# International Science Programme (ISP) Annual report 2022

**Appendices** 

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## Appendix 1: ISP's IMPACT

## 1.1 Gender equality

Gender activities for 2022 are listed country wise (both activities using the gender equality grants and activities using the regular grant allocation).

## **Bangladesh**

Female students are given special consideration. Even when the organization is short on resources, female students are never denied the opportunity to work with the group. There are now 18 female students among the ongoing students supervised by the staff members of the group. There are two female PhD students out of five PhD students currently working with the group. The allocation of gender balance fund was utilized to provide the support to 26 female students (ongoing students and degree awarded) through chemicals and consumables and other logistic support. (IPPS BAN:02/2)

The enrollment of female students in Masters' courses has traditionally been low, but there has been some fluctuation in recent years. In 2022, out of a total of seven students who completed their degree, three were females. In the current batch of Masters' students, four out of a total of 12 students are females who will graduate in 2023. However, we have seen a higher percentage of female PhD students in our ongoing programs with five females out of seven currently enrolled. This is because during PhD admissions, we personally choose researchers and we have given preference to female researchers. Besides, our flexible attitude towards female students, giving them appropriate leave or permitting them to work from home during pregnancy and giving them equal treatment and respect in the department tend to attract the female students. (IPPS BAN:04)

The earmarked grant of SEK 30,000 that ISP each year allocates for Gender Equity has in 2022 been used to provide monthly allowances to a female researcher (Ms. Eva Mojumder) who is contributing fruitfully to our research. She is working for improving the software aspects of our telemedicine program.

(IPPS BAN:04)

In the past, our goal was to achieve gender parity by enrolling an equal number of male and female students. At the moment there are a percentage of more than 40% female among the students and also in the staff in the group. However, in 2022, the ISP support was used to shift the focus from prioritizing female students to offering them access to cutting-edge training resources. The primary objective of the groups at the Unveristy of Dhaka, now is to maximize the participation of women in STEM (Science, Technology, Engineering, Mathematics) fields. (IPPS BAN:05)

#### **Burkina Faso**

One of woman PhD student received a 12 months additional scholarship in order to permit her to continue her studies. (IPICS ANEC)

A young woman graduated researcher was supported for a six months postdoctoral position. (IPICS ANEC)

A women undergraduate student in science to enter master level II started to prepare her research work. (IPICS BUF:01)

The network PDE, Modeling and Control has supported two women in PhD training, and a visit of one woman for PhD training in Senegal. One of them graduated in 2022 and another is expected to graduate in 2023. (IPMS BURK:01)

At the student level the group is still developing activities to attract more female, especially for the PhD program. However, the group has now succeed to have three PhD students. The group has started to

carefully identifying the specific difficulties experienced by each PhD female student and give appropriate support. This allowed to provide specific support in all kind of difficulties submitted, and has significantly contributed to the thesis defense of the two PhD female students; the third one will hopefully defend this year 2023. We have organized thematic discussions with physics female students from Bachelor to PhD level and supported their participation to conference/panels and events on gender issues. The activities were successful, with very positive feedbacks from the female students who participated. The lesson learnt is that it is necessary to increase the support to the female students, including different aspects, also for the social difficulties and needs. In conclusion it is realized that it is necessary to give each PhD female studentat least a minimum of financial support (full scholarships, subsistance grants etc.). (IPPS BUF:01)

## **Ethiopia**

The Department of Mathematics at Addis Ababa University offered a scholarship for female MSc candidates. Six applicants are now beneficiaries. (IPMS AAU)

The group at Addis Ababa University is actively working to increase the number of female students in their group, and so far they brought three female students to the MSc program during the past few years, two having graduated and one dropped out. From those who finished their MSc studies, one continued her PhD study in the experimental lab of our group under the supervision of a female faculty member. The group leader thinks that ISP can play a critical role by providing financial support to cover the expenses needed during their study, particularly, tuition fee and subsistence money.

(IPPS ETH:01)

The group has carried out outreach activities for six weeks to create awareness among 27 (14 female and 13 male) high school students regarding science in general and physics in particular. The activities consist of a short program to familiarize the students (with an emphasis on female students) with research in physics. The expected objective is to bring high school young students in general and female in particular into science and more specifically into physics when they join university. The group has noted that there is a high demand for the training from students as well as their teachers and parents. From the direct interaction and the evaluation release by the participants to these so called science camps, one can learn that talented students like to learn physics. But, due to family influence and the limited prospect for job opportunity in the country, most students, particularly, female do not opt for physics as their future career.

Two girls of STEM education program were included in the research activity of the ISP supported group in 2021 and 2022, and now they are employed in the group. (IPPS ETH:02)

The gender balance at Bahir Dar University (BDU) among the PhD and MSc students in the supported group, has improved in two ways: i) the fund from ISP (gender balance) helped to increase the number of female students, and ii) BDU's accommodation and scholarship support (based on the MoU agreement ISP-BDU) with a special effort towards female students. (IPPS ETH:03)

#### Kenya

The Department of Mathematics at UoN, organized a Mathematics Clinic at a girls' school to encourage them in mathematics problem clinics solving skills (IPMS EAUMP)

The MSSEESA node at Unversity of Eldoret organized a meeting with female students at several secondary schools for inspiring them to undertake STEM courses. (IPPS MSSEESA)

Even if there is still no female academic staff in the ISP supported group at the University of Nairobi, the number of female postgraduate students is steadily increasing both at MSc and PhD levels. In 2022, the ISP funds to the group have been used to partially support (payment of tuition fees and research consumables) of two students, and funds obtained through MSSEESA were used to fully support (tuition,

stipend and consumables) other students, all identified while in their 3<sup>rd</sup> year of the BSc programme. The students were also mentored. The students under full support successfully completed the course work and have embarked on their research stage. Moreover, the members of the group participated in a mentorship workshop organized by the Department on Careers in Physics and Soft Skills. The group granted also internship to five female undergraduate students for a period of 3 months.

(IPPS KEN:02, IPPS MSSEESA)

In 2022, the gender activities grant was utilized for the following initiatives:

- (a) *Training of postgraduate students:* Eleven postgraduate students, comprising two men and nine women, attended a training program on science communication, data management, and presentation. The training was held April 19-23 and was facilitated by the Training Center for Communication (TCC) at their offices. The primary objective was to address gaps in the research and soft skills of the students. The training covered: Publishing and open access, The writing process, How to prepare a manuscript, 11 Steps to structuring a scientific paper, What to publish, Choosing your platform, Peer review process, Scientific misconduct, How to read a scientific paper, How to write a scientific paper, Open Science, Platforms to get papers, Altimetrics, Unpaywall, the African archive repository; Fundamentals of statistics, Sampling methods, Parametric and non parametric methods, Hypothesis testing, Data management with R and R studio; Science communication, and Development plan.
- (b) Holiday projects for undergraduate students: The Science, Technology, and Innovation (ST&I) Challenges, also known as "holiday projects", were conducted by a team of six undergraduate students at the Chiromo Campus on July 25-September 30. The team, composed of five females and one male, aimed to develop simple techniques for detecting adulteration in fluids by exploring methods of measuring the refractive index of fluids such as brine, milk, and fuels.
- (c) *Outreach to a girls' high school:* On November 10, an outreach program was organized for girls at Moi Girls Kamangu High School, Kikuyu County. The aim of the program was to encourage girls to pursue careers in science and was well-received by the students, who were excited to learn about the different experiments presented and to engage with our team. A team of nine, including students and staff, participated in talks, Q&A sessions, and laboratory demonstrations. The program began with a talk on the challenges that girls in physics face, followed by a laser show and a talk by one of the lecturers on the negative effects of drugs. The students were then given hands-on experience with a drone, a telescope, and solar technology and were also shown how knowledge of physics has been used to design a cost-effective water filter. The students were given souvenirs from the university for answering or asking questions during the Q&A session.

Overall, the activities were successful. The postgraduate students indicated that they would be able to put the skills they gained to immediate use, and indeed a number of them did. One of the PhD students was able to use the skills she learned to finish a manuscript and submit it for publication. The team that went for the high school outreach received positive and encouraging feedback about the value of the activities from both teachers and students at Moi Girls Kamangu High School. (IPPS KEN:04)



Figure 1: School outreach within the outskirts of Nairobi. Group members gave motivational talks and explained what physics and its various branches are, and career opportunities for students. (IPPS KEN:02)

#### Laos

The funds allocated for gender equality has been used to set up an Astronomy Field Camp at the Science and Botany Park, in Vientiane Province. Approx 20 students and 25 lectures from Department of Physics joined the activities. 70% were female students and lectures. The activities were designed to inspire women to study physics or science in Laos. Numbers of women to join our activities are small. Next year we should invite high school students to join our activities. (IPPS LAO:01)

#### Mali

The group in Bamako, arranged different activities:

- Participation of Bachelor and Master female students in training on research methodologies.
- Awareness-campaigns for self-confidence were carried out with female students.
- The group has also created a "local network of female students in Physical sciences" that brings together female students in physics classes at Bachelor, Master and PhD levels. This network serves as an ideal framework for mutual aid between female students in physics. The activity was successful and the group members understood that many female students are in situations of disorientation when choosing a course. They plan to make a platform available to the created local network of physics students to help them address their concerns and to receive advice from us afterwards.

The physics research group also arranged discussions with female students at bachelor levels and at secondary schools. (IPPS MAL:01)

## Group Photo during campaign for genre balance in physical sciences





Figure 2: School visit and female students' network at the faculty of Science and Technology, Bamako, Mali. (IPPS MAL:01)

#### Nepal

As can be expected the process to approach gender balance is long-term and the balance has not changed to a significant scale. Nevertheless, we have been organizing a series of programs dedicated to the girl students to encourage the female students towards research activities. Women still face the lack of family support for enrolling to higher education in STEM field. It is due to still existing stereotype societal norms and gender roles in the community. Lack of role models, encouragements, motivations, scientific exposures, job opportunities and facilities such as maternity leave and proper baby-care centers are the major reasons for the females not being able to continue with the higher education in STEM and hence the existing gender distribution. The group organized several motivational talk

programs both online as well as physical at various schools and colleges of Tribhuvan University (see the table). Except an online talk program delivered by Women Senior Physics Prof Neelam Srivastava, from Banaras Hindu University, India, all the other tabulated programs were organized at the Department of Physics, Amrit Campus with the ISP financial support. The participants in interaction programs were highly benefitted and motivated by exchanging their research experiences with each other. In the table below, an overview of the organized activities is given:

Date	Program Title	Targeted group	No of participants
March 8	Celebration of International women's day:	Research students from STEM	
	Share, Sip and Innovate	background	60
	Policy Intervention to Ameliorate Female	Female scholars from various colleges	
May 3	Involvement in STEM Education	of Tribhuvan University	90
	Inorganic Nanoparticles for the Photocatalytic	Undergraduate and graduate students	
August 4	Applications	of Materials science	45

The group has now learned the ways to encourage and motive others to be independent, confident and move forward in life. Sharing scientific experiences and challenges can provide new opportunites. Hence, more activities should be organized very frequently to reduce the gender distribution in STEM in future.

(IPPS NEP:01)

#### **Rwanda**

Visits to Girl High Schools in order to inspire them to afford STEM programs; these visits were supported by local universities. (IPMS PDEAPP, IPMS EAUMP)

The Department of Mathematics at University of Rwanda visited Secondary schools to invite to the celebration of IYBSSD2022, with emphasis on female students. (IPMS EAUMP)

The Department of Mathematics at University of Rwanda organized a campaign for mathematics and its applications at Girls Secondary High Schools in April and September 2022. (IPMS EAUMP)

The Department of Mathematics at University of Rwanda took part in the celebration of International Women Mathematics Day on 13 March 2022. (IPMS PDEAPP, IPMS EAUMP)

There are still no female PhD graduates in Astrosphysics in Rwanda, but through the ISP gender grant the physics group in Kigali could support the MSc graduations of three women, one in Astrophysics (Beatrice Nyiransengiyumva), one in Space science (Ange Cynthia Umuhire) and another one in Cosmology (Beatrice Mororunkwere). Ms Ange Cynthia Umuhire was declared among the Winners of the 2022 L'Oréal-UNESCO for Women in Science sub-Saharan Africa Young Talents Awards! Moreover, the ISP gender equality grant was used to support the female student (Mrs Beatrice Nyiransengiyumva) for her visit to the co-supervisor in Uganda. Beatrice Nyiransengiyumva travels with a babysitter as she has a young baby. The group also bought laptops to the three students. The laptops will help them to improve the work from home as the ones they had were having issues. (IPPS RWA:01)

## **Tanzania**

Twelve female staff and students were specifically supported to attend the ANCAP symposium, at Arusha Technical College 22-23 November 2022, and assisted to remain to participate in a one-day meeting 24 November, where issues of gender mainstreaming and strategies for gender improvements in the ANCAP memberships, meetings and students were discussed. (IPICS ANCAP)

The Department of Mathematics at University of Dar es Salaam supported the association of Tanzanian Women in Mathematics (TWM) to organize their regular meeting on 16 July, 2022 at University of Dar es Salaam. The meeting attracted 11 women from all regions in Tanzania. (IPMS EAUMP)

The Department of Mathematics at University of Dar es Salaam supported two first year female postgraduate students to participate in the EAUMP-ICTP summer school in Nairobi Kenya.

(IPMS EAUMP)

On 3-7 October, 2022 the Department of Mathematics at University of Dar es Salaam in collaboration with the Physics department organized a science camp on special training of the advanced secondary school girls from various schools in the region. The training aimed to familiarize the difficult areas in mathematics and to prepare the girls to join the university level. (IPMS EAUMP)

Through ISP support, the Departments of Mathematics and of Physics at the University of Dar es Salaam (UDSM) together has since 2016 organized Science Camps for high school girls. The participants of the camps are advanced level high school female students from schools taking physics and mathematics subjects together, and their teachers. The main objective of the Science Girls Camps is to increase the number of female students joining higher learning institutions to study science, technology, engineering, and mathematics (STEM) subjects or pursue STEM-related professions. Started as an activity with just 15 attendees, it has now grown to inlcude up to 60 participants from different regions of Tanzania: In 2022 a six-day science camp for high school girls took place in August and brought together 60 participants from 10 regions including Zanzibar and Pemba Islands government girls schools. Each school was represented by five girls and one teacher. The activity was very successful according to the evaluation of the participants, students and teachers. Considering the long-term outcome of the science camps, a significant number of participants (students) have joined higher learning institutions in STEM programs. Many students from upcountry schools desire to participate in the activity, but funding is not sufficient to bring them. The ISP supported groups in physis and in mathematics at UDSM engaged the university and IYBSSD and managed to get support including a special reduction in the accommodation cost at the university hostels and funds to cover some activities of the camp that would otherwise have been difficult to cover with the allocated ISP funds for the number of students and teachers that participated. The future the plan is to run the camps in different regions in Tanzania where many schools can be brought together at common center for training. (IPPS TAN:01/2, ISP EANWoBAS)

Another important activity is the mentoring of promising female students at undergraduate level towards taking higher degree in physics. Also, during staff recruitments, female graduates with required qualifications are encouraged to apply for academic positions. (IPPS TAN:01/2)

The MSSEESA node in Tanzania, organized both a visit to a high school and a workshop for improving the teaching capacity and hands-on skills of the school teachers. (IPPS MSSEESA)

In March 2022, colleagues at the supported mathematics group at UDSM visited schools in Bagamoyo region, close the Dar es Salaam. The activity was organized and run mainly by volunteer female lecturers of the Department of Mathematics. The aim of the visits was to sensitize about the importance of doing well in mathematics, motivate, mentor and be role models to the girls. The amount SEK 13,900 that was budgeted to support outreach activities was used to support the Tanzanian Women in Mathematics (TWM) hosting a 1-day workshop in April 2022. (IPMS EAUMP, ISP EANWOBAS)

The colleagues at the UDSM have identified two female students in need, who are enrolled in the Master of Science programmes in Mathematics and Physics. The two students are self-sponsored and struggling to raise tuition fees. The two students were supported with one-year tuition fees in 2022. One of them will also be supported also the second year of her study 2022/2023. (ISP EANWOBAS)

## Uganda

The team is composed of four female members and four male members with the deputy leader being a female. The group has continued to quell the conception that women are less likely to enter science careers because their aspirations are affected by gender stereotypes. The group will consolidate these efforts of recruiting female candidates as well as encouraging undergraduate chemistry major female

students to join the group through project assistance. Indeed, the two female undergraduate students who were recruited into the team and were facilitated for their research projects, completed their degree programs. One of them graduated 2021 and the other graduated in May 2022. (IPICS UGA:01)

In the previous years, the research group comprised only male academic members of staff, and most students supported were male. A female member of staff, Dr Betty Baziriwo, was recruited to join the group. We also decided to prioritize female students, because in the previous grant periods male students dominated the research group. Since the majority of graduate students being trained at the Department of Chemistry, Makerere University are male, we decided to allocate at least 66% of the available slots to female students, to make sure that they also well represented in graduate studies. Currently, the group has one male student and three female students under ISP support.

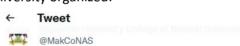
(IPICS UGA:02)

Workshops on gender for entire EAUMP network were arranged by Dr Betty Nannyonga. Under the projects, staff visited schools and communities as part of the research methodology. (IPMS EAUMP)

The network decided that node representatives would visit high school students, and hold sensitization meetings with all students. Each node in the network got USD 500 to facilitate movements of sensitization teams, and for printing posters and buying stationeries for use during the organized meetings/activities. Special focus was put on female students, talking to them and encourage them to take on science courses. The sensitization teams included women scientists who are role models in society so that young females can follow as examples. Female students were invited to talks at Departments and Scientific laboratories so that they could learn more and develop an interest in sciences. (IPPS ESARSWG)

The number of female graduates has started to gradually increases and more are now applying for graduate studies. Every year, the Department of Physics admits at least one female student at MSc level. This trend is expected to continue. The group at Makere University organized:

- A five-day Photovoltaic (PV) training program in May. The program was designed to equip participants with competence and skills needed in the design, installation and maintenance of solar PV systems and biogas plants. Technicians from industry participated as well. The group sponsored female students at both MSc and Bachelor level to participate in the training. The training was reported on Makerere University website<sup>1</sup> and also on social media platforms: https://twitter.com/MakCoNAS
- Awareness seminars in selected rural schools:
   The education sector in Uganda is still constrained by many challenges despite the increase in the number of children enrolled in schools. It is still a major challenge to transfer teachers to disadvantaged areas commonly referred to as "hard to reach areas". Northern Uganda is a region which has been involved in war for more than twenty years; forcing the



8th Workshop on Solar Photovoltaic Installation & Biogas Production Underway @MakCoNAS. Other areas of training: Photovoltaic system planning and sizing; storage batteries, introduction to biogas, classification of biogas, field trip to biogas plant. @Makerere @norad\_g @Sida



2:13 PM · May 18, 2022 · Twitter Web App

<sup>&</sup>lt;sup>1</sup> For more details, visit the College of Natural Sciences, Makerere University, website on: https://cns.mak.ac.ug/blog/8th-workshop-solar-photovoltaic-installation-biogas-production-underway-conas.

majority people into internally displaced people's (IDP) camp. The number of girls attending secondary school education in most rural parts of northern Uganda is still low. During the period 11-15 July 2022, a team of staff from the Department of Physics, Makerere University visited eight schools in northern Uganda to promote/motivate girls to pursue science education beyond the secondary school level. The students were also given access to equipment; these are equipment used for teaching in class but the girls have never used them practically. The mobile lab has excited both students and teachers in the rural schools. (IPPS UGA:01)

In the IPPS supported group at Mbarara University, the gender balance among the staff has slightly improved. Before the ISP support, there was no female staff, but through ISP support, two female students were trained and have now been offered positions as faculty members at the level of lecturer.

(IPPS UGA:02)

With the ISP funds for gender equality the group organised outreach activities to three girls' secondary schools in South Western Uganda. The activities aimed at motivating the girl pupils into sciences and to excel in science subjects. The aim was also to change their attitude and mindset towards science, particularly mathematics and physics. Most girls have been brought up thinking that mathematics and physics are for the male gender. During the activities, the female lectueres and teachers shared their experience in ways of motivating the girls. Some interesting topics in astronomy were covered. They also had the opportunity to use a telescope to observe very far objects. (IPPS UGA:02)

The group has also organized meetings with the female undergraduate and postgraduate students at Mbarara University of Science and Technology. A meeting with female students from the four universities (Mbarara University of Science and Technology, Bishop Stuart University, Kampala International University – Western Campus, and Kabale University) in South Western Uganda was also organized. In these meeting, opportunities for post-graduate studies in mathematics and physics were discussed as well as employment opportunities. The challenges facing female students were also discussed and the possible ways of overcoming such challenges. Female scientists also shared their experiences in a way to motive the participants. (IPPS UGA:02, IPPS EAARN)

All above activities by the astrophysics group at Mbarara University were supported using the gender activity grant. This covered transport for the participants, meals and conference hall, materials for the activities and some facilitation. Certificates were awarded to the perticipating undergraduate and postgraduate students. The activities were successful. The girls showed a lot of interest and were able to freely discuss the challenges they face at school and home. The facilitators were able to respond to most of the questions raised by the girls and the solutions were discussed. The women participants were also able to share their experiences from the different secondary schools and universities. (IPPS UGA:02)

On March 19, the gender network EANWoBAS, in close collaboration with Ms Elizabeth Kasozi, Head Teacher Mutundwe Primary School, organized one day of activities at Budo Junior School in Uganda to celebrate the International PI-day. Elizabeth is an experienced mathematics teacher since over 30 years as well as a counsellor to learners. The day started with the Run4Math, a cross country run which is an event that the network organizes every year. EANWoBAS donated three mango trees to the school and named the trees ISP, UGAWOM and Kavulu. Mr Kavulu is the head teacher of Budo junior school and a great supporter of EANWoBAS activities but is about to retire. The run was followed by aerobics with instructions led by one of the mathematics teachers in the school. Thereafter a mentoring session was held with the pupils, by Dr Majori Batiibwe and Ms Sylvia Namusoke. They show-cased how mathematics unites everything in life. Other activities included a POEM, creative dance, by the pupils. Information about this activity was published in *New Vision*, one of the leading newspapers of Uganda.

(ISP EANWoBAS)

## Zambia

The group advocates that within the scope of funding, an amount is specified to encourage underprivileged female undergraduates to pursue postgraduate research in basic sciences. The group

also intends to deliberately encourage undergraduate females to enroll for vacation research activities to ensure they generate interest in enrolling for MSc programme. The other strategy is engaging employers for granting dedicated leave of absence without loss of employment or benefits. (IPICS ZAM:02)

The Department of Mathematics at UNZA financed awards to the best performing undergraduate female students in mathematics. The target is to increase on the number of females in mathematics.

(IPMS EAUMP)

Funds from ISP has been used to support female MSc student and now the IPPS supported group in Lusaka has a 50/50 female/male ratio among students. This action has been popular and the group get inquires from female graduates from other universities hoping to get a MSc position supported by ISP grants.

The IPPS supported group also visited (September 28), Mpunde Girls Secondary School in Kabwe, Zambia at about 150 km from Lusaka. The Head-teacher quickly organized grade 12 pupils as audience as they were to leave secondary education by the end of the year. The university team was headed by the Head of Department, Dr Rekha Rajan (female) and she gave a brief talk on possibilities of doing physics as career. A few demonstrations with solar panels, standalone solar system, batteries, inverters, charge controllers, etc. were done. Similarly, some lab experiments on Ohms law, and on seriales and parallel connections were performed. The day after, the team continued to Ndola Girls Technical Secondary School in Ndola, Zambia, about 200 km from Lusaka. S, where similar activities were done as those done at Mpunde Girls Secondary School. This was the first gender activity carried out from by the research group using the SEK 30,000 given to the project on Gender Equality Activity. A lot of interest was seen in the pupils.

The Zambia chapter of the EANWoBAS organized the 1<sup>st</sup> EANWoBAS-Zambia Essay Writing competition for female pupils in grade 12. The Essay Writing Competition 2022 was based on the question: "How has the COVID-19 pandemic changed your attitude towards science and mathematics?" and attracted the participation of 92 girls from 25 Schools. Three judges, namely, Mrs S. Jain – Statistics, Mrs. Monica M. Kabemba – Computer Science and Dr. M. Lombe – Mathematics, were appointed as adjudicators to grade the essays and the winners determined. The Award giving ceremony was organised for March 25 at the Commonwealth, at the University of Zambia and was graced by the Deputy Vice Chancellor Dr Tamala Kambikambi and the Dean of the School of Natural Sciences. The top three students were awarded various prizes (two were a tie at position 3). In the occasion of the award ceremony, EANWoBAS – Zambia node organised various science demonstrations in physics, chemistry and biology to demonstrate to the schools that participated in the award giving ceremony. (ISP EANWoBAS)



Figure 3: Some of the member of EANWoBAS – Zambia chapter

#### **Zimbabwe**

The eventual enrolment of one male MSc student in 2022 can be considered as a success in balancing the gender in the laboratory in our economic current environment. Males would rather search for work opportunities than carry out postgraduate studies. (IPICS ZIM:01)

The group continues encouraging female students to take up postgraduate studies with the group. Also, undergraduate students are targeted, who carry out projects that fall in line with the type of work going on in the lab. Furthermore, the group invites undergraduate final-year students to the group seminars with the hope that they will get interested in the type of work carried out and hopefully desire to join after completing their undergraduate studies. (IPICS ZIM:02)

The group continues to encourage female students to join Environmental Chemistry Research through seminars at departmental and country level. (IPICS ZIM:03)

Two female members of staff joined the supported physics group in Bulawayo. The group is actively lobbying for more female members of staff to join the department and consequently join the group. The group also use as strategy to involve young female students in the BSc Applied Earth Sciences in their research activities. The intention is to facilitate the students' perception about how it is to work in earth science, exposing them to research activity and addressing the misperception of associating the field with males.

(IPPS ZIM:01)

## 1.2 Research findings and the SDGs

Research findings for 2022 are listed country wise (both activities using the gender equality grants and activities using the regular grant allocation).

#### **Bangladesh**

SDG 3 – Good Health and Well-Being Toxic metals in herbal medicines?

Herbal drug safety

Herbal medicines constitute a popular form of cure, while reports on adverse effects are sporadic. To obtain a systematic view of current knowledge, the existing publications concerning safety assessment of herbal medicines in terms of toxic metals were reviewed systematically. The results indicated that herbal medicines may be unsafe to consume although claimed harmless. Appropriate screening from herb collection and manufacturing to selling of finished herbal medicine by concerned authorities is therefore needed. *Journal of Chemistry*; DOI: 10.1155/2022/2610852 (IPICS BAN:05)

#### Nanoparticles for cancer therapy

SDG 3- Good Health and Well Being

Medical physics

Hematite (a-Fe $_2$ O $_3$ ) nanoparticles are studied for possible biomedical applications in cancer therapy. The nanoparticles were produced by a hydrothermal method and then functionalized with chitosan, a polysaccharide. Instrumental characterizations showed that the nanoparticles were of single phase and crystalline in structure, and the presence of the chitosan coating on the samples was confirmed. Thermotherapeutic studies of hematite-chitosan nanohybrid revealed promising results for biomedical applications. (IPPS BAN:02/2)

## Nanoparticles for cancer therapy

SDG 3- Good Health and Well Being

Medical physics

Magnetic iron oxide nanoparticles, have a wide range of applications in biomedical science, all requiring precise control over their shape and size distribution, which can effectively be regulated by thermal decomposition. Different values of precursor concentration, amount of solvent utilized, temperature, and reflux time, in the reaction environment can be used to produce nanoparticles of a desired size distribution between 5 and 30 nanometers. Fourier transform infrared (FTIR) data confirmed the change from hydrophobic to hydrophilic phase by utilizing cetyltrimethylammonium bromide (CTAB) for the administration of hyperthermia.. A concentration of 0.25 mg NPs/mL produced the most notable SLP

(2149 w/g) having the potential to be used in the therapy of cancer in a targeted manner with a considerably lower concentration, which is fundamental for implants in physiological conditions.

(IPPS BAN:02)

## Multiferroic composites in cancer therapeutics and computer technology

SDG 3- Good Health and Well Being

Medical physics

SDG 9 – Industry Innovation and Infrastructure

**Nanophysics** 

Multiferroic composites of lanthanum substituted bismuth ferrites (Bi1-xLaxFeO3) with x = 0.0 and 0.15, were synthesized by the chemical co-precipitation method followed by sintering at three different temperatures (800 °C, 850 °C and 900 °C) and the structural, magnetic, and ferroelectric properties, were determined. Based on the results that were obtained, multiferroic composites (La-substituted BiFeO3) is suitable for applications such as cancer therapeutics, microwave devices, computer technology, actuators, and transducers. (IPPS BAN:02)

## Electroencephalogram for Biometric identification

SDG 3- Good Health and Well Being

Medical physics

The use of electroencephalogram (EEG) signals for biometric identification and authentication was investigated. To address the challenges of signal variability across different recording sessions, an ensemble model combining EEG and keystroke dynamics was investigated based on a self-organized operational neural network (Self-ONN). The model was tested successfully on a large number of sessions (10 recording days) with many challenging noisy and variable environments for the identification and authentication tasks. The proposed multimodal Self-ONN-based ensemble model achieved an identification accuracy of 98% in rigorous validation cases and outperformed the equivalent ensemble of deep CNN models. Overall, the proposed multimodal Self-ONN model can automatically extract session invariant features to accurately identify and authenticate users. (IPPS BAN:04)

## Phonocardiograph system for telemedicine

SDG 3- Good Health and Well Being

Medical physics

A low-cost and easy-to-use phonocardiograph system was developed for telemedicine purposes. The system consists of three main parts: the acoustic sensor module, the audio amplifier module, and the application software. The acoustic sensor module includes a chest piece and a microphone enclosed in an insulator. Simulations were conducted to determine the optimal insulation materials. The microphone converts chest sounds into electrical signals, which are then filtered and amplified before being sent to a PC for digitization and analysis with the application software. The system has a frequency range of 20 Hz to 1 kHz, amplification of up to 100 times, and noise attenuation of 89%. (IPPS BAN:04)

## Deep machine learning for Bangla sign language interpretation

SDG 3 – Good Health and Well Being

Computational physics

The development of a real-time interpreter for Bangla Sign Language (BdSL) has the potential to help over 200,000 hearing and speech-impaired individuals in Bangladesh. The group used deep machine learning models for an accurate and reliable recognition of BdSL Alphabets and Numerals. The largest existing dataset containing images of BdSL alphabets and numerals was created to reduce inter-class similarity while dealing with diverse image data. It was found that developmed interpreter outperformed the works reported in the literature for BdSL alphabets and numerals recognition. The new dataset is publicly available for further research to support the development of Bangla Sign Language interpretation and benefit hearing and speech-impaired individuals. (IPPS BAN:04)

## **Ecofriendly synthesis of Silver nanoparticles with antimicrobial activity**

SDG 3 – Good Health and Well Being

Nanophysics

Silver Nanoparticles were successfully synthesized inside a biopolymer gel and their characteristics were investigated. This preparation is simpler to perform and more efficient than the conventional technique. The gel network prevents nanoparticle agglomeration, and 28nm sized silver nanoparticles were

observed inside the gel network. The NP-incorporated gel shows enhanced antimicrobial activity against *Staphylococcus* spp. and *E. col*i compared to the gel medium before reduction. (IPPS BAN:05)

#### Nanoparticles and nanorods for solar cells

SDG 7 – Affordable and Clean Energy

Nanophysics

The electrical and photovoltaic properties of ZnO nanoparticles and nanorods were studied. The results indicated that nanomaterials based on ZnO have potential usage in photovoltaic devices (solar cells), and it is important to study the coupling between their structure and properties.

(IPPS BAN:05)

## Synthesis of 2D materials for electrical applications

SDG 9 – Industry Innovation and Infrastructure

**Nanophysics** 

MoS<sub>2</sub>-nanoflakes were synthesized using the Liquid Phase Exfoliation technique with a binary mixture of ethanol and deionized water. The optimal solvent ratio was found to be 60% ethanol and 40% water. The characterization of the synthesized nanoflakes was done using Fourier Transform Infrared (FTIR), Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM), Dynamic Light Scattering (DLS) and Ultraviolet-visible (UV-Vis) Spectroscopy. The nanoflakes had an average lateral size of 183nm and a thickness of 10nm. The addition of ethanol in deionized (DI) water improved the exfoliation quality and decreased the bandgap energy of the nanoflakes for potential electrical applications. (IPPS BAN:05)

## Synthesis of nanosheets for energy storage

SDG 9 – Industry Innovation and Infrastructure

**Nanophysics** 

MoS<sub>2</sub> nanosheets were produced from natural molybdenite. These nanosheets have potential applications in energy-related issues of high relevance like energy storage (for example in Li-ion batteries and Na-ion batteries). (IPPS BAN:05)

#### **Burkina Faso**

SDG 3 – Good Health and Well-Being

Water chemistry

## Toxic thallium removed from water by nanosorbent from natural bauxites

Thallium concentrations in natural waters are highly dependent on the parent rock. Since thallium is considered as highly toxic, the exposure to living organisms may lead to health hazard. In Burkina Faso, thallium concentrations ranging from 0.07 to 4  $\mu$ g/L have been detected in ground waters of the village Yamtenga, with a risk of exposure for humans. This concern indicated the need to develop methods for the removal of trace amounts of thallium from water. The use of low-cost alumina nanoparticle adsorbents, synthesized from natural local bauxites, was studied. At optimal conditions, removal was achieved with 95% efficiency, suggesting efficient action by this sorbent.

Processes; DOI: 10.3390/pr10091826 (IPICS BUF:02)

## **East Africa**

#### Soil remediation and climate change mitigation

SDG 2 – Zero Hunger

SDG 11 - Sustainable Cities and Communities

Chemical Physics

Biochar, a substance similar to charcoal obtained by burning organic material from wastes of agriculture and forestry, has important applications in ameliorating the quality of the soil and in mitigating climate changes. Soil at pH 4 amended with biochar produced at 700 °C showed a higher quantity of essential nutrients compared to soil amended at pH 8, and demonstrated a higher capacity to sequester CO<sub>2</sub>. The results affirm that solid waste (SW) and solid biomass (SB) are ideal for producing biochar with good qualities that perform well in terms of improving soil properties and mitigating climate change.

(IPPS MSSEESA)

## Photovoltaic heating system for charging thermal energy storage tank

SDG 7 – Affordable and Clean Energy

Materials Physics

The performance of a designed electronic circuit was tested by heating 7 liters of Thermia B oil on a clear sky day and on a cloudy day. The 7 liters of TES oil were heated to an average temperature of 208° C on a

clear sky day in 4 hours and 160° C on a cloudy day in 6 hours. The efficiencies of the photovoltaic heating system were 21.5 % when heating oil on a cloudy day and 27.8% when heating oil on a clear day. The electronics circuit was able to charge the TES oil to a higher temperature with low efficiencies.

(IPPS MSSEESA)

## Perovskite lead-free tandem solar cell

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

A Lead-Free Cs<sub>1-x</sub>Rb<sub>x</sub>SnI<sub>3</sub> – Silicon Tandem Solar Cell with an efficiency of 30 % was realized.

(IPPS MSSEESA)

## Parabolic solar cooker integrated with heat storage block

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

A Parabolic Solar Cooker Integrated with a Heat Storage Block was developed. The performance of the system was tested by heating 1.5 liters of water; the temperature of the water increased from 36°C to 98.5°C in 54 minutes under normal irradiance. An aluminum block was heated by the solar cooker and its temperature increased from 35°C to 161°C in 2 hours. When this block was left to cool indoor at room temperature of 25.5 °C, it took 50 minutes to cool from 115°C to 70°C. The aluminum block allows cooking to continue even when there is no direct irradiance as a result of cloud cover. (IPPS MSSEESA)

#### **Ethiopia**

## Earthquake monitoring

SDG 11 - Sustainable Cities and Communities

Seismology

A sequence starting with a Mw 5.5 earthquake (Mw is the moment magnitude) occurred between 26-28 December 2022 in northern Afar (Bada region) in Ethiopia, with several earthquakes recorded. The group communicated the event and its characteristics to the community. (IPPS ETH:02)

## Transparent components for optoelectronics

SDG 9 – Industry Innovation and Infrastructure

Chemical and Materials Physics

Transparent conductive materials like indium-tin oxide (ITO) are critical components in optoelectronic devices for example as electrodes. In this study, the effect of thermal treatment on ITO's electrical and optical properties was investigated. ITO films of 150 nm thickness (purchased from a commercial supplier) on a glass substrate were treated at temperatures in the range between 50°C and 450°C and at ambient conditions, for 10 minutes. The results showed that the sheet resistivity of the ITO increases exponentially after about 200° C while the bandgap does not change significantly in the entire temperature range of the measurements. It is important to understand the effect of annealing on the ITO films, since this procedure is often used in their preparation and can potentially alter their properties.

## Formation and stability of self-assembled monolayers

SDG 9 – Industry Innovation and Infrastructure

Chemical and Materials Physics

A study investigated the formation and stability of self-assembled monolayers (SAMs) of phosphonic acid deposited from solution on zinc oxide surfaces. These materials can have applications that include solar cells, heterogeneous catalysts, and molecular sensors. By varying the solvent type (ethanol or isopropanol) and the solution temperature, the coverage and structure of the SAMs were determined from contact angle and Fourier Transform Infrared (FTIR) measurements. The growth mechanism was determined by fitting the coverage-versus-time plots to different isothermal equations. The coverage for the SAM deposited using ethanol was 97% and the structure was ordered; the coverage for the SAM deposited using isopropanol was ca 75% and the structure was disordered. It was found that the SAM are unstable both after exposition to water and UV light; however, the rate of degradation was much higher when exposed to UV ozone than when exposed to water. This shows the ways the the different preparation methods affect the structure and coverage of the SAMs. (IPPS ETH:03)

#### Kenya

## Performance of bifacial solar modules

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

The group studied a bifacial solar module, which is a solar panel that can convert sunlight into electricity on both sides of the panel. The analysis of the performance revealed that different reflective backgrounds contribute differently to the irradiance falling on the back module and thus contribute to different levels of power production. It was observed that without the use of a reflective surface (the default background was concrete) the highest solar irradiance produced was 118 W/m², while the lowest was 75 W/m². The study showed a directly proportional relationship between power output and solar irradiance. It was observed that as the tilt angle increased, there was a general decrease in solar irradiance on both sides of the module. The findings also confirmed that the use of reflective backgrounds significantly increases the power output of bifacial solar modules. Metalized polyethylene terephthalate, MPET reflectors produced the most irradiance of the reflector samples tested, followed by mylar sunshade and finally iron sheet. It was concluded that an elevation of 1.2 m in reference to the ground level and at a tilt angle of 30° would be suitable during bifacial module installation within the tropics. A MPET reflector was also recommended for use as a reflective surface because of its high reflectivity.

(IPPS MSSEESSA)

## Computational studies of perovskites for applications in photovoltaics

SDG 7 – Affordable and Clean Energy

Computational Physics

The group performed a detailed first-principles investigation of the structural, elastic, electronic and optical properties of cubic, tetragonal and trigonal structures of KGeX3 (X= Cl, Br) which are materials of interest for photovoltaic applications. The elastic properties showed that the trigonal structures are hard, mechanically unstable, and hence unsuitable for photovoltaics. The tetragonal structures showed larger band gap than the ideal cubic ones, and the highest power conversion efficiency (PCE) suitable for photovoltaics. The results show that, in addition to the cubic structures, also the tetragonal structures are excellent candidates for applications in photovoltaics. (IPPS KEN:02)

## Spectral diagnosis of cancer in early stages

SDG 3 - Good Health and Well Being

Computational physics

A study was performed on machine learning-based trace quantitative diagnostic biospectroscopy and imaging microscopy of cancer in body fluids and tissues using X-ray Fluorescence (XRF). The method works with synchrotron radiation to get insights into cancer pathogenesis and diagnosis of a single cell utilizing machine learning micro-XRF spectrometry and scatter imaging. The group achieved a spectral diagnosis of cancer that overcomes the shortcomings of histopathology and microscopy, especially in the early stages of the disease. Synchrotron-based micro-XRF spectral imaging studies showed, from quantitative 2-D distribution maps of single cells, trace Cu and Fe profiles that are unique biomarker metrics for differential recognition of early prostate cancer. (IPPS KEN:04)

## Laos

#### Mapping of fault areas in Laos

SDG - 11 Sustainable Citiesand Communities

Seismology

2D-Electrical Resistivity Tomography (2D-ERT) profiles were performed in Pakou District, Luang Prabang Province, using a resistivity meter. In addition, seismic refraction Tomography (SRT) and Reflection measurements were conducted on selected 2D ERT profiles. The ERT mapping of the fault area found contact between volcanic and sedimentary rocks. To confirm the data, two trenches were excavated across the fault near the resistivity and seismic survey location. ERT could give details of the characteristics of the subsurface at the fault area, identifying also lateral and vertical changes in facies and small faults. SRT provided information about the structure of the subsurface in shallow depth. Seismic reflection results could define deeper structures. This is important to know to map the potential seismic hazards near the faults. (IPPS LAO:01)

#### Mali

## Soil erosion and nutrient availability in Southern Mali

SDG – 11 Sustainable Cities and Communities SpectroscopyThe groupmonitors agricultural land erosion using satellite images and climate variables in two agroecological zones of Southern Mali. Landscape pattern analysis using geographic information systems (GIS) and remote sensing was found to be a powerful approach to diagnose soil erosion and nutrient availability. The results obtained from simulations using the Universal Soil Loss Equation revealed an increasing trend in erosion over the studied zones as a consequence of climate change. (IPPS MAL:01)

## Myanmar

## Electrochemical properties of tungsten trioxide for electrochromic applications

SDG 9 – Industry Innovation and Infrastructure

**Materials Physics** 

Electrochromic (EC) materials such as the inorganic material tungsten trioxide (WO<sub>3</sub>) can control the flow of light and be used, for example, as smart windows or mirrors. The group studied the electrochemical properties of WO<sub>3</sub> thin films on fluorine-doped tin oxide (FTO) coated glass substrates. (IPPS MYA:01)

#### Nanoparticles and nanowires

SDG 9 – Industry Innovation and Infrastructure

**Nanophysics** 

Titanium dioxide nanoparticle ( $TiO_2NPs$ ) films and silver nanowire (AgNWs) coated  $TiO_2NPs$  ( $TiO_2NPs/AgNWs$ ) films were fabricated on glass substrates by a spin coating method. These materials are of interest for their possible application as transparent electrodes. (IPPS MYA:01)

#### Nanoparticles for cancer treatment

SDG 3 – Good Health and Well Being

Nanophysics

Metal iodides and magnetite nano-particles (such as Fe3O4) were used as possible drugs carriers. Chitosan was used for surface modifications of metal iodide and magnetite nano-particles which will bind to the targeting drugs for fighting cancers. Significant improvements were observed in metal iodide nano-particles synthesis and characterization. The group has also carried out biocompatible, antimicrobial activity tests and other structural and morphological studies. (IPPS MYA:01)

#### Wastewaters purification

SDG - 11 Sustainable Cities and Communities

Chemical Physics

Graphite carbon nitrate  $(g-C_3N_4)$  has gained significant attraction in recent years and as a potential material for removing toxic elements from wastewater. Moreover, graphite phase carbon nitride  $(g-C_3N_4)$ , a two-dimensional (2D) carbon-based nanostructure, has received attention in biosensing and biomedical applications. In recent years, the group carried out the synthesis and characterization of a platinum (Pt) decorated g-C3N4 nanocomposite for biosensing and water treatments. Significant improvements in electrical conductivity values and nanostructures such as nano-rod and nano-particles were observed in PVA-gC<sub>3</sub>N<sub>4</sub> nano-fibers and Pt/gC<sub>3</sub>N<sub>4</sub> films. (IPPS MYA:01)

#### Nepal

## Vulnerability of the distribution network to lightning

SDG - 11 Sustainable Cities and Communities

Atmospheric Physics

The impact of lightning strikes over the rural electric mini-grids was investigated, with the aid of computational techniques and based on the spacing of the lightning arresters. The assessment revealed the overvoltage impact levels at different nodes of the network involved in the case study. Also, it was noted that the severity ranking of the distribution transformers in the assessed network varied with the protection scheme. Thus, it was recommended to perform a prior analysis in implementing a planned protection scheme. (IPPS NEP:01)

## Vulnerability to lightning of archeological structures

SDG – 11 Sustainable Cities and Communities

Atmospheric Physics

The group has explored the vulnerability of the various Nepali archeologically important structures, some of which being listed in UNESCO's world heritage sites, from the perspective of lightning hazards. It was found that most of the buildings/structures are unprotected and only a few of them are under protection. However, even the protected structures were not found to have complied the international standards and hence most of those structures were found to be vulnerable. (IPPS NEP:01)

## Synthesis of nanoparticles with antibacterial properties

SDG 3 – Good Health and Well Being

**Materials Physics** 

The group has synthesized nanoparticles and films of the metal oxide semiconductor ZnO using the cost-effective methods of co-precipitation, spin coating, spray pyrolysis and doctor blade. Samples of these materials in the three configurations: as synthesized, metal-doped, or metal-metal-codoped, were then studied for gas sensing application and antimicrobial efficacy. The sensor setup was self-designed and developed at the group's laboratory. Several gas sensing parameters such as gas response ratio, response and recovery times, were measured at the exposure of different concentrations of toxic vapors (ethanol, acetone, ammonia, isopropanol etc) at different temperatures. The results show that the codoping and the application of a gate potential are effective to enhance the sensing performance. For the same materials, the effect of dye extract of *Elaeocarpus ganitrus*, locally called as Rudraksha, for antibacterial application was studied and ZnO showed a potential antibacterial activity towards a gram positive bacterial pathogen (*Stafilococcus aureus*). These findings imply that bio-synthesized ZnO could play a vital role for the development of newer antimicrobial agents based on ZnO blended with common available herb available in Nepal, providing an alternative approach to treat gram-positive infections.

(IPPS NEP:01)

## New perovskite for photovoltaic applications

SDG 7 – Affordable and Clean Energy

**Computational Physics** 

A new type of oxide perovskite with the chemical formula MgZnO<sub>3</sub> (MZO), was studied in detail by computational methods. Perovskites are a family of materials with a particular crystalline structure that have reached outstanding efficiencies in low-cost photovoltaic applications. The metal cations in MZO perovskite are abundant and economical to fabricate. The aim of this study was to understand the structural, elastic, electronic, and optical properties of MZO. The results show that the MZO perovskite is indeed a potential optoelectronic material in low-frequency regions. (IPPS NEP:01)

#### **Rwanda**

Propagation of acoustic waves in dusty plasma

SDG 9 – Industry Innovation and Infrastructure

Space Physics Plasma Physics

The propagation of nonlinear waves in plasmas containing dust grains in addition to positive ions and electrons was studied. The motivation is the existence of charged dust in many space and astrophysical plasmas, including Earth's ionosphere, as well as in laboratory plasma experiments and industrial plasma processing units. The group investigated the propagation of dust ion acoustic solitary waves and double layers in a dusty plasma The results show that at a critical dust-to-ion density ratio, positive and negative solitons coexist without a soliton with finite amplitude at the acoustic speed, which contradicts an earlier study. This suggests that the existence of a soliton with finite amplitude at the acoustic speed is not always a pre-requisite for the coexistence of nonlinear structures of both polarities. Positive and negative solitons coexist when the electrons are strongly nonthermal, with moderate ion thermal effects. Increasing ion thermal effect shifts the coexistence region to lower values of f, and when the ion thermal effects become important, negative solitons disappear and only positive solitons survive. (IPPS RWA:01)

## Seasonal cycles of the emissions of Black Carbon and key aerosols

SDG 12 – Responsible consumption and production

Atmospheric Physics

SDG 13 – Climate Action

Climate Science

The multiyear concentrations of Black Carbon (BC) and other key PM2.5 aerosol constituents from the Rwanda Climate Observatory as a regional receptor site was studied. A strong seasonal cycle for all

investigated constituents was found, where the maxima coincide with large-scale upwind savanna fires. Altogether, they reported quantitative source constraints on Eastern Africa BC emissions, with implications for parameterization of satellite fire and bottom-up emission inventories as well as regional climate and chemical transport modeling. (IPPS RWA:01)

#### **Tanzania**

## Sustainability of solar cookers

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

Field Performance evaluation of an enhanced box and parabolic solar cookers were conducted, and revealed that both cookers have cooking power and efficiency capable of cooking local foods. Only irrelevant differences were observed between freshly fabricated solar cookers and those in use for one year.

(IPPS TAN:01/2)

#### Performance of thin film solar cells

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

The group fabricated and characterized Cu₂ZnSnS₄ (CZTS)-based thin film solar cells layers on FTO coated Soda Lime Glass. CZTD solar cells are low cost, environmentally friendly and produced with abundant materials. The results of the characterizations revealed that W improves the FTO/CZTS interface and hence device performance. The addition of NaF and the air annealing of the CZTS absorber improves the performance of the CZTS based solar cells with absorber-FTO interface modified by W interlayer. The highest efficiency of 5.23% was achieved for a CZTS solar cell device. (IPPS TAN:01/2)

#### Uganda

## Matheamtical modeling for disease control

SDG 3 - Good Health and Well Being

Matematical modelling

The results on disease modeling (e.g. Covid-19, Malaria, HIV/AIDS, TB) have been utilized by the Uganda medical research council and Uganda Virus Research Institute. (IPMS EAUMP)

## PV charging of thermal energy storage systems

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

The group investigated the use of solar PV in the electrical charging of thermal energy storage systems using DC heating elements. The study was aimed at developing an alternative cooking solution to reduce the over-dependence of use of wood fuel for cooking, and also to make use of the excess energy from installed PV systems once the battery is charged on good weather days. Different DC heating elements were designed and tested with different solar PV sizing. The results show that a 1 kW solar plant installation with a suitable controller is capable of charging a small-scale energy storage system (50 liters of oil) to an average temperature of about 160°. This heat can be used to prepare breakfast or a meal for a household of about five persons.

## Optically selective windows

SDG 9 – Industry Innovation and Infrastructure

**Materials Physics** 

The group investigated the effect of coatings on the optical properties of optically selective windows. Coatings composed of nanostructures of ZnS/Ag were deposited on glass substrates at deposition angles ranging from 0° to 60°. The increase in the deposition angle of ZnS did not significantly affect the energy band gap but the increase in the deposition angle of silver increased the energy band of the nano-films from 3.52 to 3.99 eV. (IPPS UGA:01)

## Coatings for lightweight spacecrafts

**Materials Physics** 

SDG 9 – Industry Innovation and Infrastructure

Space physics

The effects of 7 MeV proton irradiation on the microstructural, morphological, optical, and electrical properties of fluorine-doped tin oxide (FTO) thin films were analyzed. This material can have applications as a passive thermal control coating in future miniaturized lightweight spacecraft. Generally, the

outcome of this study suggests that FTO thin films are tolerant to low fluences of proton irradiation. (IPPS UGA:02)

## Study of the disturbances affecting radio signals through the ionosphere

SDG 9 – Industry Innovation and Infrastructure

Atmospheric physics

In the study of the spectral properties of sub-kilometer-scale equatorial irregularities as seen by the Swarm satellites, the values of the spectral indices showed a peak centered at around -2.5, located at the Equatorial Ionization Anomaly belts. The occurrence of ionospheric irregularities is of high scientific interest because they affect radio signals traveling through the ionosphere. The spectral indices were found to be sensitive to irregularities in the amplitude. The local time distribution of the spectral indices also showed a peak within the time sector 20:00 LT - 22:00 LT and then decreased gradually after about 22:00 LT till 06:00 LT. The peak of the spectral index was also observed in the South American-Atlantic-African longitudes and it was generally low in the Asian-Pacific region. The results of this work are of high relevance for better modeling of radio wave scintillation since the intensity of VHF/UHF scintillations observed by ground-based receivers depends on the magnitude and spectral distribution of density fluctuations. (IPPS UGA:02)

#### Zambia

## Extending the energy usage of solar milling plants

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

A study on extending the energy usage of solar milling plants was carried out to reduce the mismatch between community needs and the design of energy projects, and to promote a more efficient usage of energy in rural areas. Six selected solar milling plants in the Eastern Province of Zambia were used as study sites in order to investigate the average daily energy generated, energy consumed, and excess unutilized energy of solar milling plants. The 1,580 solar milling plants installed could potentially contribute about 12 MW of power to Zambia's National grid if this extension of the energy usage model is implemented. The excess energy could be used by the surrounding community and the micro, small, and medium-sized enterprises. The results will be recommended to the Zambia Cooperatives Federation for implementation. This will increase communities' business opportunities and the plants' sustainability because the cooperatives will be able to pay back the loans and salaries for the plant's security services.

(IPPS ZAM:01)

## Electric and Solar Water Heater for Zambian Domestic Energy Consumers

SDG 7 – Affordable and Clean Energy

**Materials Physics** 

The study has evaluated the comparative Life Cycle Costs (LCC) of electric vs solar water heaters for a period of 10 years for an average household of five persons, consuming 150 liters of water per day. Despite a relatively high solar irradiation potential, the use of solar water heaters in Zambia is still lower than that of conventional electric ones and/or traditional methods such as firewood and charcoal. The study found that the initial costs of using solar water heaters are comparatively higher, but the time to break even was estimated at 3.5 years. The study may provide some insights into financial analysis for energy consumers to make informed decisions on how to adopt a more economically viable water heating technology. (IPPS ZAM:01)

## 1.3 Use of research results (including technical development)

Use of research results for 2022 are listed country wise (both activities using the gender equality grants and activities using the regular grant allocation).

## **Bangladesh**

NITUB repaired one hundred eight (108) non-functioning scientific equipment, of different institutes in Bangladesh. The nominal book value of the repaired items is close to 430,000 USD. (IPICS NITUB)

In 2022, NITUB engineers fabricated low-cost equipment: pH meter and conductivity meter. NITUB engineers assembled the equipment modules and programmed the instruments. The fabricated two instruments cost about BDT 25,000/-(≈240 USD) and are undergoing trial. It is expected that these two instruments will be given to a higher secondary school in Dhaka. (IPICS NITUB)

Prof Khan has been providing consultancy services to the Department of Electrical and Electronics Engineering, Islamic University of Technology (IUT), located in Dhaka and is also a subsidiary of the Organization of the Islamic Cooperation (OIC) to develop the physics laboratories for the undergraduate engineering students. (IPPS BAN:02/1)

The group provided a service by performing measurements with their own equipment for other actors in society. In total 591 samples were analysed with BAN:02/2 equipment, as listed in the following: Service Provided: X-ray Diffraction: 291 samples; SEM & EDAX: 36 samples; Raman Spectroscopy: 17 samples; TEM/STEM: 18 samples; PPMS: 61 samples; DSC/TGA: 51 sample; FTIR: 74 samples; DLS/Zeta Potential: 23 samples; UV Spectroscopy: 21 samples. (IPPS BAN:02/2)

#### **Bolivia**

The chemistry group in Bolivia has studied the interaction between native pollinators (stingless bees) and local crops. These research lines may lead to improve strategies in the development of policies to improve management and production of stingless bees' products and also of the respective crops that they pollinate. The group has also studied the role of stingless bees (Meliponinae) as pollinators of native plants and the compounds used by plants to attract and reward them, the chemistry of stingless bees' products. In addition, the plants' sensoriality was studied in the field as well as in the laboratory; Vibrational signals from insects interacting with plants (e.g. pollinators, herbivores) were recorded and used as a playback stimuli to evaluate if plants can respond differentially in their chemistry (e.g. induced volatiles and nonvolatile secondary metabolites, rewards that attracts natural enemies) to different interaction contexts. (IPICS BOL:01)

### **Burkina Faso**

In 2022, the member laboratory at University Joseph Ki-Zerbo, LABIOTAN, has performed several controls of food safety for industries, NGO and food traders for exportation. (IPICS RABiotech)

Dr Bruno KORGO is involved in the development of the Economic Community of West African States (ECOWAS) green hydrogen policy supported by WASCAL. This policy started last year and is expected to be adopted this year by ECOWAS Heads of States and Governments. (IPPS BUF:01)

## **Ethiopia**

A group member, Prof Mulugeta Bekele, is involved as a chair of the committee undertaking an initiative to reforest the Galema Mountain located in Arsi area in Oromia regional state. (IPPS ETH:01)

#### Kenya

The group had three training sessions (two for two weeks each, and one for one week) of the Solar Academy in April, August and September, which included the training of technicians on PV systems

design, sizing, installation and maintenance. The continued participation of the group members in the installation of PV systems in factories, homes and schools enhances the uptake of the PV systems, with a direct positive effect on the environment. (IPPS KEN:02)

#### Laos

The group received requests from several private enterprises for analysis and development of their products including analysis of some chemicals in their products such as shampoo, detergent and face lotion that are made from natural products. (IPICS LAO:04)

The group provided analysis service for chemical analysis of cassava for the Department of Industry and Commerce, Lao Ministry of Industry and Commerce. (IPICS LAO:04)

#### Mali

The group organized a discussion with irrigation technicians and farmers where the agrometeorological model for irrigation planning (cropwat) was presented. The new irrigation calendar that the group developed has been presented and its implementation has been discussed. (IPPS MAL:01)

The group organized an awareness seminar with a women association on the economic benefit of using improved cookstove and bio-charcoal briquettes as cooking fuel. (IPPS MAL:01)

## Nepal

Dr Sharma was involved with the development of a training manual for engineers and technicians on Protective measures against lightning and safety measures against low voltage electrical hazards according to a request by the Ministry of Federal Affairs and General Administration (MOFAGA), Local Development Training Academy (LDTA) (https://mofaga.gov.np/news-notice/2565). (IPPS NEP:01)

Dr Sharma led a team of electrical engineers to facilitate a three-day national Training of Trainers on safety/protective measures against electrical and lightning hazards organized by Asian Disaster Preparedness Center, Nepal, under the banner of the Asian Preparedness Partnership and the Nepal focal Ministry of Home Affairs. (IPPS NEP:01)

Dr Sharma and his team of experts representing South Asian Lightning Network facilitated three training programs aimed at electricians in three municipalities (Dhangadhi, Amargadhi and Jayaprithvi) of far west Nepal with the support of the United Nations Development Programme (UNDP) and the local authorities. (IPPS NEP:01)

Dr Sharma led a team of facilitators to train local level engineers in the Karnali province of Nepal on protection against lightning and low voltage safety, organized by the provincial government in Surkhet Nepal.

(IPPS NEP:01)

Dr Sharma has been extensively working with Lalitpur, one of the main metropolitan cities of the Kathmandu valley, towards mitigating electrically induced house fires in the city. Sixteen awareness programs have already been conducted in different wards of the city. (IPPS NEP:01)

Dr Sharma has been working closely with the Nepal Engineers Association (NEA) assisting them in establishing good practices in the area of lightning protection and electrical safety. (IPPS NEP:01)

Under the leadership of Dr. Sharma, the physics group has provided a lightning risk map to various organizations including disaster risk reduction and management authority, the Ministry of Home Affairs, the Department of Meteorology and Hydrology, Nepal Telecom Authority, humanitarian organizations, non-governmental organizations etc. (IPPS NEP:01)

## **Tanzania**

The research results and skills of the chemistry group members have been used at the Tanzania Bureau of Standards for developing food contaminants and packaging standards. The National Environment Management Council (NEMC) has used the research and skills for developing new strategies for enforcement of environmental laws, e.g. related to the banning of plastic carrier bags and development of alternative carrier bags. (IPICS TAN:02)

As part of TAN:01/2 research work, the Solar Cooker project in collaboration with the Institute of Development Studies at the University of Dar es Salaam (UDSM), the group continued with the promotion of solar cooking in Tanzania by organizing a workshop on solar cooking. Solar cooker stakeholders were invited to discuss issues pertaining to the wide adoption of solar cooking technology in Tanzania. The group participated in the Nanenane Exhibitions (formerly Farmers Day) from 31 July - 8 August, 2022 to showcase solar cooking technology.

(IPPS TAN:01/2)
(IPPS MSSEESA)

The TAN:01/2 group conducted Solar PV training for technicians and artisans to equip them with theoretical and practical skills on stand-alone PV systems components, design, installation, commissioning and maintenance. The main goal of the training is to improve the quality of the PV systems installed in the country and hence the increased use of PV systems especially in rural areas. This is an ongoing activity.

(IPPS TAN:01/2)

(IPPS MSSEESA)





Figure 4. Attendees of the PV training during PV systems installation exercise 2022. (IPPS TAN:01/2)

## Uganda

The results on disease modeling (e.g., Covid-19, Malaria, HIV/AIDS, TB) have been utilized by the Uganda medical research council and Uganda Virus Research Institute. (IPMS EAUMP)

Dr. John WASSWA lead a team that conducted a feasibility study on establishing an integrated petroleum laboratory within the country. Dr. Florence NANTABA was a member of this team. (IPICS UGA:01)

In the second half of 2022, the group leader Dr Emmanuel Tebandeke, collaborated with colleagues from the College of Health Sciences, Makerere University, who has developed a rapid diagnostic kit for Ebola virus screening. During the recent outbreak of Ebola in Uganda, the medical services ran short of some key reagents necessary for Ebola testing, and ordering for the reagents directly from manufactures could take time before delivery yet the country needed extensive screening of all potential contacts. Dr. Tebandeke, utilizing facilities in the UGA:02 laboratory provided by ISP, successfully prepared the

colloidal nano gold reagent that was missing in the test kits, and the Ebola task force could carry on the crucial screening. (IPICS UGA:01)

The project leader, Dr. Tebandeke is involved in a collaborative effort with an NGO Community Integrated Development Initiative, to setup a mini sewage treatment plant and a water treatment facility at Kabojja, Kampala. Consultancy, guidance, and monitoring of both effluent quality and water quality is offered. The mini sewage treatment plant was cleared by the National Environment Management Authority (NEMA) to commence activities, offering sewage treatment service to communities around Kampala. The water treatment plant has also been cleared by Uganda National Bureau of Standards (UNBS) to start water production. (IPICS UGA:02)

The group carried out a five-day PV training program on 16-20 May 2022. The training programs are designed to equip participants with the competence and skills needed in the design, installation and maintenance of solar Photovoltaic systems and biogas plants. Technicians from the Industry participated as well.

(IPPS UGA:01)

#### Zambia

Mr. Kadango was engaged in helping set up the culture and growth of fall army worms for research in agriculture. His current work on adding value to cashew nut shell liquid (CNSL) has produced encouraging results for the use of the CNSL in controlling the fall army worms. (IPICS ZAM:02)

#### **Zimbabwe**

The research skill developed in the group have resulted in members from other universities coming to request for antimicrobial tests. Therefore, standard operation procedures for these tests are now developed, coupled with the cost. Thanks to the skills in bioassays, and the available set of equipment, the group is able to carry out various antimicrobial assays such as antifungal, antibacterial, antimycobacterial and antiproliferative assays. The group has started filling the invention disclosure forms for the following

- Repurposing of zoxazolamine for use as a topical antifungal cream
- Development of an antibacterial cream based on leaf extracts of *Combretum molle* for the prevention and treatment of bacterial wound and skin infections
- Development of an herbal cream based on extracts from Combretum zeyheri
- Development and formulation of an antibacterial cream based on phytochemicals from *Callistemon citrinus*
- Formulation and development of an antimicrobial remedy using extracts of *Combretum* apiculatum
- Development and evaluation of a topical herbal antifungal cream containing leaf extracts of Lampranthus francisci
- Development of an antibacterial gel from Triumfetta welwitschii
- Development of an antimicrobial fabric finish with phytochemicals from *Combretum zeyheri* and *Parinari curatellifolia*
- Development of antimicrobial potential of a herbal formulation based on the leaf extracts of *C. platypetalum*

There are plans to register a company to facilitate the marketing and sale of the products.

(IPICS ZIM:01)

#### 1.4 Outreach and influence

Outreach and influence for 2022 are listed country wise.

## **Bangladesh**

Public and private educational and research organizations of Bangladesh are taking consultancy support from NITUB in buying and installing scientific equipment for their laboratories. (IPICS NITUB)

Dr S Manjura Hoque, the group leader of IPPS BAN:02/2, is a Life Fellow of Engineers Institute of Bangladesh and Life Member of Bangladesh Physical Society and Bangladesh Electronic Society. She is also a member of Women Architects, Engineers, and Planners Association, where she was invited to chair as well as provide talks, and the President of the Bangladesh Atomic Energy Commission Engineering Association. (IPPS BAN:02/2)

Dr. Md Nazrul Islam Khan is now the General Secretary of both Bangladesh Physical Society and Bangladesh Electronic Society. The group contributes significantly in organizing the conferences of the Bangladesh Physical Society and Bangladesh Electronic Society. (IPPS BAN:02/2)

An open house to inspire students to pursue science and assists them in planning their future endeavors is the primary outreach activity of BAN:05, and it is attended by many high school and college students. At the most recent open house event Nanophysics group students and alumni were present at the lab to explain research activities to visitors. (IPPS BAN:05)

The group participateed in organizing the National Round of the Bangladesh Physics Olympiad.

(IPPS BAN:05)

#### **Burkina Faso**

Several RABIOTECH members in Burkina Faso have been involved for the FAO World Food Day (October 14) on the call to leave no one behind at this crucial time for global food security. (IPICS RABiotech)

RABIOTECH members in Burkina Faso have been involved in the elaboration of the strategic Plan of Nutrition in Burkina Faso at the request of the government, and they have also participated in the creation of National Association of Nutritionists of Burkina. (IPICS RABiotech)

Several members, including Prof. Mamoudou H. DICKO, Dr. Ella COMPAORE and Dr. Ousmane Ouedraogo were involved with the National Information Platform for Nutrition, <a href="http://www.nipn-nutrition-platforms.org/">http://www.nipn-nutrition-platforms.org/</a>. (IPICS RABiotech)

Two PhD defenses were reported in local media: Semporé Judith Nomwendé - <a href="https://lefaso.net/spip.php?article110016">https://lefaso.net/spip.php?article110016</a> Stéphanie C. W. Tiendrébéogo - <a href="https://lefaso.net/spip.php?article110486">https://lefaso.net/spip.php?article110486</a>

(IPICS RABiotech)

Prof. Hamidou TOURE was relected the Permanent Secretary of National Academy of Sciences, Arts and Letters of Burkina Faso in December 2022. (IPMS BURK:01)

Dr Bruno KORGO has been in contact with the international organization West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) and the group has received the visit of the Head of the Division of Energy and Green Hydrogen Technology of the German Ministry of Education and Research. (IPPS BUF:01)

#### Cambodia

There were two teacher trainings with totally 89 (32 women) chemistry teachers participated in the training, at Thbong Khmum province in July, 2022, and at Kampot province in November, 2022. Seven chemistry lessons and experimental topics were introduced to the participants:

- Safety in Laboratory and the basic uses of glassware
- Water Electrolysis (small scale)
- Electrolysis of CuSO4 (small scale)
- Titration weak acid and strong base (small scale)
- pH indicators( small scale)
- Decomposition of NaHCO3 by heating
- Soap preparation.

There were two Science Camps, in June, 2022, at Khbong Khmum province and another in October, 2022 in Kampong Thom, with totally 56 participants (40 students, 20 females)) from high schools of two provinces; 8 staffs and 8 assistances (8 females) to join the Camp Sciences. During the three-day science camp, the students learn about the following program:

- The Science's method to analyze the water;
- The chemical property of water;
- The method to collect the samples and measure the quality of water samples
- How to use the equipment to analyze the Chemical and Physical property of water;
- Application on using the equipment to analyze the Chemical and Physical property of water
- Analysis the sample and how to build the graphic and writing the report.

Students were divided in to group of five persons and go to collect the samples to analyze. After, they wrote the report and they've presented their experimental results to the science camp's committees.

Finally, they've got their participation certificates.

(IPICS CAB-CCS)

## **Ethiopa**

The Department of Mathematics at Addis Ababa University organized the first ever International Mathematics Olympiad for high school students in collaboration with Prof Paul Vaderlind from Stockholm University. The event was supported by World Bank by providing prizes to seven winners.

(IPMS AAU)

The group devised a short training program for promising high school students promoted to grade 12 from different public and private schools to attract them into science in general and physics in particular.

(IPPS ETH:01)

A group member, Prof. Lemi Demeyu, has been giving service for three years as an executive committee member of the Ethiopian Physical Society (EPS) and is involved in the preparation of the annual conference organized by EPS every four years. (IPPS ETH:01)

#### Kenya

The communities involved in production of herbal products were involved in a NAPRECA summer school to get information on some of procedures they can use in improving their products. (IPICS NAPRECA)

The group members participated in an outreach activity organized by their department, to a school in the outskirts of Nairobi in November and gave motivational talks and explained what physics and its various branches are, and career opportunities for students. (IPPS KEN:02)

Prof. Mwabora served as a member of the Board of Governors at the Coast Institute of Technology for three years since January 2020; as a Chairman of the Planning Estates and Infrastructure Committee; as a member of the Academic Research Innovation and Student Affairs Committee; as a member of the Audit and Risk Management Committee; he was elected to serve as Chairman of the Board of Directors in 2022; he was appointed External Examiner for PhD thesis at the Department of Physics, Makerere University, Uganda; he was a Coordinating Board Member of the Materials Science and Solar Energy Network for Eastern and Southern Africa (MSSEESA). (IPPS KEN:02)

Dr S M Waita serves as a committee member of a forum to deliberate on Enhancing Research and Development in Renewable Energy in Kenya, setting up an Energy Research Institute. (IPPS KEN:02)

Dr Waita is fine-tuning a policy draft with a gender perspective based on his experience as a trainer in the Solar Academy as well as an active installer of PV solar systems. (IPPS KEN:02)

#### Laos

The chemistry group collaborated with Department of Natural Resources and Environment Inspection, Ministry of Natural Resources and Environment for sampling site survey and data analysis on wastewater quality and current performance of decentralized wastewater treatment facilities in some cities in Vientiane, Luang Prabang and Khammuan provinces, under the project supporting fund from the Water Environment Partnership in Asia. (IPICS LAO:01)

Dr Sounthone Singsoupho was invited to present a Seminar at the Ministry of Energy and Mines, Laos, by the title: "Design and assessment of mining tail dam using geophysics techniques". (IPPS LAO:01)

#### Mali

The group has organized an awareness campaign at the Faculty of Science and Technique to promote physical science to bachelor students. (IPPS MAL:01)

#### Nepal

The group leader Dr. Shriram Sharma is the chairman of South Asian Lightning Network and is extensively involved in several activities pertinent to the protection against lightning and safety against electrical hazards in association with various organizations. (IPPS NEP:01)

About 10 national media interviews were done by Dr. Sharma to raise awareness on lightning hazards over the year. (IPPS NEP:01)

Dr. Sharma has been working with the Non-align Movement member countries Center for Science and Technology (NAM S & T Center) New Delhi for the promotion of science and technology in Nepal and other Developing nations. (IPPS NEP:01)

#### Rwanda

With the aim to encourage high school students to participate in the Rwanda Mathematics Competition, the Department of Mathematics at University of Rwanda visited Secondary Scools. (IPMS EAUMP)

The Department of Mathematics at UR organized a workshop in algebra for Secondary school teachers in Kigali on 4 November 2022. (IPMS EAUMP)

Members of the research groups took part in visits to STEM schools and organised stargazing sessions at the occasion of some sky events such as eclipses. (IPPS RWA:01)

Members of the research groups organized STEM teacher training workshops. In 2022, they trained about 20 teachers in Basic Astronomy for High schools. (IPPS RWA:01)

Members of the physics research groups write teaching materials related to Astrophysics and Space science. (IPPS RWA:01)

Mrs. Ange Cynthia Umuhire was one of the 2022 of L'Oreal-UNESCO Medal winner for Women in Science in Sub-Saharan Africa. (IPPS RWA:01)

#### **Tanzania**

The group held discussions at the National Environment Management Council (NEMC) concerning research and challenges of non-woven carrier bags. NEMC officers were made to have a better understanding of the concerns about the non-woven bags as well as were trained on how to conduct sampling.

(IPICS TAN:02)

The group exhibited an outreach project titled "Policy influence on banning of plastic bags and follow up on alternative carrier bags in Tanzania" at the 46<sup>th</sup> Dar es Salaam International Trade Fair (DITF) held at in

Dar es Salaam. Increased awareness to the stakeholders including government officials, politicians, researchers, regulatory agencies and established new collaborations. (IPICS TAN:02

The Mathematics Association of Tanzania (MAT) in collaboration with Department of Mathematics at University Dar es Salaam conducted an annual meeting in Morogoro, Tanzania from 29 August to 3 September, 2022. The total number of participants were 147, which is more than those attended in 2021. (IPMS EAUMP)

The Department of Mathematics at University of Dar es Salaam through the Eastern African Centre of Mathematics Research (EACMAR)-UDSM node, in collaboration with EAUMP, Sida mathematics and NORHED II – Mathematics of Sustainable Project organized two days' workshop on mathematics in industries and about 45 participates from different fields attended. In the workshop, several papers were presented. (IPMS EAUMP)

The group co-organized and took part as trainers and mentors in sessions of Training of Secondary School Physics Teachers, which took place twice in the year 2022 being the third year of the training program funded by the Institute of Physics. The aim of the training was to impart to teachers, student-centered interactive teaching methods using locally available resources. The overall goal is to improve students' understanding and enjoyment of physics and ultimately increase the number of students opting to take physics at higher levels. 11 schools with 23 physics teachers from public schools in Dar es Salaam have participated since year one (2020).

(IPPS TAN:01/2)
(IPPS MSSEESA)

#### Uganda

A memorandum of understanding between COMSTECH (the Ministerial Standing Committee on Scientific and Technological Cooperation of the OIC (Organization of Islamic Cooperation)) and NAPRECA was signed. (IPICS NAPRECA)

The communities involved in production of herbal productswere invited to participate in a one-day conference and to show case their products (IPICS NAPRECA)

The team engaged an art based NGO in trying to reach out especially the non-scientific community. The team also organized a science exhibition with the undergraduate students and invited the Minister for Science and Technology. The team has also continued to engage other NGO in sensitizing the public on environmental safety.

(IPICS UGA:01)

The group has initiated collaboration with the Green Economy media group focusing on issues of green chemistry, sustainable chemistry and environmental protection. The group members are offered airtime to disseminate research findings, give caution, guidance and views on trending environmental pollution and protection topics. Some of the segments on dissemination of our research outputs were recorded in our laboratory at Makerere and ISP was acknowledged for the support. The segments are aired on SMART 24 TV Channel 372 on DSTV, and Channel 394 on GoTV. (IPICS UGA:02)

Dr. Tebandeke is the chair of a multisectoral committee on sound management of chemicals and waste in Uganda, under the Ministry of Water and Environment. Dr Betty Naziriwo, the deputy project leader sits on the Mathematics Clinic, in Uganda which is aimed at promoting basic science teaching in secondary schools in Uganda. (IPICS UGA:02)

Through the Research and Innovation Fund of Makerere University, the group has organized several workshops for Mathematics teachers both at primary and secondary school levels. (IPMS EAALG)

Through the network's refresher courses in mathematics teachers across Uganda, teachers have been equipped with better methods of teaching of mathematics. (IPMS EAALG)

In a survey during the year 2021, the network realised among other things that secondary school mathematics teachers quit the teaching profession after a few of years of teaching. In a report, the network gave a recommendation that the salaries to be increased to ensure they do not quit teaching for greener pastures. We do not know whether our report to the Ministry of Education was the basis of the decision by government, but beginning July 2022 salaries of science teachers in secondary schools were enhanced. The profession is now attracting more people. (IPMS EAALG)

The Department of Mathematics continues to carry out its outreach activities via Uganda Mathematical Society. The activities include The Annual National Mathematics contest for Primary schools, Secondary schools, National Teachers' Colleges (NTCs) and Primary Teachers' Colleges (PTCs) and universities. This year the National Mathematics Contest for all these levels were conducted in April 2022 with a total number of 14,332 participants of which 8,033 were in the Primary School category, 3,977 in the O level category, 2,274 in the A level category 08 in Primary Teacher's College cateory and 40 at university level. Prizes were awarded to the best performers in each category in July 2022. A selection of five students in the Secondary school category participated in the 63<sup>rd</sup> international mathematical which took place in Oslo Norway in July 2022. (IPMS EAUMP)

The Department of Mathematics at Makerere University works close with its outreach arm: Uganda Mathematical Society to inform policy mainly on mathematics curriculum development.

(IPMS EAUMP)

Under the Research and Innovation Fund (RIF) projects at Makerere University, staff visited schools and communities as part of the research methodology. (IPMS EAUMP)

The Makerere University team visited two refugee camps in northern Uganda, namely 1) Pagirinya in Adjumani district that was visited in March 2022 together with two visiting students from Uppsala, Sweden, and 2) Bidibidi refugee camp in Yumbe district, where the viability of the usage of solar cookers in the camp was discussed. (IPPS UGA:01)



PAGIRINYA 16
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Figure 5. Visit to Bidibid refugee camp and Pagirinya refugee camp in March 2022.





Figure 6. Visit to Kaliro Technical School and trained both staff and students on the best practice in solar energy installation and maintenance. (IPPS UGA:01)

#### **Zambia**

Through a competition within University of Zambia, the Electrochemical Biosensor for Rapid Detection of Coronavirus Disease, developed by the group, was selected for participation at the International Trade Fair and the Lusaka Agricultural and Commercial show. Ms Lilia Mphosha is part of the University team from the School of Natural Sciences. (IPICS ZAM:01)

The group participated in the Energy Week the Ministry of Energy organized, and showcased the use of iron oxide nanoparticles to catalyze biomethane production. The project was presented by an undergraduate student Ms Sombo Mukwato. (IPICS ZAM:01)

Dr. Evelyn Funjika and Ms Lilia Mphosha represented the School of Natural Science STEM for girls' symposium promoting science education. (IPICS ZAM:01)

Dr. Onesmus Munyati was appointed a member of the Expert Group, for the Zambia UNCTAD Technology Assessment Project on Energy and Agriculture using Science, Technology and Innovation Catalyst under the Ministry of Technology and Science. (IPICS ZAM:01)

Members of the group participated in some statutory body committees such the Zambia Environmental Management Agency, Energy Regulation Board and the Zambia Bureau of Standards. (IPICS ZAM:01)

Dr. James Nyirenda chaired various technical committees for the statutory body, Zambia Environmental Management Agency (ZEMA) on the Minamata Convention as well as the establishment of Chemical Observatories (ChemObs). (IPICS ZAM:02)

Dr. James Nyirenda chaired the technical committee for the statutory body, Zambia Bureau of Standards (ZABS) Standard formulation of Tobacco-free Nicotine Pouches. (IPICS ZAM:02)

Dr. James Nyirenda was appointed to the Scientific Advisory Committee for the National Biosafety
Authority to offer guidance on molecular biology and biochemistry matters. (IPICS ZAM:02)

Two members of staff (Dr. M. Lombe and Dr. M. Kikonko) are part of the Committee of Experts at the Higher Education Authority involved in accrediting learning programmes in higher learning institutions in Zambia. (IPMS EAUMP)

One member (Dr M. Lombe) is part of the team of experts engaged by the Ministry of Education. Another member (Dr M. Kikonko) is part of the Editorial Board of the Journal of Natural and Applied Sciences (JONAS). (IPMS EAUMP)

One member (Dr T. Chowa) appeared before the National Assembly of Zambia, Committee on Delegated Affairs: The pension and insurance regulations bill N.A.B NO. 30, to give oral briefing on behalf of the University of Zambia Vice Chancellor (as delegated Expert) 1 December 2022. Another member (Dr. M. Kikonko) is a Board Member for the Papaya Kay Foundation (PKF), Zambia. (IPMS EAUMP)

In 2022 (6-7 October), ZAM:01 students visited Moyo Solar Mini-grid which supplies power to Moyo Rural Health Center and a few staff houses, as part of the field visits to some of the solar installations (off-grid, mini-grids, on-grid (grid-tied), solar hammer mills) usually organized for the students. The study visit focuses on the waste of power that occurs due to low demand. (IPPS ZAM:01)

## **Zimbabwe**

The research group was heavily involved in the Research, Innovation and Industrialisation Week that is organised annually by University of Zimbabwe in Harare. This is an opportunity to showcase the research activities to peers, the university community, and public and government officials. The Minster of Higher and Tertiary Education and government officials were among the visitots to the groups' stand. On the

last day of the week, also high school students would pass by and inquire about the work carried out in the laboratory. Some stakeholders have benefited in that they now see the importance of research in science because it produces tangible products. The recommendation from the public was that we need to move from prototypes to real industrialisation in which there is production of these goods at least to be in a university shop.

(IPICS ZIM:01)

Members of the group are key members of National Professional Societies that run from the Department of Biotechnology and Biochemistry, and are actively involved in organizing seminars and meetings for these societies. (IPICS ZIM:01)

The group organized a stakeholders' workshop for teachers and high school students in forms 3 and lower sixth. Eighty people attended the event. The research group shared information on the various pollutants emanating from anthropogenic actions that affect the aquatic and terrestrial environments. The participants were given activities which included discussion topics and group oral and dramatic presentations. The event provided the research group with a platform to provide awareness of various pollutants, their sources and their effects. It also provided the participants a forum to share information on ways to protect our environment from pollutants emanating from man's day-to-day activities.

(IPICS ZIM:02)

Dr. Basopo was invited to lecture at a Waterford residential community on "Pollutants emanating from human activities and the effects on the environment". One hundred women attended the event. The participants gained information on various chemicals associated with mining, farming, industrial and domestic activities, their effects and ways of protecting our environment. (IPICS ZIM:02)

## Appendix 2. ISP IN NUMBERS

## 2.1. Supported research groups

**Table 1.** Number of research groups supported in listed countries 2022, and the situation in the countries with regard to income level (World Bank fiscal year 2021),<sup>2</sup> developmental state (2021),<sup>3</sup> and fragility (2020).<sup>4</sup> Countries that score between 60.0 and 89.9 are classified in the **orange "Warning" category**; those scoring between 90.0 and 120.0 in the **red "Alert" category**. LDC = Least Developed Country. Bold annotations indicate a change of status compared to the previous year

Country	Chemistry IPICS	Mathematics IPMS	Physics IPPS	Total	World Bank Income Level	UN Develop- mental State	Fragile State Index Rating (0- 120)
Bangladesh <sup>5</sup>	2		4	6	Lower-middle	LDC	85.0
Bolivia	1			1	Lower-middle	Not a LDC	74.9
Burkina Faso	2		1	3	Low	LDC	87.1
Ethiopia	2	1	3	6	Low	LDC	99.0
Kenya			5	5	Lower-middle	Not a LDC	89.2
Laos <sup>6</sup>	2		1	3	Lower-middle	LDC	76.0
Mali			1	1	Low	LDC	96.6
Myanmar			2	2	Lower-middle	LDC	93.8
Nepal <sup>7</sup>			1	1	Lower-middle	LDC	82.2
Rwanda	1		1	2	Low	LDC	85.0
Tanzania	1		1	2	Lower-middle	Not a LDC	79.3
Uganda	2		2	4	Low	LDC	92.9
Zambia	2		1	3	Lower-middle	LDC	84.9
Zimbabwe	3		1	4	Lower-middle	Not a LDC	99.1
Total	18	1	24	43			

In **Bangladesh**, totally six research groups are supported. In chemistry one research group at Department (Dept) of Chemistry at University of Dhaka (IPICS BAN:04) had a final year of support in the field of environmental and food contamination chemistry, and support continued to one group at Dept of Chemistry, University of Rajshahi, in the field of safety of herbal medicines (IPICS BAN:05).

In physics four groups were supported. One is at Dept of Physics, Bangladesh University of Engineering and Technology (IPPS BAN:02/1), working with fundamental studies of magnetic materials, and one is at the Materials Science Division at the Atomic Energy Centre, Dhaka (IPPS BAN:02/2), implementing knowledge in nanomaterials and magnetism into new biomedical applications, such as cancer characterization and therapy. Support in medical physics was continued to a group at the Dept of Biomedical Physics & Technology (IPPS BAN:04), and to a group in the field of nanophysics at the Dept of Physics, both at University of Dhaka (IPPS BAN:05).

In **Bolivia**, support continued to a research group (IPICS BOL:01) in the field of chemical ecology, at University Mayor Real y Pontificia de San Francisco Xavier de Chuquisaca (USFX) in Sucre.

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<sup>&</sup>lt;sup>2</sup> https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups 2021-04-14

<sup>&</sup>lt;sup>3</sup> https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/ldclist.pdf 2021-04-14.

<sup>&</sup>lt;sup>4</sup> https://fragilestatesindex.org/ 2021-04-14.

<sup>&</sup>lt;sup>5</sup> UN General Assembly resolution A/RES/76/8 adopted on 24 November 2021, decided that Bangladesh, Laos and Nepal will graduate five years after the adoption of the resolution, i.e. on 24 November 2026. <sup>6</sup> Ibid.

<sup>7</sup> Ibid.

In **Burkina Faso**, two research groups at the Dept of Chemistry, University Joseph Ki-Zerbo, Ouagadougou, were supported, one in the field of natural products research (IPICS BUF:01) and one in the field of clay mineralogy (IPICS BUF:02). Support to Department of Physics at the same university was given in the area of energy effective buildings (IPPS BUF:01).

In **Ethiopia**, chemistry and physics support was provided to four research groups at Addis Ababa University (AAU), at the Depts of Chemistry and Physics, and at the Department of Pharmaceutical Chemistry and Pharmacognosy. Two were working on conducting polymers with photovoltaic applications (IPICS ETH:01 and IPPS ETH:01), and one in the field of seismology (IPPS ETH:02). The chemistry group IPICS ETH:01 is working also on electrochemical sensors. At the College of Health Sciences, support to a group working in the field of pharmacological chemistry (IPICS ETH:02) was continued. Support was also continued to the AAU Dept of Mathematics (IPMS AAU; formerly named IPMS ETH:01). The Physics program continued to support the newly started (in 2021) research group at Bahir Dar Univiersity (ETH:03) working in materials science, in particular for solar energy applications.

In **Kenya**, five physics research groups were supported. Four of these are at University of Nairobi (UoN), and one is at the University of Eldoret. They work in the fields of X-ray fluorescence (IPPS KEN:01/2), nanostructured solar cells (IPPS KEN:02), photovoltaics (IPPS KEN:03), applied laser physics (IPPS KEN:04), and seismology (IPPS KEN:05).

In **Laos**, three research groups were supported at the National University of Laos. Two are at the Dept of Chemistry, one in environmental chemistry (IPICS LAO:01), and one in natural products chemistry (IPICS LAO:04). At the Dept of Physics one group is supported in the field of geoscience (IPPS LAO:01). The support in Laos is partly using funding provided by Stockholm University (SU).

In **Mali**, a physics research group in the field of spectral imaging (IPPS MAL:01) was supported at the Dept of Physics at Université des Sciences, des Techniques et des Technologies de Bamako.

In **Myanmar**, at University of Mandalay, support was provided to one physic research group, working in the field of experimental and theoretical nuclear physics, and in solar energy materials (IPPS MYA:01). The group in University of Yangon (MYA:02) that got a pilot support in 2020 IPPS got a three-year grant in 2021. The group works in materials science at the Universities' Research Centre. The group in Mandalay has been badly affected by the political turmoil and all activites have been put on hold. The group in Yangon is better off and has been able to carry on.

In **Nepal**, ISP physics continued to support the Atmospheric and Material Science Research Group (AMSRG) working with lightning and with materials science research. The group is located at the Dept of Physics, Tribhuvan University.

In **Rwanda**, at University of Rwanda, support to a chemistry research group in the field of environmental chemistry (IPICS RWA:01), and a physics research group in the field of astrophysics and atmospheric physics (IPPS RWA:01), was continued.

In **Tanzania**, support was provided to two research groups at University of Dar es Salaam, one in environmental chemistry (IPICS TAN:02) and one in physics, in the field of materials science (IPPS TAN:01/2).

In **Uganda** support was continued to a research group in the field of materials science (IPPS UGA:01/1) at Makerere University, Kampala, and to a research group in astronomy and space science at the Mbarara University of Science and Technology, Mbarara (IPPS UGA:02). In chemistry, chemistry support was continued to two groups at Makerere University, conducting research in the field of environmental chemistry (IPICS UGA:01), and in the field of coordination chemistry (IPICS UGA:02).

In **Zambia**, at University of Zambia, a physics research group was supported in the field of materials science (IPPS ZAM:01), and two chemistry research groups, in the field of conducting polymers (IPICS ZAM:01) and in the field of natural products chemistry (IPICS ZAM:02), respectively.

In **Zimbabwe**, two chemistry research groups were supported at University of Zimbabwe, Harare. One was at the Department of Biochemistry, working in the field of biomolecular interactions (IPICS ZIM:01), and one at the Department of Chemistry, working in the field of environmental chemistry (IPICS ZIM:03). A third group, working in the field of biochemical toxicology (IPICS ZIM:02), was supported at the Department of Environmental Science and Health, at the National University of Science and Technology (NUST) in Bulawayo. In physics, support was provided to a research group at NUST in the field of geophysics and groundwater studies (IPPS ZIM:01).

## 2.2 Supported networks

In 2022, totally 20 scietific networks were supported [Table 2], eight in chemistry, seven in mathematics, and four in physics. In addition, a network formed 2018 to promote the participation of women in basic sciences was supported.

<b>Table 2</b> . Number of scientific networks supported by ISP, k	', by region.
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Region	Chemistry	Mathematics	Physics	Gender	Total
Africa	4	6	4	1	15
Asia	4	1			5
Total	8	7	4	1	20

#### Scientific networks in chemistry

ANCAP - African Network for the Chemical Analysis of Pesticides and Other Pollutants, aims to safeguard public health and the environment and ensure the safety of African agricultural and aquatic products. Nodes are located in Ethiopia, Kenya, Nigeria, Rwanda, Sudan, Tanzania, Uganda and Zimbabwe.

**ANEC - African Network of Electroanalytical Chemists,** has the objective to foster research activities in the field of electroanalytical chemistry, and to promote and encourage the use of electrochemical approaches in basic science and in environmental sciences and food security. Nodes are located in Burkina Faso, Cameroon, Ethiopia, Kenya, Morocco, Tunisia, Senegal and South Africa.

**ANFEC - Asian Network of Research on Food and Environment Contaminants** builds on the progress facilitated by the ISP support to environmental chemistry in the region, and to further develop the capacity for reliable trace analysis of pollutants. Nodes are located in Bangladesh, Cambodia and Laos.

**ANRAP - Asian Network of Research on Antidiabetic Plants**, with the objective to develop cooperation between scientists working in the field of antidiabetic plant research. Nodes are located in Bangladesh, the Philippines, India, Malaysia and Pakistan.

**CAB-CCS** – **Cambodian Chemical Society** has the goal to enhance chemistry education in high schools by training provincial teachers. It is an outreach link initiated by staff at the Royal Academy Cambodia and at the Dept. Chemistry, Royal University of Phnom Penh.

**NAPRECA - Natural Products Research Network for Eastern and Central Africa**, has the objective to initiate, develop and promote research in the area of natural products chemistry in Eastern and Central Africa. Nodes are located in Botswana, Cameroon, DR Congo, Egypt, Ethiopia, Kenya, Madagascar, Sudan, Rwanda, Tanzania, Uganda and Zimbabwe.

**NITUB - Network of Instrument Technical Personnel and User Scientists of Bangladesh** has the objective to improve the capabilities in handling, maintaining, troubleshooting and repairing scientific instruments in Bangladesh.

**RABiotech - West African Biotechnology Network** has the objective to ensure and reinforce research training in biotechnology, and to share research on local challenges. Nodes are located in Benin, Burkina Faso, Guinea, Ivory Coast, Kenya, Mali, Niger, Nigeria, Senegal, Togo and Tunisia.

#### Scientific networks in mathematics

Four research groups (APREA, CoRS, EAALG and PDEAPP) are presented below together with the previously supported networks. Although they are called "research groups" they fit better into "networks" in the sense that they all have members from a number of different African countries.

APREA - Applied Probability Reseach in Eastern Africa with the main objective to form a sustainable statistical research group whose focus is in solving health, economic and environmental issues using applied probability theories which eventually will contribute significantly towards poverty reduction. APREA has members from University of Nairobi, Kenyatta University, Technical University (Kenya), Makerere University, Kyambogo University (Uganda) and Eduardo Mondlane University (Mozambique). The main collaborating insitutions in Sweden are the Royal Institute of Technology and Linköping University.

**BURK:01 - PDE Modeling and Control** aiming at applications of mathematics, and strengthening other areas of mathematics. The cooperation is between University Joseph Ki-Zerbo (Burkina Faso), Gaston Berger University (Senegal), University of Nouakchott (Mauritania), University of Cocody-Abidjan (Ivory Coast), and Université des Sciences, des Techniques et des Technologies de Bamako (Mali).

CoRS - Combinatorial Research Studio, whose objective is to initiate and develop research in enumerative combinatorics in the region. The establishment of the group was initiated through the support of ISP and Sida bilateral research programmes. CoRS has members from Addis Ababa University (Ethiopia), University of Antananarivo (Madagascar), Makerere University and Mbarara University of Science and Technology (Uganda). The main collaborating institutions in Europe are Stckholm University (Sweden) and Université Paris Cité.

**EAALG** – The Eastern Africa Algebra Research Group, whose overall objective of EAALG is to build research and graduate training capacity in Algebra within the Eastern Africa region. This is done through offering scholarships to postgraduate students, organizing workshops and summer schools, facilitating research and also through collaborations among the member departments with other researchers from both the South and the North. EAALG has members from Addis Ababa University (Ethiopia), Makerere University (Uganda), University of Nairobi (Kenya), Khartoum University (Sudan), Eduardo Mondlane (Mozambique), University of Rwanda (Rwanda) and University of Zambia (Zambia).

**EAUMP - Eastern Africa Universities Mathematics Programme** with the main objectives to enhance postgraduate training in mathematics and build capacity for mathematics research in the participating universities. The network consists of the Depts. of Mathematics at Makerere University (Uganda), University of Rwanda (Rwanda), University of Dar es Salaam (Tanzania), University of Nairobi (Kenya), and University of Zambia (Zambia).

**PDEAPP - Partial Differential Equations and Applications** with the overall goal to strengthen the growth of partial differential equations and application in Africa through research and publication. The first strategic objective is to identify and formulate new research projects, to train research group members in research proposal grant writing. The second strategic objectives to achieve this goal is the support MSc and PhD students. The third strategic objective is research collaboration North- South and South-South through research visits. PDEAPP has members from University of Joseph Ki-Zerbo (Burkina Faso), Addis

Ababa University (Ethiopia), Eduardo Mondlane University (Mozambique), University of Rwanda (Rwanda), Busitema University (Uganda), Makerere University (Uganda) and University of Zambia (Zambia).

**SEAMaN** - South East Asian Mathematics Network, with the objective to strengthen the postgraduate education in mathematics at the three Departments of Mathematics, at the National University of Laos (Laos), Royal University of Phnom Penh (Cambodia) and the University of Mandalay (Myanmar). The network node in Myanmar has been badly affected by the political turmoil and all activities have been put on hold.

### Scientific networks in physics

**AFSIN - African Spectral Imaging Network** (AFR:03), with the objective to bring the research activity of the members to international standard in the field of spectroscopy and spectral imaging, with applications in medicine, environment and agriculture. Nodes in nodes in Burkina Faso, Cameroon, Ivory Coast, Ghana, Kenya, Mali, Senegal, Sri Lanka and Togo.

**EAARN - East Africa Astronomy Research Network** (AFR:05) is coordinated from Muni University in Arua, Uganda. Nodes are at Mbarara University of Science and Technology (MUST), Entoto Observatory at Addis Ababa (Ethiopia), and University of Rwanda (Rwanda). Students from the nodes participate in the MSc program at MUST.

**ESARSWG - Eastern and Southern African Regional Seismological Working Group** (AFR:01), with the objective to monitor seismic activities of the East Africa Rift System through the operation of seismic stations in nine countries and collectively analyse data. Nodes in Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe.

MSSEESA - Materials Science and Solar Energy Network for Eastern and Southern Africa (AFR:03), with the aim to use costly equipment in a more efficient way and to harmonize and strengthen the quality of physics education in the region with special focus on materials for Solar energy applications. Nodes in Kenya, Tanzania, Uganda and Zambia.

### Other scientific network

**EANWoBAS - Eastern Africa Network for Women in Basic Sciences,** consisting of of female researchers in mathematics and physicist from universities in Uganda, Kenya, Rwanda, Tanzania and Zambia. The network envisions to be leading in creating gender balanced gender representation in the basic sciences, on all levels from primary to tertiary education in East Africa.

 Table 3. Supported research groups and network coordinating nodes per university/institute.

Country	Institute/University	Chemistry	Math	Physics	Gender	Total
Bangladesh	Atomic Energy Centre Dhaka			BAN:02/2		1
Bangladesh	Bangladesh University of Engineering & Technology			BAN:02/1		1
Bangladesh	Bangladesh University of Health Sciences	ANRAP				1
Bangladesh	Rajshahi University	BAN:05				1
Bangladesh	University of Dhaka	BAN:04 NITUB		BAN:04 BAN:05		4
Bolivia	Royal and Pontifical Major University of Saint Francis Xavier of Chuquisaca	BOL:01				1
Burkina Faso	University Joseph Ki-Zerbo	BUF:01 BUF:02 ANEC RABiotech	BURK:01	BUF:01		6
Cambodia	Cambodian Chemical Society	CAB-CCS				1
Ethiopia	Addis Abeba University	ETH:01 ETH:02	AAU CoRS	ETH:03		5
Ivory Coast	National Polytechnic Institute			AFSIN		1
Kenya	University of Nairobi		APREA EAUMP	KEN:01/2 KEN:02 KEN:04 KEN:05		5
Kenya	University of Eldoret			KEN:03 MSSEESA		2
Laos	National University of Laos	LAO:01 LAO:03 ANFEC	SEAMaN	LAO:01		5
Mali	University of Sciences, Techniques and Technologies of Bamako			MAL:01		1
Myanmar	University of Mandalay			MYA:01		1
Myanmar	University of Yangon			MYA:02		1
Nepal	Tribhuvan University			NEP:01		1
Rwanda	University of Rwanda	RWA:01	PDEAPP	RWA:01		3
Tanzania	University of Dar es Salaam	ANCAP TAN:02		TAN:01/2		4
Uganda	Makerere University	UGA:01 UGA:02 NAPRECA	EAALG	UGA:01/1	EANWoBAS	6
Uganda	University of Mbarara			UGA:02		1
Uganda	Muni University			EAARN		1
Uganda	Uganda Geological Survey			EARSWG		1
Zambia	University of Zambia	ZAM:01 ZAM:02		ZAM:01		3
Zimbabwe	National University of Science & Technology	ZIM:02		ZIM:01		2
Zimbabwe	University of Zimbabwe	ZIM:01 ZIM:03				2
Total number	26 institutes/universities	26	8	26	1	56

## 2.3 Staff in supported activities

**Table 4.** Gender proportion of staff members/network member. The average values 2008-2013 and 2014-2019 are given, and the values in 2020, 2021 and 2022. Percent values are followed by the numbers of women (F) in relation to the total in each year category.

Indicator	2008-2013	2014-2019	2020	2021	2022
g) Gender	ISP total				
proportion of	18% F	23% F	22% F	20% F staff	22% F staff
staff. <sup>8</sup>			(214/978)	(191/968)	(217/981)
	Chemistry	Chemistry	Chemistry	IPICS	IPICS
	28%	29%	30%	31%	31%
			(94/313)	(80/261)	(98/312)
	Mathematics	Mathematics	Mathematics	IPMS	IPMS
	12%	19%	17%	14%	17%
			(58/332)	(57/407)	(59/356)
	Physics	Physics	Physics	IPPS	IPPS
	12%	18%	19%	18%	19%
			(62/271)	(54/300)	(60/313)

# 2.4 Students in supported activities

### PhD and MSC students

**Table 5.** Gender proportions and numbers of students. The yearly averages 2008-2013 and 2014-2019 are given, and the values for 2020, 2021 and 2022. Percent values are followed by the numbers of women (F) in relation to the total in each category.<sup>9</sup>

Indicator	2008-13	2014-19	2020	2021	2022
h1) Gender	ISP total				
proportion of	23% F PhD	27% F PhD	31% F PhD	27% F PhD	29% F PhD
all			(155/496)	(190/699)	(180/626)
postgraduate	27% F MSc	33% F MSc	43% F MSc	36% F MSc	29% F MSc
students.			(276/635)	(258/718)	(202/696)
students.	Chemistry	Chemistry	Chemistry	Chemistry	Chemistry
	34% F PhD	34% F PhD	40% F PhD	37% F PhD	35% F PhD
			(61/153)	(71/192)	(76/220)
	36% F MSc	41% F MSc	46% F MSc	48% F MSc	40% F MSc
			(77/169)	(106/220)	(115/290)
	Mathematics	Mathematics	Mathematics	Mathematics	Mathematics
	16% F PhD	21% F PhD	24% F PhD	15% F PhD	16% F PhD
			(38/160)	(30/186)	(28/175)
	19% F MSc	31% F MSc	47% F MSc	26% F MSc	24% F MSc
			(77/164)	(62/236)	(51/215)
	Physics	Physics	Physics	Physics	Physics
	16% F PhD	22% F PhD	31% F PhD	33% F PhD	32% F PhD
			(56/183)	(78/235)	(76/231)
	19% F MSc	27% F MSc	40% F MSc	34% F MSc	40% F MSc
			(122/302)	(90/262)	(114/285)

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<sup>&</sup>lt;sup>8</sup> Source: Condensed indicators (ISP work file based on partners' activity reports).

<sup>&</sup>lt;sup>9</sup> The gender distribution of both *reported* and *graduated* postgraduate students are based on "condensed indicators" for each year (based on data from activity reports, used as base for the annual reports). For the years 2014-2016, graduated and reported PhD students have been quality assured in detail, meaning that any duplicates and other inconsistencies in the reporting of graduates and students have been removed. The number of PhD students and the gender distribution might therefore differ from the numbers stated in the annual reports from these years.

**Table 6.** Proportion of female (F) students (%) of **all postgraduate students** in activities supported by ISP in 2022, by region.

Students and region	Total	% F
PhD students in Africa	557	25% F
PhD students in Asia	64	56% F
PhD students in Latin America	5	60% F
All PhD students	626	29% F

Master students in Africa	625	32% F
Master students in Asia	158	48% F
Master studentsin Latin America	11	73% F
All MSc, MPhil, Lic students	696	29%

### PhD and MSc graduations per ISP program and region

**Table 7.** Summary of chemistry (IPICS), mathematics (IPMS) and physics (IPPS) **PhD graduates 2022**. Sandwich type training (Sandw.) or Local training is indicated, and gender of graduates. (F = female; M = male).

		Africa			Asia		L	Latin America		Total				Total sum	% Female			
PhD	San	dw.	Lo	cal	San	dw.	Lo	cal	San	dw.	Lo	cal	San	dw.	Lo	cal		
	F	М	F	М	F	М	F	Μ	F	Μ	F	Μ	F	М	F	М		
IPICS	2	5	4	10	0	0	0	1	0	0	2	1	2	5	6	12	25	32
IPMS	0	4	5	27	0	0	0	0	0	0	0	0	0	4	5	27	36	14
IPPS	2	5	4	13	1	0	9	3	0	0	0	0	3	5	13	16	37	43
Tota/	4	14	13	50	1	0	9	4	0	0	2	1	5	14	24	55	98	30

**Table 8.** Summary of chemistry (IPICS), mathematics (IPMS) and physics (IPPS) **MSc, MPhil and Lic. graduates 2022**. Sandwich type training (Sandw.) or Local training is indicated, and gender of graduates. (F = female; M = male).

MSc,	Africa			Asia			Lati	Latin America			Total				Total aven	% Female		
MPhil	San	dw.	Lc	cal	Sand	W.	Lo	cal	Sand	lw.	Lo	cal	San	dw.	Lo	cal	Total sum	% remale
Lic	F	М	F	М	F	М	F	М	F	М	F	М	F	М	F	М		
IPICS	21	6	19	43	0	0	11	10	0	0	1	0	21	6	31	53	111	47
IPMS	0	0	14	41	0	0	0	0	0	0	0	0	0	0	14	41	55	25
IPPS	0	0	8	24	0	0	20	14	0	0	0	0	0	0	28	38	66	42
Total	21	6	41	108	0	0	31	24	0	0	1	0	21	6	73	132	232	41

**Table 9.** The average number of **PhD and MSc graduations** per year 2008-2013 and 2014-2019, and the yearly number in 2019, 2020, 2021 and 2022.

Indicator	2008-13	2019	2014-19	2020	2021	2022
q) Number of PhD graduations per year (% of women)	27 (17% F)	90 (40% F)	70 (29% F)	94 (35% F)	69 (29% F)	98 (30% F)
p) Number of MSc graduations per year (% of women)	103 (24% F)	240 (33% F)	201 (31% F)	234 (43% F)	215 (35% F)	232 (41% F)

## Retention of PhD students per ISP program

**Table 10. Retention of PhD students.** The yearly averages 2011-2013 and 2014-2019 are given, and the values for 2020, 2021 and 2022 percent values are followed by the numbers of women (F) in relation to the total in each category. Proportion of PhD students continuing 2022 of those reported active the year before. Is given in the last column.

		2021	2022
i) Proportion of PhD students continuing or graduating each year.  The figures in brackets are: (Proportion of PhD students continuing or graduating or (Proportion of PhD students continuing or graduating/PhD students reported active the year before)  Ii) Protal 92% (1599/1743) (1599/1743) F81% (198/121) (1200/1319)	ISP Total 92% (351/383) F 94% (106/113) M 91% (245/270) IPICS 94% (102/108) F 97% (38/39) M 93% (64/69) IPMS 87% (82/94) F 89% (17/21) M 89% (65/73) IPPS 92% (167/181) F 96% (51/53) M 91% (116/128)	ISP Total 88% (502/571) F 88% (149/169) M 88% (353/402) IPICS 86% (165/192) F 85% (60/71) M 87% (105/121) IPMS 88% (164/186) F 91% (31/34) M 88% (133/152) IPPS 90% (171/191) F 90% (57/63) M 89% (114/128)	ISP Total 89% (454/512) F 88% (133/151) M 89% (321/361) IPICS 95% (143/150) F 98% (50/51) M 94% (93/99) IPMS 81% (124/153) F 72% (21/29) M 83% (103/124) IPPS 89% (187/209) F 87% (62/71) M 91% (125/138)



Figure 7. Mary Taabu with members of Physics Department during her graduation in September, 2022 (IPPS KEN:02, IPPS KEN:04)

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 $<sup>^{10}</sup>$  Data for the past agreement period is available only for 2011-2013.

## 2.4.1 PhD graduations

The PhD graduations listed below are given country-wise. For each country, students reported by chemistry groups and networks (IPICS) are given first, followed by those reported for mathematics (IPMS) and physics (IPPS). The entries are given essentially as submitted to ISP. "Sandwich" theses are by students with intermittent visits to a collaborating supervisor in another country. (F = female; M= male).

Home country	ISP program	Group/ Network	Name	Title of thesis	Gender	Sandwich/ Local/FTA
Bangladesh	IPICS	BAN:04	Md. Shahed Reza	Investigation on Chemical Contaminants in Selected Food Stuff	М	Local
Bangladesh	IPPS	BAN:02/2	Abdul Kaiyum	Synthesis and Characterization of environment friendly multiferroic composite	М	Local
Bangladesh	IPPS	BAN:02/2	Md. Dulal Hossain	The effect of Gd and V doped on the structural, magnetic and electrical properties of Ni-Zn-Co ferrites	М	Local
Bangladesh	IPPS	BAN:02/2	Nusrat Jahan	Study of bulk and nano ferrites and the comparison of their magnetic and electrical properties	F	Local
Benin	IPICS	RABiotech	Victor NIKIEMA	Impact de l'alimentation familiale dans la récupération des enfants malnutris aigus sévères de 6-59 mois sous traitement des Aliments Thérapeutique Prêt-à l'Emploi au Burkina Faso	М	Sandwich
Bolivia	IPICS	BOL:01	Carolina Vilaseca	Genetic and chemical studies of different populations of the chagas vector in relation to infectivity and prevalence of Chagas disease	F	Local
Bolivia	IPICS	BOL:01	Jhean Carla Echalar	Differential susceptibilityto chagas disease of Guaraní nad Hispano- American populations in Bolivia: Chemical and Genetic basis	F	Local
Bolivia	IPICS	BOL:01	Maricruz Mojica	Repellent activity of essential oils from native plant species from Chuquisaca against Chagas disease vectors	F	Local
Bolivia	IPICS	BOL:01	Mario Castro	Social capital related with stress patterns in USFX students using chemical indicators	М	Local
Burkina Faso	IPICS	BUF:02	Issaka GARIKOE	Removal of bisphenol A through adsorption on organo-smectites	М	Local
Burkina Faso	IPICS	RABiotech	AKAKPO Agbémébia Yawovi	Bioactivité de l'huile essentielle de citronnelle (Cymbopogon citratus (DC) Stapf) et conservation des boissons locales: cas de la biostabilisation du lait de soja (Glycine max) et du lait de souchet (Cyperus esculentus) au Burkina Faso	М	Local
Burkina Faso	IPICS	RABiotech	COMPAORE-SEREME Diarra	Formulation de pains composites (blé-céréales locales) riches en fibres diététiques par l'utilisation de bactéries starters isolées de la technologie du "massa"	F	Local

Burkina Faso	IPICS	RABiotech	Judith SEMPORE	Valorisation des produits de l'anacardier par l'amélioration des systèmes de transformation et de gestion de la qualité pour un meilleur accès aux marchés	F	Local
Burkina Faso	IPICS	RABiotech	Mahamadi OUÉDRAOGO	Comparaison des teneurs en phytonutriments dans les variétés de Vigna radiata (Mung bean) produit dans les conditions agro-écologiques du Burkina Faso	М	Local
Burkina Faso	IPICS	RABiotech	Stéphanie TIENDREBEOGO	Optimisation des procédés de production, de la qualité hygiénique et sensorielle du Kilishi, des saucisses et des fonds de sauces	F	Local
Burkina Faso	IPMS	BURK:01	Abdoul Aziz Kalifa DIANDA	Contributions à l'étude de problèmes de type Kirchhoff et d'évolution dans des espaces discrets et de Banach	М	Local
Burkina Faso	IPMS	BURK:01	Boulaye YIRA	Sur des modèles de transports de sédiments et de polluants	М	Local
Burkina Faso	IPMS	BURK:01	Rabo Noufou	Êtudes Théoriques et numériques d'équations aux dérivées partielles fortement à puissances variables	М	Local
Burkina Faso	IPMS	BURK:01	Roland SILGA	Stabilisation frontière de quelques problèmes avec retard	М	Local
Burkina Faso	IPPS	BUF:01	DABILGOU Dieudonné	Energy optimization of plastic waste melting processes by Scheffler solar concentration	М	Local
Burkina Faso	IPPS	BUF:01	ILBOUDO W, Arsène	Formation of desert aerosols, study of the impact on the production efficiency of photovoltaic solar systems	М	Local
Burkina Faso	IPPS	BUF:01	KONATE Ramatou	Studies and improvement of the performance of polycrystalline silicon bifacial cells	F	Local
Burkina Faso	IPPS	BUF:01	LENGANI Abdel Kader	Design and energy optimization of a tuber cutter with integrated maintenance in cossette production	М	Local
Burkina Faso	IPPS	BUF:01	OUEADRAOGO Lareba Adelaide	Study of the thermal performance of a habitable cell built using a new insulating material: foamed concrete	F	Local
Burkina Faso	IPPS	BUF:01	OUEDRAOGO Salifou	Contribution to the study of air flow in natural convection in a solar chimney	М	Local
Burkina Faso	IPPS	BUF:01	SINON Souleymane	Experimental study and modeling of a convective dryer for fruits and vegetables	М	Local
Cameroon	IPICS	ANEC	Raïssa MASSAH TAGUEU	Development of amperometric sensors based on metal-organic frameworks (MIL-101(Cr) and NH2-MIL-101(Cr)): Application to the electroanalysis of some foods additives	F	Local
Cameroon	IPICS	ANEC	Rodrigue TCHOFFO	Matériaux composites obtenus par greffage de la β-cyclodextrine sur l'hydroxyapatite: caractérisation et application à l'électroanalyse du diquat et du plomb(II).	М	Local

Cameroon	IPICS	ANEC	Rolland TCHOUMENE DEDZO	Nouvelles kaolinites-nanohybrides obtenues par intercalation du méthyl viologène et de la 1,2,4-triazole dans la méthoxykaolinite: applications environnementales	M	Local
Cameroon	IPICS	ANEC	Vidal Delmas EBUNANG TABE	Composite materials from laponite clay mineral: Preparation, characterization and electroanalytical applications	М	Local
Cameroon	IPPS	AFR:04	Mimosette MAKEM	Authomatic Analysis of Leukocyte for Leukemia Diagnosis	F	Local
Cameroon	IPPS	AFR:04	Yepdia Lee Mariel HEUCHEUN	Experimental contibution study of a signal cryptography system: application to medical images	М	Local
Chad	IPMS	BURK:01	Djendodé MBAINADJI	Contributions à l'étude d'une classe d'équations intégrodifférentielles à retard en norme alpha en dimension finie et infinie: Aspects quantitatifs et qualitatifs	М	Local
Chad	IPMS	BURK:01	Yaya Youssouf Yaya	Sur les Systèmes d'Advection-Diffusion: Étude de Quelques Modèles de Populations de la Chaîne Trophique	М	Local
Ivory Coast	IPPS	AFR:04	Konan Didier YALE	Optical characterization of Mycobacterium ulcerans in the context of early diagnosis of Buruli ulcer	М	Local
Ethiopia	IPICS	ETH:01	Alemayehu Yifru	Removal of hexavalent chromium, lead and cadmium from wastewater by water hyacinth-based materials and electrochemical detection at polymer-modified electrodes	М	Local
Ethiopia	IPMS	AAU	Addis Belete	Hierarchical Multilevel Multi-leader Multi-follower Problem: Multi- parametric Solution Approach	М	Local
Ethiopia	IPMS	AAU	Fikre Bogale Petros	Edge Precoloring Extension of Trees and Cartesian Products of Graphs	М	Sandwich
Ethiopia	IPPS	ETH:01	Nika Bekri	Investigation of the Photophysics and degradation of isoindigo based copolymers	М	Local
India	IPPS	AFR:04	Bobby Bhatt	Nuclear Forensic Analysis via Machine Learning Laser Based Spectrometry and Spectral Imaging Based Spectrometry and Spectral Imaging	F	Local
Ivory Coast	IPICS	RABiotech	KOUAKOUA Yapi Elisée	Formulations de mélanges binaires d'extraits de pulpes de fruits désacidifiés à base de Saba senegalensis	F	Sandwich
Ivory Coast	IPICS	RABiotech	Yardjouma SILUE	Amélioration de la conservation au frais des mangues variété « Kent » de Côte d'Ivoire	М	Sandwich
Kenya	IPMS	APREA/ EAUMP UoN	Calvin Bitange Maina	Normal Weighted Inverse Gaussian Distributions and EM-Algorithm with Applications to Risk Measures and Dependence Modelling	М	Local
Kenya	IPMS	APREA/ EAUMP UoN	Cynthia Mwende Mwau	Phase Type Models Applied in Estimation of Aggregate Claim Losses of Secondary Cancer Cases	F	Local

Kenya	IPMS	APREA/ EAUMP UoN	Howard Omukami	Generalizations of Logistic Distribution	М	Local
Kenya	IPMS	APREA/ EAUMP UoN	Joab Onyango Odhiambo	Stochastic Modelling of Systematic Mortality Risk Under Collateral Data and its Applications	М	Local
Kenya	IPMS	APREA/ EAUMP UoN	Walter Omonywa Onchere	Shared Compound Frailty Model with Application in Joint Life Annuity Insurance	М	Local
Kenya	IPMS	EAUMP UoN	Elvice Omondi - not reported in 2021	Classification and Construction of Low-dimensional Hom-Lie Algebras and Ternary Hom.Nambu-Lie Algerbras	М	Sandwich
Kenya	IPPS	KEN:01/2	Anne W. Mutahi's - not reported in 2021	Indoor and Outdoor Air Quality Studies in Typical Informal and Rural Settlements in Kenya	F	Sandwich
Kenya	IPPS	AFR:04	John Irungu Githaiga	Novel Machine Learning Approaches to Cancer Diagnostics in Human Body Fluids and Tissue via Laser Raman Spectral Imaging and Analysis Techniques	М	Local
Kenya	IPPS	AFR:04/ KEN:02	Mary Taabu Simiyu	Application of magnetic field and exotic composite filter membrane in water purification and treatment	F	Local
Mali	IPMS	BURK:01	Cherif Mohamed Moctar TRAORE	Contributions to Gaussian invariance principles of triangular sequences of stationary and non-stationary, independent and non-independent, specially associated random variables, with a focus on random sums and related questions	М	Local
Mauritania	IPMS	BURK:01	Yahya Baba El Yekheir	Iterative methods for equations and systems of variational inequalities with nonlinear operators	М	Local
Myanmar	IPPS	MYA:01	Khaing Pwint Wai	Mean-Field Study of Triaxial Deformation in Medium-Mass Nuclei	F	Local
Myanmar	IPPS	MYA:01	May Zin Oo	Study on Pollution Monitoring parameters in Water Quality from Mandalay Area	F	Local
Myanmar	IPPS	MYA:01	Mi Mi Khin	Health Risk Assessment of Toxic Metals and Radioactive Materials in Environmental Samples (water and sediment) in Myintgne River Mandalay Regio	F	Local
Myanmar	IPPS	MYA:01	Mono Zaw	Electrochromic Switchability and Durability of Tungsten Trioxide Films for Smart Window Application	F	Local
Myanmar	IPPS	MYA:01	Nu Nu Aye	Theoretical Study on Charmonium Spectrum	F	Local
Myanmar	IPPS	MYA:01	Su Su Hlaing	Photocatalytic Performance and Electrochemical Stability of Nano- particulate Titanium Dioxide Coated With Silver Nanowires Network	F	Local

Myanmar	IPPS	MYA:01	Yin Min Thant	Theoretical Study on Bottomonium Spectrum and Radiative Transitions	F	Local
Myanmar	IPPS	MYA:02	Than Lwin	Structure, Surface M-orphology and Thermal Properties of LaBaSnO3 Perovskites with Various La-doping Concentrations	М	Local
Myanmar	IPPS	MYA:02	Zin Mar Aung	Characterization of Oridinary Portland Cement Composite by Adding Kaolinite Clay as Pozzolanic Material	F	Local
Myanmar	ISP	TICA	Ei Ei Phyo Myint	Surveillance on fish-borne parasites in second intermediate hosts from mekong region of Myanmar, north and northeast of Thailand	F	n/a
Myanmar	ISP	TICA	Thiri Yadanar Htun	AB initio calculations of light hypernuclei	F	Sandwich
Rwanda	IPICS	RWA:01	Daniel Umereweneza	Discovery of Secondary Metabolites from Rwandese medical plants: Isolation, Characerisation and Biological Activitiy	М	Sandwich
Rwanda	IPMS	EAUMP UR	Beatrice Byukusenge	Residual Analysis in the GMANOVA-MANOVA Model	F	Sandwich
Rwanda	IPMS	EAUMP UR	Jean Pierre Muhirwa	Numerical analysis of variable volume model for exothermic continuously stirred tank reactor	М	Sandwich
Rwanda	IPMS	EAUMP UR	Vincent Umutabazi	Smooth Schubert varieties and boolean complexes of involutions	М	Sandwich
Rwanda	IPPS	RWA:01	Alicreance Hiyaduduje	The effects of traveling ionospheric disturbances on SuperDARN near range echoes	М	sandwich
Rwanda	IPPS	RWA:01	MUSHINZIMANA Francois- Xavier	Linear and Nonlinear Waves in Multispecies Plasmas	М	Local
Saudi Arabia	ISP	ABU	Mohammed Albuhayri	Asymptotics of implied volatility in the Gatheral double stochastic volatility model	М	Sandwich
Senegal	IPICS	ANEC	BOIAN Malang	Electrochemical, physical and mechanical study of the effects of reinforcement corrosion on concrete steel performance	М	Local
Senegal	IPICS	ANEC	DIEYE El hadji	Synthesis of polypyrrole and polyaniline via ionic liquids: Application to the detection and removal of heavy metals Cu2+, Pb2+ and Cd2+ in aqueous solution by electrodialysis	М	Local
Senegal	IPICS	RABiotech	Alioune MARONE	Recherche et identification de germes pathogènes et matières particulaires responsables de maladies respiratoires dans les vents et poussières de la zone soudano[1]sahélienne (étude pilot	М	Sandwich
Senegal	IPICS	RABiotech	Awa Latyr SENE	Caracteristiques Ecologiques, Pontentialites Nutritionnelles et Socioeconomiques des Parcs A Sclerocarya Birrea (A. Rich) Hoscht. Au Ferlo (Nord Senegal)	F	Sandwich
Senegal	IPICS	RABiotech	FALOU DIACK	Les Ovins du Senegal: Systemes D'elevage, Caracterisations Morphobiometrique et Genetique	М	Sandwich

Senegal	IPMS	BURK:01	Mouhamadou Moustapha Gueye	Advances in iterative methods for solving nonlinear problems in classical Banach spaces	М	Local
Tanzania	IPMS	EAUMP UDSM	Akli Babi	Estimating the Rate of Convergence of Numerical Schemes for Stochastic Differential Equations with Irregular Coefficients.	М	Local
Tanzania	IPMS	EAUMP UDSM	Benito Mng'ong'o	Application of Multi-Criteria Decision Making Methods on the Choice of Crops for Small Scale Agro-processing: The Case of Njombe Region, Tanzania	М	Local
Tanzania	IPMS	EAUMP UDSM	Lucas Wangwe	Investigation of some fixed point Theorems for various types of mapping in Abstract spaces.	М	Local
Tanzania	IPMS	EAUMP UDSM	Mary C Swai	Modelling and Optimal Control of the Interventions on the Dynamics of Pneumonia Considering Drug Resistance and Saturated Treatment Function	F	Local
Tanzania	IPMS	EAUMP UDSM	Said S. Salim	Mathematical Modelling of the Dynamics of Prostate Cancer in the Presence of Vaccination and Immune Checkpoint Inhibitor	М	Local
Tanzania	IPMS	EAUMP UDSM	Uledi Ngullo	A lagrangian based Decomposition Methods for Combinatorial Optimization	М	Local
Tanzania	IPMS	EAUMP UDSM	Yustina Liana	Modelling the combined effects of treatment, public health education and tsetse fly control on the dynamics of African Trypanosomiasis	F	Local
Tanzania	IPPS	MSSEESA/TAN: 01/2	Emmanuel Rasiel Ollotu	Bifacial Kesterite Solar Cells Layers' Properties: Influence of Silver Layer and Rapid Thermal Processing	М	Local
Togo	IPPS	AFR:04	Kosi SESIME	Nanoformulations based on zinc oxide nanoparticles with phyto- compounds extracted from medicinal plants from Africa and India for biomedical applications	М	Local
Togo	IPPS	AFR:04	Kossivi Bienvenu Rodrigue AFOUDJI	Two-beam multiphoton microscopy for the study of quadratic properties of liquid media	М	Local
Uganda	IPMS	APREA/ EAUMP MAK	Joseph Okello Omwonylee	Limiting behaviours of the longest gaps between occurrence epochs in poisson processes	М	Sandwich
Uganda	IPMS	APREA/ EAUMP UoN	Rebecca Nalule Muhumuza	Hierarchical models and spatio-temporal processes in data analysis	F	Sandwich
Uganda	IPMS	EAUMP MAK	Annet Kyomuhangi	Reduced Modules Relative to Functors	F	Local
Uganda	IPMS	EAUMP MAK	Edson Mayanja	Mathematical Models for HIV-HCV Co-infection Dynamics under various Control Strategies	М	Local
Uganda	IPMS	EAUMP MAK	Felix Wamono	Small Area Estimation Using Repeated Surveys	М	Local
Uganda	IPMS	EAUMP MAK	Mary Nanfuka	The use of Splines for solving ill posed problems	F	Local

Uganda	IPMS	EAUMP MAK	Nathan Muyinda	Exploring the dynamics of ecological species in intransitive competition networks	М	Local
Uganda	IPMS	EAUMP MAK	Olivia Nabawanda	Flattened derangements, non-exceeding functions	F	Local
Uganda	IPMS	EAUMP MAK	Silas Kito Luliro	On the numerical range of linear relations and stability theorems	М	Local
Uganda	IPPS	MSSEESA/ UGA:01	John Paul Eneku	Optimization of the electrical resistivity of magnetron sputtered aluminium and boron co-doped Zinc Oxide thin films for solar cells	М	Sandwich
Uganda	IPPS	UGA:02	Faustine Abiriga	Assessing the impact of ionospheric plasma lenses on the performance of GNSS application in the East African region	М	Sandwich
Uganda	IPPS	UGA:02	Otto Trust	Origin of Chemical peculiarities in Am Stara	М	Sandwich
Uganda	IPPS	UGA:02	Silver Onyango	Evaluation of variation in Ambient particulate matter (PM10) at selected sites in Uganda: A case of Rudindi, Mbarara and Kyebando	М	Local

# 2.4.2 Other postgraduate theses

The MSc, MPhil and Lic graduations listed below are given country-wise. For each country, students reported by chemistry groups and networks (IPICS) are given first, followed by those reported for mathematics (IPMS) and physics (IPPS). The entries are given essentially as submitted to ISP. "Sandwich" theses are by students with intermittent visits to a collaborating supervisor in another country. (F = female; M= male).

Home country	ISP program	Group/ Network	Name	Title of thesis	Gend er	Sandwich / Local/FTA
Bangladesh	IPICS	ANRAP	Abdul Gaffer	Antidiabetic Properties and role of GLUT-4 gene Expression of Cinnamomum tamala and Rhus chinensis on nSTZ induced type-2 diabetic model Rats	М	Local
Bangladesh	IPICS	ANRAP	Chowdhury Tamanna Murtoza	Determination of Antioxidant & Antidiabetic Properties of Rhus chinensis & Cinnamomum tamala on n-STZ induced type-2 diabetic model rats	F	Local
Bangladesh	IPICS	ANRAP	Matiur Rahman Rana	Hypoglycemic activity of Zingiber Officinale ethanolic extract in insulin receptor on nSTZ-induced diabetic model rats	М	Local
Bangladesh	IPICS	BAN:04	Fajilatun Nesa	Study of Organochlorine Pesticides, fatty acid compositions and microbiological quality of some dry fish samples	F	Local
Bangladesh	IPICS	BAN:04	Fouzia Ahmed Anny	Chemical and biological activity studies of Moringa oleifera fruits	F	Local
Bangladesh	IPICS	BAN:04	Lutfun Nahar	Assessment of Water Quality Parameters, Pesticides and Microplastics in the Surface Water of Turag River	F	Local
Bangladesh	IPICS	BAN:04	Maruful Mostafa Saikat	Assessment of physicochemical properties and composition of coloured mango candy available in Bangladesh	М	Local

Bangladesh	IPICS	BAN:04	Mst. Ummay Salma	Comparison of Proximate Compositions and Antioxidant Activity of Some Popular Pulse Varieties of Bangladesh	F	Local
Bangladesh	IPICS	BAN:04	Raju Ahmed	Determination of Tetracyclines and Amoxicillin Antibiotics in Different Feed Samples by High Performance Liquid Chromatography	М	Local
Bangladesh	IPICS	BAN:04	Shahnaj Akter	Analysis of Carcinogens (Acrylamide and Potassium Bromate) in Baked Goods of Bangladesh	F	Local
Bangladesh	IPICS	BAN:04	Sharmin Shahjahan	Chemical and Biological activity studies of Averrhoa carambola	F	Local
Bangladesh	IPICS	BAN:04	Supath Xavier	Study of Food Contaminants (Acrylamide and PotassiumBromate) in Bakery Items of Bangladesh	М	Local
Bangladesh	IPICS	BAN:04	Thirthankar Biswas	Chemical and Biological Activity Studies of Cucumis melo L.	М	Local
Bangladesh	IPICS	BAN:05	Irin, Parvin	Studies of Preservatives used in Anti- Diabetic Herbal Drugs by Uv- Vis Specroscopy	F	Local
Bangladesh	IPICS	BAN:05	Kobory Roy	Phosphorous release kinetics of Vermicompost and Molasses Amended Soil	F	Local
Bangladesh	IPICS	BAN:05	Mahmuda, Kahtun	Determination of Microbial Load in some Energy Stimulating Herbal Drugs from Rajshahi City and Investigation the Association with pH	F	Local
Bangladesh	IPICS	BAN:05	Mahjabin, Sultana	Toxic Meta and Microbial Contaminant Assessment in Composite Plant Materials of AntiDiabetic Herbal Preparations MPhil	F	Local
Bangladesh	IPPS	BAN:02/1	Tanzina Tabassum	Investigation of the structural, electrical and magnetic properties of Mn doped AlFeO3	F	Local
Bangladesh	IPPS	BAN:02/2	Arnab Saha	Synthesis and characterization of Sr1-xCrxTi1-xFexO3	М	Local
Bangladesh	IPPS	BAN:02/2	Kazi Faiza Amin	Synthesis of novel magnetite nanoparticles with chitosan mesoporous silica coating for efficient removal of heavy metals from wastewater	F	Local
Bangladesh	IPPS	BAN:02/2	Md. Anik Hasan	Synthesis and characterization of Ba0.9Ca0.1Ti1-xFexO3	М	Local
Bangladesh	IPPS	BAN:02/2	Md. Kamal Uddin	Synthesis of excedingly small size magnetite nanoparticles for enhancement of MRI contrast agent	М	Local
Bangladesh	IPPS	BAN:02/2	Md. Sazzad Hossain Rifat	Enhancement of positive contrast of MRI by using MgFe2O4 magnetic nanoparticles	М	Local
Bangladesh	IPPS	BAN:02/2	Munira Dilshad	Microstructure property relationship of Dental Materials	F	Local
Bangladesh	IPPS	BAN:02/2	Premananda Das	Effectiveness of n-HAP in fracture healing in the living in vivo system	М	Local
Bangladesh	IPPS	BAN:02/2	Sadia Hossain	Study of Doxorobicin drug loading PEG coated nanoparticles	F	Local
Bangladesh	IPPS	BAN:02/2	Salma Akter Lema	Synthesis and char acterization of Ba0.9-xCa0.1TiO3	F	Local
Bangladesh	IPPS	BAN:02/2	Saurav Kumar Singha	Enhencement of shelf life of milk product by using Ag-Ti-Chitosan film	М	Local
Bangladesh	IPPS	BAN:02/2	Sharan Ahmed	Synthesis and characterization of Sr1-xZrx(Ti1-xCoy)O3	М	Local
Bangladesh	IPPS	BAN:02/2	Tamanna Hoque	Study of Doxorobicin drug loading dextran coated nanoparticles	F	Local
Bangladesh	IPPS	BAN:02/2	Thamina Rahman Taki	Synthesis and Characterization of superparamagnetic Fe3O4 nanoparticles	F	Local

Bangladesh	IPPS	BAN:02/2	Ummay Salma	Synthesis of Y doped BaFe12O19	F	Local
Bangladesh	IPPS	BAN:02/2	Zeban Rayhan	Synthesis of r-Go nanocomposites	Μ	Local
Bangladesh	IPPS	BAN:04	Adnan Mollic	Comparison of Machine Learning and Deep Learning Algorithms in Concentration and Relaxation Mood Classification From EEG	М	Local
Bangladesh	IPPS	BAN:04	Faisal Bin Kashem	Early Recognition and Progression Detection of Alzheimer's Disease by Classification of Neuroimaging Data Using Convolutional Neural Network	М	Local
Bangladesh	IPPS	BAN:04	Md. Shariful Islam	Investigation of Electrocardiac Changes During Healthy Aging	М	Local
Bangladesh	IPPS	BAN:04	Muntakim Mahmud Khan	Intracranial Hemorrhage Detection from CT Scans: An Automatic Segmentation Process Using Machine Learning	М	Local
Bangladesh	IPPS	BAN:04	Naima Nasrin Nisha	Transcranial Doppler Ultrasound Signal Classification by Deep Learning Neural Network	F	Local
Bangladesh	IPPS	BAN:04	Naima Sultana Alam Supti	Detection of Human Skin Tumors (Basal cell Carcinoma And Squamous Cell Carcinoma) using Millimeter wave Reflectometery- A Simulation Study	F	Local
Bangladesh	IPPS	BAN:04	Safia Aktar Dipa	Effects of Temperature on Electrical Impedance of Biological Tissues	F	Local
Bangladesh	IPPS	BAN:05	Iffat Zumarradah	Effect of Molar Mass of Polyethylene Glycol (PEG) on the Seed layer of ZnO Nanoparticles and Crystallinity of ZnO Nanorods	F	Local
Bangladesh	IPPS	BAN:05	Nishat Anjum	Study on the Structural, Microstructural, and Magnetic Properties of Bi2O3 Added Ni-Cd-Zn Ferrites	F	Local
Bangladesh	IPPS	BAN:05	Sadia Rahman Jhilik	Influence of Bi2O3 Addition on Structural, Magnetic, And Electrical Properties Of Li-Cu-Zn Ferrites	F	Local
Bangladesh	IPPS	BAN:05	Syeda Afrina Akram	Structural, Magnetic & Electrical Properties of MoO3 Added Li0.25 Cu0.15 Zn0.35Fe2.25O4 Ferrites	F	Local
Benin	IPICS	RABiotech	ATTAKOUI Jéhovania S.I. Ashley	Caractérisation et évaluation en bassin de la bioefficacité d'aliments fortifiés pour la nutrition du Clarias et du Tilapia	F	Sandwich
Benin	IPICS	RABiotech	Gracia Onésime Donadé TOGNON	Production d'une farine composite pour la préparation du « Amala », une pâte traditionnelle à base de farine de cossettes d'igname	F	Sandwich
Benin	IPICS	RABiotech	Kèmi Anaïce Carlson ODJO	Elaboration et évaluation d'un aliment à base de farine d'Hermetia illucens (mouches soldats noires) pour la nutrition des poissons au Bénin	F	Sandwich
Benin	IPICS	RABiotech	KOKOYE N. Charbel	Caracterisation Et Evaluation De La Bioefficacite En Etang D'aliments Fortifies Pour La Nutrition Du Tilapias Et Du Clarias	М	Sandwich
Benin	IPICS	RABiotech	OMIYALE B. Thomas d'Aquin	Caractérisation et valor isation de la drêche de brasserie stabilisée pour l'élaboration d'aliments destinés au poisson-chat (Clarias garie pinus)	М	Sandwich
Benin	IPICS	RABiotech	Onésime Sèdjro KOSSOUO	Développement et évaluation d'un dispositif de distribution de bière pression de sorgho	М	Sandwich
Benin	IPICS	RABiotech	Rosine Judith LAWSON	Evaluation de la filière des petits poissons fumés-séchés en vue de la valorisation des sous-produits au Bénin	F	Sandwich

Bolivia	IPICS	BOL:01	Luciana Escobar	Use and customs of stingless bees by the Guaraní and Quechua indigenoous groups in the chaco region of Bolivia. Licentiate	F	Local
Burkina Faso	IPICS	ANEC	Ali INAME	Nanoparticules fluorescentes de carbone (carbon quantum dots): synthèse, caractérisation et application potentielle	М	Local
Burkina Faso	IPICS	ANEC	Jean-Philippe Théodore SILGA	Elaboration de microcapteur électrochimique a base de polymère à empreinte moléculaire: application à la détection du 3-méthyl-4-nitrophénol	М	Local
Burkina Faso	IPICS	ANEC	SILGA Phillipe	Carbon quantum dots: Synthesis, characterization, and potential applications	М	
Burkina Faso	IPICS	BUF:01	Jonas Mano	Biopesticidal potentialities of Cassia nigricans	М	Local
Burkina Faso	IPICS	RABiotech	Adjaratou SOURATIE	Evaluation des propriétés nutritionnelles et antioxydantes des feuilles de Leptadenia hastata	F	Local
Burkina Faso	IPICS	RABiotech	AMADOU OUMAROU Moustapha	Évaluation de la réponse humanitaire apportée aux personnes déplacées internes: Site des personnes déplacées internes (PDIs) de Tadress (Niger)	М	Local
Burkina Faso	IPICS	RABiotech	COULIBALY Michel	Valorisation des agro-ressources: screening des souches microbiennes performantes et bioconversion des résidus de noix d'anacarde issus de transformation industrielle	М	Local
Burkina Faso	IPICS	RABiotech	DINDANE Zakaria	Activités antifongique, antiaflatoxinogène et Phytotoxique de formulations utilisées dans la conservation du maïs au Burkina Faso	М	Local
Burkina Faso	IPICS	RABiotech	GARANGO Salyou	Evaluation des paramètres physico-chimiques de quelques huiles alimentaires vendues dans les villes de Tenkodogo, Manga et Koupéla	М	Local
Burkina Faso	IPICS	RABiotech	ILLIASSOU TOULLE Hamza	Analyse des déterminants de la sous-nutrition chez les femmes en âge de procréer en milieu rural au Niger et modélisation des interventions pour y remédier: cas de guidan-sori	Δ	Local
Burkina Faso	IPICS	RABiotech	KABORE Abdou	Procédés de traitement et qualité des peaux et queues de bovins destinées à la consommation humaine dans la ville de Ouagadougou	М	Local
Burkina Faso	IPICS	RABiotech	KABORE S. Roland	Effet des techniques culturales sur la qualité nutritionnelle du sorgho, de l'arachide et du niebe au Burkina Faso	М	Local
Burkina Faso	IPICS	RABiotech	KEITA Assétou	Evaluation des propriétés nutritionnelles et antioxydantes des arilles de Blighia sapida récoltés à Ouagadougou et Bobo-Dioulasso	F	Local
Burkina Faso	IPICS	RABiotech	KOLOGO Brehima	Caractérisation de la qualité physico-chimique et du profil en acide gras de quelques huiles alimentaires de friture à Ouagadougou	М	Local
Burkina Faso	IPICS	RABiotech	LALLOGO Seydou	Optimisation du procédé de production et de la qualité nutritionnelle, microbiologique, sensorielle du Kilishi.	М	Local
Burkina Faso	IPICS	RABiotech	OUARO Désiré	Evaluation de la qualité sanitaire du maïs vendu et consommé dans la ville de Ouagadougou: cas des aflatoxines.	М	Local
Burkina Faso	IPICS	RABiotech	OUEDRAOGO Salif Béchir	Evaluation de la qualité sanitaire et nutritionnelle des amandes de cajou vendues au Burkina Faso	М	Local

Burkina Faso	IPICS	RABiotech	OUEDRAOGO Somketta Emmanuel	Evaluation de la réponse au traitement en ambulatoire de la malnutrition aiguë sévère chez les enfants de 6 à 59 mois dans le District Sanitaire de Pama	М	Local
Burkina Faso	IPICS	RABiotech	OUEDRAOGO Sylvain	Estimation de l'insécurité alimentaire et nutritionnelle au Burkina Faso selon la méthodologie Cadre Harmonisé	М	Local
Burkina Faso	IPICS	RABiotech	PAGABELEM T. Mathieu	Evaluation des teneurs en Eléments Traces Métalliques (ETM) et en histamine dans la Boucle du Mouhoun	М	Local
Burkina Faso	IPICS	RABiotech	SAM Adissa 1ère Jumelle	Caractérisations physicochimiques et microbiologiques des nectars de fruits de Lannea microcarpa de différentes provenances du Burkina Faso	F	Local
Burkina Faso	IPICS	RABiotech	SANDWIDI Yolande	Evaluation des perceptions et de la consommation	F	Local
Burkina Faso	IPICS	RABiotech	SANFO Abdoul Rachid	Evaluation de la réponse humanitaire apportée aux personnes déplacées internes dans la commune de Nagréongo	М	Local
Burkina Faso	IPICS	RABiotech	SAWADOGO Abdoulaziz	Analyse des déterminants des cas d'abandons de la prise en charge de la malnutrition aiguë chez les enfants de moins de cinq ans dans la région de l'Est (Burkina Faso)	М	Local
Burkina Faso	IPICS	RABiotech	SAWADOGO Issifou	Etude de l'influence de l'activité physique et du régime alimentaire sur le statut anthropométrique, nutritionnel et clinique: cas de certains agents de l'Etat à Ouagadougou	М	Local
Burkina Faso	IPICS	RABiotech	SORGHO Wendkouni Mathias	Contrôle des BPH/BPF et de la qualité de la restauration collective selon la norme ISO/TS 22002-2: Cas de la restauration des sportifs professionnels de Ouagadougou	М	Local
Burkina Faso	IPICS	RABiotech	TAPSOBA Christelle Wendlamita	Pesanteurs socio-culturelles de la malnutrition aiguë au Burkina Faso: cas du centre hospitalier universitaire Yalgado Ouedraogo	F	Local
Burkina Faso	IPICS	RABiotech	TOURE KHALID Nasséra	Valorisation nutritionnelle des plantes potagères produites au Niger: modalité de production- vente et caractérisation biochimique de la légume-feuille Corchorus olitarius	F	Local
Burkina Faso	IPICS	RABiotech	TRAORE Lassina	Evaluation de l'efficacité des substances antifongiques de Bacillus spp. et de Lactobacillus spp. contre les souches aflatoxinogènes contaminant le maïs au Burkina Faso	М	Local
Burkina Faso	IPICS	RABiotech	YAMEOGO Jean	Analyse des déterminants des cas d'abandons de la prise en charge de la malnutrition aiguë chez les enfants de moins de cinq ans dans la région de l'EST (BURKINA FASO)	М	Local
Burkina Faso	IPICS	RABiotech	YEMBONNE Maïmouna	Evaluation des BPH/BPF et de la qualité microbiologique des brochettes de soja (glycine max) vendues dans la ville de Ouagadougou	F	Local
Burkina Faso	IPICS	RABiotech	ZONGO Antoinette	Potentialités nutritionnelles et activités antioxydantes de trois plantes consommées au Burkina Faso: cas de Cleome gynandra, Ipomea batatas et Cassia obtusifolia	М	Local

Burkina Faso	IPMS	BURK:01	Aicha Flora KARAMBIRI	Solution entropique et renormalisée d'un problème elliptique anisotropique non linéaire avec puissance variable. MPhil	F	
Burkina Faso	IPMS	BURK:01	Drissa KAMBELE	Modélisation mathématique et contrôle optimal	?	
Cameroon	IPICS	ANEC	Astrée Lottie DJUFFO YEMENE	Amperometric sensor based on metal-organic framework NH2-MIL-101(Cr) for the simultaneous detection of paracetamol, diclofenac and tartrazine	F	Local
Cameroon	IPICS	ANEC	Calice WABO Gildas	Development of an amperometric sensor based on the composite material of montmorillonite, Zn ions and phenylalanine (Zn <sup>2+</sup> -Mo,Phe) for the electroanalysis of acetaminophen in aqueous solution	М	Local
Cameroon	IPICS	ANEC	Corine MBIANDA M.	Electroanalysis of bisphenol a on a magadiite modified carbon paste electrode	F	Local
Cameroon	IPICS	ANEC	Fabiola DONTSI TONLEU	Study and monitoring of the click phenylurazole-tyrosine reaction by electrochemistry and mass spectrometry: Towards the functionalization of proteins and peptides	F	Local
Cameroon	IPICS	ANEC	FOTSING FONGANG WILLY	Elaboration d'une électrode de carbone vitreux modifiée par le trachyte de la localité de Ziver: Application à la détection du bleu de méthylène en solution aqueuse	М	Local
Cameroon	IPICS	ANEC	Joliot Perrin MBIAMY NGAMI	Synthèse et Caractérisation d'une base de Schiff: Application à l'inhibition de la corrosion de l'acier C35 en milieu HCl 1M	М	Local
Cameroon	IPICS	ANEC	Rossel LIENDJI WENDJI	Etude du comportement électrochimique du 2,2-diphenyl-1-picrylhydrazyl dans le méthanol en présence de quelques cations métalliques et acides	М	Local
Cameroon	IPICS	ANEC	SARRAH SONITA HANGA POUNGOUE	Etude de la stabilité du 2,2-diphényl-1-picrylhydrazyl en milieu aprotique en présence de cations métalliques (Cu²+, Zn²+ et Li+) et d'acides (HClO4 et HNO3)	F	Local
Cameroon	IPICS	ANEC	Shella Calmette AKENMO	Synthesis and electrochemical applications of zinc oxide nanoparticles using vermiculite (NPsZnO/Ver)	F	Local
Cameroon	IPPS	AFR:04	Aymar MBASSI	AI-based diagnosis of COVID-19 severity by image analysis	М	Local
Cameroon	IPPS	AFR:04	Calvine NANSEU	Computer-aided-diagnosis of malaria using blood smear image analysis	F	Local
Cameroon	IPPS	AFR:04	Cathérine EYOMAN	Developing a non-invasive diagnosis for Malaria	F	Local
Cameroon	IPPS	AFR:04	Linge MVELLE	Computerized diagnosis of Tuberculosis by image analysis	М	Local
Cameroon	IPPS	AFR:04	Stella GUEGUIMENE	Devoloping a telecardiology integrated tool	F	Local
Ethiopia	IPICS	ETH:02	Abebe Dagne	Antimicrobial Activity Of The Root Extract Of Carduus Leptacanthus And Its Major Constituent	М	Local
Ethiopia	IPICS	ETH:02	Esubalew Asres	Development and Validation of High-Performance Thin Layer Chromatography (HPTLC) Method for the Simultaneous Determination of Amoxicillin and Clavulanic Acid in Tablet Dosage Form	М	Local
Ethiopia	IPICS	ETH:02	Gizachew Kasahun	Antiprotozoal and Antimicrobial Activities of the Root Extracts of Silene macrosolen Steud. ex A.Rich	М	Local

Ethiopia	IPICS	ETH:02	Gudeta Uma	Determination of Antibiotic Residues (Tetracycline, Oxytetracycline, and Penicillin G) in Beef for public consumption at Dukem and Bishoftu Towns, Central Ethiopia	М	Local
Ethiopia	IPICS	ETH:02	Israel Mohammed	Nematicidal Activity of the 80% Methanol Extract and Major Compounds Isolated from the Unripe Fruits of Peponium vogelii (Hook. f.) Engl.	М	Local
Ethiopia	IPICS	ETH:02	Melese Legesse	Antimicrobial Activity of Semisynthetic Mannich Base Knipholone Analogs	М	Local
Ethiopia	IPICS	ETH:02	Miniyichil Chanie	Screening the Quality of Some Selected Parenteral Chemotherapeutic Drugs (Cisplatin, Oxaliplatin, Doxorubicin and Methotrexate) Available at University of Gondar Referral Hospital, North-west Ethiopia, Using Paper Analytical Device.	М	Local
Ethiopia	IPICS	ETH:02	Misganaw Gashaw	High Performance Thin layer Chromatography Method Development and Validation for Quantitative Determination of Tetracycline Hydrochloride in Tetracycline Hydrochloride Active Pharmaceutical Ingredient (API) and Its Dosage Forms	М	Local
Ethiopia	IPICS	ETH:02	Selamawit Yimer	Antitrypanosomal Activity of 80% Methanol Root Extract of Lobelia rhynchopetalum Hemsl. and It's Major Constituent against Trypanosoma congolense Field Isolate	F	Local
Ethiopia	IPICS	ETH:02	Shewaneh Ayele	Antimicrobial Activity of Anthrones from the Leaf Latex of Aloe pirottae A.  Berger against Selected Plant Pathogenic Bacteria and Fungi	М	Local
Ethiopia	IPICS	ETH:02	Yenewa Kerie	Analytical Method Development and Validation Based on Paper Analytical Device (Pad) For Adulteration Detection in Teff Injera (Ethiopian Flatbread)	М	Local
Ethiopia	IPMS	AAU	Gelila Dawit Chencha	Invertibility of boundary-domain integral operator for variable coefficient mixed BVP in 2D	F	Local
Ethiopia	IPMS	AAU	Kibru Ababu Agonafir	Setting Conditions for the Existence of Common Fixed Point of Generalized F-Contraction of Nonlinear Multivalued	М	Local
Ethiopia	IPMS	AAU	Mariam W ETAFERAHU FEKEDE	Wiener Index and It's Applications	F	Local
Ethiopia	IPPS	ETH:01	Nahom Kelemu	Forced translocation of a comb-like polymer through a nanopore	М	Local
Ethiopia	IPPS	ETH:03	Alemu Wassihun	Comparison of UV-B Distribution at Bahir Dar vs. Ras Dashen.	М	Local
Ethiopia	IPPS	ETH:03	Baweke Mekuriaw	Effect of Temperature on the Performance of Crystaline Silicon Solar Cell technology at Debre Markos	М	Local
Ethiopia	IPPS	ETH:03	Belayneh Demilie	UV-A Distribution in Bahir Dar City and at Ertale	М	Local
Ethiopia	IPPS	ETH:03	Getasil Chanie	Synthesis and characterization of bis-(1,3-benzenediol)bis-(2,2'-bipyridine)ruthenium(III) chloride and tannicacidruthenium(III) chloride complexes for dye sensitized solar cell and electro catalytic applications	М	Local
Ethiopia	IPPS	ETH:03	Mekdes Mengesha	Formation and stability of octadecylphosphonic acid monolayers on zinc oxide thin film	F	Local

Ethiopia	IPPS	ETH:03	Mezgebu Biresaw	Synthesisand Characterization of New Cobalt(II) Coordination Polymer Complex with 1,10-Phenanthroline and 4, 4'-Bipyridine for Electrochemical Applications	М	Local
Ethiopia	IPPS	ETH:03	Teshome Gosaye	Thermo-Luminesncefromamorphous Silicon Quantum Dots Using one Trap-One Recombination Center (Otor) and Interactive Multiple Trap (Imtrs) Model	М	Local
Ethiopia	IPPS	ETH:03	Yohannes Atalay	Effect of shape and size on the plasmon resonance peak of gold nanoparticles	М	Local
Ivory Coast	IPICS	RABiotech	ASSOGBA Nadjibath Modoukpe	Evaluation Des Methodes de Conservation des Fruits et Legumes Chez Les Detaillantes D'abobo: Cas De La Tomate (Solanum Lycopersicum) et De La Feuille D'epinard (Spinacia Oleracea)	F	Sandwich
Ivory Coast	IPICS	RABiotech	ASSOU Juliana	Evaluation Des Risques Professionnels Lies A L'environnement De Travail Du Personnel Du Departement Ncp Du Crd Nestle Abidjan Selon: Iso 45001 V 2018	F	Sandwich
Ivory Coast	IPICS	RABiotech	BOKA Ahoundjaut Ohono Bénédicte Carine	Plaidoyer pour la mise en place d'un programme d'Education Thérapeutique Nutritionnelle des patients présentant un syndrome coronarien à l'Institut de Cardiologie d' Abidjan (IC A)	F	Sandwich
Ivory Coast	IPICS	RABiotech	BROU AMENAN Tina Edwige	Mise en place d'une éducation thérapeutique et nutritionnelle chez les coronariens admis à l'Institut de Cardiologie d'Abidjan (ICA)	F	Sandwich
Ivory Coast	IPICS	RABiotech	Diarra Lydia Désirée	Evaluation De L'alimentation Et De La Qualite De Vie Des Personnes Agees De La Commune De Koumassi	F	Sandwich
Ivory Coast	IPICS	RABiotech	DIPE Aka Gnaba Rachel	Hyperuricémi e et risque cardiovasculaire: Cas des patient s suivis Au Centre Médical Edlona (CME) d'Abidjan	F	Sandwich
Ivory Coast	IPICS	RABiotech	GANAME Aminata	Evaluation Des Pratiques De L'assistance Nutritionnelle Chez Les Patients Adultes Admis Au Service De Reanimation Du Centre Hospitalier Et Universitaire De Angre	F	Sandwich
Ivory Coast	IPICS	RABiotech	GBACOU AFFIBA Charles- Marie Christelle	Evaluation De La Prise En Charge Nutritionnelle Du Nouveau-Ne Premature Au Centre Hospitalier Et Universitaire (Chu) De Treichville	F	Sandwich
Ivory Coast	IPICS	RABiotech	GUEI Hervé Tatiana	Évolution de la teneur en histamine du thon frais dans les process de transformation dans une industrie thonière	F	Sandwich
Ivory Coast	IPICS	RABiotech	MOBIOT AKA Christelle Desirée-Thérèse	Evaluation de l'efficacité du complément alimentaire « nutrifort » administré aux patients post opératoire suivis en chirurgie orthopedique et traumatologique au Centre Hospitalier Universitaire (CHU) de Angré	F	Sandwich
Kenya	IPMS	EAALG/ EAUMP UoN	Benson Kiplagat Kipng'ong'o	Geometry of Robotic kinematics	М	Local
Kenya	IPMS	EAUMP UoN	Abdulkarim Isse Ayuub	The Impact of Remittance on Economic Growth in Somalia	М	Local
Kenya	IPMS	EAUMP UoN	Augustine Wekesa Masinde	Properties of N-power Operators and Their Characterization	М	Local
Kenya	IPMS	EAUMP UoN	Beverlyne Jepchirchir	Analysis of Tumor Growth with Radiotherapy Treatment Using Mathematical Model	F	Local

Kenya	IPMS	EAUMP UoN	Calvince Odhiambo Ouma	Factors for the Prevalence of Active Tuberculosis in Nairobi, Binary Logistic Regression Model	М	Local
Kenya	IPMS	EAUMP UoN	Collins Kituyi Wangila	Comparison of Standard Kaplan Meier and Modified Weighted Kaplan Meier for Data with Heavy Censoring	М	Local
Kenya	IPMS	EAUMP UoN	Collins Lotuk Lomor	Modelling Determinants of Household Food Security in Six Rwandan Districts Optimizing Generalized Linear Model with Binomial Response and Link Logit	М	Local
Kenya	IPMS	EAUMP UoN	Cosmas Kibet Biwott	Application of Firth's Logistic Regression in Identifying Determinants of Actual Hiv Risk	М	Local
Kenya	IPMS	EAUMP UoN	Cosmus Emmanuel Mwangangi	Partial Differential Equations for Shallow Water Systems	М	Local
Kenya	IPMS	EAUMP UoN	Daniel Aggrey Osuka	Evaluation of Girl-centered Male Engagement Program in Kenyan Urban Slums in Nairobi	М	Local
Kenya	IPMS	EAUMP UoN	Elizabeth Wanja Gitau	Comparing Accelerated Failure Time and Cox Ph Models: a Study Case on Employee Attrition Data Set	F	Local
Kenya	IPMS	EAUMP UoN	Erick Wesonga	Statistical Modeling of Unemployment in Kenya Using Regression	М	Local
Kenya	IPMS	EAUMP UoN	Evans Akumu Omondi	Modeling the Impact of Covid-19 on the Us/kes Exchange Rate Volatility:  Application of the Garch and Egarch Models		Local
Kenya	IPMS	EAUMP UoN	Faith Kwamboka Okong'o	Modeling the Key Determinants of Household Ict Access and Usage in Kenya	F	Local
Kenya	IPMS	EAUMP UoN	Geoffrey Odhiambo Magak	Modeling the Dynamics of Covid-19 Infection Rates Among Patients with Other Chronic Illnesses.	М	Local
Kenya	IPMS	EAUMP UoN	George Markotuoro Awino	Bayesian Analysis of Epidemic Data Using Stochastic Models: Applications to Cholera in Kenya.	М	Local
Kenya	IPMS	EAUMP UoN	Ibrahim Abass Asha	Examining Factors That Are Associated with Financial Quality of Listed Commercial Banks in Kenya	F	Local
Kenya	IPMS	EAUMP UoN	Jane Ndinda Ndambuki	Model Reduction for Partial Differential Equations	F	Local
Kenya	IPMS	EAUMP UoN	Jared Odolloh Midega	Mathematical Modelling and Simulation on Traffic Flow Rate Using Fluid Flow Dynamics	М	Local
Kenya	IPMS	EAUMP UoN	Joan Muthoni Murage	Forecasting Pneumonia Mortality in Children Under 5yrs	М	Local
Kenya	IPMS	EAUMP UoN	John Njenga Keziah	Modelling Macroeconomic Determinant of Public Debt in Kenya	М	Local
Kenya	IPMS	EAUMP UoN	Kelvin Kiprono	A Study of W5-curvature Tensor in Kenmotsu Manifold and Other Related Manifolds	М	Local
Kenya	IPMS	EAUMP UoN	Kelvin Tumbuti Ndegwa	Factors Influencing Rural Households Food Insecurity: a Case Study of Borama District, Somaliland	М	Local
Kenya	IPMS	EAUMP UoN	Kevin Makori Anyona	Modellling Retention Rate of Students in Higher Lerarning Institutions Using Non Parametric Methods and Cox Proportional Model	М	Local
Kenya	IPMS	EAUMP UoN	Kipkoech Gilbert Ruttoh	Binary Logistic Regression to Model Determinants of Hei Seroconversion	М	Local

Kenya	IPMS	EAUMP UoN	Loice Akoth Owino	Association Between Gender Disparity in Contraceptive Use and and Effects on Family Planning	F	Local
Kenya	IPMS	EAUMP UoN	Mercy Wangari Kimani	Determinants of Financial Inclusion Among Sme's: case Study Kenya	М	Local
Kenya	IPMS	EAUMP UoN	Michael Mbaria Chege	Effect of Public Debt on Trade Deficits in Kenya Using an Autoregressive Distributed Lag Model	М	Local
Kenya	IPMS	EAUMP UoN	Moses Mugo Munene	Sentimental Analysis in Crime Detection: a Case Study of Kenya Law Enforcement Agencies	М	Local
Kenya	IPMS	EAUMP UoN	Naomi Wamboi Ng'ang'a	Modelling Factors Influencing Domestic Violence Against Women in Kenya	F	Local
Kenya	IPMS	EAUMP UoN	Peter Getanko Mokua	Enterprise Risk Management in Black Scholes Option Pricing Model Using Risk Hedging Techniques	М	Local
Kenya	IPMS	EAUMP UoN	Priscillah Angatia Shiroko	Expectation Maximum Algorithm for Gaussian Mixture Models	F	Local
Kenya	IPMS	EAUMP UoN	Reuben Kimutai Kipchumba	Bayesian Inference of the Weibull Pareto Distribution	М	Local
Kenya	IPMS	EAUMP UoN	S. Ochieng Omondi	Representation Theory and Symmetry	М	Local
Kenya	IPMS	EAUMP UoN	Sheila Awuor Onyango	Survival Analysis and Prevalence of Tuberculosis in Kenya	F	Local
Kenya	IPMS	EAUMP UoN	Stephen Otieno Ogutu	Application of Multi-state Models in the Determination of Contributions in Pension Plans	М	Local
Kenya	IPMS	EAUMP UoN	Titus Mutua Kioko	On Weibull Distribution and Its Generalisations With Application in Reliability Analysis	М	Local
Kenya	IPMS	EAUMP UoN	William Mukere	Analysis of Covid 19 Impact on Health Insurance in Kenya	М	Local
Kenya	IPMS	EAUMP UoN	William Muregi Mwangi	On Decomposition of Operators in Hilbert Spaces	F	Local
Kenya	IPPS	AFR:04	Julius Musau Kiilu	Investigation of Mercury in Skin Lighteners Using Chemometric Assisted Energy Dispersive X-Ray Fluorescence Spectroscopy	М	Local
Kenya	IPPS	KEN:03	Milimo Amos Nalianya	Numerical study of lead free CsSn0. 5Ge0. 5I3 perovskite solar cell by SCAPS-1D	М	Local
Kenya	IPPS	KEN:01/2	Brian Tarus	Design of a radioisotope-Excited EDXRF System for Rare Earth Elements Analysis in Geological Samples	М	Local
Kenya	IPPS	KEN:01/2	Cleophas Nasio	Investigation of Natural Diatomite Sorption Properties for Application in Radioactive Waste Management	М	Local
Kenya	IPPS	KEN:01/2	Henry Mutinda	Design and Development of low cost Automated microcomputer based wireless gamma Column Scanner	М	Local
Kenya	IPPS	KEN:01/2	Jimmy Ndung'u	Investigation of Feed Dynamics Using the Radiotracer Residence Time Distribution Method and Metastable Techenetium-99: A Case Study of Clinker Milling at National Cement Company, Athi River	М	Local
Kenya	IPPS	KEN:01/2	Nancy Owili	Evaluation of trace elements' concentrations in nails of esophageal and stomach cancer patients as an early diagnostic screening tool	F	Local

Kenya	IPPS	KEN:01/2	Reuben Wachira	Assessment of non-ionizing radiation exposure levels in selected commercial and residential areas of Nairobi City	М	Local
Kenya	IPPS	KEN:01/2	Sally Njogu	Investigation of the Physical, Mineralogical, Chemical and Morphological Effects of an Optimized Thermal Enhancement Process on Gemstones using X-ray Diffraction and Raman Spectroscopy	F	Local
Kenya	IPPS	MSSEESA/ KEN:03	Nancy Obare	Structural, Optical and Electrical Characterization of CuSbS2 for Photovoltaic Application: An Experimental and Numerical Simulation Approach	F	Local
Kenya	IPPS	MSSEESA/ KEN:03	Perpetua Jelimo Chemaoi	Computation of The Properties of Tin Halide Perovskite For Photovoltaic Application In Solar Cell	F	Local
Laos	IPICS	LAO:04	Phetdavanh Huksasouk	Phytochemical constitution, total phenolic content, total flavonoid content and antioxidant in 15 Medicinal plants	М	Local
Laos	IPICS	LAO:04	Solivanh Sengchan	Phytochemical composition and antioxidant activity of Barleria prionitis L. of Lao PDR	М	Local
Myanmar	IPPS	MYA:01	Theint Nadi Naing	Entrance Channel Effects on the Compound Nucleus Formation Probabilities of Superheavy Elements Using FBD Model	F	Local
Myanmar	IPPS	MYA:02	Myat Nu Yin	Structural and Optical Characterization of Al and Ni Doped ZnO Nano-composite	F	Local
Nepal	IPICS	ANRAP	Dipesh Shrestha	Hypoglycemic activity of Rhus chinensis and Cinnamomum tamala on n-stz induced type -2 diabetic model rat	М	Local
Nepal	IPICS	ANRAP	Kamal Dhakal	Hypoglycemic activity of Rhus chinensis and Cinnamomum tamala on n-stz induced type -2 diabetic model rat	М	Local
Nepal	IPPS	NEP:01	Agrima N Shretha	New semiconductor materials for applications in electronics and optoelectronics	F	Local
Nepal	IPPS	NEP:01	Bhupal Poudyal	Preparation and characterization of Cu-doped ZnO based gas sensor	М	Local
Nepal	IPPS	NEP:01	Preeti Shah	Biosynthesis, characterization and antimicrobial efficacy of ZnO Nanopartcles using leaf extracts of Rudraksha, Elaeocarpus ganitrus, available in Nepal	F	Local
Nepal	IPPS	NEP:01	Rajesh Shretha	Study on ZnO based gas sensing mechanism at room temperature towards ethanol vapours	М	Local
Nepal	IPPS	NEP:01	Rasmita Timalsinha	Sensitivity measurement of ZnO NPs prepared with Ixora coccinae towards ammonia vapour Ammonia	F	Local
Niger	IPICS	RABiotech	Daouda Insa Bani	Evaluation de l'indice foliaire, accumulation de biomasse et rendement du mil cultivé en association avec le niébé	F	Sandwich
Niger	IPICS	RABiotech	SANI OUMAROU Almoctar	Perormances agronomiques de 22 variétés de Niébé pour la résistance au Striga gesnerioides	М	Sandwich
Niger	IPICS	RABiotech	SEINI ISSAK Harouna	Analyse génétique et sélection des accessions à hauts rendements de voandzou originaire de la région de Maradi/Niger	М	Sandwich
Niger	IPMS	BURK:01	Abdoulkarim Ousmane Yacouba	Hypersurfaces de type lumière d'une variété lorentzienne à courbure principales constantes le long de la distribution écran MPhil	М	

Niger	IPMS	BURK:01	Zakari Dan Azoumi Ali	Sous variété d'une variété pseudo-riemannienne dorée MPhil	M	
Nigeria	IPICS	RABiotech	Anyaduba, Augusta Ogechukwu	Characterization of microbial agents of African mango fruit rot and their impact on some chemical parameters of seed kernels	F	Sandwich
Nigeria	IPICS	RABiotech	ENE CHIDINMA PEACE	Comparative enzyme profiling of fermentation of african oil seed for production of seasoning agents	F	Sandwich
Nigeria	IPICS	RABiotech	Obelenwa, Ursula Chidimma	Development of Biofertilizers From Locally Isolated Rhizosphere Populations and Their Impacts on Local Test Crops	F	Sandwich
Nigeria	IPICS	RABiotech	Okereke Adaugo	Valorisation of garri process waste streams for animal feed use using Pleurotus Ostreatus spawn	М	Sandwich
Rwanda	IPICS	RWA:01	Audace Uwineza Muzirake	Heavy Metals removal from aqueous solutions by Sunflower seeds and imine- based ligands	М	Local
Rwanda	IPICS	RWA:01	Celestin Nsabimana	The use of solid and liquid wastes from dairies as an alternative fertilizer to the farmers in Rwanda. An environmental management perspective	М	Local
Rwanda	IPICS	RWA:01	Donat Murwanashayaka	Physical and biochemical analysis of natural organic fertilizer production through coffee wastes vermicomposting	М	Local
Rwanda	IPICS	RWA:01	Emmanuel Nkurunziza	Risk assessment of non controlled pesticides application by rwanda farmers in orange, tomato and cabbage	М	Local
Rwanda	IPICS	RWA:01	Ernest Tuyisenge	Evaluation of nutrients and pathogens removal in a full scale horizontal flow constructed wetland treating septic tank effluent	М	Local
Rwanda	IPICS	RWA:01	Frodouard Hitimana	Evaluation of organic matters and suspended solids removal in a full scale horizontal flow constructed wetland treating septic tank effluent	М	Local
Rwanda	IPICS	RWA:01	Jacques Munyegaju	Optimization of textile effluent treatment by bio-adsorbents: Application of surface response methodology	М	Local
Rwanda	IPICS	RWA:01	Martin Nyandwi	Environmental monitoring and risk assessment of pesticide residues in surface waters of Nyabarongo river	М	Local
Rwanda	IPICS	RWA:01	Placide Habimana	Inventory of pesticides used in Rwanda and contribution to the assessment of their possible negative impact on the environment	М	Local
Rwanda	IPICS	RWA:01	Valerien Mutambyi	Optimization of textile effluent treatment by electrocoagulation process: Application of surface response methodology	М	Local
Rwanda	IPICS	RWA:01	Vedaste Nyandwi	Removal of heavy metals from polluted water by hydroxylated natural products	М	Local
Senegal	IPICS	ANEC	DIAW Moustapha	Immobilization by nucleophilic substitution of silyl groups on a glassy carbon electrode	М	Local
Senegal	IPICS	ANEC	DIOUF Babacar	Analysis of soil pollution by lead in mechanical and road garages in Dakar	М	Local
Senegal	IPICS	ANEC	THIAM Pape Gamou	Investigation of hydro-alcoholic products available on the national market.	М	Local
Senegal	IPMS	BURK:01	Abass SOW	Inégalités de Carleman et applications à la contrôlabilité à zero MPhil	?	Local

Senegal	IPMS	BURK:01	Boulkhairy SY	Méthode de la sentinellepour quelques problémes d'identifications de données manquantes MPhil	?	Local
Senegal	IPMS	BURK:01	Chihoui Mmadi THOUWAIBA	Suppression de singularités dans un domaine polygonal non convexe MPhil	?	Local
Senegal	IPMS	BURK:01	Fam fall GUENE	Modélisation épidémiologique sur reseaux MPhil	?	Local
Senegal	IPMS	BURK:01	Kalidou Aliou Ball	Théorie ergodique et application en épidemiologie MPhil	?	Local
Senegal	IPMS	BURK:01	Léontine Ndogou Bakhoum	Modélisation du rôle de l'infection virale dans les efflorescences récurrentes du phytoplancton, African Institute for Mathematical Sciences (AIMS), Sénégal MPhil		Local
Senegal	IPMS	BURK:01	Sékou SYLLA	Contrôlabilité régionale de quelques systèmes distribués MPhil	F	Local
Senegal	IPMS	BURK:01	Yacine Mame Diarra Bousso DIOUF	Stabilité globale de quelques modèles épidémiologiques par l'approche des fonctions de Lyapunov MPhil		Local
Tanzania	IPMS	EAUMP UDSM	Adam Said Mgabe	An investigation on correspendence between some spaces and algebras		Local
Tanzania	IPMS	EAUMP UDSM	Ahmad Athuman	The use of Weather Research and Forecasting Model to Predict Severe Weather Events particularly Thurderstoms over Lake Victoria Basin in Tanzania		Local
Tanzania	IPMS	EAUMP UDSM	Almachius Rwejuna	An Investigation on Divided and Locally Divided Rings		Local
Tanzania	IPMS	EAUMP UDSM	Elias Ouko Aleaxander	An investigation sheaf cohomology and its application in analysis		Local
Tanzania	IPMS	EAUMP UDSM	Emanuel Kapinga	An Investigation on Some Fixed Points Theorem in Cone b-Metric Spaces		Local
Tanzania	IPMS	EAUMP UDSM	Johnson Nasson	The analysis of Non-Newtonian Blood flow through an Atherosclerotic Artery in the presence of body accerelation, heat source and Magnetic field	М	Local
Tanzania	IPMS	EAUMP UDSM	Jonasi S. Chilongola	An Investigation on Fixed-point Theorem in Quasi-Partial-B Metric Space	М	Local
Tanzania	IPMS	EAUMP UDSM	Masanja Ngukumbi	An Investigation on Interval Orders and Their Applications	М	Local
Tanzania	IPMS	EAUMP UDSM	Mohamed Hamis Mohamed	Evaluating Weather Research and Forecasting Model in Simulating Seasonal Rainfallin Tanzania: Implications of selecting Parameterization Schemes and Initialization Data	М	Local
Tanzania	IPMS	EAUMP UDSM	Nelson Stanley Buluba	No title	М	Local
Tanzania	IPMS	EAUMP UDSM	Pauline Shashi	An investigation on some fixed points theorem in cone metric space	М	Local
Tanzania	IPPS	MSSEESA/ TAN:01/2	Egidius Rutatizibwa Rwenyagila	Investigation of Synthesis Densification and Ferroelectric Prospects of Conventionally Sintered Li and Mg Doped ZnO Ceramics for Potential Applications as Ferroelectric Materials		Local
Tanzania	IPPS	MSSEESA/ TAN:01/2	Abdulmajid Talib Khatib	Design of a Dual Axis Solar Tracker Optimized for Dar es Salaam and its Influence on the Power Generated by PV Systems	М	Local
Tanzania	IPPS	MSSEESA/ TAN:01/2	Hidar Ussi Pandu	Effect of Locally Available Clay and Stones as Thermal Storage Materials on The Performance of Enhanced Solar Box Cooker	М	Local

Togo	IPICS	RABiotech	KABASSINA Essoyodou Marcelle	Evaluation Des Politiques Publiques Visant La Creation D'environnements Alimentaires Sains au Togo Avec L'outil Food-Epi	F	Sandwich
Togo	IPICS	RABiotech	KAKOU Essowoè Estelle	Evaluation Des Connaissances Sur Le Sel Iode Et Les Tdci Dans Les Prefectures D'amou Et De Wawa, 25 Ans Apres La Decision D'iodation Universelle Du Sel Au Togo	F	Sandwich
Togo	IPICS	RABiotech	PATALI Magnim	Amelioration De L'alimentation Par La Consommation Des Legumineuses A Kemerida Dans La Binah	F	Sandwich
Togo	IPPS	AFR:04	Kokou Jean Baptiste AMEWOTEPE	Multispectral fluorescence and reflectance imaging using AFSIN's LEGO system - Applications to plants	М	Local
Togo	IPPS	AFR:04	Essoham Sylvain ADEWI	Properties and potential applications of biosynthesized nanoparticles	М	Local
Togo	IPPS	AFR:04	Kossivi Anani DONKATA	New semiconductor materials for applications in electronics and optoelectronics	М	Local
Uganda	IPICS	UGA:01	Teddy Nagawa	The Occurrence of Selected Antibiotics in Fish and Benthic Invertebrates (Oligochaete) from Lake Victoria, Uganda	F	Local
Uganda	IPMS	EAUMP MAK	Herbert Batte	Solutions to a non-linear Pillai-type equation	М	Local
Uganda	IPPS	EAARN	Grace Katusiime	Determination of Atmospheric Parameters and Chemical abundance of B-A type Stars		Local
Uganda	IPPS	EAARN	Daniel Batya	Estimation of Astrophysical Stellar Parameters of Solar-like Oscillating Long Period Variables in the Large Magellanic Cloud	М	Local
Uganda	IPPS	MSSEESA/ UGA: 01	Denis Egesa	Energy yield of a hybrid diesel-PV grid connected system in Kalangala	М	Local
Uganda	IPPS	UGA:02	Geoffrey Cele	Instantaneous mapping of the ionospheric total electron content over the East African low latitude region	М	Local
Uganda	IPPS	UGA:02	Paschal Oleni	Determination of joint statistics of scintillation on multiple satellite links	М	Local
Zambia	IPICS	ZAM:01	Robert Singogo	Functionalized Fe3O4 nanoparticles for selective recognition of kappa-casein a breast cancer biomarker	М	Local
Zambia	IPICS	ZAM:02	Nakamwi Maliande	Formulation and Assessment of the Anti-inflammatory Effects of an Ointment Containing Ocimum americanum Crude Extract	F	Local
Zimbabwe	IPICS	ZIM:01	Gillian Gumimdoga	Development and Formulation of an Antifungal Remedy Based on Phytochemicals from Erythrina abysinnica	F	Local
Zimbabwe	IPICS	ZIM:01	Loice Nyamwanza	Antimicrobial potential of an herbal cream based on extracts from Combretum zeyheri	F	Local
Zimbabwe	IPICS	ZIM:02	Donald Ndebele	Assessing the impact of coal mining activities on soil and terrestrial organisms using the land snail Achatina fulica as a biondicator. MPhil	М	Local
Zimbabwe	IPICS	ZIM:02	Joanna B Change	The effect of coal mining activities on aquatic bodies, plants and the freshwater snail Helisoma duryi in Hwange, Zimbabwe. MPhil	F	Local

### 2.5 Publications

In the chemistry program, 46% of the 292 in scientific journals were in quality journals, which is lower than in 2021 (60%). Alarmingly, articles in journals by predatory publishers made up 18%, which is a substantial increase in comparison with earlier years, for example about 10% in 2021. In 2022, two networks in Africa reported the majority of the articles in journals by predatory publishers. The low incident, and mostly absence, in particular in research groups of articles in journals by predatory publishers indicates their awareness of the situation, possibly at least partly because of ISP's efforts to promote publications in quality journals. The African networks with a high incidence of articles in journals by predatory publishers, on the other hand, report papers by network members that are distant from ISP's influence, which may explain the disappointing outcome. It clearly demonstrates the need to better reach out to these networks, attempting to raise the participant's awareness of the importance to avoid publishing in journals by predatory publishers.

In the mathematics program, 50% of the 195 articles in scientific journals were in quality journals (72% in 2021), as defined above, and 13% were in predatory journals (7% in 2021). Most of the publications in predatory journals are by network nodes in East Africa.

In the physics program, of the 112 publications by the supported groups and networks, 74 (66%) were in quality journals and 12 (11%) in journals by predatory publishers. Also in the physics program, Africa is over-represented in the predatory statistics.

### **Acknowledgments**

In the chemistry program, ISP and/or Sida acknowledgement was given in 26% of the publications, compared to 31% in 2021.

In the mathematics program, ISP/Sida acknowledgement was given in 14% (15% in 2021) of the publications.

In the physics program, ISP/Sida acknowledgement was given in 66% of the all publications (63% in 2021).

A discussion of possible reasons for low rate of acknowledgement is given in the Annual Report 2022.

#### List of publications

Below, publications are detailed for each program, chemistry, mathematics and physics, and summarized in tables. The bibliographic data given is obtained directly from the reporting of the supported activities, with only minor editing.

- The code of the ISP supported activity that is reporting the publication is given before each entry.
- All publications reported to ISP are listed, independent of whether the scientific work has been directly supported by ISP funding or not.
- In cases where the Digital Object Identifier (DOI) code is given, information can be accessed by adding the code to the web address <a href="http://dx.doi.org/">http://dx.doi.org/</a>.

In all cases, each publication reported to ISP is never intentionally listed twice in the annual reports; if the electronic article is listed; the listing is not repeated when the printed version is published.

#### Scientific Quality Journals and Other Journals

The publications are sorted by scientific journal, and where available the *Journal Impact Factor (JIF) 2021 is given.* Journals listed with JIF are here considered to be "scientific quality journals".

From 2016, an additional quality measure is applied, comprising the ranking in the Norwegian Register for Scientific Journals, Series and Publishers, operated jointly between The National Board of Scholarly

Publishing (NPU) and Norwegian Directorate for Higher Education and Skills on behalf of The Norwegian Ministry of Education and Research. Where available, **the rank is given**. These numbers are counted for in the last column.

The Norwegian scale stretc.hes from 0–2. Journals ranked at 0 are not categorized as a scientific publication venue, those ranked at 1 being a scientific publication venue, and those at 2 being extra prestigious scientific publication venues.<sup>11</sup>

The data are based on search on journals' ISSN. Where no rank is given, the ISSN was not recognized in the database. Journals ranked 1 or 2 are here considered to be "scientific quality journals", while those ranked 0/- and those not listed as "other journals".

In this report, articles in journals listed in Web of Science with "Journal Impact Factor" (JIF) or ranked at 1 or 2 in the Norwegian Register for Scientific Journals, Series and Publishers are regarded as published in scientific quality journals. Articles in journals listed in Web of Science still without JIF are marked with an \*.

Journals marked in red occur on Cabells Blacklist, indicating a "predatory", non-scientific publication venue. 12

### 2.5.1 Chemistry publications

Table 11. Summary by region of publication data for the chemistry program in 2022. The number of publications (Publ.) in scientific journals is specified to those with and without Journal impact factors (JIF) and/or Norwegian Centre for Research Data (NCDR) ranking (see explanation in the first paragraphs of this appendix, and whether ISP funding was acknowledged.

Publication category	Africa		Asia		Latin	America	Total	
ISP acknowledged	yes	No	yes	no	yes	no	yes	no
Publ. in Scientif. Quality J. (TR or/and NCRD ranked)	41	87	2	0	3	0	46	87
Publ. in Other Scientific Journals ("unranked")	6	59	13	7	1	1	20	67
Publ. in Journals by "predatory publishers"	3	49	0	0	0	0	3	49
Books, Chapters, Popular Publ., Technical Reports, etc.	3	11	2	2	2	0	7	13
Total number of publications (yes/no)	53	206	17	9	6	1	76	216
Grand total	259		26		7		292	

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<sup>&</sup>lt;sup>11</sup> Norwegian Centre for Research Data; <a href="https://dbh.nsd.uib.no/publiseringskanaler/Forside">https://dbh.nsd.uib.no/publiseringskanaler/Forside</a>.

<sup>12</sup> https://www2.cabells.com/blacklist 2020-05-20.

Group/ Network	Journal	Author(s)	Title	DOI	WoS, 1 yr IF 2021	Norwegian Register
RABiotech	Acta Scientific Nutritional Health	Saber JEDIDI, Foued ALOUI, Houcine SELMI, Kais RTIBI, Houssem SAMMARI and Hichem SEBAI	Antibacterial Capacity and Inhibitory Effect of Rosemary (Rosmarinus officinalis L.) Essential Oils on Gastrointestinal Transit in Rats	10.31080/ASNH. 2022.07.1176		
ZIM:02	Advances in Biological Chemistry	R Ndlovu, N Basopo	Pesticide-Induced Alterations of Esterase and Antioxidant Enzymes of Aquatic Organisms Oreochromis mossambicus and Xenopus Iaevis.	doi.org/10.4236/ abc.2022.126023		
RABiotech	Advances in Infectious Diseases	Denise P. Ilboudo, W. W. Eudoxie Kévine Savadogo, Théodora M. Zohoncon, Estelle Savadogo, Yéri Esther Hien, Lassina Traore, Djéneba Ouermi, Wendkuuni Florencia Djigma, Christelle M. Nadembega, Marius Belemgnegre, Paul Ouedraogo, Mahamoudou Sanou, Damintoti SimpliceKarou, Yves Traore, Jacques Simpore	Hepatitis B and C Immunological and Molecular Parameter Analysis in HIV-Positive Patients Undergoing Antiretroviral Therapy at Saint Camille Hospital in Ouagadougou (HOSCO), Burkina Faso	doi.org/10.4236/ aid.2022.121002		
ZIM:01	Advances in Traditional Medicine	Machingauta A., Stevens MY, Fru CG., Sithole S, Yeboah S and Mukanganyana S.	Evaluation of the antiproliferative effect of 8-sitosterol isolated from Combretum platypetalum Welw. ex M.A. Lawson (Combretaceae) on Jurkat-T cells and protection by glutathione	doi.org/10.1007/ s13596-022- 00650-6		
ZIM:02	African Journal of Aquatic Science	Z Makuvara, J Marumure, L Chapungu, J Machingura, AH Siwela	Comparison of oxidative stress biomarkers in Oreochromis mossambicus in minimally and disturbed aquatic environments in Matabeleland Province	10.2989/160859 14.2022.2086846	1.577	1
ZIM:02	African Journal of Environmental Science and Technology	N Basopo, D Ndebele and Rumbidzai Trish Chitsa.	A comparison of selected heavy metals in soils mixed with domestic and industrial sludges and assessment of effects of the sludge pollutants on oxidative stress markers of the African kale (Brassica oleracea var acephala) grown using sewage sludge manure.	10.5897/AJEST20 22.3127		
RABiotech	African Journal of Food Science	Nafissatou DIOP NDIAYE, Adjaratou BASSE DIENG, Mor DIEYE and Mady CISSE	Microbial quality and visual appearance of traditional baobab fruit nectar during storage	doi.org/10.5897/ AJFS2022.2207		0

RABiotech	African Journal of Food, Agriculture, Nutrition and Development	Bougma S, Hama-Ba F, Garanet F and A Savadogo	Caractéristiques sociodémographiques des mères et pratiques d'alimentation de complément chez les enfants de 6 a 23 mois dans le centre-nord du Burkina Faso	doi.org/10.18697 /ajfand.115.2225 0	1
ANCAP	African Journal of Pure and Applied Chemistry	P Mukasa, J Wasswa, P Namuyomba and E Ntambi	Dichlorodiphenyltrichloroethane (DDT) and its metabolites in house dust, soil and selected food crops from indoor residual sprayed areas of Apac and Oyam Districts, Uganda	doi.org/10.5897/ AJPAC2022.0884	
ANCAP	American Journal of Analytical Chemistry	O Ahimbisibwe, D Byamugisha, P Mukasa, T Omara, E Ntambi	Leaching of Lead, Chromium and Copper into Drinks Placed in Plastic Cups at Different Conditions	10.4236/ajac.202 2.132002	0
RABiotech	American Journal of Food and Nutrition	SORO Lêniféré Chantal, GNANWA Mankambou Jacques, KOUADIO Kouakou Kouassi Armand, ANIN-ATCHIBRI ANIN LOUISE	Assessment of the Nutritional Status and Eating Habits of Pregnant Women in Rural Areas (Case of the City of Man)	doi.org/10.12691 /ajfn-10-2-3	
RABiotech	American Journal of Food Science and Technology	Alain Gustave Yaguibou, Souleymane Zio, Bakary Tarnagda, François Tapsoba, Fulbert Nikiema, Jean Paul Bakoué Karama, and Aly Savadogo	Toxicological and Physicochemical Quality in the Production Units of Dried Mangoes in Burkina Faso	doi.org/10.12691 /ajfst-10-3-3	0
RABiotech	American Journal of Food Science and Technology	Fidèle Wend-Bénédo TAPSOBA, Zoénabo DOUAMBA, Fabrice BATIONO, Diarra COMPAORE-SEREME, Thomas Jean NDIG- YENOUBA, Wendkuni Anne Christelle YAOGHO, Ndegwa Henri MAINA, Hagrétou SAWADOGO- LINGANI	Effects of Cereal Malts Used as Improver on Physico-chemical, Nutritional and Sensory Characteristics of Wheat and Red Sorghum Composites Breads	doi.org/10.12691 /ajfst-10-3-4	0
RABiotech	American Journal of Food Science and Technology	Yapi Elisée KOUAKOUA, Olivier Kouadio KOUADIO, Eliane Hadiowe GNAGNE, Aïssatou COULIBALY, Massogbè DIABATE, N'Guessan Georges AMANI	Effect of Different Fruit Blends on the Acidity of Saba senegalensis Pulp	doi.org/10.12691 /ajfst-10-3-6	0
RABiotech	American Journal of Microbiological Research	Priscillia Renée Nguimbi-Tsati, Christian Aimé Kayath, Nicaise Saturnin Mokemiabeka, Tarcis Baloki Ngoulou, Thantique Moutali Lingouangou, Yannich Okouakoua, Gabriel Ahombo	Production of Biosurfactants and Hydrolytic Enzymes by Bacillus-Genus Bacteria Isolated from Mbala Pinda, Traditional Food, Republic of Congo	doi.org/10.12691 /ajmr-10-3-1	0
RABiotech	American Journal of Plant Sciences	Adam Abdoulaye, Agossou D. P. Noumavo, Durand Dah-Nouvlessounon, Messan A. B. Ohin, Hasan Bayraktar, Farid T. Bade, Honoré S.	Purification of Moringa oleifera Leaves Protease by Three-Phase Partitioning and Investigation of Its Potential Antibacterial Activity	doi.org/10.4236/ ajps.2023.14100 5	0

		Bankole, Lamine Baba-Moussa, Farid Baba- Moussa				
RABiotech	American Journal of Plant Sciences	Winsou Irène, Anago Eugenie, Dah- Nouvlessounon Durand, Aclinou Eustache, Nounagnon Martial, Roko Gautier, Baba-Moussa Lamine	Phenolic Profile and Antioxidant, Anti- Inflammatory Activity of Annona senegalensis, Ipomoea batatas, Terminalia superba and Psidium guajava Linn Extracts Used in Benin	doi.org/10.4236/ ajps.2022.13908 8		0
ANCAP	Analytica Chimica Acta	H.F. El-Sharif, S. Patel, E.N. Ndunda, S.M. Reddy	Electrochemical detection of dioctyl phthalate using molecularly imprinted polymer modified screen-printed electrodes	10.1016/j.aca.20 22.339547	6.558	1
RABiotech	Animals	Salimata Pousga, Ulf Magnusson, Ismail Moumouni, Guiguigbaza-Kossigan Dayo, Assa Kante and Sofia Boqvist	Extension Services for Livestock Keepers in Low-Income Countries—A Low Priority?	doi.org/10.3390/ ani12060726	3.231	1
RABiotech	Annals of Microbiology	Dabiré Yérobessor, Somda Namwin Siourimè, Somda Marius K., Mogmenga Iliassoun, Traoeé Abdoulaye K, Ezeogu Lewis I., Traoré Alfred S., Ugwuanyi Jerry O., Dicko Mamoudou H.	Molecular indentification and safety assessment of Bacillus strains isolated from Burkina traditional condiment soumbala	10.1186/s13213- 022-01664-w	2-112	1
RABiotech	Annals of Plant Sciences	Andrée Emmanuelle Sika, Romuald Léonce Kadji, Didier Kra Kedjebo, Soumaïla Dabonné and Rose Koffi-Nevry	Antimicrobial Activities of Essential Oils from Safou (Dacryodes edulis) Grown in Côte d'Ivoire	http://dx.doi.org/ 10.21746/aps.20 22.11.3.9		
RABiotech	Annals Series on Biological Sciences	Ibrahim KABORE, Mamounata DIAO, Samson GUENNE, Amana METUOR-DABIRE, Hemayoro SAMA, Alin CIOBICA, Adama HILOU, Martin KIENDREBEOGO, Mamoudou H. DICKO	Phytochemistry and Alternative use of Sweeteners in Metabolic Diseases	doi.org/10.56082 /annalsarscibio.2 022.1.109		
ANEC	Applied Clay Science	Siegnin R, Dedzo GK, Ngameni E	Sulfonation of the interlayer surface of kaolinite.	doi.org/10.1016/j .clay.2022.10657 0	5.907	1
RABiotech	Applied Sciences	Fatouma Mohamed Abdoul-Latif, Abdirahman Elmi, Ali Merito, Moustapha Nour, Arnaud Risler, Ayoub Ainane, Jérôme Bignon and Tarik Ainane	Chemical Analysis of Essential Oils of Cymbopogon schoenanthus (L.) Spreng. and Nepeta azurea R.Br. ex Benth from Djbouti, In-Vitro Cytotoxicity against Cancer Cell Lines and Antibacterial Activities	doi.org/10.3390/ app12178699	2.838	1
ANEC	Archives of Agronomy and Soil Sciences	Gilles Pouangam Ngalani, Frank Dzemze Kagho, Nanseu Njiki Charles Peguy, Pascale Prudent, Jean Aubin Ondo and Emmanuel Ngameni	Effects of coffee husk and cocoa pods biochar on the chemical properties of an acid soil from West Cameroon	doi.org/10.1080/ 03650340.2022.2 033733	2.242	1

ANCAP	Asian Journal of Applied Chemistry Research	J Masereka, D Byamugisha, and C Adaku	Heavy Metal Accumulation in Vegetables Grown in Rock Soils of Kilembe Copper Mine, Kasese, Western Uganda	doi.org/10.9734/ ajacr/2022/v12i1 213		
RABiotech	Asian Journal of Biotechnology and Bioresource Technology	Konan Gbè Aya Jacqueline, Kouassi Kouakou Nestor, Yao Konan c, N'Dri Yao Denis and Amani N'Guessan Georges	Local Foods Based on Baobab Pulp (Adansonia digitata L.) Consumed in Savannah Areas of Northern Côte d'Ivoire	doi.org/10.9734/ AJB2T/2022/v8i4 30133		
RABiotech	BioMed Research International	Agossou D. P. Noumavo, Messan A. B. Ohin, Ibilola G. Fadipe, Bruno Hadji, Sébastien Ahouangansi, Yanik Y. Akin, Lamine Baba- Moussa, and Farid Baba-Moussa	Knowledge, Hygienic Practices, and Toxi- Infectious Risks Associated with Ready-to-Eat Gbeli: A Particular Chip Derived from Cassava (Manihot esculenta Crantz) Tuber Vended in Streets of Abomey-Calavi Municipality, Benin	doi.org/10.1155/ 2022/8399831	3.246	1
RABiotech	BioMed Research International	Roger Dakuyo, Kiessoun Konaté, Abdoudramane Sanou, Kabakdé Kaboré, Hemayoro Sama, David Bazié, Mamounata Diao, and Mamoudou Hama Dicko	Comparison of Proximate and Phytonutrient Compositions of Cashew Nuts and Apples from Different Geographical Areas of Burkina Faso	doi.org/10.1155/ 2022/1800091	3.246	1
RABiotech	Biotechnology Journal International	Kamirou Chabi-Sika, Haziz Sina, Bawa Boya, Ibrahima Mama-Sirou, Lucas Kpangon, Hafiz A. Salami, Aude Kelomey, Gautier Roko, Sylvestre A. Assogba, Marcel Y. Adoko and Lamine Baba- Moussa	Phytochemical Screening and Antimicrobial Activity of Sarcocephalus latifolius Smith Roots Extracts	doi.org/10.9734/ BJI/2022/v26i666 5		
ANCAP	BMC Chemistry	A Lakew, T Assefa, M Woldeyohannes, N Megersa & BS Chandravanshi	Development and validation of liquid chromatography method for simultaneous determination of multiclass seven antibiotic residues in chicken tissues	doi.org/10.1186/ s13065-022- 00797-y	4.095	
RABiotech	BMC Microbiology	Yérobessor Dabiré, Namwin Siourimè Somda, Marius K. Somda, Clarisse B. Compaoré, Iliassou Mogmenga, Lewis I. Ezeogu, Alfred S. Traoré, Jerry O. Ugwuanyi and Mamoudou H. Dicko	Assessment of probiotic and technological properties of Bacillus spp. isolated from Burkinabe Soumbala	doi.org/10.1186/ s12866-022- 02642-7	4.465	1
RABiotech	BMC Plant Biology	Hemayoro Sama, Dieudonné Kimbié Traoré, Samson Guenné, Adama Hilou and Mamoudou H. Dicko	Efect of pedo-climatic conditions on physicochemical characteristics and agro- industrial potential of three native oilseeds fruits from Burkina Faso	doi.org/10.1186/ s12870-022- 03713-7	5.265	2
RABiotech	BMC Public Health	Viny Andzi Elenga, Abel Lissom, Darrel Ornelle Assiana Elion, Jeannhey Christevy Vouvoungui, Jean Claude Djontu, Reauchelvy Kamal	Risk factors and prevalence of human African trypanosomiasis in individuals living in remote areas of the republic of Congo	doi.org/10.1186/ s12889-022- 14577-9	4.135	1

		Boumpoutou, Gabriel Ahombo and Francine Ntoumi				
ANCAP	Bulletin of the Chemical Society of Ethiopia	A Lakew, N Megersa, BS Chandravanshi	Trace level enrichment and clean-up of 6- lactam antibiotic residues in edible chicken tissues and feathers by solid phase extraction for quantitative determination utilizing liquid chromatography	dx.doi.org/10.43 14/bcse.v36i3.2	1.218	1
ETH:01	Bulletin of the Chemical Society of Ethiopia	A. Yifru, N. Mekonnen, S. Mehretie, S. Admassie	Polypyrrole—polyaniline-water hyacinth leaf protein concentrate composite for the removal of Cr(VI) from aqueous Solution: kinetics, isotherm and thermodynamic studies	10.4314/bcse.v3 6i3.7	1.218	1
ANCAP	Bulletin of the National Research Centre	AK Maiyo, JK Kibet, FO Kengara	Biocatalytic degradation of selected tobacco chemicals from mainstream cigarette smoke using Croton megalocarpus seed husk biochar	doi.org/10.1186/ s42269-022- 00715-1		
RABiotech	Bulletin of the National Research Centre	Ferdinand Adounkpe, Aimé Cézaire Ayena, Viridiane Aholoukpe, Victorien Dougnon, Jean-Robert Klotoe, Marc Medehouenou and Lamine Baba-Moussa	Use of the leaves of Alchornea cordifolia (Schumach. & Thonn.) Müll (Euphorbiaceae) and prospects for treatment of infections due to multidrug-resistant bacteria	doi.org/10.1186/ s42269-022- 00821-0		
ANCAP	Bulletin of the National Research Centre	P Kebirungi, A Nyombi, T Omara, C Adaku & E Ntambi	Oxytetracycline residues in bovine muscles, liver and kidney tissues from selected slaughter facilities in South Western Uganda	doi.org/10.1186/ s42269-022- 00702-6		
UGA:01	Carbohydrate Polymer Technologies and Applications	Ojok Walter, Emmanuel Ntambi, James Bolender, John Wasswa, William Wanasolo, Brenda Moodley	Synthesis and characterization of hematite biocomposite using cassava starch template for aqueous phase removal of fluoride	10.1016/j.carpta. 2022.100241		
RABiotech	Case Reports in Clinical Medicine	Doumbouya Idrissa, Touré Mohamed Lamine, Barry Djénabou Négué, Diawara Karinka, Traoré Mohamed, Cissé Fodé Abass	Intraventricular Hemorrhage, a Rare Complication of a Cerebral Tuberculoma: Study of a Case in the Neurology Department of the University Hospital of Conakry	doi.org/10.4236/ crcm.2023.12100 1		
ANEC	Chemistry Africa	Balla Fall, Cheikh Gaye, Matar Niang, Yakubu Adekunle Alli, Abdou Karim Diagne Diaw, Modou Fall, Sabu Thomas & Hyacinthe Randriamahazaka	Removal of Toxic Chromium Ions in Aqueous Medium Using a New Sorbent Based on rGO@CNT@Fe2O3	10.1007/s42250- 022-00499-x		

ANCAP	Chemistry Research Journal	AD Gosomji, R Sha'ato, QB Adebisi, G Nanbol	Evaluation of the Water Quality Status of Raw and Conventionally Treated Water from Three Sources in Plateau State Nigeria	n/a		
ANEC	Clays and Clay minerals	Nguelo BB, Nganji US, Yami YRK, Dedzo GK, Ngameni E	Electrochemical Study of Methoxykaolinite Interactions with Cations and Application to Trace-Level Detection of Pb(II) in Various Aqueous Media	doi.org/10.1007/ s42860-022- 00196-3	2.207	1
ANCAP	Cleaner Materials	SJ Kimosop, VA Okello, VO Shikuku, F Orata, ZM Getenga	Synthesis of mesoporous akaganeite functionalized maize cob biochar for adsorptive abatement of carbamazepine: Kinetics, isotherms, and thermodynamics	doi.org/10.1016/j .clema.2022.100 104		1
RWA:01	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Jiaxuan Chen, Ningzhao Shang, Xin Lan, Anaclet Nsabimana, Zhiwei Che, Yufan Zhang	Facile preparation of ternary heterostructured Au/polyoxometalate/nitrogen-doped hollow carbon sphere nanohybrids for the acetaminophen detection	doi.org/10.1016/j .colsurfa.2022.12 9029	5.518	1
RWA:01	Colloids and Surfaces A: Physicochemical and Engineering Aspects	Siying An, Ningzhao Shang, Jun Zhang, Anaclet Nsabimana, Ming Su, Shudong Zhang, Yufan Zhang	Fabrication of electrocatalytically active, cobalt-embedded nitrogen-doped ordered macroporous carbon for sensitive detection of nitrobenzene	doi.org/10.1016/j .colsurfa.2022.13 0078	5.518	1
ANCAP	Computational and Theoretical Chemistry	P Kirenga, SL Mkoma, S Mlowe, Y Msambwa, LW Kiruri, FR Jacob, JE Mgaya, GA Kinunda, G Deogratias	Influence of heteroatoms on the optoelectronic properties of triphenylamine-based dyes for DSSCs application: A computational approach	doi.org/10.1016/j .comptc.2022.11 3644	2.292	1
RWA:01	Computers Chemical Engineering	Noura Najid, Jean Nepo Hakizimana, Sanaa Kouzbour, Bouchaib G ourich, Alejandro Ruiz, García, Christophe Vial, Youssef Stiriba, RaphaeSemiat	Fouling control and modeling in reverse osmosis for seawater desalination: A review	doi.org/10.1016/j .compchemeng.2 022.107794	4.130	2
RABiotech	Critical Reviews in Food Science and Nutrition	Céline Termote, Nicanor Obiero Odongo, Bettina Staeubli Dreyer, Bénédicte Guissou, Charles Parkouda & Barbara Vincet	Nutrient composition of Parkia biglobosa pulp, raw and fermented seeds: a systematic review	doi.org/10.1080/ 10408398.2020.1 813072	11.208	1
RABiotech	Critical Reviews in Food Science and Nutrition	James Owusu-Kwarteng, Charles Parkouda, Gbenga Adedeji Adewumi, Labia Irène Ivette Ouoba & Lene Jespersen	Technologically relevant Bacillus species and microbial safety of West African traditional alkaline fermented seed condiments	doi.org/10.1080/ 10408398.2020.1 830026	11.208	1

ANCAP	Crops	A Mulatu, N Megersa, T Abena, S Kanagarajan, Q Liu, TA Tenkegna, RR Vetukuri	Biodiversity of the Genus Trichoderma in the Rhizosphere of Coffee (Coffea arabica) Plants in Ethiopia and Their Potential Use in Biocontrol of Coffee Wilt Disease	doi.org/10.3390/ crops2020010		
BAN:04	Current Research on Biosciences and Biotechnology	M N Islam, M Shoeb, N Nahar	Biological activity studies of the aerial parts of Phyllanthus niruri L.	10.5614/crbb.20 22.4.1/U7GMG5 6E		
BAN:04	Current Research on Biosciences and Biotechnology	M Shoeb, M M Islam, K T Tasnim, S Akter, M I R Mamun	Lipid content and fatty acid profile of commonly consumed freshwater and marine fish of Bangladesh	10.5614/crbb.20 22.4.1/J1LQ0XTP		
BAN:04	Current Research on Biosciences and Biotechnology	M Shoeb, M M Islam, K T Tasnim, S Akter, M I R Mamun	Lipid content and fatty acid profile of commonly consumed freshwater and marine fish of Bangladesh	10.5614/crbb.20 22.4.1/J1LQ0XTP		
BAN:04	Current Research on Biosciences and Biotechnology	M Shoeb, M M Islam, M S Reza, N Nahar, M M Islam	HPLC analysis of artificial preservatives, stimulants and sweeteners in carbonated beverages in Bangladesh	10.5614/crbb.20 22.3.2/2V2BWDB 5		
BAN:04	Current Research on Biosciences and Biotechnology	N Parvin, M Shoeb, N Nahar, R Islam	Investigation of tetracycline residues in poultry meat samples from Dhaka city by high-performance liquid chromatography	10.5614/crbb.20 22.3.2/P89JJ95N		
BAN:04	Current Research on Biosciences and Biotechnology	N Parvin, M Shoeb, N Nahar, R Islam	Investigation of tetracycline residues in poultry meat samples from Dhaka city by high-performance liquid chromatography	10.5614/crbb.20 22.3.2/P89JJ95N		
BAN:04	Current Research on Biosciences and Biotechnology	T Ahmed, R Islam, N Parvin, M Shoeb	Determination of age-dependent endogenous indole-3 acetic acid (IAA) level in different organs of tomato plants	10.5614/crbb.20 22.3.2/WFP0HM M1		
RABiotech	CyTA: Journal of Food	Kabakdé Kaboré, Kiéssoun Konaté, Roger Dakuyo, Abdoudramane Sanou, Hemayoro Sama, Balamoussa Santara & Mamoudou Hama Dicko	Evaluation of phytonutrients composition and nutraceutical potential of tomato byproducts	doi.org/10.1080/ 19476337.2022.2 148755	2.478	
ZAM:01	Desalination and Water Treatment	Kalaba, G., Nyirenda, J., & Munyati, O.	Characterisation of activated carbons for removal of organic and heavy metal pollutants from water in resource limited countries.	doi.org/10.5004/ dwt.2022.28531	1.273	1
BAN:04	Dhaka University Journal of	M M Rhaman, M Shoeb, M N Islam	Evaluation of Total Phenolic, Flavonoid Content and Antioxidant Capacity of Different Parts of Averrhoa carambola L.	10.3329/dujps.v2 1i2.63115		

	Pharmaceutical Science					
BAN:04	Dhaka University Journal of Science	S A Nishat, S X Besra, M Shoeb, A Sultana	Analysis of Fats and Fatty Acids in Several Bakery Cookies of Bangladesh	10.3329/dujs.v70 i2.62607		
BAN:04	Dhaka University Journal of Science	M R A Refat, M Shoeb, A Sultana	Proximate Analysis of Melon Seeds Available in Bangladesh	10.3329/dujs.v70 i1.60382		
BAN:04	Dhaka University Journal of Science	M R A Refat, P Nandi, M Shoeb, A Sultana	Composition of Energy Drink Samples in Bangladesh	10.3329/dujs.v70 i1.60380		
BAN:04	Dhaka University Journal of Science	M Shoeb, F Sharmin, M N Islam, L Nahar, R Islam, N Parvin	Assessment of Physico-Chemical Parameters of Water Samples Collected from the Southern Part of Bangladesh	10.3329/dujs.v70 i1.60381		
BAN:04	Dhaka University Journal of Science	MJ Dhuti, M Shoeb, H Afroz	Assessment of Nutritional Value of Limonia acidissima I. (Wood Apple)	10.3329/dujs.v70 i2.62606		
RABiotech	Discover Food	Oscar Zannou, Ifagbémi B. Chabi, Yénoukounmè E. Kpoclou, P. P. Kayodé, Adéchola Charis M. Galanakis, Serkan Selli	Traditional fermented foods of Benin Republic: microbiological safety and health benefts	doi.org/10.1007/ s44187-023- 00043-x		
RWA:01	Discovery Phytomedicine	Jean Ntaganda; Devotha, Mukandayisenga; Theodette, Mukeshimana; Bosco, Shimirwa Jean	Phytochemical Screening and in vitro Antimicrobial Activity of Lawsonia Inermis Barks	10.15562/phyto medicine.2022.1 88		
RABiotech	Dose-Response	Anouar Abidi, Jihen Dhaouafi, Chirine Brinsi, Haifa Tounsi, and Hichem Sebai	Tunisian Horehound (Marrubium vulgare) Aqueous Extract Improves Treatment of Bleomycin-Induced Lung Fibrosis in Rat	doi.org/10.1177/ 15593258221119 300	2.623	1
RABiotech	Dose-Response	Chaima Abidi, Kais Rtibi, Salima Boutahiri, Haifa Tounsi, Afifa Abdellaoui, Soumaya Wahabi, Bernard Gressier, Bruno Eto, and Hichem Sebai	Dose-dependent Action of Zingiber officinale on Colonic Dysmotility and Ex Vivo Spontaneous Intestinal Contraction Modulation	doi.org/10.1177/ 15593258221127 556	2.623	1
RABiotech	Dose-Response	Nadhem Aissani, Makrem Ghidaoui, and Hichem Sebai	Wool Wax Extraction from Washing Effluent and Effect on Olea europea Germination and Growth	doi.org/10.1177/ 15593258221121 202	2.623	1
RABiotech	Dose-Response	Saber Jedidi, Houcine Selmi, Foued Aloui, Kais Rtibi, Houcem Sammari, Chaabane Abbes, and Hichem Sebai	Antioxidant Properties, Phytoactive Compounds and Potential Protective Action of Salvia officinalis Flowers Against Combined Gastro-Intestinal Ulcer and Diarrhea Experimentally Induced in Rat	doi.org/10.1177/ 15593258221102 313	2.623	1

ANCAP	East African Journal of Science, Technology and Innovation	P Dzomba	Formulation and evaluation of a herbal shampoo using flavonoid glycosides from Dicerocaryum senecioides	eajsti.org/index.p hp/EAJSTI/article /view/463		
ANCAP	Environmental Advances	EC Ngeno, KE Mbuci, MC Necibi, VO Shikuku, C Olisah, R Ongulu, H Matovu, P Ssebugere, A Abushaban, M Sillanpää	Sustainable re-utilization of waste materials as adsorbents for water and wastewater treatment in Africa: Recent studies, research gaps, and way forward for emerging economies	doi.org/10.1016/j .envadv.2022.10 0282		1
ANCAP	Environmental Chemistry and Ecotoxicology	BM Muendo, VO Shikuku, ZM. Getenga, JO Lalah, SO Wandiga, GM Karau, M Rothballer	Enhanced hexazinone degradation by a Bacillus species and Staphylococcus species isolated from pineapple and sugarcane cultivated soils in Kenya	doi.org/10.1016/j .enceco.2022.02. 002		
ANCAP	Environmental Pollution	M Gu, W Fang, X Li, W Yang, MG Waigi, FO Kengara, SW, C Han, Y Zhang	Up-regulation of ribosomal and carbon metabolism proteins enhanced pyrene biodegradation in fulvic acid-induced biofilm system	doi.org/10.1016/j .envpol.2021.118 602	9.988	1
ANCAP	Environmental Science and Technology	Y Wang, L Xiang, F Wang, Z Wang, Y Bian, C Gu, X Wen, FO Kengara, A Schäffer, X Jiang, and B Xing	Positively Charged Microplastics Induce Strong Lettuce Stress Responses from Physiological, Transcriptomic, and Metabolomic Perspectives	10.1021/acs.est. 2c06054	11.357	2
ANCAP	Environmental Science: Processes & Impacts	M Nipen, SJ Jørgensen, P B-Nizzetto, K Borgå, K Breivik, AJ Mmochi, EB Mwakalapa, MI Quant, M Schlabach, RD. Vogt and F Wania	Mercury in air and soil on an urban-rural transect in East Africa	10.1039/D2EM00 040G	5.334	1
ANCAP	Environmental Toxicology and Chemistry	A Haarr, EB Mwakalapa, JL Lyche, AJ Mmochi, A Polder, A Ruus, K Borgå	Spatial Variation in Contaminant Occurrence in Marine Fishes and Prawns from Coastal Tanzania	doi.org/10.1002/ etc.5254	4.218	2
ETH:02	Ethiopian Pharmaceutical Journal	Yonathan Alebachew, Daniel Bisrat, Solomon Tadesse, Kaleab Asres	In Vivo Antimalarial Activity of the Hydroalcoholic Extract of the Rhizomes of Kniphofia insignis Rendle and Isolation of Knipholone	10.4314/epj.v37i 1.7		
BOL:01	European Journal of Investigation in Health, Psychology and Education	Castro M, Vargas Piérola P, Pinto CF & Alvarado R	Serial mediation model of social capital effects over academic stress in university students	doi.org/10.3390/ ejihpe12110115		1

RABiotech	European Journal of Medicinal Plants	Adam Abdoulaye, Agossou P. Noumavo, Nicéphore M. Glodjinon, Adolphe Adjanohoun, Lamine Baba-Moussa and Farid Baba-Moussa	Characteristics of Medicinal Plants used in Traditional Medicine for Oral Diseases Treatment in Southern Benin	doi.org/10.9734/ EJMP/2022/v33i9 30488		0
RABiotech	European Scientific Journal	Ouédraogo C., Guenné S., Somda M.B., Blanche M'Po S.M., Sidibe I., Sere I., & Roland Méda N.,	Perceptions sur les Conduites Dopantes dans le Sport dans la Ville de Bobo-Dioulasso (Burkina Faso)	doi.org/10.19044 /esj.2022.v18n3p 26		0
RABiotech	Evidence-Based Complementary and Alternative Medicine	Wendmintiri Jeanne d'Arc Kabre, Durand Dah- Nouvlessounon, Fatoumata/Ba Hama, N. Arnaud Kohonou, Haziz Sina, Maximin Senou, Lamine Baba-Moussa, and Aly Savadogo	Anti-Inflammatory and Anti-Colon Cancer Activities of Mung Bean Grown in Burkina Faso	doi.org/10.1155/ 2022/7873572	2.650	0
KEN:02	Fitoterapia	Carolyne Chepkirui, Catarina Bourgard, Pieter J Gilisen, Albert Ndakala, Solomon Derese, Yukino Gütlin, Máté Erdélyi, Abiy Yenesew	A new β-hydroxydihydrochalcone from Tephrosia uniflora, and the revision of three β-hydroxydihydrochalcones to flavanones	10.1016/j.fitote.2 022.105166	2.882	1
ANCAP	Food Additives & Contaminants: Part A. Chemistry, analysis, control, exposure & risk assessment	CK Simukoko, EB Mwakalapa, P Bwalya, K Muzandu, V Berg, S Mutoloki, A Polder & JL Lyche	Assessment of heavy metals in wild and farmed tilapia (Oreochromis niloticus) on Lake Kariba, Zambia: implications for human and fish health	doi.org/10.1080/ 19440049.2021.1 975830	3.549	1
RABiotech	Food and Nutrition Sciences	Ahmat Mahamat Assafi, Soudy Imar Djibrine, Ngomdé Djasnabaye, Nakour Nargaye, Baroua Abouna	Contribution to Knowledge of Food Formulation during Lean Periods in the Provinces of Wadi-Fira and West-Ennedi (Chad)	doi.org/10.4236/ fns.2022.138052		0
RABiotech	Food and Nutrition Sciences	Balde Samba, Ayessou Nicolas Cyrille, Khadim Niane, Bou Ndiaye, Mady Cisse, Codou Mar Diop	Impact of Extraction on Biochemical Properties and Antioxidant Potential of Momordica charantia L. Seeds' Oil	doi.org/10.4236/ fns.2022.132014		0
RABiotech	Food and Nutrition Sciences	Boampoundi Hélène Ouoba, Amana Metuor Dabire, Sidnooma Véronique Zongo, Hemayoro Sama, Samson Guenne, Renan Ernest Traore, Jacques Simpore	Evaluation of the Value Nutritious Leaves Five Varieties Taro (Colocasia esculenta) Cultivated in Burkina Faso	doi.org/10.4236/ fns.2022.131006 0		0
RABiotech	Food and Nutrition Sciences	David Bazié, Kiessoun Konaté, Dakuyo Roger, Kabakdé Kaboré, Abdoudramane Sanou, Hemayoro Sama, Mamoudou Hama Dicko	Physical and Phytochemical Properties of the Rind of Five Watermelon Cultivars	doi.org/10.4236/ fns.2022.131207 2		0
RABiotech	Food and Nutrition Sciences	Delvina Okondza Nohya, Imar Djibrine Soudy, Mahamat Assafi Ahmat, Al-Habo Sossal, Mandiguel Djimalbaye, Arsène Lenga	Anti-Obesity Effect of Boscia senegalensis in Rabbits	doi.org/10.4236/ fns.2022.136043		0

RABiotech	Food and Nutrition Sciences	Edouard Mbarick Ndiaye, Papa Guédel Faye, Alioune Sow, Khadim Niane, Seyni Ndiaye, Samba Baldé, Omar Ibn Khatab Cisse, Nicolas Cyrille Ayessou, Mady Cisse	Impact of Storage Conditions on the Physicochemical Characteristics of Baobab (Adansonia digitata L.) Seed Oil	doi.org/10.4236/ fns.2022.134028	n/a	0
RABiotech	Food and Nutrition Sciences	Fidèle Wend-Bénédo Tapsoba, Diarra Compaore-Sereme, Clarisse Sidbéwendé Compaore, Thomas Jean Ndig-Yenouba, Wendkuni Anne Christelle Yaogho, Ndegwa Henri Maina, Hagrétou Sawadogo-Lingani	Effects of Cereal Malts Used as Improver on Physico-Chemical, Nutritional and Sensory Characteristics of Wheat and Millet Composites Breads	doi.org/10.4236/ fns.2022.137049	n/a	0
RABiotech	Food and Nutrition Sciences	Mamadou Abdoulaye Konare, Cheickna Cisse, Nouhoum Diarra, Marius K. Somda, Mamadou Wele, Rokia Sanogo	Nutritional Composition of Four Underexploited Wild Fruits in Mali	doi.org/10.4236/ fns.2022.131004	n/a	0
RABiotech	Food and Nutrition Sciences	Ndiaye Seyni, Ndiaye Bou, Cissé Oumar Ibn Khatab, Cissé Mady, Gueye Mathieu, Qi Zhang, Ayessou Nicolas Cyrille Mensah	Quassia undulata Oil Exploitation: Extraction's Yield, Phytochemical Profile of Seeds and Oilcake Nutritional Value	doi.org/10.4236/ fns.2022.132013	n/a	0
RABiotech	Food and Nutrition Sciences	Paul Attien, Evelyne Toe, Kra Athanase Kouassi, Arthur Constant Zébré, Mamayé Neolly Gomé, Haziz Sina, Nanouman Marina Christelle Assohoun-Djeni, Arsene Konan, Ibourehema Coulibaly, Baba-Moussa Lamine, Adjehi Dadie	Evaluation of Health Risks Related to the Consumption of Fish from the Guéssabo River	doi.org/10.4236/ fns.2022.131006	n/a	0
RABiotech	Food and Nutrition Sciences	Sarr Médoune Gaye, Diouf Paul, Ayessou Nicolas Cyrille, Cissé Mady, Sakho Mama, Diop Codou Gueye Mar	Intake Nutritional Variabilities of Saba senegalensis Fruits	doi.org/10.4236/ fns.2022.131005 9	n/a	0
RABiotech	Food and Nutrition Sciences	Zoénabo Douamba, Abel Tankoano, Donatien Kaboré, Diarra Compaore-Sereme, Mahamoudou Ouédraogo, Pingdwindé Marie Judith Samadoulougou-Kafando, Adama Paré, Mamadou Hama Dicko, Hagrétou Sawadogo/Lingani	Microbiological Quality of Fresh and Grilled Mutton Sold in Ouagadougou, Burkina Faso	doi.org/10.4236/ fns.2022.131206 9	n/a	0
RABiotech	Food Science & Nutrition	Kabakdé Kaboré, Kiéssoun Konaté, Hemayoro Sama, Roger Dakuyo, Abdoudramane Sanou, David Bazié, Mamounata Diao, Mamoudou Hama Dicko	Evaluation of the physicochemical parameters of edible oils sold in the three cities of Burkina Faso	doi.org/10.1002/ fsn3.2819	3.553	1
RABiotech	Foods	Alioune Diop, Jean-Michel Méot, Mathieu Léchaudel, Frédéric Chiroleu, Nafissatou Diop Ndiaye, Christian Mertz, Mady Cissé, Marc Chillet	Impact of Special Drying Schemes on Color Stability of Mangoes with Different Maturity Degrees	doi.org/10.3390/ foods11050656	5.561	1

RABiotech	Foods	Mor Dieye, Nafissatou Diop Ndiaye, Joseph Bassama, Christian Mertz, Christophe Bugaud, Paterne Diatta and Mady Cissé	Storage Time as an Index for Varietal Prediction of Mango Ripening: A Systemic Approach Validated on Five Senegalese Varieties	doi.org/10.3390/ foods11233759	5.561	1
RABiotech	Forests	Robin Doucet, Gaël Bibang Bengono, Marius Ruwet, Isabelle Van De Vreken, Brieuc Lecart, Jean-Louis Doucet, Juan Antonio Fernandez Pierna, Philippe Lejeune, Benoit Jourez, Alain Souza and Aurore Richel	Highlighting a New Morphospecies within the Dialium Genus Using Leaves and Wood Traits	doi.org/10.3390/ f13081339	3.282	1
RABiotech	Frontiers in Plant Science	Dakuyo R, Konaté K, Bazié D, Sanou A, Kaboré K, Sama H, Santara B, Konkobo FA and Dicko MH	Correlating the morphology of Anacardium occidentale L. fruits from 30 orchards with their physicochemical and nutritional properties	doi.org/10.3389/ fpls.2022.103357 7	6.627	2
RABiotech	Genes	Zare Yacouba, Houaga Isidore, Kere Michel, Gnanda B. Isidore, Traore Boureima, Millogo Vinsoun, Konkobo Maurice, Bandaogo Ousseni, Zongo Moussa, Bougouma-Yameogo M. C. Valerie, Rekaya Romdhane and Nianogo A. Joseph	Genetic Diversity and Population Structure of Local Chicken Ecotypes in Burkina Faso Using Microsatellite Markers	doi.org/10.3390/ genes13091523	4.141	1
ANCAP	Green and Sustainable Chemistry	I Karume, S Tewolde, E Tebandeke, I Mukasa, and R Mbabazi	Efficiency of Crude α-Cyclodextrin in Gold Recovery from Electronic Waste and Soil	10.4236/gsc.202 2.123006		
RABiotech	GSC Advanced Research and Reviews	BAKARNGA-VIA Issakou, YANKA Pihouli Payang, DJEKOTA Christophe, HAMIT Mahamat Alio, BRAHIM Boy Otchom, MBAIGOLMEM Béral Valéry and ABDELSALAM Tidjani	Antidermatophyte activity of ethanolic extracts of Daniellia oliveri (Fabaceae) and Parinari curatellifolia (Chrysobalanaceae) in Chad	doi.org/10.30574 /gscarr.2022.13.2 .0299		
RABiotech	GSC Advanced Research and Reviews	TO Lou Tanan Géraldine M-L, KOUASSI Kouakou Nestor, ATSIN Guy Joël Olivier, N'GUETTA Adélaïde, AMANI N'Guessan Georges and KOUAMÉ Akissi Françoise	Influence of nitrogen-potassium fertilizers on plantain banana fruits physicochemical characteristics during ripening	doi.org/10.30574 /gscarr.2022.11.2 .0059		
RABiotech	Heliyon	Poussian Raymond Barry, Abdoudramane Sanou, Kiessoun Konat, Raïssa RR. Aworet- Samseny, Oksana Sytar, Mamoudou Hama Dicko	Toxicological profile, phytochemical analysis and antiinflammatory properties of leaves of Vitex doniana Sweet. (Verbenaceae)	doi.org/10.1016/j .heliyon.2022.e1 0080	3.776	1
ANEC	Indo American Journal of Pharmaceutical Sciences	Sawadogo Stanislas, Dabiré Anankpètinan Prosper, Somé Andouormwine Abel, Ganamé Têeda Hamidou, Karanga Yssouf	Phytochemistry and hypotensive effect of Jatropha curcas L (Euphorbiaceae) leaves aqueous extract	doi.org/10.5281/ zenodo.7495053		

ANCAP	Inorganica Chimica Acta	AK Wekesa, GS Nyamato, CO Kowenje, SO Ojwach	Coordination behavior and binding properties of 2,6-pyridinedimethanol with Cu(II), Zn(II), and Cd(II) cations	doi.org/10.1016/j .ica.2022.121042	3.118	1
RWA:01	Inorganica Chimica Acta	Janvier Mukiza, Henrik Braband, Robin Bolliger, Qaisar Nadeem, Gratien Habarurema, Jurdas Se zirahiga, Tite Uwambajineza, Thomas Fox, Olivie r Blacque, Roger Alberto	Complexes of orotic acid and derivatives with the fac- $[M(CO)3]+(M = Re \text{ and } 99Tc/99mTc)$ core as radiopharmaceutical probes	doi.org/10.1016/j .ica.2022.121037	3.118	1
RABiotech	Insects	Aïchatou Nadia Christelle Dao, Fernand Sankara, Salimata Pousga, Kalifa Coulibaly, Jacques Philippe Nacoulma, Irénée Somda and Marc Kenis,	Sustainable Use of Macrotermes spp. to Improve Traditional Poultry Farming through an Efficient Trapping System in Burkina Faso	10.3390/insects1 3010062	2.769	1
RABiotech	International Journal of Advanced Research	Atakora Magnou-Léléng, Dossou Bayi Reine, Melila Mamatchi, Soncy Kouassi, Anani Kokou, KagniDossou Mensah, Karou Damintoti Simpliste, Améyapoh Yaovi and Gbéassor Messanvi	Study Of The Socio-Economic Importance And Artisanal Technology Of Fermented And Salted Fish (Lanhouin) Produced And Sold In LOMÉ	http://dx.doi.org/ 10.21474/IJAR01 /14720		0
TAN:02	International Journal of Agriculture	KJ Lucas, LWT Fweja, MJ Mihale	Determining Pesticide Residues in Bee produce and their Potential Risk to Consumers in Tanzania.	doi.org/10.47604 /ija.1705		
ANCAP	International Journal of Analytical Chemistry	A Lakew, N Megersa, and BS. Chandravanshi	Depletion of Amoxicillin Residue in Edible Tissue of Broiler Chicken by Different Cooking Methods	10.1155/2022/78 12441	1.698	
ANEC	International Journal of Analytical Chemistry	Serge Mbokou Foukmeniok, Roland Fabrice Yibor Bako, Ousmane Ilboudo, Yssouf Karanga, Evang´eline Njanja, Maxime Pontie, Issa Tapsoba, Ignas Tonle Kenfack, and Rousseau Djouaka	Sensitive Carbon Fiber Microelectrode for the Quantification of Diuron in Quality Control of a Commercialized Formulation	doi.org/10.1155/ 2022/9994639	1.698	
RABiotech	International Journal of Biochemistry Research & Review	Kamirou Chabi-Sika, Haziz Sina, Bawa Boya, Hafiz A. Salami, Gabin A. Dossou, Ibrahima Mama-Sirou, Glorieuse Dansou, Akim Socohou, Martial Nounagnon, Halfane Lehmane, Adolphe Adjanohoun and Lamine Baba-Moussa	Ethnobotanical Survey and Some Biological Activities of Ageratum conyzoides Collected in Southern-Benin	doi.org/10.9734/I JBCRR/2023/v32i 1793		0
RABiotech	International Journal of Biochemistry Research & Review	Philippe Krou Eba, Athanase Kra Kouassi, Philippe Kambou and Georges N'guessan Amani	Nutritional Quality and Evaluation of Some Microbial Flora of Smoked Fish Sold in Some Public Markets in the City of Abidjan (Côte d'Ivoire)	doi.org/10.9734/I JBCRR/2022/v31i 530320		0

RABiotech	International Journal of Biological and Chemical Sciences	Florence SANKARA, Fernand SANKARA, Salimata POUSGA, Wendpègda Jeanne Marie BAMOGO, Kalifa COULIBALY, Jacques Philippe NACOULMA, Irénée SOMDA et Marc KENIS	Influence des attractifs sur la production des larves de la mouche domestique (Musca domestica L. (1758)) pour l'alimentation avicole dans la zone ouest du Burkina Faso	dx.doi.org/10.43 14/ijbcs.v16i3.25	
RABiotech	International Journal of Biological and Chemical Sciences	Lêniféré Chantal SORO, Mohamed Ba KONE, Armand Kouassi Kouakou KOUADIO et Anin Louise OCHO-ANIN ATCHIBRI	Influence de la cuisson à l'eau et du séchage sur la valeur nutritionnelle de trois légumes feuilles (Hibiscus sabdarifa, Solanum nigrum et Corchorus olitorius) consommés en Côte d'Ivoire	dx.doi.org/10.43 14/ijbcs.v16i1.4	
RABiotech	International Journal of Biological and Chemical Sciences	Mamounata TAPSOBA, Théodore P. BAYILI, Boureima TRAORE, Auguste T. YAMBOUE et Moussa ZONGO	Induction d'æstrus au moyen du protocole à base de spirale "Progesterone Releasing Intra-vaginal Device" dans les élevages bovins de la zone péri-urbaine de Ouagadougou	dx.doi.org/10.43 14/ijbcs.v16i1.33	
RABiotech	International Journal of Biological and Chemical Sciences	Messanvi AVODEH, Bayi Reine DOSSOU, Kouassi SONCY, Mensah KAGNI-DOSSOU, Kokou ANANI, Simplice Damintoti KAROU et Yaovi AMEYAPOH	Évaluation du plan de maitrise sanitaire dans les unités de production d'eau en sachet au Togo: cas des villes de Kara et Sokodé	dx.doi.org/10.43 14/ijbcs.v16i2.24	
RABiotech	International Journal of Biological and Chemical Sciences	Moïse HARO, Moussa ZONGO et Balé BAYALA	Caractérisation morpho-biométrique du testicule du bouc sahélien	dx.doi.org/10.43 14/ijbcs.v16i2.16	
RABiotech	International Journal of Biological and Chemical Sciences	Zoénabo DOUAMBA, Mamoudou OUARME, Sidbewendé Clarisse COMPAORE, Namwin Siourimè SOMDA, Donatien KABORE, Hagrétou SAWADOGO/LINGANI et Jacques SIMPORE	Prévalence des souches de salmonelles dans les graines de sésame et leurs produits dérivés au Burkina Faso	dx.doi.org/10.43 14/ijbcs.v16i3.16	
RABiotech	International Journal of Biosciences	Ahmat Mahamat Ahmat, Hassan Mahamat Ali, Fissou Henry, Bertille Dewa, Ali Haroun Hissein, Kadidja Gamougam, Adoum Fouda Abderrazzack, Abdelsalam Tidjani, Choua Ouchemi	Study of the antibiotic resistance of Pseudomonas aeruginosa isolated from pus and urine samples of patients hospitalized at the University Hospital of Mother and Child (CHU-ME) of N'Djamena (Chad)	http://dx.doi.org/ 10.12692/ijb/21. 2.271-278	0
RABiotech	International Journal of Biotechnology and Molecular Biology Research	Ibrahim KEITA, Iliassou MOGMENGA, Marius Kounbèsiounè SOMDA, Lassina DOUMBIA, Aboubakar S. OUATTARA, Ousmane A. KOITA and Alfred S. TRAORE	Yeasts from a traditional ferment "Rabilé": Molecular and physiological characterization	doi.org/10.5897/I JBMBR2021.0320	

ANCAP	International Journal of Energy and Water Resources	Z Mhande, MJ Mihale, H Hellar-Kihampa, N Brion & W. Baeyens	Trace metal enrichment and sediment quality in coastal-urban rivers along the Indian Ocean coast, Dar es Salaam, Tanzania	doi.org/10.1007/ s42108-022- 00212-1		
ANCAP	International Journal of Environmental Analytical Chemistry	A Lakew, N Megersa, and BS. Chandravanshi	Quantitative extraction of multiclass antibiotic residues in cow milk utilizing salting-out assisted liquid-liquid extraction followed by liquid chromatographic determination	doi.org/10.1080/ 03067319.2022.2 044029	2.731	1
ANEC	International Journal of Environmental Analytical Chemistry	El Hadji Dièye, Alioune Fall, Modou Fall, Carlos Arthur Ferreira, Mauro R. S. Silveira and Alessandra F. Baldissera	Electrosynthesis and electrochemical characterisation of polypyrrole in 1-hexyl-2,3-dimethylimidazolium tetrafluoroborate and 1,2-dimethylimidazolium methylsulfate.  Application to the detection of copper in aqueous solutions	10.1080/030673 19.2020.1791334	2.731	1
RABiotech	International Journal of Environmental Bioremediation & Biodegradation	Paola Sandra Elenga Wilson, Gabriel Judicael Okeni-Boba, Christian Aimé Kayath, Kiele Molingo Mbemba, Etienne Nguimbi, Gabriel Ahombo	Qualitative and Quantitative Assessment of a Surfactin biosurfactant in the Bioaugmentation of Crude-oil Contaminated Soil in Garages in the Republic of Congo	doi.org/10.12691 /ijebb-10-1-1		
ANCAP	International Journal of Environmental Research and Public Health	F Chirikona, N Quinete, J Gonzalez, G Mutua, S Kimosop, F Orata	Occurrence and Distribution of Per- and Polyfluoroalkyl Substances from Multi- Industry Sources to Water, Sediments and Plants along Nairobi River Basin, Kenya	doi.org/10.3390/i jerph19158980	4.614	1
ANCAP	International Journal of Environmental Research and Public Health	J Xu, Y Hao, Z Yang, W Li, W Xie, Y Huang, D Wang, Y He, Y Liang, J Matsiko, P Wang	Rubber Antioxidants and Their Transformation Products: Environmental Occurrence and Potential Impact	doi.org/10.3390/i jerph192114595	4.614	1
ANCAP	International Journal of Environmental Research and Public Health	M Röösli, S Fuhrimann, A Atuhaire, H-A Rother, J Dabrowski, B Eskenazi, E Jørs, PC Jepson, L London, S Naidoo, DS Rohlman, I Saunyama, B van Wendel de Joode, AO Adeleye, OO Alagbo, D Aliaj, J Azanaw, R Beerappa, C Brugger, S Chaiklieng, S Chetty-Mhlanga, GA Chitra, V Dhananjayan, A Ejomah, CE Enyoh, YJH Galani, JN Hogarh, JN Ihedioha, JP Ingabire, E Isgren,	Interventions to Reduce Pesticide Exposure from the Agricultural Sector in Africa: A Workshop Report	doi.org/10.3390/i jerph19158973	4.614	1

		YLE Loko, L Maree, N Metou'ou Ernest, HM Moda, E Mubiru, MF Mwema, I Ndagire, GO Olutona, P Otieno, JM Paguirigan, R Quansah, C Ssemugabo, S Solomon, MB Sosan, MB Sulaiman, BM Teklu, I Tongo, O Uyi, H Cueva- Vásquez, A Veludo, P Viglietti, MA Dalvie				
RABiotech	International Journal of Food Properties	David Bazie, Kiessoun Konate, Kabakdé Kaboré, Roger Dakuyo, Abdoudramane Sanou, Hemayoro Sama & Mamoudou Hama Dicko	Nutraceutical potential of the pulp of five cultivars of watermelon [Citrullus lanatus (Thunb.) Matsum. & Nakai] grown in Burkina Faso	doi.org/10.1080/ 10942912.2022.2 111441	3.388	1
RABiotech	International Journal of Food Properties	Edwige Bahanla Oboulbiga, Charles Parkouda, Christophe Dabiré, Aimée W.D.B. Guissou, Korotimi Traore, Zénabou Semde, Zoénabo Douamba, Hagrétou Sawadogo-Lingani & Mamoudou H. Dicko	Storage stability of dried tomato slices during storage as affected by salt and lemon pretreatments	doi.org/10.1080/ 10942912.2022.2 046051	3.388	1
RABiotech	International Journal of Food Properties	Nadhem Aissani & Hichem Sebai	Potent anti-glioblastoma effect of 4- methylthio-3- butenyl isothiocyanate from Raphanus sativus and antioxidant activity	doi.org/10.1080/ 10942912.2022.2 115064	3.388	1
RABiotech	International Journal of Microbiology	Alidehou Jerrold Agbankpe, Sylvain D. Kougblenou, Tamegnon Victorien Dougnon, Alida Oussou, Elodie Gbotche, Charles Hornel Koudokpon, Brice Boris Legba, Lamine Baba- Moussa, and Honore Sourou Bankole	Prevalence and Antimicrobial Resistance of Campylobacter coli and Campylobacter jejuni Isolated from Pig Guts, Pig Feces, and Surface Swabs from the Cutting Tables at Slaughterhouse and Taverns in Southern Benin	doi.org/10.1155/ 2022/5120678		1
RABiotech	International Journal of Microbiology and Biotechnology	Priscillia Renée Nguimbi-Tsati, Saturnin Nicaise Mokemiabeka, Christian Aimé Kayath, Thantique Moutali Lingouangou, Yannich Okouakoua, Gabriel Ahombo,	Molecular Identification and Phylogenetic Classification of Producing-Antibacterial Substances Bacteria Isolated from Mbala Pinda, a Congolese Traditional Food	doi.org/10.11648 /j.ijmb.20220703 .15		
RABiotech	International Journal of Phytoremediation	Ursula Chidimma Obelenwa & Jerry Obeta Ugwuany	Development of Bacteria biofertilizers using locally isolated rhizosphere populations and agricultural refuse and their impacts on growth of local test crops	doi.org/10.1080/ 15226514.2022.2 145265	4.003	1
RABiotech	International Journal of Plant Biology	Fatouma Mohamed Abdoul-Latif, Abdirahman Elmi, Ali Merito, Moustapha Nour, Arnaud Risler, Ayoub Ainane, Jérôme Bignon, Tarik Ainane	Essential Oils of Tagetes minuta and Lavandula coronopifolia from Djibouti: Chemical Composition, Antibacterial Activity and Cytotoxic Activity against Various Human Cancer Cell Lines	doi.org/10.3390/i jpb13030026		

ZAM:02	International Journal of Research and Scientific Innovation	Lawrence Chimbwali, Lavina Prashar, James Nyirenda and Newton Simfukwe	Assessment of uterotonic potential of Gossypium hirsutum root extracts on isolated rat uterus smooth muscle.		
RABiotech	International Journal of Sciences	Adjaratou Basse, Donatien Kabore, Mamadou Salif Sow, Seynabou Momar Fall, Eliasse Dieme, Fatou Diallo, Magatte Fall, Mamoudou Hama Dicko	Influence of Mechanical Shelling on the Microbiological and Physico-Chemical Quality of Souna Millet (Pennisetum glaucum) and its Derivatived	doi.org/10.18483 /ijSci.2573	
RABiotech	International Journal of Tropical Disease & Health	Sawadogo Haffsatou, Zida Adam, Soulama Issiaka, Zongo Cheikna, Sawadogo Patindoilba Marcel, Guiguemde Thierry, Nikiema Seni, Sombié Salif, Tchekounou Chanolle, Sermé Sindié Samuel, Anin-Atchibri Anin Louise, Ouedraogo-Traore Rasmata, Guiguemde Tinga Robert and Savadogo Aly	Comparative Study of the Rapid Diagnostic Test and Microscopy with PCR as a Reference in Placental Malaria Diagnosis in Burkina Faso	dx.doi.org/10.97 34/IJTDH/2022/v 43i163064	
RABiotech	International Journal of Zoology	Haziz Sina, Kamirou Chabi-Sika, Razaki Osse, Akim Socohou, Ibrahim A. Abibou, Hafiz Salami, Germain Gil Padonou, Adolphe Adjanonhoun, and Lamine Baba-Moussa	Bacteria Load Determination of the Intestinal Microbiota and Identification of Spiroplasma and Wolbachia in Anopheles gambiae	doi.org/10.1155/ 2022/1491648	
ZAM:02	International Science and Technology Journal of Namibia	Mazimba, E., Nkunika, P. O., Moonga, M. N., & Nyirenda, J.	Efficacy of selected biopesticides against the tomato leaf miner, Tuta absoluta (Meyrick)(Lepidoptera: Gelechiidae), in Lusaka, Zambia.	n/a	
ANCAP	Inwascon Technology Magazine (i TECH MAG)	JM Mwaniki, JO Onyatta, Y Okeyo	Kinetics, Equilibrium and Thermodynamics Study on The Adsorption of Pb2+ Ions by Water Hyacinth Powder from Both Industrial Wastewater and Aqueous Solution	doi.org/10.26480 /itechmag.04.202 2.34.38	
BUF:01	IRA-International Journal of Applied Sciences	Svitlana Nitièma-Yefanova, Siédouba Georges Yé, Gouyahali Son, Roger C. H. Nébié, Yvonne L. Bonzi-Coulibaly	Hydraulic pressing optimization and physicochemical characterization of Jatropha curcas seed oil	dx.doi.org/10.21 013/jas.v17.n4.p 1	
RABiotech	Jordan Journal of Biological Sciences	Raymond P. Barry, Kiessoun Konaté, Abdoudramane Sanou, Yérobessor Dabiré and Mamoudou H. Dicko	Bio-guided Fractionation: Optimization of Chemical Profiling, Antioxidant, Anti- inflammatory and Antibacterial Properties of Vitex doniana Fruits	doi.org/10.54319 /jjbs/150516	
RABiotech	Journal of Advances in Microbiology	Constant Arthur Zébré, Paul Yao Attien, Haziz Sina, Marina Gome, Ibrahim Konate and Lamine Baba-Moussa	Sanitary Investigation on Microbial and Heavy Metals of Grilled Fish Sold in the Night Street Market of Daloa (Ivory Coast)	doi.org/10.9734/ JAMB/2022/v22i 12688	

RABiotech	Journal of African Cultural Heritage Studies	Margaret Nyarota, Oliver Chikuta Robert Musundire and Clotilda Kazembe	Indigenous Culinary Claims and Cultural Heritage Preservation: A Viewpoint	doi.org/10.22599 /jachs.114		
RABiotech	Journal of Agricultural Chemistry and Environment	Cheik Omar Tidiane Compaoré, Ynoussa Maiga, Amidou S. Ouili, Mahamadi Nikiema, Aboubakar S. Ouattara	Purification Potential of Local Media in the Pre-Treatment of Greywater Using Vertical Biofilters under Sahelian Conditions	doi.org/10.4236/j acen.2022.11200 8		0
RABiotech	Journal of Agriculture and Food Research	Kabakdé Kaboré, Kiéssoun Konaté, David Bazié, Roger Dakuyo, Abdoudramane Sanou, Hemayoro Sama, Balamoussa Santara, Mamoudou Hama Dicko	Effects of growing zones on nutritional and bioactive compounds of by-products of two tomato cultivars	doi.org/10.1016/j .jafr.2022.10041 4		1
LAO:01	Journal of Analytical Methods in Chemistry	V. Phouthavong, H. Inoue, K. Phomkeona and V. Choulamany	Home-made vaporization gas-liquid separation for colorimetric determination of ethanol in alcoholic beverages	10.1155/2022/73 46253	2.594	1
RABiotech	Journal of Analytical Sciences and Applied Biotechnology	Fatouma MOHAMED ABDOUL-LATIF*, Ibrahim HOUMED ABOUBAKER, Houda MOHAMED ABDOUL-LATIF, Amina MOHAMED ALI, Tarik AINANE	Staphylococcus aureus infections in patients from 2019–2021 at Peltier hospital of Djibouti	doi.org/10.48402 /IMIST.PRSM/jas ab-v4i1.32085		
RABiotech	Journal of Analytical Sciences and Applied Biotechnology	Fatouma MOHAMED ABDOUL-LATIF, Ayoub AINANE, Ali MERITO, Tarik AINANE	Chemical composition and biological activities of essential oils from Djibouti	doi.org/10.48402 /IMIST.PRSM/jas ab-v3i1.29122		
RABiotech	Journal of Analytical Sciences and Applied Biotechnology	Fatouma MOHAMED ABDOUL-LATIF, Houda MOHAMED ABDOUL-LATIF, Ibrahim HOUMED ABOUBAKER, Amina MOHAMED ALI, Tarik AINANE	Septicemia in polyvalent medicine from 2019–2021 at Peltier hospital in Djibouti	doi.org/10.48402 /IMIST.PRSM/jas ab-v4i2.35043		
RABiotech	Journal of Animal & Plant Sciences	Bansé OUEDRAOGO, Henri KABORE, Salimata POUSGA, Sibiri Jean ZOUNDI	Effet de l'incorporation de la farine de graines bouillies d'Acacia macrostachya (Reichenb. ex. DC.) dans l'alimentation sur les performances de croissance des poulets de chair au Burkina Faso	doi.org/10.35759 /JAnmPlSci.v54- 1.		
RABiotech	Journal of Animal & Plant Sciences	Raogo Sylvain TENSABA, André KIEMA, Moussa ZONGO et Lyrie BIDIGNE	Analyse des pratiques paysannes de reproduction et d'exploitation des petits ruminants en zone périurbaine de la ville de Kaya	doi.org/10.35759 /JAnmPlSci.v53-2		

RABiotech	Journal of Animal & Plant Sciences	Timbilfou KIENDREBEOGO, Aminata KINDO, Salimata POUSGA, Drissa Barry, Valérie M.C. BOUGOUMA-YAMOEGO et Chantal-Yvette KABORÉ-ZOUNGRANA	Déterminants de la consommation de la viande de lapins dans la ville de Bobo- Dioulasso (Burkina Faso)	doi.org/10.35759 /JAnmPlSci.v54- 3.		
RABiotech	Journal of Animal & Plant Sciences	Yaya DIATTA, Sire DIEDHIOU, Aly DIALLO, Arfang Ousmane Kémo GOUDIABY, Jean BASSENE, Yves Paterne SAGNA, Mamadou SOW, Mariama Dalanda DIALLO, Ibrahima NDOYE, Saliou FALL	Effets des amendements organiques sur la dynamique et la composition des espèces herbacées en milieu salin dans la commune d'Enampore en Basse Casamance (Sénégal)	doi.org/10.35759 /JAnmPlSci.v53-1		
RABiotech	Journal of Applied Microbiology	Bassirou Ndoye,   Rasoul Shafiei, Nastaran Shah Sanaei, Ilse Cleenwerck, Marius K. Somda, Mamoudou Hama Dicko, Lat Souk Tounkara, Amadou Tidiane Guiro, Frank Delvigne, Philippe Thonart	Acetobacter senegalensis isolated from mango fruits: Its polyphasic characterization and adaptation to protect against stressors in the industrial production of vinegar: A review.	10.1111/jam.154 95	4.059	1
RWA:01	Journal of Applied Research in Water and Wastewater	Jacques Munyegaju, Hakizimana Jean Nepo, Buscotin Horax Beakou, Valerien Mutambyi, Uwitonze Nestor	Textile effluent treatment using Avocado seeds based activated carbon	doi.org/10.22126 /arww.2022.8008 .1258		
BAN:05	Journal of Applied Science and Process Engineering	Islam N, Faruque MO, Zamir R	Investigation of Sodium Benzoate and Potassium Sorbate in Anti- Diabetic Herbal Drugs	doi.org/10.33736 /jaspe.4544.2022		
RABiotech	Journal of Asian Scientific Research	METUOR DABIRE Amana, OUOBA Boampoundi Helene, GUENNE Samson, ZONGO Sidnooma Veronique, SAMA Hemayoro, TRAORE Renan Ernest	Evaluation of the bio protective value of the leaves of sixty varieties of taro (Colocasia esculenta) cultivated in BURKINA FASO	doi.org/10.55493 /5003.v12i4.4645		
RABiotech	Journal of Biosciences and Medicines	Maximin Senou, Jacques Ezéchiel Lokonon, Edjégué Oloroun-Togni Ruth Abissi, Félicienne Agbogba, René J. Dehou, Espérance Medoatinsa, Pascal Tchogou, Boris Fresel Cachon, Alban Houngbeme, Eugène Attakpa, Amègnona Agbonon, Lamine Baba-Moussa	Antibacterial Activity and Toxicity of the Sap and Aqueous Extract of the Leaves of Jatropha multifida Linn.	doi.org/10.4236/j bm.2022.107013		
RABiotech	Journal of Chemistry	Oksana Sytar, Marek Zivcak, Kiessoun Konate, and Marian Brestic,	Phenolic Acid Patterns in Different Plant Species of Families Asteraceae and Lamiaceae: Possible Phylogenetic Relationships and Potential Molecular Markers	doi.org/10.1155/ 2022/9632979	3.241	1
BAN:05	Journal of Chemistry	Zamir R, Islam N, Zahan KE, Asraf A, Zakaria CM	An Insight into Pathway and Health Risk Assessment of Toxic Metals in Herbal Medicines	doi.org/10.1155/ 2022/2610852	3.241	1

RWA:01	Journal of Colloid and Interface Science	Yanan Jia, Ningzhao Shang, Xiaobo He, Anaclet Nsabimana, Yongjun Gao, Jian Ju, Xinjian Yang, YufanZhang	Electrocatalytically active cuprous oxide nanocubes anchored onto macroporous carbon composite for hydrazine detection	10.1016/j.jcis.20 21.08.154	9.965	1
ANEC	Journal of Electrochemical Chemistry	Wamba-Tchio OR, Pengou M, Teillout A-L, Baumier C, Mbomekallé IM, De Oliveira P, Nanseu-Njiki CP, Ngameni E.	Electrochemical study and experimental simulation of the synergistic effect of a formulation based on Ficus pumila Linn. Leaves extract and zinc sulfate on the XC38 steel corrosion inhibition in NaCl solution	doi.org/10.1016/j .jelechem.2022.1 16553	4.598	1
RABiotech	Journal of Experimental Agriculture International	Konan Gbè Aya Jacqueline, Nimaga Daouda, Kouassi Kouakou Nestor, N'dri Yao Denis a and Amani N'Guessan Georges	Identification of the Main Dishes Made from the Pulp of Tomi (Tamarindus indica L) Consumed in the Savannah Region of Côte d'Ivoire	doi.org/10.9734/ JEAI/2022/v44i10 30899		
RABiotech	Journal of Food and Nutrition Research	Fabrice Bationo, Mahamadé Goubgou, Diarra Compaoré-Sérémé	The Importance of Food Plant Nutrients in the Management of Severe Respiratory Infections Focusing on Their Immunomodulatory, Anti-inflammatory and Antioxidant Properties	doi.org/10.12691 /jfnr-10-1-9		
RABiotech	Journal of Food and Nutrition Research	Fidèle Wend-Bénédo TAPSOBA, Serge SAMANDOULOUGOU, Elie Wilfried Wendnongma BIEOGO, Abel TANKOANO, Alfred S TRAORE, Hagrétou SAWADOGO-LINGANI	Physico-chemical and Microbiological Characteristics of Infant Porridges Produced from Infant Flours Containing Millet and Sorghum Malt	doi.org/10.12691 /jfnr-10-5-2		
RABiotech	Journal of Food and Nutrition Research	Kouassi Kan Kouassi Parfait, Soro Doudjo, Kone Youssouf Kisselmina Youssouf, Cisse Mady, Assidjo Nogbou Emmanuel, Yao Kouassi Benjamin	Sensory Profile and Physico-Chemical Characteristics of Clarified and Pasteurized Cashew Apple Juice during Storage	doi.org/10.12691 /jfnr-10-3-2		
RABiotech	Journal of Food Security	Gilbert Owiah Sampson, Emmanuel Ohene Afoakwa, Oluwakemi Cyrilla Ogunseye, Daniel Tetteh Amanquah	Response Surface Methodology for Studying the Effects of Sugar Concentration and Acid Balancing on the Physico-Chemical Properties of Watermelon (Citrullus Vugaris) Jam	doi.org/10.12691 /jfs-10-1-2		
RABiotech	Journal of Fungi	Ignace Sawadogo, Adama Paré, Donatien Kaboré, Didier Montet, Noël Durand, Jalloul Bouajila, Elisabeth P. Zida, Hagrétou Sawadogo- Lingani, Philippe Augustin Nikiéma, Roger Honorat Charles Nebié and Imaël Henri Nestor Bassolé	Antifungal and Antiaflatoxinogenic Effects of Cymbopogon citratus, Cymbopogon nardus, and Cymbopogon schoenanthus Essential Oils Alone and in Combination	doi.org/10.3390/j of8020117	5.724	1

ANCAP	Journal of Hazardous Materials	Isioma Tongo, Nosakhare Osazee Erhunmwunse	Effects of ingestion of polyethylene microplastics on survival rate, opercular respiration rate and swimming performance of African catfish (Clarias gariepinus)	10.1016/j.jhazma t.2021.127237	14.224	2
RABiotech	Journal of Life Science and Biomedicine	Brahima KOBYAGDA, Fatoumata HAMA-BA, Bakary TARNAGDA, Ousmane OUEDRAOGO, Bassibila ZOUNGRANA, Aly SAVADOGO	Diets and food security of host and non-host households of internally displaced persons in the Kora, Burkina Faso	dx.doi.org/10.54 203/jlsb.2022.12		0
RABiotech	Journal of Life Science and Biomedicine	Sanogo BOUGMA, Boureima KAGAMBÉGA, François TAPSOBA, Aminata SANOU, Laurencia Toulsoumdé SONGRÉ-OUATTARA and Aly SAVADOGO	Food consumption and dietary diversity associated with breastfeeding mod of children aged 6-23 months in Ouagadougou, Burkina Faso	dx.doi.org/10.54 203/jlsb.2022.14		0
RABiotech	Journal of Materials Science and Engineering A	Edouard Mbarick Ndiaye, Kalidou Ba, Alioune Sow, Adama Diop, Yousra El Idrissi, Hamza El Moudden, Papa Guedel Faye, Hicham Harhar, Nicolas Ayessou, Mohamed Tabyaoui and Mady Cisse	Valorization of Natural Residue into Activated Carbon: Example of the Shells of the African Baobab Fruit (Adansonia digitata) L.	doi.org/10.17265 /2161- 6213/2022.4- 6.001		0
ETH:01	Journal of Materials Science: Materials in Electronics	N. Bekri, E. Asmare, Z. Abdissa, W. Mammo, N. A. Tegegne	Photophysics and thermally-induced degradation of P2TI-DD, a polymer synthesized by direct arylation reaction	10.1007/s10854- 022-08499-w	2.779	1
RABiotech	Journal of Medicinal Plants Studies	Bakarnga Via Issakou, Bakarnga Via Issakou, Bessimbaye Nadlaou, Issa Ramat Adam, Brahim Boy Otchom, Abdoullahi Hissein Ousman, Mbaigolmem Béral Valéry, and Abdelsalam Tidjani	Anti radical and antibacterial activities of the ethanolic extract bark of Anogeissus leiocarpus (Guill. Et Perr) from Chad	doi.org/10.22271 /plants.2022.v10. i6b.1499		
ANCAP	Journal of Molecular Liquids	FS Wanyonyi, TT Fidelis, H Louis, GK Mutua, F Orata, L Rhyman, P Ramasami, AMS Pembere,	Simulation guided prediction of zeolites for the sorption of selected anions from water:  Machine learning predictors for enhanced loading	doi.org/10.1016/j .molliq.2022.118 913	6.633	1
ANCAP	Journal of Nanotechnology	C Ondijo, F Kengara, IK Owino	Synthesis, Characterization, and Evaluation of the Remediation Activity of Cissus quadrangularis Zinc Oxide Nanoparticle-Activated Carbon Composite on Dieldrin in Aqueous Solution	doi.org/10.1155/ 2022/2055024		1

ZAM:02	Journal of Natural and Applied Sciences	Nyirenda J.	Rapid Smartphone-based Image Reading for Assessing Quality of Active Pharmaceutical Ingredients of Commonly Prescribed Drugs- Lusaka Zambia	10.53974/unza.jo nas.6.1.743		
RWA:01	Journal of Natural Products	Thobias M. Kalenga, Jackson T. Mollel, Joanna Said, Andreas Orthaber, Jas S. Ward, Yoseph Atilaw, Daniel Umereweneza, Monica M. Ndoile, Joan J. E. Munissi, Kari Rissanen, Edward Trybala, Tomas Bergström, Stephen S. Nyandoro,* and Mate Erdelyi*	Modified ent-Abietane Diterpenoids from the Leaves of Suregada zanzibariensis	doi.org/10.1021/ acs.jnatprod.2c0 0147	4.803	2
RABiotech	Journal of Nematology	Nadhem Aissani and Hichem Sebai	Nematicidal effect of Raphasatin from Raphanus sativus against Meloidogyne incognita	doi.org/10.2478/j ofnem-2022- 0050	1.481	1
RABiotech	Journal of Public Health and Epidemiology	Wemboo Afiwa Halatoko, Essozimna Sondou, Ghislain Emmanuel Sopoh, Gnatoulma Katawa, Fandame Boukari, Mounérou Salou, Simplice Damintoti Karou and Egard Marius Ouendo	Standards and regimentations of biosafety and biosecurity in medical biology laboratories in Togo, 2021	doi.org/10.5897/ JPHE2022.1391		0
RABiotech	Journal of Research in Pharmacy	Yacine NAIT BACHIR, Naima SAHRAOUI, Zahia CHEURFA, Meriem MEDJKANE, Amel HADJ ZIANE	Formulation of a natural nanosystem based on Bcyclodextrin/arginine/xanthan to increase antifungal activity of Salvia officinalis essential oil from Algeria (Bejaïa, Kalaa n'Ath Abas)	http://dx.doi.org/ 10.29228/jrp.156		
ANEC	Journal of Solid State Chemistry	Tchoumene R, Kenne Dedzo G, Ngameni E	Intercalation of 1,2,4-triazole in methanol modified-kaolinite: Application for copper corrosion inhibition in concentrated sodium chloride aqueous solution	doi.org/10.1016/j .jssc.2022.12310 3	3.656	1
RABiotech	Journal of the Air & Waste Management Association	Thierry Kahale, Ousmane Ouédraogo, Mauro Duarte Neto, Virginie Simard & Alexandre R. Cabral	Field-based assessment of the design of lysimeters for landfill final cover seepage control	doi.org/10.1080/ 10962247.2022.2 126557	2.636	1
BAN:05	Journal of the Asiatic Society of Bangladesh, Science	Islam N, Zamir R, Faruque MO, Rahman MS	Presence of Methyl Paraben in Anti- Diabetic Herbal Preparations	doi.org/10.3329/j asbs.v48i1- 2.64513		
BAN:04	Journal of the Bangladesh Chemical Society	M Shoeb, M Hossain, MM Islam, MS Reza, N Nahar, N Parvin	Determination of some preservatives and sweeteners in fruit drinks by high performance liquid chromatography	n/a		

RABiotech	Journal of Tuberculosis Research	Sekossounon Sanni, Ablo Prudence Wachinou, Corinne Simone Colette Merle, Lamine Baba- Moussa, Dissou Affolabi,	SLCO1B1, NAT2 Polymorphisms and Pharmacokinetic Variability of Rifampicin and Isoniazid in Tuberculosis Patients from Sub-Saharan Africa	doi.org/10.4236/j tr.2022.103009		
RABiotech	Journal of Tuberculosis Research	Sekossounon Sanni, Haziz Sina, Lamine Baba- Moussa	Genetic Polymorphisms and Toxicities of First-Line Antituberculosis Drugs: Systematic Review of the Literature	doi.org/10.4236/j tr.2022.103010		
RABiotech	Legume Research	Fatoumata Hama-Ba, Roland Kaboré, Roger Kaboré, Mamoudou H. Dicko	Effect of Soil Type on the Nutritional Quality of Groundnut (Arachis hypogaea L) in Burkina Faso	doi.org/10.18805 /LRF-714	0.669	1
RWA:01	Macromolecule Research	Twizeyimana, E., Zhang, S., Mukerabigwi, J.F. et al.	Oxidized Alginate Hydrogel-Based Derivatives with Optimized Features for Cell Culture Scaffold.	doi.org/10.1007/ s13233-022- 0030-z	4.402	1
ANCAP	Marine Environmental Research	KE Osuka, BD Stewart, M Samoilys, CJ McClean, P Musembi, S Yahya, AR Hamad, J Mbugua	Depth and habitat are important drivers of abundance for predatory reef fish off Pemba Island, Tanzania	doi.org/10.1016/j .marenvres.2022. 105587	3.737	1
ETH:01	Materials Research Express	N. Bekri, E. Asmare, W. Mammo, N. A. Tegegne	Photostability of benzodithiophene based polymer: effect of PC60BM and intermolecular interactions	10.1088/2053- 1591/ac6c7a	2.025	1
ANCAP	Materials Today	H Du, J Fu, L-X Liu, S Ding, Z Lyu, Y-C Chang, X Jin, FO Kengara, B Song, Q Min, J-J Zhu, D Du, C Gu, Y Lin, J-S Hu, W Zhu	Recent progress in electrochemical reduction of carbon monoxide toward multi-carbon products	doi.org/10.1016/j .mattod.2022.08. 012	26.943	1
RABiotech	Medicines	Hemayoro Sama, Modeste Traoré, Samson Guenné, Ibrahim Séré, Adama Hilou and Mamoudou H. Dicko	Ethnobotanical and Phytochemical Profiling of Medicinal Plants from Burkina Faso Used to Increase Physical Performance	10.3390/medicin es9020010		
RABiotech	Microbiology Resource Announcements	Olubukola Oluranti Babalola, Nadège Adoukè Agbodjato, Ayansina Segun Ayangbenro, Adolphe Adjanohoun, Lamine Baba-Moussab	Draft Genome Sequences of Four Strains of Plant GrowthPromoting Bacteria Associated with Maize Rhizosphere	doi.org/10.1128/ mra.00730-22		0
RABiotech	Molecules	Elisabeth Rakiswendé Ouédraogo, Kiessoun Konaté, Abdoudramane Sanou, Hemayoro Sama, Ella Wendinpuikondo Rakèta Compaoré, Oksana Sytar, Adama Hilou, Marian Brestic and Mamoudou Hama Dicko	Assessing the Quality of Burkina Faso Soybeans Based on Fatty Acid Composition and Pesticide Residue Contamination	doi.org/10.3390/ molecules271962 60	4.927	1
ETH:02	Molecules	Gete Chemeda, Daniel Bisrat, Mariamawit Y Yeshak, Kaleab Asres	In Vitro Antileishmanial and Antitrypanosomal Activities of Plicataloside Isolated from the Leaf Latex of Aloe	10.3390/molecul es27041400	4.927	1

			rugosifolia Gilbert & Sebsebe (Asphodelaceae)			
BUF:02	Molecules	Issaka Garikoé, Boubié Guel and Ingmar Persson	Sorption of Bisphenol A as Model for Sorption Ability of Organoclays	doi.org/10.3390/ molecules271443 43	4.927	1
ANEC	Monatshefte für Chemie	Nassi A, Sop SDK, Leuna J-BM, Makota S, Pengou M, Ngameni E	Electrochemical reactivity of thin film of plumbagin at ionic liquid   water interface	doi.org/10.1007/ s00706-022- 02940-w	1.613	1
RWA:01	Nanomaterials	Hubert Rudakemwa, Ki Jun Kim, Tae Eun Park, Hyeryeon Son, Jaedo Na and Seong Jung Kwon	Observation and Analysis of Staircase Response of Single Palladium Nanoparticle Collision on Gold PUltramicroelectrodes.	doi.org/10.3390/ nano12183095	5.719	1
ANEC	Nanomaterials	Pecheu CN, Jiokeng SLZ, Tamo AK, Doungmo G, Doench I, Osorio-Madrazo A, Tonle IK, Ngameni E	Fabrication of an Organofunctionalized Talc- like Magnesium Phyllosilicate for the Electrochemical Sensing of Lead Ions in Water Samples	10.3390/nano12 172928	5.719	1
KEN:02	Natural Product Research	Denis Akampurira, Hoseah M. Akala, Solomon Derese, Matthias Heydenreich & Abiy Yenesew	A new C–C linked benzophenathridine–2- quinoline dimer, and the antiplasmodial activity of alkaloids from Zanthoxylum holstzianum	10.1080/147864 19.2022.2034810	2.488	1
BOL:01	Neotropical Entomology	Urquizo O, Cardozo-Alarcón F, Adler M, Lozano R, Calcina-Mamani S, Collao- Alvarado K, Niemeyer HM & Carlos F. Pinto	Pollen preference patterns by Tetragonisca angustula (Apidae: Meliponini) in a Boliviano-Tucumano Forest	10.1007/s13744- 022-00986-3	1.650	1
ANEC	New Journal of Chemistry	Mbiagaing CD, Tagne AJ, Ngnie G, Dedzo GK, Ngameni E.	Application of palladium nanoparticle supported organo-kaolinite for 4-chloro-2-nitroaniline catalytic reduction and electrochemical detection	doi.org/10.1039/ D2NJ01453J	3.925	1
RABiotech	Nutrients	Kabakdé Kabore, Kiéssoun Konaté, Abdoudramane Sanou, Roger Dakuyo, Hemayoro Sama, Balamoussa Santara, Ella Wendinpuikondo Rakèta Compaoré and Mamoudou Hama Dicko	Tomato By-Products, a Source of Nutrients for the Prevention and Reduction of Malnutrition	doi.org/10.3390/ nu14142871	6.706	1
RABiotech	Nutritional Neuroscience	Mohamed-Amine Jabri, Kaïs Rtibi & Hichem Sebai	Chamomile decoction mitigates high fat dietinduced anxiety-like behavior, neuroinflammation and cerebral ROS overload	doi.org/10.1080/ 1028415X.2020.1 859727	4.062	1

RABiotech	Open Access Library Journal	Male Dore, Souleymane Djigue Barry, Mohamed Lamine Toure, Mohamed Lelouma Mansare, Kaba Conde, Karinka Diawara, Mohamed Lamine Conde, Adama Kone, Idrissa Doumbouya, Mamady Camara, Issiaga Bah, Fode Abass Cisse,	A Tetra Paresis Revealing Multiple Sclerosis: About a Case and Review of the Literature	doi.org/10.4236/ oalib.1109198		
RABiotech	Open Access Library Journal	Mohamed Lamine Condé, Souleymane Djigué Barry, Mohamed Lamine Touré, Mohamed Tafsir Diallo, Mouloukou Souleymane Doumbouya, Malé Doré, Idrissa Aissatou Camara, Laila Touré, Karinka Diawara, Namory Camara, Idrissa Doumbouya, Gnouma Sidibé, Mohamed Asmaouh Bangoura, Fodé Abass Cissé	Peripheral Facial Paralysis Post-Vaccination with COVID-19: About Two Cases Observed at the University Hospital of Conakry	doi.org/10.4236/ oalib.1109332		
ANCAP	Open Journal of Ecology	C Githukia, D Onyango, D Lusweti, R Ramkat, C Kowenje, J Miruka, H Lung'ayia, P Orina	An Analysis of Knowledge, Attitudes and Practices of Communities in Lake Victoria, Kenya on Microcystin Toxicity.	DOI:10.4236/oje. 2022.123012	C	)
TAN:02	Open Science Journal	MJ Mihale	Water quality evaluation in selected coastal rivers of Tanzania using Water Quality Index	doi.org/10.23954 /osj.v7i1.3072		
RABiotech	Open Veterinary Journal	Dhouha Alimi, Azhar Hajri, Selim Jallouli, and Hichem Sebai	Efficacy of synergistic activity of seed oils from Carthamus tinctorius (Safflower) and Nasturtium officinale (Watercress) on the lethality of the cattle tick Hyalomma scupense (Acari: Ixodidae)	doi.org/10.5455/ OVJ.2022.v12.i1. 10		
RABiotech	PAMJ - One Health.	Sanogo Bougma, Edwige Bahanla Oboulbiga, Bakary Tarnagda, Oumarou Zongo, Boukaré Kaboré, Henri Sidabéwindin Ouedraogo, Laurencia Toulsoumdé Songré-Ouattara, Aly Savadogo	Evaluation de la qualité physico-chimique et microbiologique de quelques farines infantiles locales vendues à Ouagadougou, Burkina Faso	doi.org/10.11604 /pamj- oh.2022.9.25.375 66	1	L
RABiotech	Pan African Medical Journal	Rolande Mabika Mabika, Sandrine Lydie Oyegue Liabagui, Franck Mounioko, Alain Souza, Jean Fabrice Yala	Evaluation of the bioresistance profile of enterobacteria isolated from faeces of children with diarrhoea in the town of Koula-Moutou, Gabon: prospective study	doi.org/10.11604 /pamj.2022.43.6 3.25276	C	)
ANCAP	PeerJ Analytical Chemistry	RA Naiyl, FO Kengara, KH Kiriamiti, YA Ragab	Lipid extraction from microalgae using pure caprolactam-based ionic liquids and with organic co-solvent	doi.org/10.7717/ peerj-achem.13		

ANCAP	Physical Sciences Reviews	VO Shikuku, EC, Ngeno, JB Njewa and P Ssebugere	Pharmaceutical and personal care products (PPCPs) and per- and polyfluoroalkyl substances (PFAS) in East African water resources: progress, challenges, and future	doi.org/10.1515/ psr-2022-0124		1
RABiotech	Plants	Kabré Wendmintiri Jeanne d'Arc, Dah- Nouvlessounon Durand, Fatoumata Hama-Ba, Agonkoun Abiola, Guinin Felix, Sina Haziz, Kohonou N. Arnaud, Tchogou Pascal, Senou Maximin, Savadogo Aly and Baba-Moussa Lamine	Mung Bean (Vigna radiata (L.) R. Wilczek) from Burkina Faso Used as Antidiabetic, Antioxidant and Antimicrobial Agent	doi.org/10.3390/ plants11243556	4.658	1
RABiotech	Plants People Planet	Barbara Vinceti, Tobias Fremout, Celine Termote, Diego Fallas Conejo, Evert Thomas, Carl Lachat, Laeticia Celine Toe, Adjima Thiombiano, Issouf Zerbo, Djingdia Lompo, Lassina Sanou, Charles Parkouda, Alain Hien, Oumarou Ouédraogo, Hermann Ouoba	Fermote, Diego Fallas Conejo, Evert Thomas, Carl Lachat, Laeticia Celine Toe, Adjima Thiombiano, Issouf Zerbo, Djingdia Lompo, Lassina Sanou, Charles Parkouda, Alain Hien, Oumarou Ouédraogo, Hermann Ouoba			1
RABiotech	PLoS One	Abdoudramane Sanoul, Kiessoun Konate, Roger Dakuyo, Kabore´ Kabore, Hemayoro Sama, Mamoudou Hama Dicko	Hibiscus sabdariffa: Genetic variability, seasonality and their impact on nutritional and antioxidant properties	doi.org/10.1371/j ournal.pone.026 1924	3.752	1
BUF:01	PLoS One	Dangles, O., Struelens, Q., Ba, M. P., Bonzi- Coulibaly, Y., Charvis, P., Emmanuel, E., & Vidal, L	Insufficient yet improving involvement of the global south in top sustainability science publications	doi.org/10.1371/j ournal.pone.027 3083	3.752	1
ANCAP	Pollutants	M Opolot, T Omara, C Adaku, E Ntambi	Pollution Status, Source Apportionment, Ecological and Human Health Risks of Potentially (Eco)toxic Element-Laden Dusts from Urban Roads, Highways and Pedestrian Bridges in Uganda	doi.org/10.3390/ pollutants301000 7		
RABiotech	Processes	Fatouma Mohamed Abdoul-Latif, Abdirahman Elmi, Ali Merito, Moustapha Nour, Arnaud Risler, Ayoub Ainane, Jérôme Bignon and Tarik Ainane	Essential Oils of Ocimum basilicum L. and Ocimum americanum L. from Djibouti: Chemical Composition, Antimicrobial and Cytotoxicity Evaluations	doi.org/10.3390/ pr10091785	3.352	0
RABiotech	Processes	Fatouma Mohamed Abdoul-Latif, Zineb El Montassir, Ayoub Ainane, Said Gharby, El Hassan Sakar, Ali Merito, Jalludin Mohamed and Tarik Ainane	Use of Thymus Plants as an Ecological Filler in Urea-Formaldehyde Adhesives Intended for Bonding Plywood	doi.org/10.3390/ pr10112209	3.352	0
BUF:02	Processes	Ollé Rodrigue Kam, Corneille Bakouan, Inoussa Zongo, Boubié Guel	Removal of Thallium from Aqueous Solutions by Adsorption onto Alumina Nanoparticles	doi.org/10.3390/ pr10091826	3.352	0

RABiotech	Public Health Nutrition	Ousmane Ouédraogo, Augustin Nawidimbasba Zeba, Saidou Kaboré, Abdramane Berthé, Koiné Maxime Drabo, Dowrot Bertine Ouaro Dabiré, Estelle Bambara, Helene Ouédraogo, Tegawendé Pierre Ilboudo, Claudine Konaté, Denis Garnier, Gunter Boussery, Mediatrice Kiburente and Noël Marie Zagré	Acceptance and challenges of the introduction of the routine community-based vitamin A supplementation strategy: the case of Burkina Faso	doi.org/10.1017/ S1368980022000 283	4.539	1
BUF:01	RAMReS Sciences des Structures et de la Matière	Karanga Yssouf, Ilboudo Ousmane, Tapsoba Issa, Colson Emmanuel, Gerbaux Pascal, Bonzi- Coulibaly Yvonne	Characterization of flavonoids in the ethyl acetate extract from Euphorbia hirta L. by liquid chromatography and tandem mass spectrometry	n/a		
ZIM:03	Reaction Kinetics, Mechanisms and Catalysis.	Pamhidzai Dzomba; Mark F. Zaranyika	Degradation of tetracycline in tropical river ecosystems: generation and dissipation of metabolites; kinetic and thermodynamic parameters.	10.1007/s11144- 022-02249-z	1.843	1
ZIM:02	Research Journal of Chemistry and Environment	N Basopo, D Ndebele, N Kutywayo	An assessment of toxic effects of chemical toxicants on biochemical markers in the freshwater snail Helisoma duryi exposed to different water samples from a gold mine.	doi.org/10.25303 /2611rjce01010	0.636	
UGA: 02	Results in Chemistry	R. Mbabazi, O.F. Wendt, S. Allan Nyanzi, B. Naziriwo, E. Tebandeke	Advances in carbon dioxide and propylene oxide copolymerization to form poly(propylene carbonate) over heterogeneous catalysts	doi.org/10.1016/j .rechem.2022.10 0542		1
ZAM:01	Results in Engineering	Nyirenda, J., Kalaba, G., & Munyati, O	Synthesis and characterization of an activated carbon-supported silver-silica nanocomposite for adsorption of heavy metal ions from water.	doi.org/10.1016/j .rineng.2022.100 553		1
ANCAP	Reviews on Environmental Health	AK Maiyo, JK Kibet, and FO Kengara	A review of the characteristic properties of selected tobacco chemicals and their associated etiological risks	doi.org/10.1515/ reveh-2022-0013	4.022	1
BOL:01	Revista Ciencia, Tecnología e Innovación	Castro M, Vargas P, Pinto CF, Alvarado R.	Bonding social capital and academic stress in university students	doi.org/10.56469 /rcti.vol20n26.71 0		
BOL:01	Revista Ciencia, Tecnología e Innovación	Mojica M, Reynoso M, Mengoni S, Alzogaray R & Pinto CF	Repellent activity of Amomyrtus meli, Peumus boldus and Senecio nutans essential oils, on Triatoma infestans (Hemiptera: Reduviidae)	doi.org/10.56469 /rcti.vol20n26.70 8		

RABiotech	Revue d'élevage et de médecine vétérinaire des pays tropicaux	Souleymane Amine Alhadj Djibrine Soudy Imar, André Zoli Pagnah, Mohamed Moctar Mouiche Mouliom, Souley Bagari Iya	Résidus d'antibiotiques dans la viande bovine et les œufs vendus à N'Djaména et à Moundou (Tchad)	doi.org/0.19182/ remvt.36919		1
ANCAP	RSC Advances	S Otienoa, F Kengara, C Kowenje and R Mokaya	Optimization of biodiesel synthesis from Jatropha curcas oil using kaolin derived zeolite Na–X as a catalyst	10.1039/D2RA03 278C	4.036	1
RWA:01	Russian Journal of Inorganic Chemistry	Mukiza J, Gerber TIA., Taherkhani F, Habarurema G, Hosten E, Ngororabanga JMV, Kampire E, Betz R	Pentagonal-Bipyramidal Oxidorhenium (V) Complex with N4 -Tetradentate Ligand: Unusual Synthetic Route, Spectroscopic, Crystallographic and DFT Studies	10.1134/S00360 23622040131	1.667	1
RABiotech	Scholars Journal of Agriculture and Veterinary Sciences	Kra Kouassi Aboutou Séverin, Kouadio Natia Joseph, Djama Abo Nina Raymonde, Otchoumou Kraidy Athanase, Niamké Lamine Sébastien	Influences of Pelled Feeds Formulated with Vegetables, Household and Industrial Residues on the Performance of Rabbits (Oryctolagus cuniculus)	doi.org/10.36347 /sjavs.2022.v09i1 1.005		
UGA:01	Science of the Total Environment	Fred Ssepuya, Silver Odongo, Benjamin A Musa Bandowe, Juma John Moses Abayi, Chijioke Olisah, Henry Matovu, Edward Mubiru, Mika Sillanpää, Ibrahim Karume, Charles Drago Kato, Victor Odhiambo Shikuku, Patrick Ssebugere	Polycyclic aromatic hydrocarbons in breast milk of nursing mothers: Correlates with household fuel and cooking methods used in Uganda, East Africa	doi.org/10.1016/j .scitotenv.2022.1 56892	10.754	2
ANCAP	Science of the Total Environment	S Wu, Z Yang, F Wang, X Jin, F Kengara, K Xi, W Fang, W Yang, Y Zhang	Effect of γ-Fe <sub>2</sub> O <sub>3</sub> nanoparticles on the composition of montmorillonite and its sorption capacity for pyrene	doi.org/10.1016/j .scitotenv.2021.1 51893	10.754	2
ANCAP	Science of the Total Environment	Z Shehu, G William, A Nyakairu, E Tebandeke, ON Odume	Overview of African water resources contamination by contaminants of emerging concern	doi.org/10.1016/j .scitotenv.2022.1 58303	10.754	2
RABiotech	Scientific African	Agbémébia Y. Akakpo, Donatien Kabore, Marius K. Somda, Abdouramane Sawadogoa, Henriette B. Mihina, Zenabou Semde, Aboubakar S. Ouattara	Potential antifungal activity of essential oil from Cymbopogon citratus (DC) Stapf and its performances as biostabilization of tiger nut milk (Cyperus exculentus)	doi.org/10.1016/j .sciaf.2022.e0149 7	*	1
ZIM:03	Scientific African	M F Zaranyika and P Dzomba	Aquatic bioaccessibility of tetracycline antibiotics to higher fauna: Prediction based on the water-column/sediment partition coefficient	doi.org/10.1016/j .sciaf.2022.e0111 3	*	1
RABiotech	Scientific Reports	Abdoudramane Sanou, Kiessoun Konaté, Kaboré kabakdé, Roger Dakuyo, David Bazié, Sama Hemayoro, Mamoudou Hama Dicko	Modelling and optimisation of ultrasound-assisted extraction of roselle phenolic compounds using the surface response method	doi.org/10.1038/ s41598-023- 27434-5	4.997	1

RABiotech	Scientific Reports	FodeAbass Cisse, Noémie Ligot, Kaba Condé, Djigué Souleymane Barry, Lamine Mohamed Toure, Mamadi Konate, Mohamed Fodé Soumah, Karinka Diawara, Mohamed Traoré & Gilles Naeije	Predictors of stroke favorable functional outcome in Guinea, results from the Conakry stroke registry	10.1038/s41598- 022-05057-6	4.997	1
ANEC	Sensors	Ebunang DVT, Tajeu KY, Pecheu CN, Jiokeng SLZ, Tamo AK, Doench I, Osorio-Madrazo A, Tonle IK, Ngameni E.	Amino-Functionalized Laponite Clay Material as a Sensor Modifier for the Electrochemical Detection of Quercetin	10.3390/s221661 73	3.847	1
ANCAP	Separation Science and Technology	C Ineza, BH Pearce, NM Begum, R Luckay	The synthesis and use of new amic acid extractants for the selective extraction of Cu(II),Ni(II) and Co(II) from other base metal ions in acidic medium	doi.org/10.1080/ 01496395.2021.1 881119	2.799	1
RABiotech	Separations	Fatouma Mohamed Abdoul-Latif, Abdirahman Elmi, Ali Merito, Moustapha Nour, Arnaud Risler, Ayoub Ainane, Jérôme Bignon and Tarik Ainane	Essential oil of Ruta chalepensis L. from Djibouti: Chemical Analysis and Modeling of In Vitro Anticancer Profiling	doi.org/10.3390/ separations9120 387	3.344	1
ANCAP	SINET: An Ethiopian Journal of Science	Y Alemayehu, T Tolcha, N Megersa	DLLME coupled with HPLC-DAD for enrichment of pesticide residues in environmental sediment and soil samples	dx.doi.org/10.43 14/sinet.v45i3.2		1
LAO:01	Souphanouvong University Journal of Multidisciplinary Research and Development	C. Syhalath, K. Phomkeona, V. Choulamany, T. Yamaguchi and V. Phouthavong	Development of a smartphone-based colorimetric detection for quantification of vitamin C in dietary supplements and skin care products	n/a		
LAO:01	Souphanouvong University Journal of Multidisciplinary Research and Development	K. Phomkeona, H. Inoue, V. Choulamany and V. Phouthavong	Home-made separation unit for colorimetric detection of ethanol in alcoholic beverages	n/a		
LAO:01	Souphanouvong University Journal of Multidisciplinary Research and Development	P. Deevanxay, K. Phomkeona, B. Sengthongsa and K. Thipachanh	Water Quality and Some Pesticide Residues in Nam Ton of Sangthong District, Vientiane Capital	n/a		

LAO:01	Souphanouvong University Journal of Multidisciplinary Research and Development	S. Keoinpaeng, P. Deevanxay, V. Choulamany, V. Phouthavong and S. Kongmany	Survey and Analysis of Water Quality in Phou Chom Voy Provincial Protected Area of Bolikhamxay Province	n/a		
RABiotech	Surgical Science	Silvère Ngakani Offobo, Hilaire Nyamatsiengui, Louis Clément Obame, Kundulunga Jean Albert Aseke, François Ondo N'Don	The Epidemiological Profile of Acute Peritonitis and Sensitivity to Antibiotics, about 167 Cases, in the General Surgery Department of the Amissa Bongo Regional Hospital Center in Franceville, Gabon	doi.org/10.4236/ ss.2022.136039		0
RABiotech	Sustainability	Mahamadi Nikiema, Narcis Barsan, Ynoussa Maiga, Marius K. Somda, Emilian Mosnegutu, Cheik A. T. Ouattara, Dayeri Dianou, Alfred S. Traore, Valentin Nedeff, and Aboubakar S. Ouattara	Optimization of Biogas Production from Sewage Sludge: Impact of Combination with Bovine Dung and Leachate from Municipal Organic Waste	doi.org/10.3390/ su14084380	3.889	0
ZAM:02	Sustainable Chemistry	Zombe, K., Nyirenda, J., Lumai, A., & Phiri, H.	Impact of Solvent Type on Total Phenol and Flavonoid Content and Sun Protection Factor of Crude Cashew Nutshell Liquid.	doi.org/10.3390/ suschem3030021		
BOL:01	Symmetry	Vilaseca C, Pinto CF, Ordenes-Claveira R, Laroze D, Méndez M & Benítez H	Insect Fluctuating Asymmetry: An Example in Bolivian Peridomestic Populations of Triatoma infestans (Klug, 1834) (Hemiptera: Reduviidae)	doi.org/10.3390/ sym14030526	2.940	1
BUF:01	To Chemistry Journal	Nabomo Hien, Jean Claude W. Ouédraogo, Yvonne L. Bonzi-Coulibaly	Flavonoid-Metallic Cation Interactions Studied by Antioxidant Potential of Mixtures in Methanolic Solution	n/a		
ANCAP	Toxicological & Environmental Chemistry	A Tesfaye, M Amde, E Teju, D Bekana & N Megersa	Acetic acid-modified zinc oxide nanoparticles for solid phase extraction of Cu(II) and Cr(III) in water	doi.org/10.1080/ 02772248.2021.2 007922	1.565	1
ANCAP	Water Research	S Wang, J Wasswa, AC Feldman, I Kabenge, N Kiggundu, T Zeng	Suspect screening to support source identification and risk assessment of organic micropollutants in the aquatic environment of a Sub-Saharan African urban center	doi.org/10.1016/j .watres.2022.118 706	13.400	2
TAN:02	Western Indian Ocean Journal of Marine Science	Z Mhande, MJ Mihale, and H Hellar-Kihampa	Use of physicochemical parameters and metal concentrations in assessing anthropogenic influences on coastal rivers in Dar es Salaam, Tanzania	10.4314/wiojms. v21i1.2		1

RABiotech	World Journal of Advanced Research and Reviews	Elisabeth Rakiswendé Ouédraogo, Kiessoun Konaté, Roger Dakuyo, Kabakdé Kaboré, Abdoudramane Sanou, Hemayoro Sama; and Mamoudou Hama Dicko	Optimization of soybean pre-treatment processes for the improvement of their nutritional, biochemical and bioactive characteristics	doi.org/10.30574 /wjarr.2022.15.2. 0700	
RABiotech	World Journal of Advanced Research and Reviews	Martin Luthère King N'gbo, Fankroma Martial Thiérry Koné, Pégnonsienrè Lacina Soro, Soumaïla Dabonné and Patrice Lucien Kouamé	Potential use of fish meal (Sardinella maderensis), snail meal (Achatina fulica) and African Locust Beans (Parkia biglobosa) in Japanese quails diets: zootechnical and nutritional performance	doi.org/10.30574 /wjarr.2022.14.2. 0423	
RABiotech	World Journal of Advanced Research and Reviews	Modou Séré, Kiessoun Konaté, Balamoussa Santara, Dominique O. Sanou, and Adrien M.G. Belem	Study of the antibacterial capacity of extracts of Solanum incanum L., (Solanaceae) traditionally used for the management of avian cholera in rural areas of Burkina Faso	doi.org/10.30574 /wjarr.2022.13.1. 0717	
RABiotech	World Journal of Advanced Research and Reviews	SORO Lêniféré Chantal, MONYN Ebalah Delphine, KOUADIO Kouakou Kouassi Armand, BOUH Ange Meka Hanielle and ANIN-ATCHIBRI Anin Louise	Ethnobotanical survey, mineral and phytochemical composition of Byttneria catalpifolia and Sida urens: Two spontaneous plants consumed in households in the city of Man	doi.org/10.30574 /wjarr.2022.15.3. 0894	
RABiotech	World Journal of Pharmaceutical Research	Kiessoun Konaté, Dominique Ouryagala Sanou, Balamoussa Santara, Mamoudou Hama Dicko	Qualitative analysis of phenolic compounds and antibacterial activity of trunk bark extracts of Anogeissus leiocarpus (dc.) Guill. And perrot (Combretaceae) traditionally used for the management of infectious diseases in village poultry farming in the region of the boucle of mouhoun	doi.org/10.20959 /wjpr20224- 23599	

## 2.5.2 Matematics publications

Table 12. Summary by region of publication data for the mathematics program in 2022. The number of publications (Publ.) in scientific journals is specified to those with and without Thomson Reuters (TR) impact factors (IF) or/and Norwegian Centre for Research Data (NCDR) ranking (see explanation in the first paragraphs of this appendix, and whether ISP funding was acknowledged (Y) or not (N).

Publication category	Africa		Asia		Latin	America	Total	
ISP acknowledged	yes	no	yes	no	yes	no	yes	no
Publ. in Scientif. Quality J. (TR or/and NCRD ranked)	37	59	1	0	0	0	38	59
Publ. in Other Scientific Journals ("unranked")	19	54	0	3	0	0	19	57
Publ. in Journals by "predatory publishers"	1	12	0	0	0	0	1	12
Books, Chapters, Popular Publ., Technical Reports, etc.	0	3	0	0	0	0	0	3
Total number of publications (yes/no)	57	128	1	3		0	58	131
Grand total	18	35	4		0	0	189	

Group/ Network	Journal	Author(s)	Title	DOI	WoS, 1 yr IF 2021	Norwegian Register
APREA	Advances and Applications in Statistics	Calvin Bitange Maina, Patrick Weke, Carolyne Ogutu, J.A.M. Ottieno	EM-Algorithm for a Normal-Weighted Inverse Gaussian Distribution: Normal-Reciprocal Inverse Gaussian Distribution	doi.org/10.17654/0972 361722001		0
BURK:01	Advances in Differential Equations and Control Processes	Morou Hamidou, Adamou Otto	A Transmission model of Covid-19 with quarantine, treatment and vaccination	dx.doi.org/10.17654/09 74324322006		1
BURK:01	Advances in Mathematics Research	Djendode Mbainadji, Issa Zabsonre	Local existence and regularity of solutions in α- norm for some partial functional integrodifferential equations in Banach spaces			
BURK:01	Advances in Mathematics: Scientific Journal	Samaké, Amadou Mahamane, Stages of the COVID-19 Epidemic in Mali Ouaténi Diallo			1	
EAUMP UDSM	Advances in the Theory of Nonlinear Analysis and its Applications	Anju Panwar, Reena Morwal, Santosh Kumar	Fixed points of ρ-nonexpansive mappings using MP iterative process	10.31197		
EAUMP UR	Advances in Theoretical and Mathematical Physics	Jean de Dieu Maniraguha, Krzysztof Marciniak, Celestin Kurujyibwami	Transforming Stäckel Hamiltonians of Banenti type to plolynomial form	10.48550/arXiv.2101.0 0444	1.722	1
EAUMP UDSM	African Health Science	Samson O Omondi, Peter K Msaki, Kazema R Ramadhan, Idrissa S Amour, Innocent J Lugendo	Investigation of the origin of scatter components transmitted through anti-scatter grids in X-ray Digital Imaging system using Monte Carlo Simulation	10.4314/ahs.v22i2.71	1.108	1
EAUMP UR	African Journal of Food, Agriculture, Nutrition and Development	Similien NDAGIJIMANA, Ignace KABANO, Jean Marie NTAGANDA	Analysis of risk factors that influence stunting among Rwandan children under the age of five	10.18697/ajfand.110.2 1125		1
APREA	Afrika Statistika	Calvin Bitange Maina, Patrick Weke, Carolyne Ogutu, J.A.M. Ottieno	Modelling Skewed and Heavy-Tailed Data Using a Normal Weighted Inverse Gaussian Distribution	dx.doi.org/10.16929/as /2022.3171.300		
APREA/EA UMP UoN	Afrika Statistika	W. O. Onchere, P.G.O. Weke, J.A.M. Ottieno, C. A. Ogutu	Compound Joint-life Annuity Frailty Modeling	10.16929/as/2022.319 9.302		
APREA/EA UMP UoN	Afrika Statistika	C. M. Mwau, P.G.O. Weke, D. N. Bundi, J.A.M. Ottieno	Phase Type Zero Truncated Poisson Lindley Distributions and their application in modeling Secondary Cancer Cases	10.16929/as/2022.314 5.199		
BURK:01	Afrika Statistika	Niang Aladji Babacar, Lo Gane Samb, Traoré, Cherif Mamadou Moctar	Poisson invariance principles from two classical Poisson limit theorems and extension to nonstationary independent sequences	10.16929/as/2022.312 5.198		

EAUMPU UoN	Afrika Statistika	C. Maina, P.G.O. Weke, C.A. Ogutu, J.A.M Ottieno	Modelling Skewed and Heavy-tailed Data Using A Normal Weighted Inverse Gaussian Distribution	10.16929/as/2022.316 5.300		
SEAMaN NUOL	AIMs	Bounmy Khaminsou, Weerawat Sudsutad, Jutarat Kongson, Somsiri Nontasawatsri, Adirek Vajrapatkul, Chatthai Thaiprayoon	Investigation of Caputo proportional fractional integro-differential equation with mixed nonlocal conditions with respect to another function	10.3934/math.2022531	2.739	1
BURK:01	American Journal of Applied Mathematics	Issa Zabsonre	An Existence Result in α-norm for Impulsive Functional Differential Equations with Variable Times	10.11648/j.ajam.20221 001.11		
EAUMP MAK	Analysis Mathematica	Ndikubwayo, I.	Polynomials Defined by 5-Term Recurrence Relations, Banded Toeplitz Matrices, and Reality of Zeros	doi.org/10.1007/s1047 6-022-0158-2	0.703	1
EAUMP UR	Annals of Combinatorics	Axel Hultman, Vincent Umutabazi	Boolean Complexes of Involutions	doi.org/10.1007/s0002 6-022-00629-9	1.040	1
EAUMP MAK	Annals of Mathematics and Computer Science	Mirumbe I.	On the quasiminimizing constant for the minimum of two quasisuperminizers on <i>Rn</i> equipped with a p-admissible weight	annalsmcs.org/index.p hp/amcs/article/view/7 4/41		
BURK:01	Annals of the University of Craiova	Roland Silga, Bila Adolphe Kyelem, Gilbert Bayili	Indirect boundary stabilization with distributed delay of coupled multi-dimensional wave equations	doi.org/10.52846/ami.v 49i1.1430		
EAUMP MAK	Applications and Applied Mathematics	Kasozi, J.	Numerical Ultimate Survival Probabilities in an Insurance Portfolio Compounded by Risky Investments.	digital commons.pvamu .edu/aam/vol17/iss1/4		
EAUMP UDSM	Applied General Topology	Mohammad Asim, Santosh Kumar, Mohammad Imdad, Reny George	C *-algebra valued quasi metric spaces and fixed point results with an application	104995		1
APREA/EA UMP UoN	Applied Mathematics	C. B. Maina, P. G. O. Weke, C. A. Ogutu, J. A. M. Ottieno	A normal weighted Inverse Gaussian Distribution for Skewed and Heavy-Tailed data	10.4236/am.2022.1320 13		0
BURK:01	Applied Mathematics	Ouaténi Diallo, Yaya Koné, Chata Sanogo, Jérôme Pousin	A Mathematical Model of COVID-19: Analysis and Identification of Parameters for Better Decision Making	www.scirp.org/journal/ paperinformation.aspx ?paperid=115478		0
EAUMPU UoN	Applied Mathematics & Information Sciences	J. Abonongo, I. J. Mwaniki, J. A. Aduda	Sine F-Loss Family of Distributions: Properties and Insurance Applications	dx.doi.org/10.18576/a mis/160518		0
EAALG/EA UMP MAK	Arabian Jounal of Mathematics	Herbert Batte, Taboka P. Chalebgwa, Mahadi Ddamulira	Perrin numbers that are concatenations of two repdigits	doi.org/10.1007/s4006 5-022-00388-8		1
BURK:01	Asia Pacific Journal of Mathematics	Yassia OUEDRAOGO, Rodrigue SANOU, Blaise KONE	Multiple solutions for anisotropic nonlinear discrete Dirichlet boundary value problems in a two-dimensional Hilbert space	10.28924/APJM/911		

EAUMP UNZA	AUT Journal of Mathematics and Computing	Xavier Mbaale, Bernardo G Rodriguesb, Seiran Zandi	Designs from maximal subgroups and conjugacy classes of PSL(2,q), q odd.	doi.org/10.22060/ajmc. 2022.21877.1117		
PDEAPP/A AU	Axioms	Henok Desalegn Desta, Deepak B. Pachpatte, Jebessa B. Mijena, Tadesse Abdi	Univariate and Multivariate Ostrowski-Type Inequalities Using Atangana—Baleanu Caputo Fractional Derivative	doi.org/ 10.3390/axioms110904 82	1.824	0
EAUMP MAK	Biomathematics	Mayanja, E., L., S. Luboobi, J. Kasozi, R., N. Nsubuga	Mathematical Modelling of HIV-HCV Co-infection Dynamics in Presence of HIV Therapy	doi.org/10.55630/j.bio math.2022.07.158		1
EAUMP UR	BMC Medical Informatics and Decision Making	Nishimwe, A., Ruranga, C., Musanabaganwa, C. et al.	Leveraging artificial intelligence and data science techniques in harmonizing, sharing, accessing and analyzing SARS-COV-2/COVID-19 data in Rwanda (LAISDAR Project): study design and rationale	doi.org/10.1186/s1291 1-022-01965-9	3.298	1
BURK:01	Carpathian Journal of Mathematics	Sow, T. M. M.; Diene, Aminata Diop; Djitte, N.	A novel approach for solving simultaneously one- parameter nonexpansive semigroup, convex minimization and fixed point problems involving set-valued operators	www.jstor.org/stable/2 7178494	1.360	1
AAU/PDEA APP	Chaos, Solitons & Fractals	Sileshi Sintayehu, Bruno Buonomo, Alberto d'Onofrio, Tadesse Abdi	Period doubling' induced by optimal control in a behavioral SIR epidemic model	doi.org/10.1016/j.chao s.2022.112347	9.922	1
EAUMP UR	Children	Chilyabanyama, O.N., Chilengi, R., Simuyandi, M., Chisenga, C.C., Chirwa, M., Hamusonde, K., Saroj, R.K., Iqbal, N.T., Ngaruye, I., Bosomprah	Performance of Machine Learning Classifiers in Classifying Stunting among Under Five Children in Zambia	doi.org/10.3390/childr en9071082	2.835	X
EAUMP UR	Climate	Parsons, Danny, David Stern, Denis Ndanguza, Mouhamadou Bamba Sylla	Evaluation of Satellite-Based Air Temperature Estimates at Eight Diverse Sites in Africa	doi.org/10.3390/cli100 70098		1
BURK:01	Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics	Cheikh SECK	Study and suppression of singularities in wave- type evolution equations on non-convex wave- type evolution equations on non-convex domains with cracks	10.31801/cfsuasmas.10 49893		
AAU	Communications in Mathematical Biology and Neuroscience	Amalework Ayele Ejigu, Manalebish Debalike Asfaw, Semu Mitiku Kassa	Estimating the spatial distribution of possible livestock production level using a mathematical model and the smap soil moisture data: the case of Botswana	doi.org/10.28919/cmb n/7817		
EAUMP UR	Communications in Statistics - Theory and Methods	Emelyne Umunoza Gasana, Dietrich von Rosen, Martin Singull	Moments of the likelihood-based discriminant function	doi.org/10.1080/03610 926.2022.2100909	0.863	1

EAUMP UR	Communications in Statistics - Theory and Methods	Kanuti Ngailo, E. and Ngaruye, I.	Asymptotic results for expected probability of misclassifications in linear discriminant analysis with repeated measurements	doi.org/10.1080/03610 926.2022.2116286	0.863	1
BURK:01	Complexity	Saima Mustafa, Shumaila Ghaffar, Murrium Bibi, Muhammad Ghaffar Khan, Qaisara Praveen, Harish Garg, Mahamane Saminou	An application of fuzzy multiple linear regression in biological paradigm	doi.org/10.1155/2022/ 1162464	1.333	1
BURK:01	Computation	Abdoulaye Samaké, Amadou Mahamane, Mahamadou Alassane, Ouaténi Dialllo	A Mathematical and Numerical Framework for Traffic-Induced Air Pollution Simulation in Bamako	doi.org/10.3390/comp utation10050076		1
AAU	Computational and Applied Mathematics	Solomon B. Zegeye, Mengistu G. Sangago, Habtu Zegeye	Approximation of common solutions of nonlinear problems in Banach spaces	doi.org/10.1007/s4031 4-022-01907-1		
BURK:01	Creative Mathematics and Informatics	Sene, M.; Ndiaye, M.; Djitte, N.	A new Krasnoselskii's type algorithm for zeros of strongly monotone and Lipschitz mappings	doi.org/10.37193/CMI. 2022.01.11		
BURK:01	Cubo	Ouaro, Stanislas; Rabo, Noufou; Traoré, Urbain	Numerical analysis of nonlinear parabolic problems with variable exponent and L1 data	dx.doi.org/10.56754/07 19-0646.2402.0187		
BURK:01	Czechoslovak Mathematical Journal	Morou Hamidou, Abdessalem Mnif	Unimodular row over Laurent polynomial rings	eudml.org/doc/298940	0.328	1
BURK:01	Differential Inclusions, Control and Optimization	Kaboré, A.; Ouaro, S.	Nonlocal boundary inclusion problem with L1-data and constant exponent	doi.org/10.7151/dmdic o.1236		
BURK:01	Differential Inclusions, Control and Optimization	Ouaro, Stanislas; Rabo, Noufou; Traoré, Urbain	Numerical analysis of nonlinear elliptic-parabolic problems with variable exponent and L1 data	doi.org/10.7151/dmdic o.1233		
BURK:01	Differential Inclusions, Control and Optimization	Mamadou Abdoul Diop, Khalil Ezzinbi & Mamadou Pathé LY	Nonlocal problems for integrodifferential equations via resolvent operators and optimal controls	doi.org/10.7151/dmdic o.1231		
AAU	Discussiones Mathematicae Graph Theory	Carl Johan Casselgren, Fikre B. Petros	Edge precoloring extension of trees II	doi.org/10.7151/dmgt. 2461	1.028	1
AAU	E-Learning and Digital Media	Habtamu Zelelew, Zelalem Teshome, Tefera Tadesse, Yonas Keleta	Planting the seeds of innovative e-learning platform in higher education institutions in Ethiopia: The case of ET online college	doi.org/10.1177/20427 530221108030		1
AAU	Electronic Journal of Graph Theory and Applications	Tomas Vetrik, Mesfin Masre and Selvaraj Balachandrana	Zeroth-order general Randi'c index of trees with given distance k-domination number	dx.doi.org/10.5614/ejg ta.2022.10.1.17		
CoRS	Enumerative Combinatorics and Applications	Per Alexandersson† and Olivia Nabawanda	Peaks are Preserved Under Run-Sorting	10.54550/ECA2022V2S 1R2		

EAUMP UDSM	EURASIP Journal on Advances in Signal Processing	Mugundu Rambika, Abdi T. Abdalla, Baraka Maiseli, Idrissa Amour, Alfred Mwambela	Aspect dependent-based ghost suppression for extended targets in through-the-wall radar imaging under compressive sensing framework	doi.org/10.1186/s1363 4-022-00894-z	1.759	1
BURK:01	European Journal of Mathematics and Applications	Mohamado Kiema and Issa Zabsonre	Square-mean pseudo almost periodic solutions of class r under the light of measure theory	doi.org/10.28919/ejma .2022.2.4		
BURK:01	European Journal of Mathematics and Statistics	Harouna Sangara, Abdou Fane	Time Series Analysis and Forecast of Covid-19 Data in Southern African Countries	doi.org/10.24018/ejma th.2022.3.5.61		
BURK:01	European Journal of Pure and Applied Mathematics	Niang A.B., Sangaré H., Kpanzou T.A., Lo G.S. and Ngom N.	Extensions of two classical Poisson limit laws to non-stationary independent sequences	doi.org/10.29020/nybg. ejpam.v15i2.4323		
BURK:01	European Journal of Pure and Applied Mathematics	Mohamed Congo, Marie Françoise Ouedraogo	Boundedness of non regular pseudo-differential operators on variable exponent Triebel-Lizorkin-Morrey spaces,	doi.org/10.29020/nybg. ejpam.v15i1.4200		
BURK:01	European Journal of Pure and Applied Mathematics	Mohamed Congo, Marie Françoise Ouedraogo	Boundedness of non regular pseudo-differential operators and their adjoints on variable exponent Besov-Morrey space	doi.org/10.29020/nybg. ejpam.v15i4.4553		
EAUMPU UoN	European Mathematical Society Magazine	C. Bonadiman, J. Ongaro, D. Martinelli & B. Szendrői	Live and remote: Nairobi workshops in algebraic geometry	10.4171/MAG/89		
BURK:01	Filomat	A. Diop, M.A. Diop, K. Ezzinbi, M. Fall	Existence and controllability for some random integrodifferential equations with statedependent delay	doi.org/10.2298/FIL220 4363D	0.988	1
BURK:01	Filomat	A. Anguraj, K. Ramkumar, Mamadou Abdoul Diop, K. Ravikumar	Exponential behavior of nonlinear stochastic partial functional equations driven by Poisson jumps and Rosenblatt process	doi.org/10.2298/FIL220 9857A	0.988	1
EAUMP UDSM	Filomat	Vedaste Mutarutinya, Marco Mpimbo, Gabriel Nshizirungu	On the Relationship and the Norm Discretization for Lizorkin-Triebel Spaces with Generalized Smoothness	10:2298	0.988	1
EAUMP UDSM	Fixed Point Theory and Algorithms for Sciences and Engineering	Pragati Gautam, Santosh Kumar, Swapnil Verma and Gauri Gupta	Existence of common fixed point in Kannan F- contractive mappings in quasi-partial b-metric space with an application	10.1186		1
BURK:01	Folia Mathematica	Harouna Ouedraogo, Ali Traoré and Aboudramane Guiro	A study of discret class of Schistosomiasis model with delay and general incidence.	fm.math.uni.lodz.pl/art ykuly/24/v24n1_3_27. pdf		
PDEAPP/A AU	Foundations	Henok Desalegn, Jebessa B. Mijena, Eze R. Nwaeze, Tadesse Abdi	Simpson's Type Inequalities for s-Convex Functions via a Generalized Proportional Fractional Integral	doi.org/10.3390/found ations2030041		1

EAUMP UDSM	Fractal and Fractionals	Penumarthy Parvateesam Murthy, Chandra Prakash Dhuri, Santosh Kumar, Rajagopalan Ramaswamy, Muhannad Abdullah Saud Alaskar 3, Stojan Radenovi'c	Common Fixed Point for Meir–Keeler Type Contraction in Bipolar Metric Space	10.3390	3.577	1
APREA	Frontier Public Health	Collins Okoyo, Nelson Onyango, Idah Orowe, Charles Mwandawiro, Graham Medley	Sensitivity Analysis of a Transmission Interruption Model for the Soil-Transmitted Helmitted Infections in Kenya	doi.org/10.3389/fpubh. 2022.841883		0
BURK:01	Frontiers in Applied Mathematics and Statistics	Boulaasair L., Bouzahir H, Vargas A.N. and Diop M.A.	Existence and uniqueness of solutions for stochastic urban-population growth model	doi.org/10.3389/fams.2 022.960399		1
EAUMPU UoN	Frontiers in Public Health	C. Okoyo, N. O. Owuor, I. Orowe, C. Mwandawiro, G. Medley	Sensitivity Analysis of a Transmission Interruption Model for the Soil-Transmitted Helminth Infections in Kenya	10.3389/fpubh.2022.8 41883		0
EAUMP UR	Future Internet	Murorunkwere B.F, Tuyishimire O, Haughton D, Nzabanita	Fraud Detection Using Neural Networks: A Case Study of Income Tax	www.mdpi.com/1999- 5903/14/6/168		1
EAALG/EA UMP MAK	Glasnik Matematicki	Herbert Batte, Mahadi Ddamulira, Juma Kasozi, Florian Luca	On the multiplicity in Pillai's problem with Fibonacci numbers and powers of a fixed prime	doi.org/10.3336/gm.57 .2.02	0.432	1
BURK:01	Global Journal of Advanced Research on Classical and Modern Geometries	Mouhamadou Hassirou, Boubacar Moundio	Osserman Condition On Sasakian Manifolds	geometry-math- journal.ro/pdf/Volume 11-Issue2/7.pdf		
EAUMP UNZA	Global Scientific Journals	Musonda M. and Chowa T.	The barriers and facilitators of Life Insurance Uptake: A study of Kalumbila Mining Community			
PDEAPP/ BURK:01	Gulf Journal of Mathematics	Urbain TRAORE and Estelle NASSOURI	A Collapsing Sandpile with Nonlocal Boundary Condition	doi.org/10.56947/gjom .v12i1.779		1
AAU	IEEE Access	Imtiaz Ali, Muhammad Javaid, Samuel Asefa Fufa	Studies of Multilevel Networks via Fault-Tolerant Metric Dimensions	10.1109/ACCESS.2022. 3199948	3.476	1
AAU	IEEE Access	Muhammad Kamran Aslam, Muhammad Javaid, Kasif Nazar, Samuel Asefa Fufa	Study of Convexo-Symmetric Networks via Fractional Dimensions	10.1109/ACCESS.2022. 3207197	3.476	1
AAU	Indian Journal of Pure and Applied Mathematics	Hunduma Legesse Geleta	Exploring zero free regions for fractional hypergeometric zeta functions	doi.org/10.1007/s1322 6-022-00268-z	0.559	1
BURK:01	Informatics in Medicine Unlocked	M.S. Goudiaby, L.D. Gning, M.L. Diagne, B.M. Dia, H. Rwezaura, J. M. Tchuenche	Optimal control analysis of COVID-19 and tuberculosis co-dynamics analysis	10.1016/j.imu.2022.10 0849		1
EAUMP UDSM	Information Systems and Operational Research	Nils-Hassan Quttineh, Uledi Ngulo Torbjörn Larsson	Approximating the Pareto frontier for a challenging real-world bi-objective covering	10.1080	1.047	1

EAALG/EA UMP MAK	International Electronic Journal of Algebra	Kimuli P. I and Ssevviiri D	Characterization of regular modules	10.24330/ieja.1224782		1
BURK:01	International Journal of Advances in Applied Mathematics and Mechanics	Morou Hamidou, Adamou Otto	A mathematical model for a transmissible disease with two variants	www.ijaamm.com/uplo ads/2/1/4/8/21481830 /v10n2p1_1-14.pdf		
EAUMP MAK	International Journal of Applied and Computational Mathematics	Muhumuza, C., Mayambala, F., Mugisha, J.,Y.,T.	A Stochastic Model of Fowl Pox Disease: Estimating the Probability of Disease Outbreak	doi.org/10.1007/s4081 9-022-01442-x		1
BURK:01	International Journal of Applied Mathematics	Maman Yarodji Abdoul Kader	A new variant of Rusanov scheme: β–Rusanov for numerical resolution of shallow water flows	dx.doi.org/10.12732/ija m.v35i4.7		1
BURK:01	International Journal of Control	Mamadou Abdoul Diop, Khalil Ezzinbi, Paul Guindo	Optimal controls for semilinear integrodifferential evolution equations in Banach spaces	doi.org/10.1080/00207 179.2022.2070776	2.102	1
EAUMPU UoN	International Journal of Environmental Research and Public Health	K. Daniel, N.O. Owuor, R. & J. Sarguta	A Spatial Survival Model for Risk Factors of Under- Five Child Mortality in Kenya	10.3390/ijerph1901039 9	4.614	1
EAUMP MAK	International Journal of General Medicine	Kabagenyi, A.; Wasswa, R.; Nannyoga, B., K. et al	Factors Associated with COVID-19 Vaccine Hesitancy in Uganda	10.2147/IJGM.S372386	2.145	1
EAUMPU UoN	International Journal of Innovation in Science and Mathematics	S.K. Moindi, B.M. Nzimbi & S.K. Luketero	A Study of P1-Curvature Tensor in LP-Sasakian Manifolds	www.ijism.org/adminis trator/components/co m_jresearch/files/publi cations/IJISM_982_FIN AL.pdf		
BURK:01	International Journal of Mathematics and Mathematical Sciences	O.S. Sougue, O Traore	On a predator-prey model involving age and spatial structure	doi.org/10.1155/2022/ 5656953		1
EAUMPU UoN	International Journal of Mathematics Trends and Technology	B.M. Nzimbi, F.M. Mwangi, & S.W. Luketero	Remarks on the Peripheral Spectrum of Operators in Hilbert Spaces	10.14445/22315373		0
EAUMP UDSM	International Journal of Nonlinear Analysis and Applications	Lucas Wangwe, Santosh Kumar	Common fixed point theorems under implicit contractive condition using E. A. property on metric-like spaces employing an arbitrary binary relation with some application	10.22075		
AAU	International Journal of Nonlinear Analysis and Applications	Solomon Bekele Zegeye, Habtu Zegeyeb, Mengistu Goa Sangagoa, and Oganeditse A. Boikanyob	A convergence theorem for a common solution of f-fixed point, variational inequality and generalized mixed equilibriumproblems in Banach spaces	dx.doi.org/10.22075/ijn aa.2022.25363.2995		

EAUMP UR	International Journal of Science Academic Research	Jean Marie Ntaganda, Mahamat Saleh Daoussa Haggar, Angelique Dukunde	Fuzzy logic strategy implemented on an optimal control problem of hypoxemic hypoxia tissue blood dioxide carbon exchange: cardiovascular-respiratory system response to exercise	www.scienceijsar.com/ sites/default/files/articl e-pdf/IJSAR-0935_0.pdf		
EAUMP UNZA	International Journal of Scientific and Research Publications	Mahlangu L. and Chowa T.	An investigation of the causes of non-performng loans: A case of a Zambian bank	10.29322/IJSRP.12.05.2 022.p12505		
EAUMPU UoN	International Journal of Statistics and Applied Mathematics	J. Tsimita, S. Moindi, & B. Nzimbi	A study of <b>W 5</b> curvature tensor in LP-Sasakian manifold	10.22271/maths.2022. v7.i3a.821		
EAUMPU UoN	International Journal of Statistics and Applied Mathematics	F.M. Isaiah, S.K. Moindi, B.M. Nzimbi, P.W. Njori	A study of <b>W3</b> curvature tensor in LP-Sasakian manifolds	10.22271/maths.2022. v7.i2b.805		
APREA	International Journal of Statistics and Economics	Mamadou Alieu Jallow, Lukman Abiodum Nafiu and Patrick Weke	Stochastic Forecasting of Stock Prices of Capital Assets Using Semi-Markov Model	www.ceser.in/ceserp/i ndex.php/bse/article/vi ew/6806		
EAUMPU UoN	IOSR Journal of Humanities and Social Sciences	C.W. Yegon, A.W. Wang'ombe, W. Cholo, A.G. Njuguna, E. Kagereki	Patient Factors Influencing Satisfaction with Quality of Healthcare in Kenya: Regression Modeling of Nationally Representative Data			
EAUMP UNZA	Japanese Journal of Statistics and Data Science	Nawa, V.M	A weighted score confidence interval for a binomial proportion	doi.org/10.1007/s4208 1-022-00146-2		1
BURK:01	Journal de Mathématiques Pures et Appliquées de Ouagadougou	Issa ZABSONRE, Hamidou TOURE, Boris HADA	Existence and regularity of solutions in α-norm for some nonlinear second order differential equation in Banach Spaces	www.ired.org/modules /infodoc/assets/doc/Do cument_N06562.pdf		
BURK:01	Journal de Mathématiques Pures et Appliquées de Ouagadougou	Silga Roland, Bayili, Gilbert	Stabilization for 1D wave equation with delay term on the dynamical contro	www.ired.org/modules /infodoc/assets/doc/Do cument_N06563.pdf		
BURK:01	Journal of Applied Mathematics	Abdoulaye Samaké, Amadou Mahamane, Ouaténi Diallo	Parallel implementation and scalability results of a local-scale air quality model: Application to Bamako urban city	10.1155/2022/946353 7	0.720	1
EAUMP MAK	Journal of Applied Mathematics	Nankinga L. Luboobi, L., S., Mugisha, J. Y., T., Nannyonga, B., Carlsson, L.	A Stage-Structured Fishery Model for African Catfish and Nile Tilapia Feeding on Two Food Resources with Harvesting	doi.org/10.1155/2022/ 4112015	0.720	1
EAUMPU UoN	Journal of Applied Statistics	S. Gachau, E.N. Njagi, N.O. Owuor, P. Mwaniki, M. Quartagno, R. Sarguta, M. English, P. Ayieko	Handling missing data in a composite outcome with partially observed components: simulation study based on clustered paediatric routine data	10.1080/02664763.202 1.1895087	1.416	1

AAU	Journal of Computational Science	Demmelash Mollalign, Allen R. Mushi and Berhanu Guta	Solving Multi-Objective Multilevel Programming problems using two-phase Intuitionistic Fuzzy Goal Programming method	doi.org/10.1016/j.jocs. 2022.101786	3.817	1
EAUMP UDSM	Journal of Function Spaces	Santosh Kumar and Faustine Nziku	Some Fixed Point Theorems for Boyd and Wong Type Contraction Mapping in Ordered Partial Metric Spaces with an Application	10.1155	1.281	1
EAUMP UDSM	Journal of Function Spaces	Mohd Jubair, Javid Ali and Santosh Kumar	Estimating Fixed Points via New Iterative Scheme with an Application	10.1155	1.281	1
EAUMP UDSM	Journal of Function Spaces	Gunaseelan Mani, Arul Joseph Gnanaprakasam, Khalil Javed and Santosh Kumar	On Orthogonal Coupled Fixed Point Results with an Application	10.1155	1.281	1
EAUMPU UoN	Journal of Function Spaces	M. Alshammari, N. Iqbal, D. B. Ntwiga	A comparative study of fractional-order diffusion model within Atangana-Baleanu-Caputo operator	10.1155/2022/922670 7	1.281	1
EAUMPU UoN	Journal of Function Spaces	Y. Alkhezi, N.A. Shah, & D.B. Ntwiga.	Analytical Fuzzy Analysis of a Fractional-Order Newell-Whitehead-Segel Model with Mittag- Leffler Kernel	10.1155/2022/278537 9	1.281	1
EAUMP UDSM	Journal of Fuzzy Extension and Applications	Leonce Leandry, Innocent Sosoma, David Kolosen	Basic fuzzy arithmetic operations using $\alpha$ –cut for the gaussian membership function	10.22105		
AAU	Journal of Inequalities and Applications	Ludmila Nikolova, Lars-Erik Persson, Sanja Varošanec, Markos Fisseha Yimer	Refinements of some classical inequalities via superquadraticity	doi.org/10.1186/s1366 0-022-02821-0	2.021	1
CoRS	Journal of Integer Sequences	Fufa Beyene, Roberto Mantaci	Merging-Free Partitions and Run-Sorted Permutations	cs.uwaterloo.ca/journal s/JIS/VOL25/Beyene/be yene10.pdf		1
BURK:01	Journal of Integral Equations and Applications	Amadou Diop, Moustapha Dieye, Mamadou Abdoul Diop, Khalil Ezzinbi	Integro-differential equations of Volterra type with nonlocal and impulsive conditions	10.1216/jie.2022.34.19	0.943	1
EAUMP UDSM	Journal of Intelligent and Fuzzy Systems	Mngʻongʻo, Benito G.; RAD, Dana; Koloseni, David; Balas, Valentina E.	Application of fuzzy TOPSIS in assessing performance of agro-processed organic crops: A case of Sustainable Agriculture Tanzania (SAT) in Morogoro	10.3233	1.737	1
EAUMPU UoN	Journal of Mathematical Finance	C.B. Maina, P.G.O. Weke, C.A. Ogutu, & J.A.M. Ottieno	Estimating Value at Risk (VaR) and Expected Shortfall Using Normal Weighted Inverse Gaussian Distributions	10.9734/bpi/nramcs/v7 /6817F		0
AAU	Journal of Mathematics	Demessie Ergabus Birmechu and Hunduma Legesse Geleta	New Zero-Free Regions for Hypergeometric Zeta and Fractional Hypergeometric Zeta Functions	doi.org/10.1155/2022/ 4862447	1.555	1
AAU	Journal of Mathematics	Maria Singaraj Rosary and Samuel Asefa Fufa	On Reverse Valency Based Topological Characterization of a Chemical Compound	doi.org/10.1155/2022/ 5424430	1.555	1

CoRS/AAU	Journal of Mathematics	S. Imran, Z. Ali, N. Nigar, Syed Ajaz K. Kirmani, M.K. Siddiqui, and S.A. Fufa	Computation of Metric Dimension of Certain Subdivided Convex Polytopes	doi.org/10.1155/2022/ 3567485	1.555	1
EAUMP UDSM	Journal of Mathematics	Lucas Wangwe and Santosh Kumar	Common Fixed Point Theorems for F-Kannan— Suzuki Type Mappings in TVS-Valued Cone Metric Space with Some Applications	10.1155	1.555	1
EAUMP UDSM	Journal of Mathematics	Santosh Kumar, Anita Tomar, Gopi Prasad	On Solution of Nonlinear Integral and Fractional Differential Equations via Discontinuous Nonlinear Contractions	10.1155	1.555	1
AAU	Journal of Mathematics and Computer Science	Ashenafi Awraris, Berhanu Guta Wordofaa, Semu Mitiku Kassa	A simplex-based branch-and-cut method for solving integer tri-level programming problems	dx.doi.org/10.22436/j mcs.025.03.03		
BURK:01	Journal of Nonlinear Sciences and Applications	Fall M., Mane A., Dehigbe B., Diop M.A.	Some results on the approximate controllability of impulsive stochastic integro-differential equations with nonlocal conditions and state-dependent delay	dx.doi.org/10.22436/jn sa.015.04.04		1
BURK:01	Journal of Nonlinear Sciences and Applications	M.H.M. Hamit, K.H. Bete, B.I. Mahamat, M.A. Diop	Controllability of impulsive stochastic functional integrodifferential equations driven by Rosenblatt process and Lévy noise	10.22436/jnsa.015.02.0 6		1
BURK:01	Journal of Nonlinear Sciences and Applications	D. Chalishajar, K. Ramkumar, A. Anguraj, K. Ravikumar, M.A. Diop	Controllability of neutral impulsive stochastic functional integrodifferential equations driven by a fractional Brownian motion with infinite delay via resolvent operator	dx.doi.org/10.22436/jn sa.015.03.01		1
BURK:01	Journal of Numerical Mathematics and Stochastics	M. Fall, M. D. Dididya, A. W. Gnonlonfoun and M.A. Diop	On Impulsive Integrodifferential Equations With State-Dependent Delay	www.jnmas.org/jnmas 13-2.pdf		1
PDEAPP/EA UMP UR	Journal of Positive School Psychology	Denis Kagyera Katakara, Wellars Banzi, Dany Kamuhanda	An assessment of Student Teacher's attitudes towards incorporation of ICT in Mathematics instruction,	journalppw.com/index. php/jpsp/article/view/4 043/2665		0
PDEAPP/EA UMP UR	Journal of Research Innovation and Implications in Education	Denis Katakara Kagyera, Banzi Wellars	Blended Learning as Methodology of Mathematics Instruction at the University of Rwanda in the Era of Covid-19 Pandemic	jriiejournal.com/wp- content/uploads/2022/ 02/JRIIE-6-1-010.pdf		1

EAUMP UR	Journal of Somali studies	Joseph Nzabanita, Innocent Ngaruye, Charles Ruranga, Emmanuel Masabo, Elias Mutezimana, Japhet Niyobuhungiro, Annie Uwimana, Jean Paul Nizeyimana, Jeanne Uwonkunda, Denis Ndanguza	Effects of High School Leavers' Characteristics on the Academic Performance in Higher Education: Empirical Evidence from Rwanda	journals.co.za/doi/full/ 10.31920/2056- 5682/2022/v9n2a4		
EAUMP UDSM	Konuralp Journal of Mathematics	Wangwe, L. and Kumar, S	Fixed Point Theorem for Single valued Mapping in Convex Partial Symmetric Spaces with an Application	10.2022		
EAUMP UDSM	Konuralp Journal of Mathematics	Asaph Keikara Muhumuza, Rebecca Nalule Muhumuza, Santosh Kumar	Extreme-Fixed Points of the Vandermonde Polynomial when Optimized over p-Normed Surfaces Defined by Univariate Polynomials	dergipark.org.tr/en/do wnload/article- file/2567156		
BURK:01	Le Matematiche	Ouaro, S.; Sawadogo, N.	Suitable Radon measure for nonlinear Dirichlet boundary p(u)-Laplacian problem.	10.4418/2022.77.1.1		1
BURK:01	Malaya Journal of Matematik	Dramane Ouedraogo, Idrissa Ibrango and Aboudramane Guiro	Global stability for reaction-diffusion SIR model with general incidence function	doi.org/10.26637/mjm 1002/004		
EAUMPU UoN	Manuscripta Mathematica	M. Damian	Monads on multiprojective spaces and associated vector bundles	doi.org/10.1007/s0022 9-022-01449-0	0.640	1
EAUMP UDSM	Mathematical and Computational Applications	S.Y. Tchoumi, H. Rwezaura, M.L. Diagne, G. Gonzalez-Para and J. Tchuenche	Impact of Infective Immigrants on COVID-19 Dynamics	10.3390		1
BURK:01	Mathematical Biosciences and Engineering	R. Seck, D. Ngom, B. Ivorra	An optimal control model to design strategies for reducing the spread of the Ebola Virus Disease	10.3934/mbe.2022082	2.194	1
AAU	Mathematical Inequalities & Applications	Markos Fisseha Yimer	Multidimensional weighted P'OLYA–KNOPP inequalities with sharp constants	10.7153/mia-2022-25- 55		1
AAU	Mathematical Methods in the Applied Sciences	Bruno Buonomo, Alberto d'Onofrio, Semu Mitiku Kassa, Yetwale Hailu Workineh	Modeling the effects of information-dependent vaccination behavior on meningitis transmission	doi.org/10.1002/mma. 7808	3.007	1
AAU	Mathematical Methods in the Applied Sciences	Solomon Bekele Zegeye, Habtu Zegeye, Mengstu Goa Sangago, Oganeditse A. Boikanyo2, Sebsibe Teferi Woldeamanuel	An inertial method for a solution of split equality of monotone inclusion and the <i>f</i> -fixed point problems in Banach spaces	10.1002/mma.8678	3.007	1
BURK:01	Mathematical Modeling and Computing	Benboubker M. B., Traore U.	Existence and stability of solutions to nonlinear parabolic problems with perturbed gradient and measure data	doi.org/10.23939/mmc 2022.04.977		
EAUMP UDSM	Mathematical Physics Studies	A.S. Lighuda, S.D. Maharaj, J.M. Sunzu, E.W. Mureithi	Three-layered star comprising polytropic, quark and gaseous matter	10.1007		

AAU	Mathematical Problems in Engineering	Chuang Sun, A. Khalid, H.M. Usman, A. Ahmad, M.K. Siddiqui, S.A. Fufa	On Neighborhood Degree-Based Topological Analysis of Polyphenylene Network	doi.org/10.1155/2022/ 1951226	1.430	0
APREA	Mathematical Problems in Engineering	Joab Odhiambo, Philip Ngare, Patrick Weke	Poisson Incorporated Credibility Regression Modeling of Systematic Mortality Risk for Populations with Finite Data	doi.org/10.1155/2022/ 1753542	1.430	0
CoRS	Mathematical Problems in Engineering	Rongbing Huang, Muhammad Nadeem, Iqra Rashid, M.K. Siddiqui, Samuel Asefa Fufa	On Characterization of Graphs Structures Connected with Some Algebraic Properties	0.1155/2022/8792684	1.430	0
EAUMPU UoN	Mathematical Problems in Engineering	T.S. Barry, O. Ngesa, N.O. Owuor, H. Mwambi	A Bayesian Bivariate Model for Spatially Correlated Binary Outcomes	10.1155/2022/785204 2	1.430	0
BURK:01	Mathematics	Ben Mansour Dia, Mouhamadou Samsidy Goudiaby, Oliver Dorn	Boundary Feedback Stabilization of Two- Dimensional Shallow Water Equations with Viscosity Term	doi.org/10.3390/math1 0214036	2.592	1
BURK:01	Mathematics and Computers in Simulation	Ousmane Koutou, Abou Bakari Diabaté, Boureima Sangaré	Mathematical analysis of the impact of the media coverage in mitigating the outbreak of COVID-19	10.1016/j.matcom.202 2.10.017	3.601	1
AAU	Mathematics Letters	Tadesse Bekeshie	A New Proof of Young's Inequality Using Multivariable Optimization	10.11648/j.ml.2021070 4.12	4.294	1
EAUMP MAK	Modelling and Simulation in Engineering	Nyende, J., Enyogoi, I., Mango, J., Kasumba, H.	Numerical Simulation of a Two-Dimensional Groundwater Pollute Transport Problem Using Incompressible Steady-State Navier-Stokes Equations and Diffusion-Convection Equations	doi.org/10.1155/2022/ 7419502		1
BURK:01	Moroccan Journal of Pure and Applied Analysis	Abdoulaye Samake, Amadou Mahamane, Mahamadou Alassane, Ouaténi Diallo	A Mathematical and Numerical Framework for Traffic-Induced Air Pollution Simulation in Bamako	doi.org/10.3390/comp utation10050076		
PDEAPP/B URK:02	Moroccan Journal of Pure and Applied Analysis	M. B. Benboubker, E. Nassouri, S. Ouaro and U. Traoré	Renormalized solutions for a p(·)-Laplacian equation with Neumann nonhomogeneous boundary condition involving diffuse measure data and variable exponent	doi.org/10.2478/mjpaa -2022-0012		
BURK:01	Nonautonomous Dynamical Systems	Mamadou Abdoul Diop, Khalil Ezzinbi and Bila Adolphe Kyelem	Local existence and blowing up phenomena for a class of non-autonomous partial functional differential equations with infinite delay	doi.org/10.1515/msds- 2022-0156		1
BURK:01	Nonautonomous Dynamical Systems	Yacouba Zongo, Brahima Roamba, Boulaye Yira, Jean De Dieu Zabsonré	On the existence of global weak solutions of a 2D sediment transport model	doi.org/10.1515/msds- 2022-0153		1

BURK:01	Nonautonomous Dynamical Systems	Abou Bakari Diabaté, Boureima Sangaré, Ousmane Koutou	Mathematical modeling of the dynamics of vector-borne diseases transmitted by mosquitoes: taking into account aquatic stages andgonotrophic cycle	doi.org/10.1515/msds- 2022-0155		1
AAU/EAU MP UDSM	Novi Sad Journal of Mathematics	Santosh Kumar, Richard Osward, Mengistu Goa Sangago	Extragradient method for approximating a common solution for a fixed point and variational inequality problems in Hilbert space	10.30755		
EAUMP UNZA	Open Journal of Business and management	Yohane R, Mutono-Mwanza, B.G and Chowa T	Affordability and sustainability of Pensions in Higher learning institutions in Zambia	10.4236/4236/ojbm.20 22.105137		
EAUMP MAK	Operations Research and Decisions	Mukalazi, H., Larsson, T., Kasozi, J., Mayambala, F.	Asset liability management for the Bank of Uganda defined benefits scheme by stochastic programming	10.37190/ord220207		1
EAUMP MAK	Operations Research and Decisions	H. Mukalazi, T. Larsson, J. Kasozi, F. Mayambala	Long term projection of the demographic and financial evolution of the parliamentary pension scheme of Uganda	10.37190/ord220307		1
BURK:01	Optimization Letters	Moussa Barro, Sado Traore	An uncertain minimization problem: robust optimization versus optimization of robustness	10.1007/s11590-022- 01965-8	1.529	1
EAUMPU UoN	Pharmaceutical Statistics	S. Gachau, E. N. Njagi, G. Molenberghs, N. Owuor, R. Sarguta, M. English, P. Ayieko	Pairwise joint modeling of clustered and high- dimensional outcomes with covariate missingness in pediatric pneumonia care	10.1002/pst.2197	1.234	1
EAUMPU UoN	PLOS Global Public Health	L. Mutea, I. Kathure, D.T. Kadengye, S. Kimanzi, D. Wacira, N.O. Owuor, H. Wao	Determinants of contraceptive use among women 0–23 months postpartum in Kitui County, Kenya: A cross-sectional study	10.1371/journal.pgph.0 000482		1
EAALG/EA UMP MAK	Rendiconti del Circolo Matematico di Palermo	Kimuli, P.I., Ssevviiri, D.	Weakly-morphic modules	doi.org/10.1007/s1221 5-022-00758-3		1
APREA	Research in Mathematics	Joab Odhiambo, Philip Ngare, Patrick Weke	Buhlmann Credibility Approach to Systematic Mortality Risk Modelling for Sub-Sahara Populations (Kenya)	doi.org/10.1080/27658 449.2021.2023979		
BURK:01	Research in Mathematics	Mamadou Abdoul Diop, Khalil Ezzinbi, Mamadou Pathe Ly, Baboucarr Ceesay	Existence results for some partial stochastic integrodifferential equations with nonlocal conditions in Hilbert spaces	doi.org/10.1080/27658 449.2022.2043019		
BURK:01	Research in Mathematics	Assane Savadogo, Boureima Sangaré, Hamidou Ouedraogo	A mathematical analysis of prey-predator population dynamics in the presence of an SIS infectious disease	doi.org/10.1080/27658 449.2021.2020399		
APREA	Results in Applied Mathematics	A.S. Diallo, S.B. Affognon, B.M Ndiaye & P. Ngare	Stochastic optimal control and simulations with application to the cashew nut sector in Senegal	doi.org/10.1016/j.rina m.2022.100272		1

BURK:01	Results in Control and Optimization	Dimplekumar Chalishajar, Ravikumar Kasinathan, Ramkumar Kasinathan, Mamadou Abdoul Diop	Optimal controls for neutral stochastic systems with infinite time delay and deviated argument driven by Rosenblatt process	doi.org/10.1016/j.rico. 2022.100181		
EAUMP UDSM	Results in Nonlinear Analysis	Anju Panwar, Pinki Lamba, Santosh Kumar	Some convergence results using a new iterative algorithm in CAT(0) space	1053006		
EAUMP MAK	Risks	Bett, N., Kasozi, J., Ruturwa, D.	Temporal Clustering of the Causes of Death for Mortality Modelling	doi.org/10.3390/risks1 0050099		
EAUMP UDSM	Royal Society Open Science	Levens Watson, Alex Szorkovszky, David J.T. Sumpter	Friend of a friend models of network growth	10.1098	3.653	1
SEAMaN NUOL	Scientific Journal of NUOL	Lisateur Lilianou	Study Fish Change in Phouchomvoy Provincian Protected, Bolikhamxay Province by Mathematical Modeling			
EAUMP UR	Seminaire Lotharingien de Combinatoire	Umutabazi Vincent, Axel Hultman	Smoothness of Schubert varieties indexed by involutions in finite simply laced types	www.mat.univie.ac.at/ ~slc/wpapers/s84umut a.pdf		1
AAU	SINET: Ethiopian Journal of Science	Dereje Wasihun, Tilahun Abebaw, Yibeltal Yitayew, Venkateswarlu Kolluru	Weak idempotent rings	dx.doi.org/10.4314/sin et.v45i1.8		1
AAU	SINET: Ethiopian Journal of Science	Oluma Ararso Alemu, Hunduma Legesse Geleta	Zeros of a two-parameter family of harmonic quadrinomials	dx.doi.org/10.4314/sin et.v45i1.9		1
EAALG	SINET: Ethiopian Journal of Science	Dereje Wasihun, Tilahun Abebaw, Yibeltal Yitayew, Venkateswarlu Kolluru	Weak idempotent rings	dx.doi.org/10.4314/sin et.v45i1.8		1
PDEAPP/A AU	SINET: Ethiopian Journal of Science	Natnael Gezahegn, Tadesse Abdi	Spectral problem for the Laplacian and a selfadjoint nonlinear elliptic boundary value problem	dx.doi.org/10.4314/sin et.v45i2.8		1
SEAMaN NUOL	Souphanouvong University Journal of Multidisciplinary Research and Development	Phoui Souksomvang	Attitudes toward Teaching Sciencebat Teacher Trainning College in Lao PDR			
SEAMaN NUOL	Souphanouvong University Journal of Multidisciplinary Research and Development	Sonexay Songvilay	The use of generating function cyclotomic polynomials to discover and prove some new restricted integer partitions	_		
BURK:01	Stochastics	Amadou Diop, Mamadou Abdoul Diop, Khalil Ezzinbi & Paul dit Akouni Guindo	Optimal controls problems for some impulsive stochastic integro-differential equations with state-dependent delay	doi.org/10.1080/17442 508.2022.2029446	1.000	1

EAUMP UDSM	Tanzania Journal of Science	Alfred K. Hugo, Goodluck M. Mlay, Moses Baraka Kabigi	Modelling the Impacts of Immigrants on COVID 19 Transmission	10.4314	
BURK:01	Thai Journal of Mathematics	Issa Zabsonre, Abdel Hamid Gamal Nsangou, Moussa El-Khalil Kpoumie, Salifou Mboutngam,	Stepanov-Like Pseudo Almost Periodic Solutions of Class r in α-Norm under the Light of Measure Theory		
EAUMP UDSM	Topological Algebra and its Applications	David Aron and Santosh Kumar	Fixed point theorem for a sequence of multivalued nonself mappings in metrically convex metric spaces	10.1515	
EAUMP UDSM	Topological Algebra and its Applications	Jerolina Fernandez, Neeraj Malviya, and Santosh Kumar	Extended Nb -cone metric spaces over Banach algebra with an application	10.1515	
BURK:01	Universal Journal of Mathematics and Mathematical Sciences	Cheikh Seck, Mame Libasse Laye Ane and Babacar Diouf	A new approach to find the best cost of null controllability for the 1D heat equation by a strategic zone profile	10.1155/2021/464340 5	0
BURK:01	Universal Journal of Mathematics and Mathematical Sciences	B. Bella, I. Ly, A. Ouedraogo	On the cauchy problem for the p-laplace operator	dx.doi.org/10.17654/22 77141722012	0
EAUMP UDSM	Ural Mathematical Journal	David Aron and Santosh Kumar	Fixed point theorem for multivalued non-self mappings satisfying JS-contraction with an application	10.15826	
PDEAPP/EA UMP UR	Webology	Denis Kagyera Katakara, Wellars Banzi, Dany Kamuhanda	Analysis of the Use of Digital Platforms by University and College Lecturers in Instruction of Mathematics During Covid-19 Pandemic Era	-	1

### 2.5.3 Physics publications

Table 13. Summary by region of publication data for the physics program in 2022. The number of publications (Publ.) in scientific journals is specified to those with and without Thomson Reuters (TR) impact factors (IF) or/and Norwegian Centre for Research Data (NCDR) ranking (see explanation in the first paragraphs of this appendix, and whether ISP funding was acknowledged (Y) or not (N).

Publication category	Africa		Asia		Latin	America	Total	
ISP acknowledged	yes	no	yes	no	yes	no	yes	no
Publ. in Scientif. Quality J. (TR or/and NCRD ranked)	40	26	8	21		48	48	26
Publ. in Other Scientific Journals ("unranked")	10	4	6	6		16	16	10
Publ. in Journals by "predatory publishers"	11	1		1		11	11	1
Books, Chapters, Popular Publ., Technical Reports, etc.	5		1				6	0
Total number of publications (yes/no)	66	31	15	28	0	75	81	37
Grand total	S	7	43		75		118	

Group/ Network	Journal	Author(s)	Title	DOI	WoS, 1 yr IF 2021	Norwegian Register
MYA:02	ACS Applied Materials Interfaces	Jiancong Zhang, Xing Wang, Mengjun Liang, Minxian Han, Jinhong Dai, Qiang Wei, Than Zaw Oo, Su Htike Aung, Kwun Nam Hui and Fuming Chen	High-Performance Photoelectrochemical Desalination Based on the Dye-Sensitized Bi2O3 Anode	doi.org/10.1 021/acsami. 2c04749	10.383	1
MYA:02	ACS Applied Materials Interfaces	Karthick Ramalingam, Qiang Wei, Ganguli Babu, Yuchao Zhu, Minxian Han, Yidong Xiao, Mengjun Liang, Zhuosheng Jiang, Than Zaw Oo, Su Htike Aung and Fuming Chen	Photo-Assisted Rechargeable Battery Desalination	doi.org/10.1 021/acsami. 2c07310	10.383	1
ETH:03	ACS Applied Nano Materials	A Benor, A. Gedifew, S. Yigizaw, and K. Davis	Patterning Indium Tin Oxide Using Self-Assembled Monolayers as Etch Resists for Photovoltaic and Display Devices	10.1021/acs anm.2c0060 2	6.140	1
ETH:03	ACS Omega	A. Kassa, M. Amare, A. Benor, G. T. Tigineh, Y. Beyene, M. Tefera, and A. Abebe	Potentiodynamic poly (resorcinol)-modified glassy carbon electrode as a voltammetric sensor for determining cephalexin and cefadroxil simultaneously in pharmaceutical formulation and biological fluid samples	10.1021/acs omega.2c04 514	4.132	
BAN:02/2	ACS Omega	M. Islam, M. K. R. Khan, A. Kumar, M.M. Rahman, M. A. Al-Mamun. R. Rashid, S. Manjura Hoque and M.S.I. Sarker	Sol-Gel Route for the Synthesis of CoFe <sub>2-x</sub> Er <sub>x</sub> O <sub>4</sub> Nanocrystalline Ferrites and the Investigation of Structural and Magnetic Properties for Magnetic Device Applications	10.1021/acs omega.2c00 982	4,132	
BAN:02/2	Advances in Condensed Matter Physics	A. Poddar, S. Halder, S.I. Liba, S. Manjura Hoque and S. S. Sikder	Study of the Effect of Quenching on Micro- structural and Magnetic Properties of Cu-Doped Mg-Ferrite	10.1155/20 22/3354087	1,316	
MSSEESA/ KEN:03	Advances in Condensed Matter Physics	Truphena J Kipkwarkwar, PWO Nyawere, CM Maghanga	First-Principles Calculations to Investigate the Mechanical Structure and Optical Properties of Lead Halide Perovskite CH3NH3PbI3	doi.org/10.1 155/2022/1 565268	1.316	
KEN:02	Advances in Materials Science and Engineering	Mwende Mbilo and Robinson Musembi	First-Principle Calculations to Investigate Structural, Electronic, Elastic, Mechanical, and Optical Properties of K2CuX (X=As, Sb) Ternary Compounds	doi.org/10.1 155/2022/1 440774	2.098	1
ETH:03	Advances in Polymer Technology	G. Tizazu	Investigation of the Effect of Molecular Weight, Density, and Initiator Structure Size on the Repulsive Force between a PNIPAM Polymer Brush and Protein	10.1155/20 22/9741080	2.502	1

UGA:02	Advances in Space Research	S. Aol, S. Buchert, E. Jurua, L. Sorriso - Valvo	Spectral properties of sub-kilometer-scale equatorial irregularies as seen by the swam satelitess	doi.org/10.1 016/j.asr.20 22.07.059	2.611	
BAN:02/2	AIP Advances	T. Hasan, A. Saha, M.N.I. Khan, R. Rashid, M. Basith, M. Bashar, I. Ahmed	Structural, electrical and magnetic properties of Ce and Fe doped SrTiO <sub>3</sub>	10.1063/5.0 107582	1.697	1
RWA:01	AIP Advances	X. Mushinzimana, F. Nsengiyumva, L. L. Yadav and T. K. Baluku	Dust ion acoustic solitons and double layers in a dusty plasma with adiabatic positive dust, adiabatic positive ion species and Cairnsdistributed electrons	doi.org/10.1 063/5.0076 894	1.697	1
KEN:02	AIP Advances	Mwende Mbilo and Robinson Musembi	First principles calculation to investigate the structural, electronic, elastic, mechanical, and optical properties of K2NiP2 ternary compound	doi.org/10.1 063/5.0118 809	1.697	1
BUF:01	American Journal of Energy Engineering (AJEE)	Bouto Kossi Imbga, Emmanouel Ouedraogo, Alfred Bayala, Hamado Ouedraogo, Frederic Ouattara, Florent Kieno	Characterization of Thermal and Mechanical Properties of Red Clay Mixed with Rice Straw for Thermal Insulation of Buildings	10.11648/j. ajee.202210 03.12		
KEN:04	Analytical and Bioanalytical Chemistry	Zhang, Y., Li, L., Zhang, H., Shang, J., Li, C., Naqvi, S. M. Z. A., Birech, Z., & Hu, J.	Ultrasensitive detection of plant hormone abscisic acid-based surface-enhanced Raman spectroscopy aptamer sensor.	10.1007/s0 0216-022- 03923-w	4.478	
KEN:04	Analytical Letters	Musyoka W. D., Angeyo, H. K., Dehayem-Kamadjeu, A., & Kaduki, K. A.	Direct analysis of blood for diagnostic metals for malaria by peak-free laser-induced breakdown spectroscopy (LIBS) with artificial neural networks (ANN) and partial least squares (PLS)	10.1080/00 032719.202 2.2067862	2.267	
KEN:04	Applied Radiation and Isotopes	Angeyo, H. K., & Gari, S.	Direct rapid quality assurance analysis of complex matrix materials: A chemometrics enabled energy dispersive X-ray fluorescence and scattering spectrometry application	10.1016/j.a pradiso.202 2.110274	1.787	
KEN:04	Applied Radiation and Isotopes	Okonda, J. J., Angeyo, H. K., Dehayem-Kamadjeu, A., & Rogena, A. E.	Chemometrics aided energy dispersive X-ray fluorescence and scattering for diagnostic modeling of trace biometals as cancer biomarkers	10.1016/j.a pradiso.202 2.110489	1.787	
BUF:01	Asian Journal of Physical and Chemical Sciences (AJOPACS)	Noufou Bagaya, Issaka Ouedraogo, Winde Nongué Daniel Koumbem, Younoussa Moussa Balde, Sette Diop and Sie Kam	Modeling and Validation of Biogas Consumption Prediction in Cook Stove Using a Network Approach	10.9734/AJ OPACS/202 2/v10i4187		
BAN:04	Bangladesh Journal of Medical Physics	Mahjabin Mobarak, K Siddique e Rabbani	Improving Deep Sensitivity of Four-Electrode Focused Impedance Method in Lungs by Varying Electrode Geometries	10.3329/bj mp.v15i1.6 3561		
BAN:02/2	Ceramics International	M.S.I. Sarker, M. Yeasmin, M. A. Al-Mamun, S. Manjura Hoque, M.K.R. Khan	Influence of Gd content on the structural, Raman spectroscopic and magnetic properties of CoFe <sub>2</sub> O <sub>4</sub> nanoparticles synthesized by sol-gel route	10.1016/j.c eramint.202 2.07.275	5.532	

ETH:03	Chemistry Africa	M. T. Ayana, B. B. Beyene, G. T. Tigineh, and A. Abebe	A Novel homobinuclear Copper (II) complex with resorcinolate: synthesis, characterization and assessment of antibacterial activity	10.1007/s4 2250-022- 00517		
BAN:02/2	Colloids and Surfaces A: Physicochemical and Engineering Aspects	M. Z. Sarker, M. M. Rahman, H. Minami, T. Suzuki, M. A. Rahman, A. Khan, S. Manjura Hoque, H. Ahmad	Magnetite incorporated amine-functional SiO <sub>2</sub> support for bimetallic Cu-Ni alloy nanoparticles produced highly effective nanocatalyst	10.1016/j.c olsurfa.202 2.129044	5.518	
KEN:02	Computational Condensed Matter	Mwende Mbilo, George S. Manyali, Robinson J. Musembi	Ab initio study of K3Cu3P2 material for photovoltaic applications	doi.org/10.1 016/j.coco m.2022.e00 726		
BAN:02/2	Computational Materials Science	S. Ahmed, T. Hasan, A.K.M. S H. Faysal, S. S. Nishat, M.N.I. Khan, A. Kabir, I. Ahmed	A DFT+U approach to doped SrTiO₃ for solar harvesting applications	10.1016/j.c ommatsci.2 022.111743	3.572	
BAN:04	Computers in Biology and Medicine	Arafat Rahman, Muhammad E.H. Chowdhury, Amith Khadakar, Anas M. Tahir, Nabil Ibtehaz, Md Shafayet Hossain, Serkan Kiranyaz, Junaid Malik, Haya Monawwar and Muhammad Abdul Kadir	Robust biometric system using session invariant multimodal EEG and keystroke dynamics by the ensemble of self-ONNs	10.1016/j.c ompbiomed .2022.1052 38	6.698	
ETH:01	Condensed Matter	Mohammed Mahmd, Mulugeta Bekele and Yigermal Bassie	Thermal and quantum fluctuation effects on non- spherical nuclei: The case of spin-1 system	doi.org/10.3 390/condm at7040062		
MSSEESA/ KEN:03	Crystals	M.M. Ahmad, Hicham Mahfoz Kotb, Shehla Mushtaq, Mir Waheed-Ur-Rehman, C. M. Maghanga and Mir Waqas Alam	Green Synthesis of Mn + Cu Bimetallic Nanoparticles Using Vinca rosea Extract and Their Antioxidant, Antibacterial, and Catalytic Activities	doi.org/10.3 390/cryst12 010072	2.670	
BAN:02/2	Current Applied Physics	M.D. Hossain, M.N.I. Khan, M. S. Hossain, S.J. Ahned, M.K. Alam, S.I. Liba, M.A. Hakim, A.T.M.K. Jamil	Structure-based magnetic, electrical and transport properties of Ni–Zn–Coferrite by V <sup>5+</sup> substitution	10.1016/j.c ap.2022.05. 012	2.856	
BUF:01	Current Journal of Applied Science and Technology (CJAST)	Dianda Boureima, Traore Abdoul Fataho, Ouedraogo Adama, KY Sikoudouin Maurice Thierry, Ouedraogo Issaka, Kam Sié and Bathiébo Dieudonné	Experimental Study of Papaya Drying in an Indirect Solar Dryer in Natural Convection	10.9734/CJ AST/2022/v 41i3231817		
BUF:01	Current Journal of Applied Science and Technology (CJAST)	Nakolemda Roger, Sawadogo Gédéon, Konaté Moustapha and Nanema Emmanuel	Galactic Cosmic Rays Production at the Equator and Magnetic Poles at the Minimum and Maximum Solar Activity	10.9734/CJ AST/2022/v 41i2231757		
UGA:01	East African Journal of Science, Technology & Innovation	Bwayo E., Ireeta Tw., Mukiibi D., Okullo W., Okello D., Lugolole R	Effect of Thickness and Deposition Angle on Optical Transmittance of ZnS/Ag Nanostructures	doi.org/10.3 7425/eajsti. v3i3.429		
AFSIN Ivory Coast	Ecological Informatics	Adolphe Y. Gbogbo, Benoît K. Kouakou, Sophie Dabo- Niang, Jérémie T. Zoueu	Predictive model for airborne insect abundance intercepted by a continuous wave Scheimpflug lidar in relation to meteorological parameters	doi.org/10.1 016/j.ecoinf	4.498	1

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BUF:01	Elixir International Journal: Thermal Engineering	Abdoulaye Compaore, Kayaba Haro, Roger Charles Mathurin Compaore, Wilfried Rimnogdo Ouedraogo and Oumar Sanogo	Estimation of Solar Radiation in Ouagadougou: Contribution to the Thermal Study of Buildings			
BUF:01	Elixir International Journal: Thermal Engineering	Boureima Kaboré, Germain Wende Pouiré Ouedraogo, Boukaré Ouedraogo, Salia Drabo, Sié Kam and Dieudonné Joseph Bathiebo	Simulation and Experimentation of Water Heating in a Metal Tube Placed in a Solar Collector			
UGA:01/ MSSEESA	Energies	Denis Okello, Robinson Omony, Karidewa Nyeinga, and Jimmy Chaciga	Performance Analysis of Thermal Energy Storage System Integrated with a Cooking Unit	doi.org/10.3 390/en1523 9092	3.252	
BUF:01	Energies	Abdoulaye Ballo, Koffi Kouakou Valentin, Bruno Korgo, Kehinde Olufunso Ogunjobi, Solomon Nwabueze Agbo, Daouda Kone and Moumini Savadogo	Law and Policy Review on Green Hydrogen Potential in ECOWAS Countries	doi.org/10.3 390/en1507 2304	3.252	
BUF:01	Energy and Power Engineering (EPE)	Mahamadi Savadogo, Adama Ouedraogo, Boubacar Soro, Zi Daouda Koudougou, Martial Zoungrana, Issa Zerbo	Analysis and Comparison of Doping Level Effects on a Crystalline Silicon PV Cell under Both Moderate Light Concentration and Normal Illumination Modes	10.4236/ep e.2022.141 0028.		
BUF:01	Energy and Power Engineering (EPE)	Ramatou Konate, Bernard Zouma, Adama Ouedraogo, Bruno Korgo, Martial Zoungrana, Sié Kam	Impact of the Thicknesses of the p and p+ Regions on the Electrical Parameters of a Bifacial PV Cell	10.4236/ep e.2022.142 006.		
UGA:01, MSSEESA	Energy for Sustainable Development	Pamella K. Kajumba, Denis Okello, Karidewa Nyeinga, and Ole J. Nydal	Assessment of the energy needs for cooking local food in Uganda: A strategy for sizing thermal energy storage with cooker system	doi.org/10.1 016/j.esd.2 022.01.005	5.655	1
MAL:01	Environmental Science and Pollution Research International	Coffi Leonce Geoffroy Sossa, Souleymane Sanogo, Jesse B. Naab, Luc O. Sintondji	Trends and research features on greenhouse gas emissions from rice production: review based on bibliometric analysis	doi.org/10.1 007/s11356 -022-22921- 0	5.190	1
RWA:01	Environmental Science and Technology	Leonard Kirago, Örjan Gustafsson, Samuel M. Gaita, Sophie L. Haslett, H. Langley deWitt, Jimmy Gasore, Katherine E. Potter, Ronald G. Prinn, Maheswar Rupakheti, Jean de Dieu Ndikubwimana, Bonfils Safari, and August Andersson	Atmospheric Black Carbon Loadings and Sources over Eastern Sub-Saharan Africa	doi.org/10.1 021/acs.est. 2c05837	11.357	
MYA:02	Environmental Technology	Yuchao Zhu, Qiang Wei, Qinyu He, Deyang Chen, Than Zaw OO, Su Htike Aung and Fuming Chen	The multi-functional system of electrochemical desalination, RhB degradation and Cr (VI) removal	10.1080/09 593330.202 2.2156818	3.475	

AFSIN Togo	EQA - International Journal of Environmental Quality	Milohum Mikesokpo Dzagli, Yawovi Mignanou Amouzouvi, Kosi Sesime, Kossivi Bienvenu Rodrigue Afoudji	Heavy metal pollution assessment in phosphate mining and processing sites, Hahotoé and Kpémé in Togo	doi.org/10.6 092/issn.22 81- 4485/13435		_
KEN:02/M SSEESA	Ethiopian Journal of Science and Technology	Munala Yobes, Sebastian Waita and Geoffrey Okeng'o	Performance of solar panels at various depths in stationary water	dx.doi.org/1 0.4314/ejst. v15i3.2.		
ETH:01	European Physical Journal B (EPJ B)	Yoseph Abebe, Tibebe Birhanu, lemi demeyu, Mesfin Taye, Mulugeta Bekele, Yigermal Bassie	Thermally activated diffusion of impurities along a semiconducting layer	doi.org/10.1 140/epjb/s1 0051-021- 00265-x	1.398	
ETH:02	Frontiers in Earth Science	Birhanu A. Kibret, Atalay Ayele and Derek Keir	Modelling S-Wave Velocity Structure Beneath the Central Main Ethiopian Rift Using Receiver Functions	10.3389/fea rt.2022.773 783	3.661	1
KEN:04	Frontiers in Plant Science	Su, R., Wu, J., Hu, J., Ma, L., Ahmed, S., Zhang, Y., Abdulraheem, M.I., Birech, Z., Li, L., Li, C., & Wei, W.	Minimalizing Non-point Source Pollution Using a Cooperative Ion-Selective Electrode System for Estimating Nitrate Nitrogen in Soil.	10.3389/fpl s.2021.8102 14	6.627	1
LAO:01	Geophysics	E Banks, M Hatch, S Douangsavanh, P Pavelic, S Singsoupho, V Xayavong, Oxayviliya, S Vongphachanh, M Viossanges, O Batelaan	Cooperation in hydrogeophysics: Enhancing practitioners and institutions' groundwater assessment capacity, Vientiane Plain, Lao PDR	doi.org/10.1 190/geo202 1-0100.1	3.264	2
BAN:04	Health and Technology	Youssoufa Mohamadou, Pascalin Tiam Kapen, Momo Foutse, Alban Loique Kamga Kamga, Origène Docna, Moniruzzaman Mohammad, Maruf Ahmad, Khondkar Siddique-e Rabbani	Design and development of a phonocardiograph for telemedicine applications	10.1007/s1 2553-022- 00646-x		
BAN:02/1	Heliyon	S. Rana, S.Karimunnesa, F.Alam, B.Chandra Das, F.A. Khan	Strain induced structural phase transition and compositional dependent magnetic phase transition in Ti doped BiO.80BaO.20FeO3 ceramics	10.1016/j.h eliyon.2022. e12530	3.776	1
ETH:03	Heliyon	A. Debalke, A. Kassa, T. Asmellash, Y. Beyene, M. Amare, G. T. Tigineh, and A. Abebe	Synthesis of a novel diaquabis(1,10-phenanthroline)copper(II)chloride complex and its voltammetric application for detection of amoxicillin in pharmaceutical and biological samples.	10.1016/j.h eliyon.2022. e11199	3.776	1
KEN:02/ MSSEESA	Heliyon	Alex Okello, Brian Owino Owuor, Jane Namukobe, Denis Okello, Julius Mwabora	Influence of the pH of anthocyanins on the efficiency of dye sensitized	doi.org/10.1 016/j.heliyo n.2022.e09 921	3.776	1

KEN:02	Indian Journal of Physics	M Mbilo, R Musembi and D P Rai	First-principles study of properties of X3Sb2Au3 (X = K, Rb) ternary compounds for photovoltaic applications	doi.org/10.1 007/s12648 -022-02547- 1	1.778	1
BUF:01	Indian Journal of Science and Technology	Salifou Ouédraogo, Moctar Ousmane, Ladifata Mogmenga, Thierry Sikoudouin Maurice Ky, Sié Kam, Joseph Bathiébo	Experimental Study of the Airflow in Natural Convection in an Innovative Prototype of Solar Chimney Power Plant, under Climatic Conditions in Ouagadougou, Burkina Faso			3
BUF:01	International Journal of Advanced Research (IJAR)	B. Kossi Imbga, Séckou Bodian, Pape M. Toure, Younouss Dieye and Vincent Sambou	Study of the thermochemical and mechanical properties of laterite bricks stabilised with cements	10.21474/IJ AR01/1587 8		7
KEN:04	International Journal of Applied Earth Observation and Geoinformation	Ondieki, J. O., Mito, C. O., & Kaniu, M. I.	Feasibility of mapping radioactive minerals in high background radiation areas using remote sensing techniques.	10.1016/j.ja g.2022.102 700	7.672	
RWA:01	International Journal of Geometric Methods in Modern Physics	Beatrice Murorunkwere, Fidele Twagirayezu, Albert Munyeshyaka, Joseph Ntahompagaze, and Abraham Ayirwanda	On inflationary parameters in scalar–tensor theories	doi.org/10.1 142/S02198 878225014 56	1.873	
RWA:01	International Journal of Geometric Methods in Modern Physics	Joseph Ntahompagaze, Amare Abebe, and Manasse R. Mbonye	Large-scale structure power spectrum from scalar—tensor gravity.	doi.org/10.1 142/S02182 718225007 17	1.873	
BUF:01	International Journal of Innovation and Applied Studies (IJIAS)	G. S. Tchouadep, E. K. Tchédré, I. Sourabié, I. Zerbo, and Martial Zoungrana	Modelling the Influence of Low Energy Electrons Emitted from Pm-147 on the Performance of a Silicon PV Cell			
BUF:01	International Journal of Innovation and Applied Studies (IJIAS)	Mamoudou Saria, Ramatou Saré, Mahamadi Savadogo, Vinci De Dieu Bokoyo Barandja, Martial Zoungrana and Issa Zerbo	3D modelling of the effects of the intensity and the inclination angle of an electromagnetic field on the current and the voltage of a polycrystalline silicon PV cell			
AFR:05	International Journal of Modern Physics D	Munyeshyaka A., Ntahompagaze J., Mutabazi, T	Cosmological Perturbation in f(G) Gravity	10.1142/S0 218271821 50053X	2.547	1
BUF:01	International Journal of Physical Sciences (IJPS)	Mahamadi SAVADOGO, Pegdwindé Ousséni Fabrice OUEDRAOGO, Adama OUEDRAOGO, Lamine ZIDA, Martial ZOUNGRANA and Issa ZERBO	Uncooled PV cell under variable light concentration: Determination of profiles of the temperature, the intrinsic properties and the carrier density	10.5897/IJP S2022.5010		

MYA:02	Ionics	Tin Htun Lwin, Swe Swe Than, Su Htike Aung, Nyein Wint Lwin, Than Zaw Oo, Fuming Chen	The Improved Photocurrent Density of D35-cpdt and DN-F10 via Co-sensitization Process in Dye- Sensitized Solar Cells	doi.org/10.1 007/s11581 -021-04383- 5	2.961	
ETH:02	Journal of African Earth Sciences	Abdulhakim Ahmed, Cecile Doubre, Sylvie Leroy, Derek Keir, Carolina Pagli, James O.S. Hammond, Atalay Ayele, Maxime Be de Berc, Marc Grunberg, Jerome Vergne, Romain Pestourie, Daniel Mamo, Birhanu Kibret, Nadaya Cubas, Aude Lavayssi`ere, Marianne Janowski, Olivier Lenglin, Alessandro La Rosa, Emma L. Chambers, Finnigan Illsley-Kemp	Across and along-strike crustal structure variations of the western Afar margin and adjacent plateau: Insights from receiver functions analysis	doi.org/10.1 016/j.jafrea rsci.2022.10 4570	2.468	1
BAN:04	Journal of Electrical Bioimpedance	Mahjabin Mobarak, Muhammad Abdul Kadir, K Siddique-e Rabban	Probing deep lung regions using a new 6-electrode tetrapolar impedance method	10.2478/joe b-2022- 0016		
BAN:02/2	Journal of Inorganic and Organometallic Polymers and Materials	M. K. Islam, M. M. Haque, R. Rashid, R. Hasan, M. A. Islam, M. N. I. Khan, S. Manjura Hoque	Size Effect on MRI/MFH Relaxations by a High Anisotropic CoFe₂O₄-Chitosan Conjugate and Imaging/Angiography Efficacy	10.1007/s1 0904-022- 02381-2	3.518	
NEP:01	Journal of Institute of Science and Technology	D. K Chaudhary, Y. S Mahrjan, S. P Amatya, Shankar P Shrestha, R. Parajuli, P. Shrestha, L. P Joshi	Sensing characteristics of ZnO nanoparticle film towards acetone	doi.org/10.3 126/jist.v27i 1.40866		
LAO:01	Journal of King Saud University Science	L.T Pham, S.P Oliveira, A.M Eldosouky, K Abdelrahman, M Fnais, V Xayavong, P Andráš, D.V Le	Determination of structural lineaments of Northeastern Laos using the LTHG and EHGA methods	doi.org/10.1 016/j.jksus. 2022.10182 5	3.829	
BAN:02/1	Journal of Magnetism and Magnetic Materials	M.A.A. Bally, M.A. Islam, M.Z. Ahsan, F.A. Khan	Effect of calcium doping on structural, magnetic and magneto-caloric properties of La0.55CaxSr0.45-xMnO3 manganites	10.1016/j.j mmm.2022. 169462	3.097	0
BAN:02/2	Journal of Magnetism and Magnetic Materials	S. Nasrin, F-U-Z.Chowdhury, M. M. Hossen, A. Islam, A. Kumar, S. Manjura Hoque	Study of the suitability of manganese-substituted cobalt ferrites nanoparticles as MRI contrast agent and treatment by employing hyperthermia temperature	10.1016/j.j mmm.2022. 170065	3.097	0
MYA:02	Journal of Magnetism and Magnetic Materials	Jongrak Borsup, Tanachat Eknapakul, Hsu Thazin Myint, Michael F. Smith, Visittapong Yordsri, Supree Pinitsoontorn, Chanchana Thanachayanont, Than Zaw Oo, Prayoon Songsiriritthigul	Formation and magnetic properties of low- temperature phase manganese bismuth prepared by low-temperature liquid phase sintering in vacuum	doi.org/10.1 016/j.jmmm .2021.1686 61	3.097	0
BAN:02/2	Journal of Magnetism and Magnetic Materials	A. Nahar, Kazi HaniumMaria, S.I. Liba, Md. Anwaruzzam an, M.N.I. Khan, A. Islam, Shamima Choudhury, S. Manjura Hoque	Surface-modified CoFe2O4 nanoparticles using Folate-Chitosan for cytotoxicity Studies,	10.1016/j.j mmm.2022. 169282	3.097	0

			hyperthermia applications and Positive/Negative contrast of MRI			
BUF:01	Journal of Material and Environmental Science	Z. Yaméogo, D. Nabayaogo, O. Kaboré, C. Bangou, I. Zebo, M. Zoungrana	Measurements of natural radioactivity and exposure rates in soil samples from Ouagadougou, Burkina Faso			
ETH:01	Journal of Materials Science: Materials in Electronics	N. Bekri, E. Asmare, Z. Abdissa, W. Mammo and N. A. Tegegne	Photophysics and thermally-induced degradation of P2TI-DD, a polymer synthesized by direct arylation reaction	doi.org/10.1 007/s10854 -022-08499- w	2.779	
BAN:04	Journal of Medical Engineering & Technology	Ariful Basher, Mohammad Moniruzzaman, Md Maruful Islam, Md Mahbubur Rashid, Iqbal Hossain Chowdhury, Akhtaruzzaman Akm, Khondkar Siddique-e Rabbani	Evaluation of gastric emptying in critically ill patients using electrical impedance method: a pilot study	10.1080/03 091902.202 2.2059116		
AFSIN Ivory Coast, KEN:04	Journal of Modern Optics	Marius Ipo Gnetto, Yao Taky Alvarez Kossonou, Yao Koffi, Kenneth A Kaduki, Jérémie T Zoueu	Solving the twin image problem in in-line holography by using multiple defocused intensity images reconstructed from a single hologram	10.1080/09 500340.202 1.2011450	1.293	1
KEN:02/M SSEESA	Journal of Polymer Research	Dibli B Otieno, Geoffrey O Bosire, John M Onyari, Julius M Mwabora	Comparative analysis of 3D-printed polylactic acid and acrylonitrile butadiene styrene: Experimental and Materials-Studio-based theoretical studies	doi.org/10.1 007/s10965 -022-03075- 6	3.061	
KEN:04	Journal of Sensors	Aketch, D. N., Mito, C. O., & Laneve, G.	Monitoring Evolution of Coastline along Mto Tamamba Delta in Kenya North Coast Using Satellite Images	10.1155/20 22/8701988	2.336	
KEN:04	Journal of Spectroscopy	Akinyi, O. E., Angeyo, H. K., & Dehayem-Kamadjeu, A.	Evaluation of a Peak-Free Chemometric Laser- Induced Breakdown Spectroscopy Method for Direct Rapid Cancer Detection via Trace Metal Biomarkers in Tissue.	10.1155/20 22/1874173	1.750	2
MYA:02	Journal of the Electrochemical Society	Lufan Tang, Qiang Wei, Jiawei Yan, Yudi Hu, Xuncai Chen, Guannan Wang, Su Htike Aung, Than Zaw Oo, Dongliang Yan, Fuming Chen	Redox Flow Capacitive Deionization in a Mixed Electrode Solvent of Water and Ethanol	10.1149/19 45-7111 /ac47e9	4.386	2
MSSEESA/ KEN:03	Kabarak Journal of Research & Innovation	N. Ongwen, E. Ogam, Z.E.A Fellah, H. Otunga, M. Mageto, A. Oduor	Temperature-Dependent Elastic Constants of Substrates for Manufacture of Mems Devices			
KEN:02	Materialia	Robinson Musembi and Mwende Mbilo	Ab Initio Study of Structural, Electronic, Elastic, Mechanical, and Optical Properties of K 4 XP 2 (X=Zn, Cd) Compounds for Optoelectronic Applications	doi.org/10.1 016/j.mtla.2 022.101587		1
ETH:01	Materials Research Express	N. Bekri, E. Asmare, W. Mammo and N. A. Tegegne	Photostability of benzodithiophene based polymer effect of PC60BM and intermolecular interactions	doi.org/10.1 088/2053-	2.025	

				1591/ac6c7		
AFR:05	Monthly Notices of the Royal Astronomical Society	Andama G., Ndugu N., Anguma S. K., Jurua E	Planetary Core Formation via Multispecies Pebble Accretion	doi.org/10.1 093/mnras/ stab3508	5.235	1
RWA:01	Monthly Notices of the Royal Astronomical Society	Antoine Mahoro, Mirjana Pović, Petri Väisänen, Pheneas Nkundabakura, Kurt van der Heyden	Stellar populations of a sample of far-infrared AGN and non-AGN green valley galaxies	doi.org/10.1 093/mnras/ stac1134	5.235	1
UGA:02	Monthly Notices of the Royal Astronomical Society	S. Joshi, O. Trust et. Al	Study of chemically peculiar stars - I. High - resolution spectroscopy and K2 photometry of Am stars in the region M44	doi.org/10.1 093/mnras/ stab3158	5.235	1
AFSIN Cameroon	Multimedia Tools and Applications	Balamurali Ramakrishnan, Yannick Pascal Kamdeu Nkandeu, Hayder Natiq, Justin Roger Mboupda Pone, Anitha Karthikeyan, Sifeu Takougang Kingni, Alain Tiedeu	Image encryption with a Josephson junction model embedded in FPGA	doi.org/10.1 007/s11042 -022-12400- 6	2.577	1
AFSIN Cameroon	Multimedia Tools and Applications	Mimosette Makem, Alain Tiedeu, Guillaume Kom, Yannick Pascal Kamdeu Nkandeu	A robust algorithm for white blood cell nuclei segmentation	doi.org/10.1 007/s11042 -022-12285- 5	2.577	1
AFSIN Cameroon	Multimedia Tools and Applications	Yannick Kamdeu Nkandeu, Alain Tiedeu, Yannick Abanda, Justin Roger Mboupda Pone	Image encryption using the logistic map coupled to a self-synchronizing streaming	doi.org/10.1 007/s11042 -022-12649- x	2.577	1
BAN:02/2	New Journal of Chemistry	M. S. Ali, M. M. Rahman, K. W. Hossain, H. Minami, M. M. Rahman, S. Manjura Hoque, M. A. Alam, and H. Ahmed	Impact of mesoporous SiO2 support for Ni/polypyrrole nanocomposite particles on their capacitive performance,	10.1039/d2 nj04320c	3.925	
BUF:01	Open Journal of Applied Science	Abdoulaye Compaore, Boukaré Ouedraogo, Kayaba Haro, Rimnogdo Wilfried Ouedraogo, Yassia Belem, Oumar Sanogo	Study Optimization of a Hybrid Solar-Wind System from an Individual in Ouagadougou	doi.org/10.4 236/ojapps. 2022.12111 24		
BUF:01	Open Journal of Applied Science	Boureima Dianda, Mibienpan Ki, Wende Pouiré Germain Ouédraogo, Nébon Bado, Sikoudouin Maurice Thierry Ky, Bruno Korgo, Sié Kam, Dieudonné Joseph Bathiebo	Numerical Study of a Cylindro-Parabolic Cooker "Blazing Tube"	doi.org/10.4 236/ojapps. 2022.12111 23		
ETH:01	Optical Materials	A. T. Mulatu, K. N. Nemera and L. D. Deja	Electronic and optical properties of TM-doped (8,0) SiCSWNT and the prospect of hydrogen storage	doi.org/10.1 016/j.optma t.2022.1130 94	3.754	

ETH:01	Physica B: Condensed Matter	T. E. Ada, K. N. Nigussa and L. D. Deja	Impact of a dopant vis-à-vis site and concentration on the photovoltaic effect of BiFeO3	doi.org/10.1 016/j.physb. 2022.41436 6	2.988	
BAN:02/2	Physica B: Physics of Condensed Matter	M. Ahmed, M.D. Hossain, S. Akter, M.A. Hossain, S.S. Sikder, M.A. Hakim, M.N.I. Khan	Structural and magnetic properties of CoO·85ZnO.15YxFe2-xO4 ferrites	10.1016/j.p hysb.2022.4 14267	2.988	
BUF:01	Physical Science International Journal (PSIJ)	Abdoul Aziz Ouiminga, Boureima Kaboré, Germain Wende Pouiré Ouedraogo and Sié Kam	Incorporation of Glass from Used Photovoltaic Solar Modules into the Concrete Matrix of Construction as a Partial Replacement of Cement in Burkina Faso	10.9734/PSI J/2022/v26i 9-10766		
BUF:01	Physical Science International Journal (PSIJ)	Adelaïde Lareba Ouédraogo, Etienne Malbila, Dieudonné Dabilgou, Fati Oumarou Amadou, Souleymane Ouédraogo, Salifou Ouédraogo, Adamah Messan, Sié Kam, Dieudonné Joseph Bathiebo, Florent Pèlèga Kiéno and Philippe Blanchart	Evolution of the Average Temperature of the Interior Atmosphere of a Habitable Cell Made of Foamed Concrete in Burkina Faso	10.9734/PSI J/2022/v26i 230308		
BUF:01	Physical Science International Journal (PSIJ)	Sawadogo Gédéon, Nakolemda Roger, Konaté Moustapha and Nanéma Emmanuel	Seasonal Variability of foE and Nocturnal Winter Anomaly in E-layer during Solar Cycles 21 and 22 at the Ouagadougou Station	10.9734/PSI J/2022/v26i 230307		
MAL:01	Polymers	Youbba Ould Salem, Halima Elazhar, Issiaka Traore, Jonathan Riffaud and Abdelmjid Nourreddine	RPL Neutron Dosimetry in n-γ Fields in Comparison with Polymer Detectors Type CR-39	doi.org/10.3 390/polym1 4091801	4.967	
KEN:04	Radiation Effects and Defects in Solids	Angeyo, H. K., & Golloch, A.	Quantitative modelling towards trace spectroanalysis of dielectrics by sliding spark plasma.	10.1080/10 420150.202 2.2133710	1.024	
AFSIN Togo	RAMReS Sciences des Structures et de la Matière	Kossivi Bienvenu Rodrigue Afoudji, Julien Egly, Milohum Mikesokpo Dzagli, Stéphane Bellemin- Laponnaz, Kokou Dodzi Dorkenoo	Spectroscopic characterizations and sum- frequency generation of chiral binol derivatives			
MYA:02	Renewable and Sustainable Energy Reviews	Mengjun Liang, Ramalingam Karthick, Qiang Wei, Jinhong Dai, Zhuosheng Jiang, Xuncai Chen, Than Zaw Oo, Su Htike Aung, Fuming Chen	The Progress and Prospect of the Solar-Driven Photoelectrochemical Desalination	doi.org/10.1 016/j.rser.2 021.111864	16.799	1
MAL:01	Results in Chemistry	Aminata Sow, Issiaka Traore, Tidiane Diallo, Mohamed TRAORE, Abdramane BA	Comparison of Gaussian process regression, partial least squares, random forest and support vector machines for a near infrared calibration of paracetamol samples	doi.org/10.1 016/j.reche m.2022.100 508		1

MSSEESA/ ZAM:01	Results in Engineering	James Nyirenda, George Kalaba, Onesmus Munyati	Synthesis and characterization of an activated carbon-supported silver-silica nanocomposite for adsorption of heavy metal ions from water	doi.org/10.1 016/j.rineng .2022.1005 53		
BAN:02/1, BAN:02/2	RSC Advances	M. A. Islam, A. K. M. A. Hossain, M. Z. Ahsan, M. A. A. Bally, M. S. Ullah, S. Manjura Hoque and F. A. Khan	Structural characteristics, cation distribution, and elastic properties of Cr <sup>3+</sup> substituted stoichiometric and non-stoichiometric cobalt ferrites	10.1039/d1 ra09090a	4.036	
BAN:02/2	RSC Advances	M. A. Islam, M. R. Hasan, M. M. Haque, R. Rashid, I. M. Syed and S. Manjura Hoque	Efficacy of surface-functionalized $Mg_{1\_x}Co_xFe_2O_4$ (0 £ x £ 1; $\Delta x$ = 0.1) for hyperthermia and in vivo MR imaging as a contrast agent	10.1039/d2 ra00768a	4.036	
MYA:01	Sagaing University Research Journal	May Zin Oo, Kalyar Thwe	Physio-Chemical Analysis of Water from Selected x Area of Mandalay City, Myanmar			
MAL:01	Science Journal of Chemistry	Aminata Sow, Issiaka Traore, Tidiane Diallo, Abdramane BA	Analysis of Local Samples of Paracetamol at Bamako by Reflectance Near-Infrared Spectroscopy	10.11648/j. sjc.2022100 6.12		
ETH:03	Scientific African	A. Abebe, K. T. Hilawea, A. Mekonnen, G. T. Tigineh, B. Sitotaw, M. Liyew, and T. A. Wubieneh	Assessment on antioxidant activity of the aqueous leaf extracts of Combretum microphyllum and the effect of Co(II)-leaf extract complex on antibacterial activity of leaf extracts of the plant material	10.1016/j.sc iaf.2022.e0 1432	*	2
KEN:04	Scientific Reports	Musyoka, W. D., Angeyo, H. K., Dehayem-Massop, A., & Kaduki, K. A.	Rapid diagnosis of malaria by chemometric peak- free LIBS of trace biometals in blood.	doi.org/10.1 038/s41598 -022-22990- 8	4.996	
NEP:01	Scientific World	S. Sharma, P. Shrestha, P. Shrestha	Telecom towers under the threat of lightning hazards	doi.org/10.3 126/sw.v15i 15.45666		
BAN:04	Sensors	Kanchon Kanti Podder, Muhammad E. H. Chowdhury, Anas M. Tahir, Zaid Bin Mahbub, Amith Khandakar, Md Shafayet Hossain and Muhammad Abdul Kadir	Bangla Sign Language (BdSL) Alphabets and Numerals Classification Using a Deep Learning Model	10.3390/s2 2020574	3.847	
ETH:03	Sensors International	A. Mebrie, M. Amare, A. Kassa, Y. B. Yohannes, A. Tesfaye, A. Abebe, and T. Asmelash	Novel poly(diaquabis(1,10-phenanthroline) copper(II)chloride) modified glassy carbon electrode for square wave voltammetric determination of aspirin in tablet samples	10.1016/j.si ntl.2022.10 0187		
AFSIN Ivory Coast	Smart Agricultural Technology	Lontsi Saadio Cedric, Wilfried Yves Hamilton Adoni, Rubby Aworka, Jérémie Thouakesseh Zoueu, Franck Kalala Mutombo, Moez Krichen, Charles Lebon Mberi Kimpolo	Crops yield prediction based on machine learning models: case of West African countries	doi.org/10.1 016/j.atech. 2022.10004 9		1

ZAM:01	Solar Compass	Mambwe, C., Schröder, K., Kügel, L., & Jain, P	Benchmarking and comparing effectiveness of mini-grid encroachment regulations of 24 African countries: A guide for governments and energy regulators to develop effective grid encroachment regulations	doi.org/10.1 016/j.solco m.2022.100 008		
BUF:01	Solar Energy	Adama Ouedraogo, Amadou Diallo, Soumaïla Goro, Wend Dolean Arsene Ilboudo, Saïdou Madougou, Dieudonné Joseph Bathiebo, Sié Kam	Analysis of the solar power plant efficiency installed in the premises of a hospital — Case of the Pediatric Charles De Gaulle of Ouagadougou	doi.org/10.1 016/j.solen er.2022.05. 051	7.188	
MSSEESA/ KEN 03	Solid State Communications	N. Ongwen, E. Ogam, Z.E.A. Fellah, H. Otunga, A. Oduor, M. Mageto	Accurate Ab-initio calculation of elastic constants of anisotropic binary alloys: A case of Fe–Al	doi.org/10.1 016/j.ssc.20 22.114879	1.934	1
LAO:01	Souphanouvong University Journal of Multidisciplinary Research and Development	s Sompaserth, S Singsoupho, T Xounsundao, S Xaysombath, P Thavixay, N Volchack	Groundwater Study in Limestone Area using Geophysical Methods			
KEN:04	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Ndung'u, C. N., Kaniu, M. I., & Wanjohi, J. M.	Optimization of diffuse reflectance spectroscopy measurements for direct and rapid screening of pesticides: A case study of spinach. Spectrochimica Acta	10.1016/j.sa a.2022.121 556	4.831	
BAN:02/2	SSRG International Journal of Medical Science	C. A. Parvin, K. Rumon, S. Manjura Hoque, R. Kawsar, M. S. Uddin, M. Hossain,	The Elimination of Gutta-percha by Chloroform and Orange Oil in Endodontic Retreatment: An Scanning Electron Microscopic Observation	10.14445/2 3939117/IJ MS- V9I3P103		
UGA:02	Surfaces and Interfaces	B. Oyrema. E. Jurua, I.G. Madiba, I. Ahmad, S.O. Aisida, F.I. Ezema, M. Maaza	Effects of 7 MeV proton irradiation on microstructural, morphological, optical, and electrical properties of flourine - doped tin oxide thin films	doi.org/10.1 016/j.surfin. 2021.10169 3	6.137	
TAN:01/2, MSSEESA	Tanzania Journal of Science	Justine J Tibaijuka1, Margaret E Samiji, Mmantsae Diale and Nuru R Mlyuka	Effects of Multilayer Structure on the Microstructure and Optical Properties of the DC Sputtered Chromium Thin Films for Selective Solar Absorber Applications	dx.doi.org/1 0.4314/tjs.v 48i3.13		
TAN:01/2, MSSEESA	Tanzania Journal of Science	Lwitiko P. Mwakyusa, Nuru R. Mlyuka and Margaret E. Samiji	Boron Doped ZnO Films Deposited by DC Reactive Sputtering Using Zn:B Target: Influence of the Deposition Temperature on the Structural, Electrical and Optical Properties	dx.doi.org/1 0.4314/tjs.v 48i1.14		

KEN:02	Tanzania Journal of Science	Lilian A Owino, Sebastian Waita, Robinson Musembi and Francis W Nyongesa	Effects of Annealing Ambient on the Structural, Optical and Electrical Properties of TiO2:Ge Thin Films.	10.4314/tjs. v48i1.1		
AFSIN/ EAUMP UR	Transactions of the Indian National Academy of Engineering	L. P. Nguemkoua Nguenjou, G. H. Kom, Sifeu Takougang Kingni, G. Tchuen, A. B. Tiedeu	Multistability, Antimonotonicity and Experimental Verification in a 3DSC-CNN Chua's Circuit with a Smooth Nonlinearity	doi.org/10.1 007/s41403 -022-00351- 1		
MYA:01	University of Mandalay Research Journal	Hla Loon Naing, Mono Zaw, Soe Ko Ko Aung	Doping Effect on Optical Properties of SnO <sub>2</sub> /TiO <sub>2</sub> Thin Films			
MYA:01	University of Mandalay Research Journal	Htet Htet Wai Moe, Ohnmar Win, Aye Moh Moh Myo, Khin Than Tint, Kazuma Nakazawa	Analysis of a Single-∧Hypernucleus Event in J-PARC E07 Experiment			
MYA:01	University of Mandalay Research Journal	Phyoe Ei Ei Nyein, Win Win Aye, San Yu Swe	Structural and Physical Properties of Dysprosium- Doped Phosphate Based Glasses			
MYA:01	University of Mandalay Research Journal	Thiri Thu, Win Win Aye, Than Zaw Oo	Zinc Tin Oxide as Photocatalyst in Decolorization of Organic Dyed Water			
MYA:02	University of Yangon Research Journal	Aung Ko Myat, Thet Thet Swe, Min Maung Maung	Extraction of Silica from Rice Husk Waste Material at Different Calcination Temperatures			
MYA:02	University of Yangon Research Journal	Kaung Kyaw Naing, Saw Lin Oo, Ye Chan	Preparation and Characterization of Electrospun PVA-rGO nanofibers			
KEN:04	Vibrational Spectroscopy	Ondieki, A. M., Birech, Z., Kaduki, K. A., Kaingu, C. K., Ndeke, A. N., & Namanya, L.	Biomarker Raman bands of estradiol, follicle- stimulating, luteinizing, and progesterone hormones in blood	10.1016/j.vi bspec.2022. 103425	2.382	
BUF:01	World Journal of Engineering and Technology (WJET)	Adelaïde Lareba Ouédraogo, Sayouba Kabré, Etienne Malbila, Abdoulaye Compaoré, Ramatou Saré, Paul Ilboudo, Sié Kam, Bruno Korgo, Dieudonné Joseph Bathiebo, Florent P. Kieno, Philippe Blanchard	Comparative Study of the Thermal and Mechanical Properties of Foamed Concrete with Local Materials	doi.org/10.4 236/wjet.20 22.103035		

### 2.5.4 Conference proceedings

Conference proceedings reported by chemistry groups (IPICS) and networks are given first, followed by those reported for mathematics (IPMS) and physics (IPPS).

ISP program	Group/ Network	Conference Name	Location	Date	Author(s)	Title	Pages	DOI
IPICS	BUF:01	22èmes Journées Scientifiques Annuelles de la SOACHIM	Ouagadoug o, Burkina Faso	2-12 Aug	Assétou Sankara, Jean Claude W. Ouédraogo, Schemaeza Bonzi, Irénée Somda et Yvonne Bonzi – Coulibaly	Activités antifongiques des résidus d'hydrodistillation de Cymbopogon citratus, Eucalyptus camaldulensis et Mentha piperita	13	
IPICS	LAO:04	National Research Forum 2022 Sciences, Technology and Innovation for Sustainable Development	Vientiane, Laos	2022- 11-04	Phengxay Deevanhxay, Kesiny Phomkeona, Aphisid Chandavong, Xiengkhane Sangmany, Yengchang Vangneng	Study on total phenolic content, total flavonoid content, and antioxidant activity of Equisetum giganteum	42	
IPMS	BURK:01	Nonlinear Analysis, Geometry and Applications. Proceedings of the Second NLAGA-BIRS Symposium	Senegal	Jan 25-30, 2022	M. M. Gueye, J. T. Mende and N. Djitte	Algorithms for nonlinear integral equations of Hammerstein type with Phi-monotone mappings in certain Banach spaces	317- 338	
IPMS	BURK:01	Nonlinear Analysis, Geometry and Applications. Proceedings of the Second NLAGA-BIRS Symposium	Senegal	Jan 25-30, 2022	Ly, S., Tendeng, L., Balde, M.A.M.T., Ngom, D., Seck, D.	Stochastic Reaction Network Modeling and Optimal Control for Covid-19	121- 142	
IPMS	EAALG	International Conference on Stochastic Processes and Algebraic Structures. SPAS 2019: Stochastic Processes, Statistical Methods, and Engineering Mathematics	Sweden	Sept 30-Oct 2, 2019	Djinja, D., Silvestrov, S., Tumwesigye, A.B.	Representations of Polynomial Covariance Type Commutation Relations by Linear Integral Operators on Lp Over Measure Spaces	59-95	doi.org/10.1007 /978-3-031- 17820-7_4
IPPS	ETH:02	Conference of the Arabian Journal of Geosciences	Sousse, Tunisia	Nov 25-28, 2019	Atalay Ayele	Magmatic Rifting and Seismicity in Afar	33-36	doi.org/10.1007 /978-3-030- 73026-0_9
IPPS	KEN:02	International Energy 2021 Conference	Yaonde, Cameroon	Nov 18-20, 2021	Mary T. Simiyu, Francis W. Nyongesa, Bernard O. Aduda, Zephaniah Birech, and and Illic Nikolina	An Assessment of the Use of Static Magnetic Field for Sodium Fluoride Defluoridation and Removal of Escherichia Coli and Rotavirus Pathogens from Water		doi.org/10.1051 /e3sconf/20223 5403002
IPPS	KEN:02	2022 IEEE PES/IAS PowerAfrica	Rwanda, Kigali	Aug 22-26, 2022	L. Kamanja, V. Komarala, V. Dutta, S. Waita and K. Wachira	Techno-Economic Analysis of a Rooftop Grid-connected Photovoltaic Solar System: A case study of Jomo Kenyatta University of Agriculture and Technology (SAJOREC),"	1-5	10.1109/Power Africa53997.202 2.9905282

IPPS	KEN:02	2023 IEEE PES/IAS PowerAfrica	Rwanda, Kigali	Aug 22-26, 2023	S. F. Palm, S. Waita, T. Nyangonda and A. Chebak	Performance Study of a Grid Connected Solar PV System in Zagtouli, Burkina Faso	1-6	10.1109/Power Africa53997.202 2.9905290.
IPPS	KEN:02	Advances in Phytochemistry, Textile and Reneewable energy Research for Industrial Growth	Eldoret, Kenya	Aug 12-14, 2020	Sebastian Waita	Photovoltaic off-grid solar home system sizing using the charging current and total energy methods: A comparison of the two sizing methods,	230- 235	1. 10.1201/97810 03221968-31
IPPS	KEN:02	International Energy 2021 Conference	Yaonde, Cameroon	Nov 18-20, 2021	Rita Mwende, Sebastian Waita, Geoffrey Okeng'o	Real time photovoltaic power forecasting and modelling using machine learning techniques.	1-6	https://doi.org/ 10.1051/e3scon f/20223540200 4
IPPS	MYA:02	14th AUN/SEED-Net Regional Conference on Materials & The 4th International Postgraduate Conference on Materials, Minerals & Polymer (RCM & MAMIP 2021)	Penang, Malaysia	2022- 07-12	Thet Thet Swe	Synthesis and Characterization of Sol- Gel drived SiO2-Na2O-CaO-P2O5-SrO- Ag2O Bioglass	2689- 2692	https://doi.org/ 10.1016/j.matpr .2022.06.496
IPPS	NEP:01	Proceedings of the 36th International Conference on Lightning Protection	Cape Town, South Africa	Oct 2- 7, 2022	Shriram Sharma, Ramji Jaisi Bhusal, Ronald L. Holle	Lightning - A Potential Cause of House Fires during the Pre-monsoon Season: A Case Study in Nepal	858- 861	
IPPS	NEP:01	Proceedings of the 36th International Conference on Lightning Protection	Cape Town, South Africa	Oct 2- 7, 2022	Shriyog Sharma, Shriram Sharma, Chandima Gomes	Archaeological sites in Nepal and India: Concerns of lightning risks	1104- 1110	
IPPS	NEP:01	Proceedings of the 36th International Conference on Lightning Protection	Cape Town, South Africa	Oct 2- 7, 2022	Shriram Sharma, Hari B. K C, Madhu Gyawali, Lok Lamsal, Sujan Neupane, Pradip Karki	The possible impact of atmospheric aerosol and other factors on lightning over the rugged terrain of Nepal	733- 736	
IPPS	NEP:01	Proceedings of the 36th International Conference on Lightning Protection	Cape Town, South Africa	Oct 2- 7, 2022	Shriram Sharma, Chandima Gomes, S. Gopa Kumar, Foster Chileshe Lubasi	Ubiquitous and Perplexing Proliferation of Nonstandard Lightning Protection System in Developing Countries	641- 645	
IPPS	NEP:01	Proceedings of the 36th International Conference on Lightning Protection	Cape Town, South Africa	Oct 2- 7, 2022	Nasib Khadka, Diwakar Bista, Chandima Gomes, Shriram Sharma, Brijesh Adhikary	Distribution Network Impact Assessment with Geometrically Identified Strike Points: An Approach	181- 186	

## 2.5.5 Books and chapters

Books and book chapters reported by supported groups and networks. IPICS = Chemistry, IPMS = Mathematics, IPPS = Physics.

ISP progra m	Group/ Network	Author(s)	Book title	Editor(s)	Chapter title	DOI
IPICS	ANCAP	AM Elbagory, A Rahman, N Cheikhyoussef, A Cheikhyoussef, NM Begum, AA Hussein	Clove (Syzygium aromaticum)	Mohamed Fawzy Ramadan	Clove (Syzygium aromaticum)-mediated metallic nanoparticles: Synthesis, characterization, and possible pharmacological and industrial applications	doi.org/10.1016/B978- 0-323-85177-0.00011-2
IPICS	ANCAP		Clove (Syzygium aromaticum)	Mohamed Fawzy Ramadan	Nanocomposites using clove (Syzygium aromaticum) chemical constituents	doi.org/10.1016/B978- 0-323-85177-0.00008-2
IPICS	ANCAP	A Haarstrick, C Kowenje	From Traditional to Modern African Water Management	Chrispin Kowenje, Andreas Haarstrick, Timothy Biswick, Gideon Ajeagah, Stephen Ojwach, Oluwatoyin A. Odeku, Gnon Baba	Sub-Saharan Africa's Way of Water Management	doi.org/10.1007/978-3- 031-09663-1_1
IPICS	ANCAP	BO Kwach, MA Oriaro, C Kowenje	From Traditional to Modern African Water Management	C Kowenje, A Haarstrick, T Biswick, G Ajeagah, S Ojwach, OA Odeku, G Baba	Traditional Water Purification Methods Among the Luo and Luhya Communities of Kenya	doi.org/10.1007/978-3- 031-09663-1_11
IPICS	ANCAP	VO Shikuku, GO Achieng' and P Ssebugere	Hand book of Research on Algae as a Sustainable Solution for Food, Energy, and the Environment	MM El-Sheekh, N Abdullah, I Ahmad	Towards Sustainable Use of Algae as Adsorbents for Wastewater Treatment	10.4018/978-1-6684- 2438-4
IPICS	ANCAP	DS Dlamini, GD Vilakati, C Matindi, AK Mishra, JM Thwala, BB Mamba, J Li	Micro and Nano Technologies, Bio- Based Nanomaterials	AK Mishra, CM Hussain,	Enhanced dye recovery from textile effluents by means of biobased nanomaterials/polymer loose nanofiltration membranes	doi.org/10.1016/B978- 0-323-85148-0.00006-3
IPICS	BAN:04	M Shoeb, M F Mumu	Modern Challenges and Approaches to Humanitarian Engineering	Y Koumpouros, A Georgoulas, G Kremmyda (Eds.)	Rohingya Refugee Crisis in Cox's Bazar: A Great Humanitarian Challenge	DOI: 10.4018/978-1- 7998-9190-1,ch008
IPICS	BOL:01	Moreno Z, Arteaga F, Rodríguez A, Durán J, Zárate S & Pinto CF	Socio environmental epidemiology in times of Covid 19	Busato M, Lutinsky J	Epidemiological and socio environmental aspects in times of COVID 19 in Bolivia	
IPICS	BOL:01	Nieri R, Michael S, Pinto C, Urquizo O, Appel H & Cocroft R	Biotremology: Physiology, Ecology and Evolution	Hill P, Mazzoni V, Stritih- Peljhan N, Virant-Doberlet V, Wessel A	Inexpensive methods for detecting and reproducing substrate-borne vibrations: advantages and limitations	https://doi.org/10.1007 /978-3-030-97419-0
IPICS	BUF:02	Issaka Garikoé and Boubié Guel	Nanoclay/Recent Advances, New Perspectives and Applications	Walid Oueslati	Solid-State Synthesis of Organoclays: Physicochemical Properties and Application for Bispheno A Removal from Aqueous Solutions	http://dx.doi.org/10.57 72/intechopen.107503

IPICS	BUF:01	Svitlana L. Nitiéma Yefanova, Jean Claude W. Ouédraogo, Benjamin Ouédraogo, Yvonne L. Bonzi-Coulibaly	Prospects for the Future. From Traditional to Modern and African Water Management: Lessons for the Future		The Use of Plants for Drinking Water Disinfection: Traditional Knowledge, Scientific Validation, Current Challenges and Prospects for the Future	DOI: 10.1007/978-3- 031-09663-1_9
IPICS	TAN:02	M Hossein, O Chande, F Ngassapa, and E Mureithi	Emerging Contaminants in the Environment-Challenges and Sustainable Practices	H Sarma, DC Domı'nguez and WY Lee	Exposure to 1, 4-dioxane and disinfection by- products due to the reuse of wastewater	DOI: 10.1016/B978-0- 323-85160-2.00004-4
IPICS	UGA:02	M. Kigozi, B. N. Ezealigo, G. N. Kasozi, E. Tebandeke, J. B. Kirabira	Graphene Oxide in Enhancing Energy Storage Devices	Fabian Ifeanyichukwu Ezema, Ishaq Ahmad, Tingkai Zhao	The Science of High-Energy Graphene Oxide— Based Materials for Hybrid Energy Storage Applications	doi.org/10.1201/97810 03215196
IPICS	UGA:01	Victor Odhiambo Shikuku, George Oindo Achieng, Patrick Ssebugere	Handbook of Research on Algae as a Sustainable Solution for Food, Energy, and the Environment		Towards Sustainable Use of Algae as Adsorbents for Wastewater Treatment	
IPMS	EAUMP UDSM	Miraji Hossein, Othman Chande, Faustin Ngassapa, Mureithi Eunice	Emerging Contaminants in the Environment	Hemen Sarma, Delfina C. Dominguez, Wen-Yee Lee	Exposure to 1,4-dioxane and disinfection by- products due to the reuse of wastewater	doi.org/10.1016/B978- 0-323-85160-2.00004-4
IPMS	EAUMP UoN	E. M. Brodin, H. Wao, C. Kabonesa, N. O. Owuor	Doctoral Examination: Exploring Practice Across the Globe	ijay Kumar, Stan Taylor, Sharon Sharmini	Kenya and Uganda	10.4324/978100319770 6
IPMS	EAUMP UoN	N. O. Owuor, & H. O. Wao	Modern Biostatistical Methods for Evidence-Based Global Health Research	Ding-Geng (Din) Chen, Samuel O. M. Manda, Tobias F. Chirwa	Meta-Analysis Using R Statistical Software	doi.org/10.1007/978-3- 031-11012-2_7

### 2.5.6 Popular publications and technical reports

Only chemistry groups/networks (IPICS) and physics groups/networks (IPPS) reported popular publications and technical reports.

ISP program		Author	Title	Publication venue	Bibliographic specification (ISSN, DOI, etc, if applicable)
IPICS	BAN:04	M Shoeb	Study on plastic pollution and associated impacts on marine life, human health and environment Final Report	Report	n/a
IPICS	BUF:01	Yvonne Bonzi L. Coulibaly	Plaquete d'information sur les biopesticides N° 5	Popular science paper of LCAEBiO	n/a
IPICS	CAB-CCS	N/A	The Bulletin of the Cambodian Chemical Society		Vol. 13, Issue 1-2
IPICS	TAN:02	JAM Mahugija, KF Killuya, S Nyandoro, M Ndoile, R Peter, GA Kinunda, FT Sung'hwa, JYN Philip, EHJ Lugwisha	Policy influence on banning of plastic bags and follow up on alternative carrier bags in Tanzania	46 <sup>th</sup> Dar es Salaam International Trade Fair (DITF), Dar es Salaam	n/a

IPPS	EAARN	Andama G., Ndugu N., Anguma S. K., Jurua E	Planetary Core Formation via Multispecies Pebble Accretion	Oxford University Press, UK	0035-8711
IPPS	ZAM:01	Christopher Mambwe, Kai-Wilfrid Schröder, Les Kügel, and Prem Jain	Comparing-effectiveness-of-minigrid-encroachment-regulations		https://www.esi- africa.com/renewable- energy/whitepaper- comparing-effectiveness-of- minigrid-encroachment- regulations/
IPPS	BUF:01	IRENA and SELCO Foundation	Electrification with renewables: Enhancing healthcare delivery in Burkina Faso	International Renewable Energy Agency, Abu Dhabi; www.irena.org/publications	ISBN:97892-9260-48-3
IPPS	TAN:01/2	Margaret Samiji	Materials Science and Solar Energy Research Group, Dar es Salaam	The African Physics Newsletter	
IPPS	LAO:01	S Singsoupho	Application of Geophysical Techniques for Groundwater Investigation: A Case Study from Atsphone District, Savannakhet Province	Vientiane	Scienctific Report

#### 2.6 Conference contributions

#### 2.6.1 International conference contributions

**Table 14.** Number of poster and oral contributions to international scientific meetings in the listed countries 2022, by scientists in ISP supported groups and networks.

Country	Domina	Chen	nistry	Mathe	ematics	Phy	sics	To	tal	Grand total
Country	Region	Oral	Poster	Oral	Poster	Oral	Poster	Oral	Poster	
Burkina Faso	Africa	17	0	1	0	0	0	18	0	18
Cameroon	Africa	0	0	0	0	18	0	18	0	18
Cape Verde	Africa	0	0	0	0	1	0	1	0	1
Congo Brazzaville	Africa	0	0	1	0	0	0	1	0	1
Congo Kinshasa	Africa	0	0	0	0	0	1	0	1	1
Egypt	Africa	0	0	0	0	1	0	1	0	1
Ethiopia	Africa	0	0	1	0	0	0	1	0	1
Ivory Coast	Africa	2	2	0	0	0	0	2	2	4
Kenya	Africa	0	0	0	0	36	1	36	1	37
Mauritius	Africa	1	0	0	0	0	0	1	0	1
Morocco	Africa	1	0	1	0	0	0	2	0	2
Mozambique	Africa	0	0	1	0	0	0	1	0	1
Nigeria	Africa	0	0	0	0	1	0	1	0	1
Rwanda	Africa	1	0	1	0	0	0	2	0	2
Senegal	Africa	0	1	0	0	2	1	2	2	4
South Africa	Africa	10	0	0	0	4	1	14	1	15
Tanzania	Africa	0	0	1	0	2	0	3	0	3
Togo	Africa	0	4	0	0	18	0	18	4	22
Uganda	Africa	0	0	0	0	6	0	6	0	6
Zambia	Africa	1	0	0	0	2	0	3	0	3
Total	Africa	33	7	7	0	91	4	131	11	142
Bangladesh	Asia	12	9	0	0	20	28	32	37	69
India	Asia	3	0	0	0	0	1	3	1	4
Indonesia	Asia	3	0	0	0	0	0	3	0	3
Japan	Asia	1	0	0	0	0	0	1	0	1
Korea	Asia	0	1	0	0	0	0	0	1	1

Nepal	Asia	0	0	0	0	1	0	1	0	1
Thailand	Asia	1	0	0	0	1	0	2	0	2
Total	Asia	20	10	0	0	22	29	42	39	81
Austria	Europe	0	0	0	0	9	0	9	0	9
Belgium	Europe	0	1	0	0	1	2	1	3	4
Czech republic	Europe	0	0	0	0	0	1	0	1	1
Denmark	Europe	0	2	1	0	0	0	1	2	3
Finland	Europe	0	0	0	0	1	0	1	0	1
Germany	Europe	0	0	0	0	1	0	1	0	1
Greece	Europe	4	1	0	0	1	1	5	2	7
Italy	Europe	0	0	1	0	1	0	2	0	2
Sweden	Europe	0	0	0	0	1	0	1	0	1
Portugal	Europe	0	6	1	0	0	0	1	6	7
United Kingdom	Europe	0	2	6	0	0	0	6	2	8
Total	Europe	4	12	9	0	15	4	28	16	44
USA	North America	2	0	0	0	1	1	3	1	4
Total	North America	2	0	0	0	1	1	3	1	4
Bolivia	Latin America	4	0	0	0	0	0	4	0	1
Total	Latin America	4	0	0	0	0	0	4	0	4
All count	ries	63	29	16	0	129	38	208	67	275

# Chemistry (IPICS), mathematics (IPMS) and physics (IPPS) contributions to international conferences listed country-wise.

Country	ISP program	Group / Network	Organiser	Author(s)	Title of the presentation	Oral or Poster	Name of event	Dates	Venue, City
Austria	IPPS	AFSIN	International Atomic Energy Agency (IAEA)	Angeyo, K. H., E. A. Otieno, D. W. Musyoka, E. K. Sichangi, J. J. Okonda, J. I. Githaiga, K. A. Kaduki, A. D. Massop	Schema for Deep Learning Modelling of Sparse Serum Biomarkers for Spectral Diagnostics of Cardiovascular disease	Oral	International Conference on Integrated Medical Imaging in Cardiovascular Diseases	Dec 13- 16	International Atomic Energy Agency (IAEA), Vienna
Austria	IPPS	AFSIN	International Atomic Energy Agency (IAEA)	Angeyo, K. H.	Leveraging Machine Learning Based Microphotonic Nuclear Forensics Capabilities for Integrated Nuclear Safeguards and Security Threat Prevention in a Prospective Nuclear Power Program	Oral	Symposium on International Safeguards — Reflecting on the Past and Anticipating the Future	Oct 31- Nov 4	International Atomic Energy Agency (IAEA), Vienna
Austria	IPPS	ETH:02	Comprehensiv e Nuclear Test-Ban- Treaty Organization (CTBTO)	Atalay Ayele	Current operational status of AS30 (FURI) seismic stations and recurring problems	Oral	7th Workshop on the Operation and Maintenance (O&M)	Nov 28 - Dec 3	Vienna
Austria	IPPS	KEN:01/2	IAEA/Internati onal Conference on Applications of Radiation Science and Technology (ICARST)	KINYUA, Jackline Wacuka, KAIRU, Wilson Macharia, GATARI Michael	Assessment of hazardous defects in live trees: Application of gamma scanning in Nairobi, Kenya	Oral	Second International Conference on Applications of Radiation Science and Technology (ICARST-2022)	Aug 22- 26	Vienna
Austria	IPPS	KEN:01/2	IAEA/Internati onal Conference on Applications of Radiation Science and Technology (ICARST)	Kioko MUTINDA, Michael MANGALA, Ian KANIU, Wilson KAIRU	Automated Microcontroller Based Gamma Column Scanner With Wireless Data Acquisition and Control System	Oral	Second International Conference on Applications of Radiation Science and Technology (ICARST-2022)	Vienna	Vienna

Austria	IPPS	KEN:01/2	IAEA/Internati onal Conference on Applications of Radiation Science and Technology (ICARST)	KILEL, Kennedy Kiprotich, BEZUIDENHOUT, Jacques; GATARI GICHURU, Michael James; LE ROUX, Rikus; Ian KANIU	Measurement of Primordial Radionuclides using In situ Gamma Ray Spectrometer as Sediment Tracers	Oral	Second International Conference on Applications of Radiation Science and Technology (ICARST-2022)	Aug 22- 26	Vienna
Austria	IPPS	KEN:01/2	IAEA/Internati onal Conference on Applications of Radiation Science and Technology (ICARST)	L.K.Kiriinya, S. W. Karuga, M.J. Gatari	Education and Training in Radiation Science and Technology in Kenya	Poster	Second International Conference on Applications of Radiation Science and Technology (ICARST-2022)	Aug 22- 26	Vienna
Austria	IPPS	KEN:04/A FSIN	International Atomic Energy Agency (IAEA)	Angeyo, K. H, Dehayem-Massop A., Kaniu I M.	Machine Learning Enabled Radiometric and Microphotonic Nuclear Forensic Analysis	Oral	2nd Coordinated Research Project (CRP) Meeting - Applying Nuclear Forensics Science to Respond to a Nuclear Security Event	July 1- 12	Vienna
Austria	IPPS	KEN:04/A FSIN	International Atomic Energy Agency (IAEA)	Angeyo, K. H, Nyairo J. O., Wabwile J. M.	Forensics Detection of Nuclear Materials by Machine Learning Mirophotonic Techniques	Oral	Technical Meeting on Nuclear Forensics: From National Foundations to Global Impact	April 11-14	Vienna
Austria	IPPS	RWA:01	UN Office for Outer Space Affairs (UNOOSA) and The International Committee on Global Navigation Satellite Systems (ICGSS)	Jean Uwamahoro	Space weather study through Analysis of Solar Radio Bursts detected by a signle- station CALLISTO spectrometer	Oral	United Nations International Meeting on the Applications of Global Navigation systems	Dec 5-9	Vienna

Bangladesh	IPICS	BAN:04	BUET	M I R Mamun	Keynote Speech on "Safety Status of Fruits and Vegetables in Bangladesh: Perceptions and Reality"	Oral	1 <sup>st</sup> International Conference on Frontier in Sciences 2022	Nov 11- 12	BUET, Dhaka
Bangladesh	IPICS	BAN:04	Faculty of Mechanical Engineering Technology, Universiti Malaysia Perlis (UniMAP)	S M Joya	Assessment of Physicochemical Properties and Plastic Microbeads in Shampoo	Poster	2nd International conference of SAIST on Education, Health, and Environment for Sustainable Goals	202208	University of Dhaka, Bangladesh
Bangladesh	IPICS	BAN:04	University of Dhaka	L Nahar	Assessment of Surface Water Quality of Turag River by Systematic Analytical and Statistical Analysis	Poster	2nd International conference of SAIST on Education, Health, and Environment for Sustainable Goals	202208	University of Dhaka, Bangladesh
Bangladesh	IPICS	BAN:04	Faculty of Mechanical Engineering Technology, Universiti Malaysia Perlis (UniMAP)	Z Samiha	Assessment of Physicochemical Properties and Plastic Microbeads in Personal Care Products (Face Wash)	Poster	2nd International conference of SAIST on Education, Health, and Environment for Sustainable Goals	202208	University of Dhaka, Bangladesh
Bangladesh	IPICS	BAN:04	BCSIR	L Nahar	Assessment of Water Quality Parameters, Pesticides and Microplastics in the Surface Water of Turag River	Oral	BCSIR Congress-2022	Dec 1-3	BCSIR, Dhaka
Bangladesh	IPICS	BAN:04	BCSIR	M I R Mamun	Keynote Speech on "Role of Scientific Awareness in Food Safety Management: Bangladesh Perspective	Oral	BCSIR Congress-2022	Dec 1-3	BCSIR, Dhaka
Bangladesh	IPICS	BAN:04	BCSIR	M Shoeb	Natural Products to combat Diabetes Mellitus in the Developing Countries	Oral	BCSIR Congress-2022	Dec 1-3	BCSIR, Dhaka
Bangladesh	IPICS	BAN:04	ENHANCE Project	M Shoeb	The Role of Chemistry in Achieving Sustainable Development Goals (SDGs)	Oral	ENHANCE	202210 14	Bangladesh University of Engineering and Technology, Dhaka
Bangladesh	IPICS	BAN:04	University of Dhaka	W Farha	Assessment of mettalic contents in vegetables samples and their effects on human health	Oral	International Conclave on Materials, Energy & Climate	Dec 18- 20	Dhaka, Bangladesh

Bangladesh	IPICS	BAN:04	Bangladesh Awami League	M J Dyuti	Assessment of Nutritional Value of Limonia acidissima L. (Wood Apple)	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	Z Samiha	Assessment of Physicochemical Properties and Plastic Microbeads in Personal Care Products (Face Wash)	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	M I R Mamun	Keynote Speech on "Safety Status of Fruits and Vegetables in Bangladesh: Perceptions and Reality"	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	M Shoeb	Plastic Pollution in the environment	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	A Haider and H Khatun	Quality Assessment of Bottled Drinking Water by Physiochemical Properties, Heavy Metals and Microbial Analysis	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	A A J Urmi	Analysis of Water Quality Parameters of the Dhaleshwari River	Poster	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	S M Joya	Assessment of Physicochemical Properties and Plastic Microbeads in Shampoo	Poster	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:04	Bangladesh Awami League	T Rahman	Evaluation of water pollution by Physicochemical and Microbiological Parameters: A Study of Dhaleshwari River	Poster	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka

Bangladesh	IPICS	BAN:05	Faculty of Pharmacy and Public Health, IUB	Zamir R, Khatun M, Islam I, Rashid MA, Zaman S, Islam N, Ahmed H, Zakaria CM	Microbial and Metal Contamination in Some Plant- Based Energy Stimulating Medicines Formulated in Bangladesh	Poster	International Conference on Drug Discovery and Development	Sept 19-20	IUB, Dhaka
Bangladesh	IPICS	BAN:05	Faculty of Pharmacy and Public Health, IUB	Islam N, Zamir R and Faruque O	Safety and Efficacy Assessment of Some Anti- Diabetic Herbal Drugs	Poster	International Conference on Drug Discovery and Development	Sept 19-20	IUB, Dhaka
Bangladesh	IPICS	BAN:05	Bangladesh Awami League	Zamir R, Islam N and Faruque O	Safety assessment of Anti- Diabetic Drugs Available in Bangladesh	Oral	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPICS	BAN:05	Bangladesh Awami League	Islam N, Zamir R and Faruque O	Safety Assessment of The Toxic Metals In Plant Based Anti- Diabetic Drugs Available in Bangladesh	Poster	International Conference on Environmental Protection for Sustainable Development (ICEPSD- 2022)	Sept 2- 4	CARS, University of Dhaka, Dhaka
Bangladesh	IPPS	BAN:02/2	Faculty of Science, BUET	S. Manjura Hoque	Multimodal Applications of Nano/Nanobiomaterials Research	Oral (Keynote)	1st International Conference on Frontier in Sciences (ICFS - 2022)	Nov 11- 12	BUET, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	A. Rahman, F. Ferdous, M. S. Bashar, S. I. Liba, M. A. Bhuiyan, I. M. Syed	Dye sensitized solar cells based on ZnO thin films deposited by ultrasonic spray pyrolysis	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	S. Akter, M.N.I. Khan F. Ferdous, R. Hasan, H. N. Das, I. M. Syed	Effects of Cr doping on the structural and electromagnetic properties of Cu Mg nanoferrites prepared by the sol gel method	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	N. Khatun, S. Ahamed, M. S. Hossain, M. Al- Mamu	Impact of Yttrium and Lanthanum on Structural, Optical, Electrical and Magnetic Properties of Cobalt Ferrites nanoparticle	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M A Jalil, M.N.I. Khan, S. Mandal, S. I. Liba, FUZ. Chowdhury, M.M. Hossain, D. Jana, M. S. Alam, M.M. Uddin	Influence of reaction temperatures on the particle size of V2O5 synthesized by facile hydrothermal technique and their auspicious photocatalytic performance in dye degradation	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka

Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. M. Rahman, M. Shamsuzzaman, R. A. Ramon, M.Rajib M. Al-Mamun, S. Sultana, S. H. Firoz	Internal Morphology Study of Madupur Clay Based Cox's Bazar Beach Sand and Minerals Incorporated Indigenous Radiation Shielding Composites by Thermal Neutron Imaging Using TRIGA Mark-II Research Reactor	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	N. Jahan, M. N. I. Khan, H. N. Das, R. Hasan, S. M. Hoque and J. I. Khandaker	Investigation through structural, electrical, and magnetic properties of the Al3+ ions doped Ni-Zn-Co nano-spinel ferrites	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	P. Sarker, S. K. Sen, A. A. Mortuza, M. S. Manir, M. R. Hasan	Microstructural parameters analysis of hydrothermally synthesized Mg-doped SnO2 nanoparticles with Debye-Scherrer, Williamson-Hall and Halder-Weigner methods	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. F. Kabir, M. Z. Rahman, J. Ferdousy, A.K.M. A. Ullah, M. M. Rahman, M.N.I. Khan	Natural Antioxidant Based Synthesis of Magnetic Silver Nanoparticles Using Some Medicinal Leaves And Their Applications Against Cancerous Cell And Multidrug- Resistant Strains	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. Hassan, S. M. Hoque, H. N. Das, M. N. I. Khan, F. A. Khan, M. S. Ullah	Structural and Magnetic Properties of Dy Substituted Mg-Cu-Zn Ferrites	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	F. T. Z. Toma, K. M. A. Hussain, M. S. Rahman, H. Das, M. N. I. Khan,	Study of the Influence of Annealing Temperatures on CdS Nanoparticles Synthesized by Chemical Precipitation Method	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	A. Mortaza, M. A. Islam, R. Rashid, M. N. I. Khan and M. K. Alam	Study of the Structural, Electrical, And Magnetic Properties of (Fe95Ti5)75P15C10 Amorphous Ribbon	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	Z. Tasnim, F. Tasnim, I. N. Esha, J. Maudood, M. S. Islam, M. N. I. Khan, M. A. Mamun, S. Hossain, K. H. Maria	The Influence of Magnesium Doping on BaZr0.5Y0.5-XMgxO3 Perovskite Oxide for Applications in Solid Oxide Fuel Cell	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	C. Das, H.N. Das, F. Alam, A. K. M. A. Hossain	X-ray diffraction analysis by Williamson- Hall, Size-Strain Plot and Halder-Wagner methods of Ni0.48Cu0.12Zn0.40Gd0.06Fe1.94O4- a comparative study	Oral	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka

Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	K. Sarkar, A. S. Sikder, M. A. Hossain, H. N. Das, M. N. I. Khan, S. S. Sikde	Annealing Effect on the Soft Magnetization and Structural Grain Growth and Nanocrystalline (Fe0.9Co0.1)73.5Cu1Nb3Si13.5B4 Metallic Glass	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. F. Uddin, M. S. Bhuiya, M. Alam, M. S. Niloy, M. S. Hossen, S. M. Haque, M. S. Shakil, M. A. Hasan	Biodistribution and progeny transfer effects of chitosan-coated cobalt ferrite nanoparticles	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. K. Uddin, N. Deb, H.N. Das, R. Rashid, A. Kumar, S. M. Hoque, I. M. Syed	Characterization and Study the Magnetic Hyperthermia Effect of Iron Oxide (Fe3O4) Nanoparticles Synthesized via Thermal Decomposition Method	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	T. Jabin, M. A. Raif, J. U. Ahamed, M. N. I. Khan	Comparing the Structural, Magnetic and Transport properties of Ba0.8Ca0.2Ti1- xNbxO3 and Ba0.8Ca0.2Ti1-xYxO3 based on frequency	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	T. Hoque, S. M. Hoque, I. N. Esha, A. Islam, A. Kumar, R. Rashid, K. H. Maria	Dextran Coated Co-Mg Ferrite Nanoparticles: Investigation as temperature sensitive drug carriers	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	S. Y. Tisa, S. D. Nath, S. I. Liba, M.N. I. Khan and S. S. Sikder	Effect of step annealing temperature on the crystallization kinetics of Fe30Ni50B20 metallic glass	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	U. Habiba, I. N. Esha, M. N. I. Khan, H. N. Das, M. S. Bashar, K. H. Mari	Exploring the Coupling Effect of Ferromagnetic, Co0.8Zn0.2Fe2O4 with the Ferroelectric, La0.5Ba0.5TiO3 at Different Concentrations in Composite Multiferroics	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. D. Hossain, A. T. M. K. Jamil, H. N. Das, S. I. Liba, M. A. Hakim, M. N. I. Khan	Impact of V substitution on the physical properties of Ni-Zn-Co ferrites: structural, magnetic, dielectric and electrical properties",	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	A. Kaiyum, M.A. Hossain, S. M Hoque, H. N. Das, M. A. Hakim and M. N. I. Khan,	Impedance spectroscopy and conduction mechanism of xNi.50Zn.40Mn.10Fe2O4. (1-x)Bi0.9La0.1Fe0.93Eu0.07O3 composites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	F. Tasnim, Z. Tasnim, I. N. Esha, J. Maudood, M. S. Islam, M. N. I. Khan, M. A. Mamun, S. Hossain, K. H. Maria	Improvement in structural stability and electronic properties of Perovskite oxide SrZr0.5Y0.5-xCaxO3 by doping Calcium for Solid oxide fuel cell application	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka

Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. N. Islam, R. Hassan, M. N. I. Khan, A. K. M. A. Hossain	Influence of Gd3+ Substitution on Microstructural, Temperature Dependent Permeability and Electrical Properties of Mn-Ni-Zn Ferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. Ahmed, P. Roy, S. Akhter, M. N. I. Khan and S. S. Sikder,	Investigation of the Structural & Magnetic Properties of Yttrium Substituted Co-Zn- Ferrites for the Use of soft RE-ferrite material	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. A. Islam, A. Mortaza, R. Rashid, M. N. I. Khan and M. K. Alam	Investigation of the structural, electrical and temperature dependent magnetic properties of (Fe90Cu10)75P15C10 ribbon	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	R. Hassan, M. N. Islam, M.N.I. Khan, and A.K.M. A. Hossain	Magnetic Properties Of Li Doped Ni-Zn- Ferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. A. Islam, M. S. Ullah, F. A. Khan, M. N. I. Khan, M. M. Rahman and K. S	Microstructural and Electrical Transport Properties of Zn Substituted Li-Cu-Mg Ferrite	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. Salauddin, M. S. Hossain, M. N. I. Khan, A. Hannan	Mineralogical analysis of rock samples collected from Jaflong and Bholaganj areas of Sylhet district	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	T. Ahamed, A. Ahad, A. Taher, M. K. Das, R. Hasan, A. Kumar, M.N.I. Khan	Preparation and Study of Structural and Electrical Properties of Vanadium Doped- Bismuth Europium Ferrite (Bi0.90Eu0.10Fe1-xVxO3) for Multiferroic Applications	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	S. Y. Tisa, S. D. Nath, S. Liba, H. N. Das, M.N. I. Khan and S. S. Sikder	Step Annealing Effect of crystallization Behavior and Transport Properties of Fe30Ni50B20 Metallic Glass Ribbon	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	U. Salma, M. S. I. Sarkar, M. K. R. Khan, M. N. I. Khan and M. M. Rahman	Structural and Magnetic Properties of Yttrium Doped BaFe12O19 Nanoparticles Prepared by Sol-gel Method	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	S. S. Acharjee, S. K. Shil, M. A. Hossain, M. N. I. Khan and S. S. Sikder,	Structure, Dielectric and Magnetic Transport Properties of Rare Earth Y3+ Doped Mn-Zn Ferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	S. A. Mukta, P. Roy, M. N. I. Khan and S. S. Sikder	Structure, Surface Morphology and Magnetic Properties of Cu2+ ion Substituted Ni-Co ferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. N. Mia, R. Bosri, M.N.I. Khan, H. N. Das, S.I. Liba, M. J. Miah	Study of structural, electrical and magnetic properties of Ag doped cobalt manganese ferrites by sol-gel method	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka

Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. R. A. Khan, B. C. Das, R. Rasid, S. I. Liba, M. N. I. Khan, M. K. Alam, F. Alam	Study of structural, magnetic and electrical properties of Sm3+ substituted Mn0.5Cu0.2Zn0.3Fe2O4	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	R. Bosri, M. N. Mia, M.N.I. Khan, H. N. Das, S.I. Liba, M. J. Miah	Study the effect of sintering temperature on structural and thermal properties of Ag doped ZnFe2O4 nanoferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. M. I. Khan, S. J. Ahmed, M. N. I. Khan, R. Rashid and A. T. M. K. Jamil	Synthesis and characterization of Mn doped Ni-Zn ferrites	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. U. Sumaya, F. T. Z. Toma, I. N. Esha, A. Kumar, M.A. Zubair, M. N. I. Khan, M. T. Chowdhury, M. S. Bashar, K.H. Maria	Synthesis and compositional analysis of ZnO powder using different chemical precursors	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. B. Biswas, A. Ahad, A. Taher, M. K. Das, H. N. Das, R. Rasid,	Synthesis and Investigation of Structural and Dielectric Properties of Samarium and Chromium Co-doped Bismuth Ferrite (Bi0.90Sm0.10Fe1-xCrxO3)	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:02/2	Bangladesh Physical Society	M. A. Bagum, R. Rashid, A. Kumar, H.N. Das, M. N. I. Khan, FUZ. Chowdhury, S. M. Hoque	Synthesis and Structural Characterization of R2-xBxMn2O6 and R1-xBxMnO3 (R= La, Sm and B= Ca, Sr) nanoparticles	Poster	International Conference on Physics	May 19-21	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:04	Bangladesh University of Engineering & Technology	K Siddique-e Rabbani	Extending the Frontiers of neuroscience - stemming from our innovations in nerve conduction measurements	Oral, Invited	1st International Conference on Frontier in Sciences (ICFS – 2022)	Nov 11	Online
Bangladesh	IPPS	BAN:04	Bangladesh Medical Physics Association	Istaqur Rahman, Hridi Prova Debnath, A K M Bodiuzzaman, K Siddique-e-Rabbani	Indigenous development of powered air- purifying respirators (PAPR) to provide safety to health care workers from airborne pathogens spread by patients	Oral	International Conference on Physics in Medicine	May 27	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:04	Bangladesh Medical Physics Association	K Siddique-e Rabbani	Design and Development of Covid related Medical devices during Pandemic by groups at Dhaka University and BIBEAT Limited	Oral, Invited	International Conference on Physics in Medicine	May 27	Atomic Energy Centre, Dhaka
Bangladesh	IPPS	BAN:04	International Science Programme (ISP)	K Siddique-e Rabbani	Without prioritizing research into life oriented technology and implementation of the outcomes, in turn creating an infrastructure for basic science research, the LMICs will not be able to make to the SDGs	Oral, Invited	Webinar (IYBSSD)	May 31	Online

Bangladesh	IPPS	BAN:05	Fanulty of Science, BUET, Dhaka	Khandker Saadat Hossain	Characterization of Thermoreversible Biopolymer gel near Gel Point	Oral	1st International Conference on Frontier in Sciences (ICFS – 2022)	Nov 11- 12	BUET, Dhaka
Bangladesh	IPPS	BAN:05	Fanulty of Science, BUET, Dhaka	Sadia Rahman Jhilik	Influence of Bi2O3 Addition on the Electromagnetic Properties of Li-Cu-Zn Ferrites	Oral	1st International Conference on Frontier in Sciences (ICFS – 2022)	Nov 11- 12	BUET, Dhaka
Belgium	IPICS	ZIM:02	SETAC Europe	J Change (Virtually), N Basopo, AH Siwela	No data	Poster	11th SETAC Young Environmental Scientists Meeting	March 7-9	Online
Belgium	IPPS	KEN:01/2	University of Antwep and European Microbeam Analysis Society (EMAS)	Nelson K. Rotich, Michael J. Gatari, Patrick Kareru and Johan Boman	Essential Trace Elements in the African Spider Plant (Cleome gynandra)	Poster	European Conference on X-ray Spectrometry (EXRS2022)	June 26-July 1	Saint John's Hospital (Oud Sint-Jan), Bruges
Belgium	IPPS	KEN:01/2	University of Antwep and European Microbeam Analysis Society (EMAS)	Margaret Gitau, Elisha Ogweno, Simion Bartilol, Michael Gatari and Johan Boman	Source Identification of PM2.5 using Trace Elements in Digested Filter Samples: Application of TXRF.	Oral	European Conference on X-ray Spectrometry (EXRS2022)	June 26-July 1	Saint John's Hospital (Oud Sint-Jan), Bruges
Belgium	IPPS	KEN:01/2	University of Antwep and European Microbeam Analysis Society (EMAS)	Dickson Ombewa, Susan Karuga, John M. Onyari, Michael Mangala, Michael Gatari	Trace Elements in Selected Fish Species from Kenya	Poster	European Conference on X-ray Spectrometry (EXRS2022)	June 26-July 1	Saint John's Hospital (Oud Sint-Jan), Bruges
Bolivia	IPICS	BOL:01	USFX/AUGM	Fabricio Cardozo	Actividad antimicrobiana de la miel de Tetragonisca angustula (Apidae: Meliponini) y su asociación con organismos comensales	Oral	XXIX Jornadas de Jóvenes investigadores 2022	Sept 7- 9	Sucre
Bolivia	IPICS	BOL:01	USFX/AUGM	Gina Zambrana	Caracterización melisopalinologica en mieles de 4 especies de abejas sin aguijón (Apidae: Meliponini) en meliponarios del municipio de Villa Vaca Guzmán – Chuquisaca	Oral	XXIX Jornadas de Jóvenes investigadores 2022	Sept 7- 9	Sucre

Bolivia	IPICS	BOL:01	USFX/AUGM	Luciana Escobar	Usos y manejos de las abejas sin aguijón (hymenoptera, apidae) por parte de mujeres productoras del chaco chuquisaqueño (cantón ticucha, Muyupampa)	Oral	XXIX Jornadas de Jóvenes investigadores 2022	Sept 7- 9	Sucre
Bolivia	IPICS	BOL:01	USFX/AUGM	Noelia Janko	Variación de la densidad de polen anemófilo en la ciudad de Sucre en relación a los factores meteorológicos y contaminantes del aire	Oral	XXIX Jornadas de Jóvenes investigadores 2022	Sept 7- 9	Sucre
Burkina Faso	IPICS	ANEC	University Norbert Zongo	Yssouf KARANGA, Yibor Fabrice Roland BAKO, Boukaré KABORE, Ousmane ILBOUDO, Issa TAPSOBA	Study of the electrochemical behaviour of flavonoids and their identification in extracts of Euphorbia hirta L. by electrochemical means	Oral	2 <sup>ènd</sup> International Symposium in Sciences and Technology (CIST) at University Norbert ZONGO	Nov 20- 26	Koudougou
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	DINDANE Zakaria, OUATTARA Lamoussa Paul, SAWADOGO Ignace, SOALA W. Romain, ZONGO Cheickna, KONATE Kiéssoun, ZIDA P. Elisabeth, NEBIE C. H. Roger	Activité antiaflatoxinogène de formulations à base d'huiles essentielles utilisées dans la conservation de maïs au Burkina Faso	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	ZONGO Sandrine, Kiessoun KONATE, Fulbert NIKIEMA, Bazoin Sylvain Raoul BAZIE, Mamoudou Hama DICKO	Détermination des aflatoxines B1, B2, G1 et G2 dans de nouvelle variété d'arachides produites au Burkina Faso par l'INERA	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Agossou D. P. NOUMAVO, Nicéphore M. GLODJINON, Brice OHIN, d'Avila Y. DOGNON, Stéphane K. HOUESSOU, Valère SALAKO, Epiphane HOSSOU, Lamine BABA-MOUSSA, Farid BABAMOUSSA	Diversité et qualité microbiologique de jus de fruits produits au Sud-Bénin.	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO

Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	KAFANDO Lassané, BATIONO Fabrice, Moussa GUIRA, Honoré KAM2, Patrice ZERBO, Madjélia SOME/DAO, Soumabéré COULIBALY, Evariste KONDE, SAMADOULOUGOU-KAFANDO Judith Marie Pingdwindé1, KANTE/TRAORE Hyacinte, SEMDE Zenabou, OUATTARA- SONGRE Toulsoundé Laurencia	Etude de la qualité sanitaire des feuilles de Moringa stenopela, de Moringa oleifera et de sa variété PKM1 en culture expérimentale au Burkina Faso	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	AÏKOU Nicolas, KANGNI Aballo Louis Marie, GNANGLE Rosen, AÏKOU Nadine M. L., AÏKOU Arielle N. E, BABA-MOUSSA Lamine Saïd	Étude du profil bactériologique de la boisson Tchakpalo (moût sucre) vendue dans les écoles de Cotonou en République du Benin	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	BOUGMA Sanogo, KABORÉ Boukaré, OUÉDRAOGO Henri Sidabéwendin, OBOULBIGA Edwige Bahanla, SONGRÉ- OUATTARA Toulsoumdé Laurencia, SAVADOGO Aly	Evaluation de la qualité microbiologique de quelques farines infantiles locales vendues à Ouagadougou	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Brehima KOLOGO, Hemayoro SAMA, Raoul BAZIE, Adama HILOU, Mamoudou H. DICKO	Evaluation de la qualite physicochimique de quelques huiles alimentaires de friture a ouagadougou	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	BATIONO Fabrice, OUEDRAOGO Béchir, SAMADOULOUGOU- KAFANDO Judith Marie Pingdwindé, SEMDE Zenabou1, OUATTARA-SONGRE	Evaluation de la qualité sanitaire des amandes grillées de cajou vendues dans trois régions du Burkina Faso	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO

Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	YEMBONNE Maïmouna, SAMADOULOUGOU/KAFANDO P. M. Judith, KABORE Donatien, PARE Adama, SOMDA K Marius	Évaluation des BPH/BPF et caractérisation microbiologique des brochettes de soja vendues dans la ville de Ouagadougou YEMBONNE Maïmouna1	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Crépin I. DIBALA, Hemayoro SAMA, Adjaratou SOURATIE, Edwige N. ROAMBA, Mamoudou H. DICKO	Potentialités nutritionnelles et antioxydantes de deux plantes du Burkina Faso: cas de Capparis corymbosa et Leptadenia hastata (pers) Decne	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Pare Adama, Ouattara/Songre Laurencia T, Kaboré Donatien, Koudougou Barkissa, Bationo Laeticia, YAMEOGO Prisca, BARRO Nicolas	Prévalence de Campylobacter et Salmonelle sur les Carcasses de Poulets Locaux Abattus dans les Marchés de la Ville de Ouagadougou	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Agossou P. NOUMAVO, Haziz SINA, Noel TOVIDE1, d'Avila Y. DOGNON1, Stéphane K. HOUESSOU1, Christian T. R. KONFO, Epiphane HOSSOU, Fatiou TOUKOUROU, Farid BABA-MOUSSA	Production de jus de fruits au Sud Bénin: process et insuffisances hygiéniques et techniques	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Boya Bawa, NOUKPO Sêmèton Harold, Sina Haziz, Dah Nouvlessounon Marius Durand, Baba-Moussa Farid2, Savadogo Aly, Baba-Moussa Lamine	Qualité sanitaire des huiles rouge produites et celles commercialisées au Sud Benin	Oral	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	Université Joseph KI-ZERBO

Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Aïnattou OUEDRAOGO, Soumaïla KONATE, Serge SAMANDOULOUGOU, Adama HILOU, Mamoudou Hama DICKO, André Jules ILBOUDO	Evaluation de la contamination des poissons par les pesticides: Cas de Anguilla anguilla (anguille), Clarias gariepinus (silure) et Oreochromis niloticus (tilapia) des retenues d'eau de Tanghin et de Loumbila au Burkina Faso		Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Sibiri Nebié, Fatoumata Hama- Ba, Adama Sawadogo, Véronique R. Kola, Charles Parkouda, Aly Savadogo	Impact des facteurs biotiques et abiotiques d'altération sur la qualité sanitaire des stocks de niébé au Burkina Faso		Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	
Burkina Faso	IPICS	RABiotech	Laboratoire de Biochimie et d'Immunologi e Appliquée (LaBIA), Université Joseph KI- ZERBO	Ouédraogo Nafissatou	Utilisation des bactériophages pour améliorer la qualité sanitaire des aliments.		Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Dec 15- 17	
Burkina Faso	IPMS	PDEAAPP	IPMS PDEAAP	Statnislas Ouaro	NIPDEs with variable Exponents	Oral (online)	Workshop on Nonlinear PDEs with variable Exponenrts	Nov 24- 25	Ouagadougou
Cameroon	IPICS	ANEC	Subdivision électrochimie de la Société Chimique de France	Delmas Vidal Tabe Ebunang, Kevin Yemélé Tajeu, Chancellin Nkepdep Pecheu, Lesly Sherman Zambou Jiokeng, Ignas Kenfack Tonlé, Emmanuel Ngameni	Analyse et quantification de la quercétine à l'aide d'une électrode de carbone vitreux modifiée par un film d'organo-laponite		Journées d'Electrochimie 2022	July 4-7	Mons, Belgique,
Cameroon	IPICS	ANEC	Subdivision électrochimie de la Société Chimique de France	Pecheu N. Chancellin, Tchieda K. Victor, Tajeu Y. Kevin, Sherman L. Z. Jiokeng, Kengne F. E. Lincoln, Andreas Lesch, Tonle K. Ignas, Emmanuel Ngameni	Détermination électrochimique de l'épinéphrine dans une préparation pharmaceutique à l'aide d'une électrode commerciale imprimée à jet d'encre de graphène, modifiée par la laponite		Journées d'Electrochimie 2022	July 4-7	Mons, Belgique,

Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	R. Nguimdo, A. Tiedeu	Automated analysis of the electrocardiogram	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa, Cameroon
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	H. Tampa, A. Tiedeu	Automated Segmentation of Optic Disc Area Using Mathematical Morphology and region growing	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa, Cameroon
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	A. Sarr	Detection oil pill in senegal with Sentinel 2 multispectral remote sensing and spectroscopy	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Japheth Omondi Aseko	Determination of alkali and alkinine earth metal levels in irrigated areas using atomic absorption spectrophotometer; key parameters in soil salinity monitoring and detection	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	M. Yepdia, A. Tiedeu	Developing tools for secure image transmission in telemedecine	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa, Cameroon
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Kenneth Amiga Kaduki	Finding information and resources for research online	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	F.K. Gueye	Gas Phase molecular spectroscopy: O2 Broadening of CH3Br	Oral	AFSIN International workshop on spectroscopic data acquisition, processing	July 25- Aug 2	University of Ebolowa, Ebolowa

							and analysis in research for publication		
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Milohum Mikesokpo Dzagli, Kosi Sesime	Green synthesis and characterization of ZnO nanoparticles using extract of Artemisia annua grown in Togo	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Charles Ndung'u Ndegwa	Machine Learning Assisted Diffuse Reflectance Spectroscopy and Molecular Modeling for Rapid Screening of Pesticide Residues - A Case Study of Chlorothalonil	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Salamata OUILLI	Raman spectroscopy with multimodes fiber bundle	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of EBOLOWA, EBOLOWA
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	DZAGLI Milohum Mikesokpo	Research article writing and Presentation	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	DZAGLI Milohum Mikesokpo	Research ethics	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Moussa SOUGOTI	Spectra curves fitting	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of EBOLOWA, EBOLOWA

Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	André ZOUNGRANA	Spectroscopy of Post-MS stars: Case of HD 30856	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of EBOLOWA, EBOLOWA
Cameroon	IPPS	AFSIN	African Spectral Imaging Network (AFSIN)	Kossivi Bienvenu Rodrigue Afoudji, Julien Egly, Milohum Mikesokpo Dzagli, Stéphane Bellemin-Laponnaz, Kokou Dodzi Dorkenoo	Two-beam multiphoton microscopy for the study of quadratic properties of liquid media case of chiral binaphtol derivatives	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	MAL:01	African Spectral Imaging Network (AFSIN)	Nana COULIBALY	ANALYSIS OF POLLUTANTS DISTRIBUTION IN THE WATER OF NIGER RIVER BASED ON REMOTE SENSING APPROACH: BAMAKO	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	MAL:01	African Spectral Imaging Network (AFSIN)	Issiaka TRAORE	NIR data pre-processing for multivariate analysis plsr	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cameroon	IPPS	MAL:01	African Spectral Imaging Network (AFSIN)	Bakamba dite Djéneba	Photovoltaic Solar Panels Anomaly Detection by Thermography	Oral	AFSIN International workshop on spectroscopic data acquisition, processing and analysis in research for publication	July 25- Aug 2	University of Ebolowa, Ebolowa
Cape Verde	IPPS	ETH:02	European Plate Observing System (EPOS)	Atalay Ayele	Updates on Africa seismological comission and ESARSWG activities	Oral	1st EPOS International Conference	July 10- 15	Sal
Congo Brazzaville	IPMS	BURK:01	AMU	Ali Mahamane Saminou	Riemannian Lie subalgebroid	Oral	PACOM	Aug 1-6	Brazzaville
Congo Kinshasa	IPPS	ETH:02	Goma Observatory	Atalay Ayele	Observation of various LF earthquakes at distances of hundreds of kilometres in Afar and the Main Ethiopian rifts: implication for source and/or path effects	Poster	1st international conference on the management of the Virunga volcanoes	May 19-21	Goma

Czech Republic	IPPS	RWA:01	Organising committee, Texas symposia series	Manasse Mbonye	Is cosmic dyanmics self-regulating?	Poster	31st Texas Symposium on Relativitics Astrophysics 2022	Sept 12-16	Prague
Denmark	IPICS	ZIM:02	SETAC Europe	J Change (Virtually), A Siwela, N Basopo	The Effect of Toxic Elements on Antioxidants Glutathione S Transferase and Diphosphotriphosphodiaphorase of Freshwater Snail Helisoma Duryi: A CASE Study on a Coal Mining Area Joanna Change	Poster	SETAC Europe 32nd Annual Meeting	May 15-19	Copenhagen
Denmark	IPMS	EAALG	Aarhus University	Caroline Namanya	Pure braid group presentations via longest elements	Oral	Aarhus homological algebra group seminar	Sept 28	Online
Denmark	IPICS	ZIM:02	SETAC Europe	N Basopo (Virtually), D Ndebele. N Moyo	Effects of Atrazine on the Breeding Activities and the Antioxidant Enzyme Activities of the Aquatic Snails Lymnaea natalensis	Poster	SETAC Europe 32nd Annual Meeting	May 15-19	Copenhagen
Egypt	IPPS	ETH:02	African Seismological Comission	Atalay Ayele	Recent Moderate Seismicity in the Afar Depression: indication for dike intrusion	Oral	African Seismological Comission Annual meeting	Oct 10- 13	Hurgada
Ethiopia	IPMS	PDEAAPP	IPMS PDEAAP	Tadesse Abdi	The weighted Cauchy type Riemann- Liouville Fractional Problem	Oral	AfMaths Seminars	March 8	Kigali
Finland	IPPS	AFR:04	Council for International Congresses of Entomology	Benoit KOUAKOU	Comparative Lidar Studies of Mosquito Habitats'	Oral	26th International Congress of Entomology	July 17- 22	Congress and Exhibition Center MESSUKESKUS Helsinki, Helsinki
Germany	IPPS	KEN:04/A FSIN	International Association of Geoanalysts (IAG)	Angeyo, K. H, Mukhono P. M., Dehayem-Massop A., Kaduki K. A.	Rapid Assessment of Trace Heavy Metals in Radiothermic Field Matrices via Calibration-Invariant LIBS	Oral	Geoanalysis 2022	Aug 6- 12	Technishe Universität Bergakademie Freiberg
Greece	IPICS	BAN:04	ENHANCE Project	M Shoeb	Antibiotic Resistance: A Great Global Threat to Humanity	Oral	2 <sup>nd</sup> International Humanitarian Symposium by ENHANCE	Sept 8- 20	University of West Attica, Athens
Greece	IPICS	BAN:04	ENHANCE Project	M Shoeb	Chemical and Biological Diversity of Medicinal Plants of Bangladesh	Oral	2 <sup>nd</sup> International Humanitarian Symposium by ENHANCE	Sept 8- 20	University of West Attica, Athens
Greece	IPICS	BAN:04	ENHANCE Project	M Shoeb	Impacts of Plastic Pollution in Human Health and the Environment	Oral	2 <sup>nd</sup> International Humanitarian Symposium by ENHANCE	Sept 8- 20	University of West Attica, Athens

Greece	IPICS	BAN:04	ENHANCE Project	M Shoeb	Management of Pesticides in Developing Countries	Oral	2 <sup>nd</sup> International Humanitarian Symposium by ENHANCE	Sept 8- 20	University of West Attica, Athens
Greece	IPICS	RABiotech	International commitee on Microbiology and Hygiene (ICMH)	Dabiré Y., Somda K.M, Somda N-S., Mogmenga I., Compaoré B., Ezeogu I.L., Traoré S.A., Ugwuanyi O.J., Dicko H.M	Assessment of the Probiotic and Technological Properties of Bacillus spp. isolated from Burkinabe Soumbala.	Poster	27th International ICFMH Conference	Aug 28- 31	Megaron Anthens International Conference Center (MAICC), Athens,
Greece	IPPS	KEN:01/2	Hellenic Association for Aerosol Research and The Aerosol Society	S.W. Karuga, M.J. Gatari, E.M. Kelder and J.C.M. Marijnissen	Design and Production of Thin Films by Electrospraying for Li-ion Batteries	Oral	International Aerosol Conference (IAC2022)	Sept 4- 9	Megaron Athens International Conference Centre (MAICC), Athens
Greece	IPPS	KEN:01/2	Hellenic Association for Aerosol Research and The Aerosol Society	L.K.Kiriinya, M. N. Njeru, M.J. Gatari	Particulate Matter (PM2.5 and PM10) Measurements Using Low Cost Optical Sensors in Nairobi, Kenya	Poster	International Aerosol Conference (IAC2022)	Sept 4- 9	Megaron Athens International Conference Centre (MAICC), Athens
India	IPICS	BAN:04	APCORE	M Shoeb	Natural Products to combat diabetes mellitus in the developing countries	Oral	2nd International Conference on Natural Products and Human Health-2022 (ICNPHH-2022)	Nov 4-6	University of Delhi, Delhi
India	IPICS	BAN:04	Indian Chemical Society	M I R Mamun	Opportunities of Chemistry Teaching and Research in Bangladesh	Oral	99th Foundation Day of the Indian Chemical Society	202205 09	Virtual
India	IPICS	BAN:04	Indian Chemical Society	M I R Mamun	Food Safety Management in Bangladesh: Challenges and Way Forward	Oral	International Seminar on 162 <sup>nd</sup> Birth Day Celebration of Acharya P C Ray	Aug 2-3	Kolkata
India	IPPS	KEN:01/2	Centre for Air Pollution Studies	M.N. Njeru, M.J. Gatari, D. K. Kariuki	The spatiotemporal variations of PM2.5 in Nairobi, Kenya using a hybrid mixed effect model	Poster	India Clean Air Summit (ICAS2022)	Aug 23- 26	Bengaluru
Indonesia	IPICS	BAN:04	ENHANCE Project	M I R Mamun	Community Based Activity to Educate Farmers about Food Safety in Bangladesh	Oral	ENHANCE Asia Symposium 2022	Dec 20- 23	Udayana University, Bali
Indonesia	IPICS	BAN:04	ENHANCE Project	M Shoeb	Enhancement of Curriculum and Research Activities at University of Dhaka to achieve UN Sustainable Development Goals (SDGs)	Oral	ENHANCE Asia Symposium 2022	Dec 20- 23	Udayana University, Bali

Indonesia	IPICS	BAN:04	ENHANCE Project	M Shoeb	Rohingya Refugee Crisis a global humanitarian challenges	Oral	Seminar for employing ENHANCE training kit	July 27- Aug 1	Brawijaya University
Italy	IPMS	AAU	Consorzio COMETA	Manalebish Debalike Asfaw	Numerical Application to the study of stability of an Ecological model	Oral	WASCOM 2021	June 6- 10	Catania
Italy	IPPS	UGA:02	ICTP	P. Opio, E. Jurua, G. Andima	Chracterisation of the effective height of the ionosphere over the East African Low latitude region	Oral	African Capacity building workshop on space weather effects on GNSS	Oct 3- 14	ICTP, Trieste
Ivory Coast	IPICS	BUF:01	ICPP3	Jonas MANO, Jean Claude W. OUEDRAOGO, Yvonne BONZI- COULIBALY	Growth effects of Cleome gynandra L. on polyphenol contents and antioxidant activities of extracts	Oral	3ème conference internationale sur les plantes pesticides / biopesticides	July 25- 29	Yamoussokro
Ivory Coast	IPICS	BUF:01	ICPP3	Igor W. K. OUEDRAOGO, Bassalia OUATTARA, Jean C. W. OUEDRAOGO, Pascal GERBAUX, et Yvonne BONZI/COULIBALY	Influence of drilling water on the molecular content bioactive extracts of the leaves of Eucalyptus camaldulensis DEHN and Cymbopogon citratus (DC) Stapf.	Oral	3ème conference internationale sur les plantes pesticides / biopesticides	July 25- 29	Yamoussokro
Ivory Coast	IPICS	BUF:01	ICPP3	Bassalia Ouattara, Igor W. K. Ouédraogo, Irène Semay, Jean Claude W. Ouédraogo, Pascal Gerbaux, and Yvonne Bonzi/Coulibaly	Analyse des composés phénoliques des extraits aqueux et éthanoliques des feuilles de Eucalyptus camaldulensis Dehn au Burkina Faso.	Poster	3ème conference internationale sur les plantes pesticides / biopesticides	July 25- 29	Yamoussokro
Ivory Coast	IPICS	BUF:01	ICPP3	Jean Claude W. OUEDRAOGO, Kibsa Jean Edouard SEDEGO, Abalo Itolou KASSANKOGNO, Elise SANON, Yvonne L. BONZI- COULIBALY	Development of a biofungicide formulation for market gardening from aromatic plants; 3 <sup>rd</sup> International Conference on promoting pesticidal plants for sustainable agriculture and heath environment	Poster	3ème conference internationale sur les plantes pesticides / biopesticides	July 25- 29	Yamoussokro
Japan	IPICS	ANFEC	International Society of Environmental and Rural Development	S. Kongmany, V. Chounlamany, P. Xaypanya, O. Pghoupasong, B. Praxaysombath, S. Phengthavanh	Some Physico-Chemical Characteristics of Surface Water in Mining Areas in the Lao PDR	Oral	13th International Conference on Environmental and Rural Development (ICERD)	March 4-5	Virtual (Zoom)
Kenya	IPPS	KEN:01/2	Kenya Chemical Society	Karr CJ, Maleche-Obimbo E, Were FH, Riederer AM, Gatari M, Mutai BC, Seto E, Collett BR, McHenry MS, Wamithi S, Kipter VK, Larson TV, Marshall JD, Simpson CD, Richardson BA, McClelland RS, Stampfer O, Zuidema C, Benki-Nugent S	Air Pollution Exposures and Brain Development: ABC Study in Kenya	Poster	10th Kenya Chemical Society International Conference	June 23 -24	Maseno University, Kisumu

Kenya	IPPS	KEN:02	Faculty of Science	Mary T. Simiyu, Francis W. Nyongesa, Bernard O. Aduda, Zephaniah Birech, and and Illic Nikolina	An Assessment of the Use of Static Magnetic Field for Sodium Fluoride Defluoridation and Removal of Escherichia Coli and Rotavirus Pathogens from Water	Oral	5th Annual Conference of the Faculty of Science and Technology	Oct 26- 28	Chiromo Campus, Nairobi
Kenya	IPPS	KEN:02	Faculty of Science	Ignatius Nakhoywa Barasa, Sebastian Waita and Bernard Aduda	Automobile Battery Monitoring System Using Arduino UNO R3 Microcontroller Board	Oral	5th Annual Conference of the Faculty of Science and Technology	Oct 26- 28	Chiromo Campus, Nairobi
Kenya	IPPS	KEN:02	Faculty of Science	Lynet Allan, Julius Mwabora, George O Amolo, and Silas Mureramanzi.	Computational methods in Materials Science studies	Oral	5th Annual Conference of the Faculty of Science and Technology	Oct 26- 28	Chiromo Campus, Nairobi
Kenya	IPPS	KEN:02	Faculty of Science	Motari Mavyline, Ndegwa Robinson, Rana Liaqat, Okengʻo Geoffrey	Power Modeling and Parametric Analysis of a Dual Axis Solar PV Panel with Automatic Tracking and Self Cleaning Mechanism Using Soft Computing and Internet of Things.	Oral	5th Annual Conference of the Faculty of Science and Technology	Oct 26- 28	Chiromo Campus, Nairobi
Kenya	IPPS	KEN:02	Physics energy group	Sebastian Waita	Solar PV status Kenyan Scenario and the success story of Solar PV capacity building training Department of Physics, UoN	Oral	Conference	Feb 24	Online
Kenya	IPPS	MSSEESA/ KEN:02	IEEE Power Engineering Society	S. F. Palm, S. Waita, T. Nyangonda and A. Chebak	Performance Study of a Grid Connected Solar PV System in Zagtouli, Burkina Faso	Oral	IEEE Power Engineering Society Conference and Exposition in Africa, PowerAfrica	Aug 22- 26	Kigali
Kenya	IPPS	MSSEESA/ KEN:02	IEEE Power Engineering Society	L. Kamanja, V. Komarala, V. Dutta, S. Waita and K. Wachira	Techno-Economic Analysis of a Rooftop Grid-connected Photovoltaic Solar System: A case study of Jomo Kenyatta University of Agriculture and Technology (SAJOREC)	Oral	IEEE Power Engineering Society Conference and Exposition in Africa, PowerAfrica	Aug 22- 26	Kigali
Kenya	IPPS	MSSEESA/ KEN:02	MSEESSA, University of Eldoret Node	Sami F.Palm, Sebastian Waita, Thomas Nyangonda and Ahmed Chebak	Analysis of the Energy output of the Zagtouli PV Plant in terms of Interruption due to grid frequency fluctuation	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Sebastian Waita	Design and Installation of the First 3Kw Grid tie Photovoltaic Solar system at the Department of Physics, Chiromo Campus, University of Nairobi	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Namisi Mauwa, Robinson Musembi, Winfred Mulwa and Bernard Aduda	DFT Study of A2ge2x6 (A=Cs,K; X=Cl,Br,I)  Double Perovskites for Photovoltaic  Applications	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru

Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Irungu M. Kahura, Sharon Kiproticha and Winfred M. Mulwa	DFT Study of Lanthanide-Doped Zinc Oxide for Photovoltaic Application	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Brian O. Owuor, Francis W. Nyongesa, Bernard O. Aduda, Alex A. Ogacho, Gerrit Boschloo and Fuxiang Ji	Dopant-Free Polymeric Hole Transport Materials for Improved Performance of All-Inorganic Perovskite Inspired Solar Cells	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Gloria Katunge, M., Sebastian M. Waita, Francis Nyongesa and Bernard Aduda	Performance of a Bifacial Solar Module Under Different Backgrounds	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:02	MSSEESA, University of Eldoret Node	Mary Simiyu, Francis Nyongesa, Bernard Aduda, Zephania Birech and Nikolina Ilin	Strength-Porosity Relationship in Diatomaceous-Based Membranes and the Role of the Aspect Ratio in Filtration Efficiency	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	David Machiri, Wycliffe Isoe, Patrick Ning'i, Maxwell Mageto and Victor Odari	Defects Studies in Thin Films of MaPbBr3 Perovskite: A DFT Based Study	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Alfred Orega, Christopher Maghanga, Mghendi Mwamburi	Development and Configuration of an Automated Test Equipment for Hall Effect Measurements	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Maxwell Mageto and Victor Odari	Effect of Film Thickness on Copper Antimony Sulphide For Photovoltaic applications:Experimental and Numerical Simulation Approach	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Gloria Murila, Maxwell Mageto, Mwamburi Mghendi	Effect of Tungsten/Vanadium Co-Doping on The Structural, Optical and Electrical Properties of TiO2 Thin Films for Photocatalytic Activities Applications	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Moses Rutinu, Victor Odari, and Francis Gaitho	Influence of Optical Properties on the Performance of a Flat Plate Solar Collector: Model and Analysis	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Victor Isahi, Christopher Maghanga, Mghendi Mwamburi, Munyati Onesmus, Sylvester Hatwaambo, Simon Mwale	Influence of Post Annealing Temperature on Tin (IV) Oxide Films Prepared by Sol-gel Spin Coating Technique for Improvement of Optical Properties	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	David Machiri, Wycliffe Isoe, Patrick Ning'i, Maxwell Magetoand Victor Odari	Light Trapping Properties of Pyramid Textured Surface of Silicon-Perovskite Tandem Solar Cell	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru

Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Miller Shatsala, Celine Awino, Mageto Maxwell and Stellah Wanyonyi	Light Trapping Properties of Pyramid Textured Surface of Silicon-Perovskite Tandem Solar Cell	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Kipkorir Kirui Pius, Victor Odari and Maxwell Mageto	Mechanical Properties of Al-Mg-Si Alloys (6xxx series)- A DFT Based Study	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Kennedy W. Khaemba, Stephen Chege, George S.Manyali, James Sifuna, Henry Barasa,and Isaac Motochi	Non-Vanishing TopologicaL Quantum State in TaP	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Emmanuel Akoto, Victor Isahi, Christopher Maghanga and Victor Odari-	Numerical Investigation and Performance Optimization of Lead-Free Cs1-XRbxSnI3 — Silicon Tandem Solar Cell	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Milimo Amos Nalianya, Celline Awino, Henry Barasa, Victor Odari and Maxwell Mageto	Numerical study of lead free CsSn0.5Ge0.5I3 perovskite solar cell by SCAPS-1D	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Wanyonyi M. Stellah, Celine Awino, Bernard Omogo	Numerical Study of P3HT: PCBM Organic Solar Cells Using GPVDM Software	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Wycliffe Isoe, Maxwell Mageto, Victor Odari and Mwamburi Mghendi	Photocatalytic Investigation of BaTiO3 Compound	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	MSSEESA, University of Eldoret Node	Abok Silas, Celine Omondi, Victor Odari and Dr Francis Gaitho	Simulation and Performance Analysis of a Wind Turbine Plant Using Matlab/Simulink Tool	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Kenya	IPPS	MSSEESA/ KEN:03	Kabarak University	Wycliffe Isoe, Maxwell Mageto, Christopher Maghanga, Patrick Ning'i, Victor Odari, James Sifuna	DFT-Based Study on CH3NH3SnI3-xBrx Perovskite Solar Cell	Oral	Kabarak, International Conference	July 12	Kabarak University
Kenya	IPPS	MSSEESA/ KEN:03	Kabarak University	Siele Kipkorir, P.W.O. Nyawere, C.M. Maghanga	Electronic Structure Study of ZnO for Photocatalysis Applications using Density Functional Theory	Oral	Kabarak, International Conference	July 12	Kabarak University
Kenya	IPPS	MSSEESA/ KEN:03	Kabarak University	Pius Kipkorir, Victor Odari, Maxwell Mageto	Magnetoelectric materials for present and future technologies; a DFT based study	Oral	Kabarak, International Conference	July 12	Kabarak University
Kenya	IPPS	MSSEESA/ KEN:03	Kabarak University	Emmanuel Akoto, Christopher Maghanga, Victor Odari, Victor Isahi	Modelling of Photovoltaic Characteristics of Lead-free Cs1-XRbXSnI3	Oral	Kabarak, International Conference	July 12	Kabarak University

Kenya	IPPS	MSSEESA/ KEN:03	Kabarak University	Nancy Obare, Maxwell Mageto, Victor Odari, Amos Nalianya, Wycliff Isoe	Numerical Study of Chalcostibite Based photovoltaic cell by SCAPS-1D	Oral	Kabarak, International Conference	July 12	Kabarak University
Korea	IPICS	ANFEC	Changwon National University	S. Kongmany, O. Pghoupasong, K. Chanthikhoun	Environmental-Friendly Cassava-Based Bioplastics For Plant Nursey Bag Application	Poster	11th International Conference on Green Composites (ICGC11)	Nov 2-4	Changwon Convention Center, Changwon
Mauritius	IPICS	ZIM:03	Unversity of Mauritius	P. Dzomba and M.F. Zaranyika	Persistence and degradation kinetic models from environmental fate studies of pollutants.	Oral	The Virtual Conference on Chemistry and its Applications: Resilience and Sustainable Research through Basic Sciences	Aug 8- 12	Reduit MU
Morocco	IPICS	ANEC	American Chemical Society and Federation of African Societies of Chemistry	M. Fall, M. Bodian, I. Yade, D. Keinde, K. Hannawi, P.W. Agbodjan, A. Darquennes.	Valorization of attapulgite Senegalese clay as cement substitute in concrete and green corrosion inhibitor in concretereinforced structures",	Oral	Atlantic Basin Conference on Chemistry	Dec 13- 15	Movenpic Mansour Eddahbi & Palais des Congrès, Marrakech
Morocco	IPMS	BURK:01	Caddi Ayyad University	Hamidou TOURE	Existence and Controllability Results in the α-norm and Kneser Property for Nonlinear Differential Equations in Banach Space	Oral	Mathematics Centre	Sept 21-23	Marrakesh
Morocco	IPPS	KEN:04/A FSIN	Organized jointly by the African School of Physics (ASP), Mohammed V University, Rabat, and Cadi Ayyad University, Marrakesh	Angeyo, K. H, Nyairo J. O., Wabwile J. M. A.	Using Microphotonic Nuclear Forensics to Mediate Nuclear Security and Nuclear Safety	Oral	2nd African Conference on Fundamental and Applied Physics	March 7-11	Cadi Ayyad University, Marrakesh
Mozambique	IPMS	EAALG	SAMSA	David Ssevviiri	Applications of reduced and coreduced modules	Oral	SAMSA Conference	Nov 22- 25	Eduardo Mondlane University, Maputo
Nepal	IPPS	BAN:04	St. Xavier's College, Kathmandu	K Siddique-e Rabbani	Transforming Lives through Technology	Oral, Invited	International Conference St. Xavier's College (ICSXC)	Dec 5	Online

Nigeria	IPPS	AFSIN	African Scientific Integration Network (AScIN)	DZAGLI Milohum Mikesokpo, Amouzouvi Yawovi Mignanou	Assessment of heavy metals contamination of soils and leaves and water around cement and phosphate industries in Togo	Oral	Regional Colloquium on Physics and Applications (CRéPAs), third edition	July 25- 29	Center for Energy Research & Development (CERD), Obafemi Awolowo University, Ile-Ife,
Online/Kenya	IPPS	KEN:01/2	Institute of Nuclear Material Management (INMM)	Margaret Ruguru Gitau, Michael James Gatari, John Birir, Susan Karuga	Knowledge Management in Nuclear Material Safety and Security: Engaging the Youth for Sustainable Development	Oral	INMM 63rd Annual Meeting	Aug 28	Online
Online/Tanzan ia	IPPS	TAN:01	IUPAP (International Union of Pure and Applied Physics)	Margaret Samiji	Increasing gender diversity among students in physics	Oral	International Conference on Physics Education	Dec 2	Online
Online/Tanzan ia	IPPS	TAN:01	IOP	Nuru Mlyuka	Physics and Climate change in Africa	Oral	Physics tackling the impact of climate change in Africa	Nov 3	Online
Portugal	IPICS	ANRAP	Lisbon	Md Mahedi Hassan Tusher	Antioxidant and Antidiabetic activity of methanolic extract of Baccaurea ramiflora on n-STZ induced T2DM rats.	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center
Portugal	IPICS	ANRAP	Lisbon	Prof Begum Rokeya	Elucidation of anti-hypercholesterolemic effects of Dillenia indica in hypercholesterolemic Type 2 diabetic rats	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center
Portugal	IPICS	ANRAP	Lisbon	Prof Shahinul Haque Khan	Phytochemicals screening and in-vitro Antioxidant Capacity of Some Traditional Bangladeshi Medicinal Plants	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center
Portugal	IPICS	ANRAP	Lisbon	Dr Md Ranzu Ahmed	Routine Diabetes Mellitus Screening in Blood Donors Attending a Tertiary Hospital	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center
Portugal	IPICS	ANRAP	Lisbon	Dr Md Ranzu Ahmed	Scientific evaluation of antidiabetic activity of Moringa oleifera in streptozotocin induced experimental diabetes	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center
Portugal	IPICS	ANRAP	Lisbon	Dr Md Ranzu Ahmed	Efficacy and Safety of Initial Metformin- Vildagliptin Dual Combination Therapy in Bangladeshi Type 2 Diabetes Patients	Poster	IDF World Diabetes Congress (online)	Dec 5-8	Lisbon Exhibition and Convention Center

Portugal	IPMS	EAUMP UR	Polytechnic Institute of Tomar	Emelyne Umunoza Gasana	Decentralized predictive symbiotic corporate compliance mining	Oral	The International Conference on Trends and Perspectives in Linear Statistical Inference	July 4-8	Polytechnic Institute of Tomar
Rwanda	IPICS	RWA:01	European Cooperation in Science and Technology	Elisee Gashugi	Waste management	Oral	Training School-Circular Economy in Europe and Africa	April 25-29	Linz, Austria
Rwanda	IPMS	PDEAAPP	IPMS PDEAAP	Banzi Wellars	Nonlinear PDEs. Generalities	Oral (online)	Workshop on Nonlinear PDEs with variable Exponenrts	Nov 23	Kigali
Senegal	IPICS	ANEC	African Materials Research Society	E. H. Dièye, A. Fall, M. Fall, C.A. Ferreira, M.R.S. Silveira, A. F. Baldissera	Synthesis of polypyrrole and polyaniline doped with ionic liquids. Application of polymers to the detection and removal of heavy metals in aqueous solutions.	Poster	11th International Conference of the African Materials Research Society	Dec 12- 15	Université Cheikh Anta Diop, Dakar
Senegal	IPPS	KEN:02	AMRS	Brian O. Owuor, Francis W. Nyongesa, Bernard O. Aduda, Alex O. Ogacho, Gerrit Boschloo and Fuxiang Ji.	Dopant-Free Polymeric Hole Transport Materials for Improved Performance of AllInorganicPerovskite Inspired Solar Cells	Poster	11th Conference	Dec 10- 15	Dakar
Senegal	IPPS	KEN:02	AMRS	Robinson Musembi, Mwende Mbilo, Julius M. Mwabora, Francis W. Nyongesa	Ab Initio Study of Structural, Electronic, Elastic, Mechanical, and Optical Properties of K4XP2 (X = Zn, Cd) Compounds for Optoelectronic Applications	Oral	11th Conference	Dec 10- 15	Dakar
Senegal	IPPS	KEN:02	AMRS	Lilian A Owino, Sebastian Waita*, Robinson J Musembi and Francis W Nyongesa	Enhanced Optoelectronic Properties of TiO2:Ge Thin Films Annealed in a Nitrogen Ambient	Oral	11th Conference	Dec 10- 15	Dakar
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Machingauta A.R.*, Tagwireyi D and Stanley Mukanganyama	Antibacterial activities and mode of action of extracts from Zimbabwean medicinal plants against Acinetobacter baumannii	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Ruvarashe Dakwa, Winnie Mozirandi and Stanley Mukanganyama	Antibacterial activities of Azanza garckeana and implications for use in COVID-19 secondary infections	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa

South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Mugayi L.C., Tagwirei D., and Mukanganyama S.	Antifungal and antimycobacterial activity of seed and leaf extracts of Trichilia emetica	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Makokoro M and Mukanganyama S	Development of a staining method to quantitate Candida albicans and biofilms using an Eve Cell counter	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Nyasha Zihumo, Trishia Jera, Ruvimbo Mapfumo, Auxillia Machingauta, Gillian Gumindoga,Sharon Chikafa, Joey Chifamba and Stanley Mukanganyama	Development of antimicrobial remedies from Aloe zebrina	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Makonese P.M, Sithole S, and Mukanganyama S	Evaluation of silver nanoparticles synthesized from Parinari curatellifolia on HL60 cells	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Makurira R.and Mukanganyama S	Green synthesis and characterization of silver nanoparticles from ethylacetate extract of Cissus cornifolia	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Society for Medicinal Plants and Economic Development (SOMPED)	Mukanganyama S	Turning folklore science into robust evidence-based decision making science: Insights into traditional plant-based herbal medicines	Oral	6th SOMPED International Conference (virtual), Cape Town	Aug 23- 25	Online, Cape Town, South Africa
South Africa	IPICS	ZIM:01	Institute of Business Executives South Africa	Mukanganyama S	KEYNOTE ADDRESS   Pandemic Disruptive Changes in Higher and Tertiary Education: Lessons learnt and future prospects for Science-based curricula. How has the	Oral	Curriculum Innovation Summit, Institute of Business Executives South Africa	Feb 23	Bay Hotel, Cape Town.

					pandemic affected the quality of research?				
South Africa	IPICS	ZIM:02	WaterNet	DA Tapfuma (Virtually), Y Naik	Nonlethal method to determine the effects of Mercury on Clarias gariepinus (African sharp tooth catfish) in aquatic ecosystems surrounding active Artisanal Small-scale Gold Mining (ASGM) activity	Oral	23 <sup>rd</sup> Edition of the WaterNet Symposium	Oct 19- 21	Sun City resort, North West Province
South Africa	IPPS	KEN:04/A FSIN	iThemba Laboratory for Accelerator Based Sciences (iThemba LABS)	Angeyo, K. H.	Prospective Appraisal of a Formative Nuclear and Radiation Physics at Nairobi	Oral	28th International Nuclear Physics Conference	Sept 11-16	Cape Town
South Africa	IPPS	NEP:01	ICLP	Nasib Khadka, Diwakar Bista, Chandima Gomes, Shriram Sharma, Brijesh Adhikary	Distribution Network Impact Assessment with Geometrically Identified Strike Points: An Approach	Oral	International Conference on Lightning Protection	Oct 2-7	Cape Town
South Africa	IPPS	NEP:01	ICLP	Shriram Sharma, Ramji Jaisi Bhusal, Ronald R. Holle	Lightning - A Potential Cause of House Fires during the Pre-monsoon Season: A Case Study in Nepal	Oral	International Conference on Lightning Protection	Oct 2-7	Cape Town
South Africa	IPPS	NEP:01	ICLP	Shriram Sharma, Hari Bahadur KC, Madhu Gyawali, Lok Lamsal, Sujan Neupane, Pradip Karki	The possible impact of atmospheric aerosol and other factors on lightning over the rugged terrain of Nepal	Oral	International Conference on Lightning Protection	Oct 2-7	Cape Town
South Africa	IPPS	NEP:01	ICLP	Shriram Sharma, Chandima Gomes, S. Gopa Kumar, Foster Chileshe Lubasi	Ubiquitous and Perplexing Proliferation of Non-standard Lightning Protection System in Developing Countries	Oral	International Conference on Lightning Protection	Oct 2-7	Cape Town
South Africa	IPPS	NEP:01	ICLP	Shriyog Sharma, Shriram Sharma, Chandima Gomes	Archaeological sites in Asia: Concerns of lightning risks	Poster	International Conference on Lightning Protection	Oct 2-7	Cape Town
Sweden	IPICS	BAN:04	ISP	M Shoeb	50 years Bangladesh-Sweden Relationship and Contribution in the Development of Basic Sciences	Oral	ISP IYBSSD2022 webinar	Oct 11	Virtual, Dhaka
Tanzania	IPMS	EAUMP UNZA	Institute of Finance and Management	Taonaziso Cowa	Actuarial Science and Technology Advancement	Oral	Seminars on Actuarial Science and Technology Advancement	May 19	Dar es Salaam
Thailand	IPICS	BAN:04	Asia Pacific Consortium of Researchers	M Shoeb	Design and Futures Thinking in Research and Education, Hybridity in the New Reality: Sustainable Research, Inclusive Pedagogical Spaces, and Practices	Oral	APCORE 2022 Virtual International Conference	Dec 12- 14	Virtual

			and Educators (APCORE)						
Thailand	IPPS	MYA:01	Suranaree University of Technology	Hla Loon Naing, Thaw Tar Aye Lwin	Lecture series on High Energy Physics	Oral	Siam School of High Energy Physics 2022	Nov 20- 26	Krabi
Togo	IPPS	AFR:04	West African Physical Society (SOAPHYS)	Anicet KOUAKOU	Effect of Herbextra on maize through multispectral and fluorescence imaging	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	AFR:04	West African Physical Society (SOAPHYS)	Gueye Fatou Ka, Tchana Fridolin Kwabia	O2 and air braodening coefficients of CH3Br rovibrational lines en the v2 band	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	Joel Martial Balkoulga, Antoine Béré, Imad Belabbas, Jun Chen and Pierre Ruterana	Atomistic simulation of Hexagonal Perovskite HoMnO3 Based on DFT- Quantum Espresso Calculations	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	SAWADOGO Daouda, Ousmane COULIBALY, Xavier CHESNEAU, Belkacem ZEGHMATI	Conception et réalisation d'un outil de simulation et d'analyse de flux énergétique: Application sur un complexe scolaire situé en zone UEMOA	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	OUEDRAOGO Lareba Adélaïde, Dieudonné Joseph BATHIEBO; Florent P. KIENO; Bruno KORGO; Sié KAM; Philippe BLANCHARD	Confort thermique dans un bâtiment construit en béton moussé au Burkina Faso	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	BANOUGA Adjigkiga; YAGUIBOU Wêpari Charles; KOHIO Niéssan; KAGONE Abdoul Karim; PAFADNAM Ibrahim; KOALAGA Zacharie; ZOUGMORE François	Détermination des propriétés thermodynamiques d'un plasma dans un disjoncteur à air basse tension contaminé par la vapeur de contacts électriques en alliage AgSnO2	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	Université de Lomé, Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	PAFADNAM Ibrahim, Nièssan Kohio, Wêpari Charles Yaguibou, Abdoul Karim Kagoné, Zacharie Koalaga, Pascal André	Étude des propriétés thermodynamiques des plasmas thermiques de mélanges de fluoroalkylamines-air: applications au traitement des dechets	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical	Zoma Vincent, Kam Sié; Kaboré Boureima; Compaoré Jean- Marie; Ouédraogo Germain	Étude numérique du comportement thermique d'un parpaing creux avec ou sans MCP en zone sahélienne	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé

			Society (SOAPHYS)						
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	KONKOBO Iliyassé, Nébié Jacques, Pr DAHO Tizane	Étude numérique d'un cuiseur hybride solaire/biomasse en contexte climatique sahélien	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	TRAORE Boureima, S. OUEDRAOGO; D. OUBDA; A. ZONGO. F. ZOUGMORE	Influence de l'interface absorbeur/couche tampon sur les performances des cellules solaires à base de CIGS	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	KONANE Daouda, OUEDRAOGO Wend Yam Serge Boris, ZONGO Abdoulaye, KORSAGA Eric, KOALAGA Zacharie, ZOUGMORE François	Méthode des impédances pour la détection et la localisation de défauts dans un réseau Basse Tension (BT): Cas de la Société Nationale d'Electricité du Burkina (SONABEL) au Burkina Faso	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	Ousmane GUIRO; Eloi Salmwendé 11 TIENDREBEOGO; Guy Crhistian TUBREOUMYA; Aboubacar COMPAORE; Zakaria GUENE; Alfa Oumar DISSA; Abdoulaye KABORE; Antoine BERE	Mix énergétique dans le réseau électrique du Burkina: Optimisation de l'injection sur le réseau par l'utilisation des smart-grids	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	Kuiliga KABORE; Sié KAM; Joseph Dieudonné BATHIEBO	Modélisation dynamique du fonctionnement d'un système de production d'air pressurise à haute température	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	SANDWIDI SAYOUBA, DABILGOU Téré, SANOGO Oumar, KOULIDIATI Jean, CHESNEAU Xavier, ZEGHMATI Belkacem, BERE Antoine	Modélisation et simulation en régime dynamique des performances hygrothermiques d'un matériau biosourcé à base de terre	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	Karim TOUSSAKOE, Emmanuel OUEDRAOGO, Kossi B IMBGA, Gilbert Nana, Florent Peléga KIENO, Sié Kam	Prédiction du confort thermique à partir de la température opérative et des indices PMV/PPD dans une voûte nubienne	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	OUEDRAOGO Souleymane, NANA G. Gilbert, TOUSSAKOE Karim, KY Thierry S. Maurice, SANEBAYE Adrien, BATHIEBO Dieudonné Joseph, KAM Sié	Présentation d'un capteur solaire en convection naturelle annexé à une chambre de séchage	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé

Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	SOU Tolomy Oxance, Pr Oumar SANOGO; Pr Tizane DAHO	Valorisation thermique par voie de combustion des graines et amandes d'espèces oléagineuses utilisées au Burkina Faso: cas du Jatropha Curcas	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	TARPILGA Moussa dit Corneille	Development of a device that efficiently uses agricultural residues for the production of biochar and energy	Oral	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	R. Saré, I. Sourabié, M. Zoungrana, I. Zerbo, B. Korgho et S. Kam	Effet spectral d'une Lumière monochromatique sur les performances d'une cellule solaire en silicium	Poster	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	TOUGMA Kiswendsida Alain, DOUMOUNIA Ali; BAMBARA T Luc; DERRA Moumouni; CISSE Ousmane Ibrahim; ZONGO Inoussa; ZOUGMORE François	Estimation de la concentration des métaux lourds dans les produits maraichers: cas des villes de Ouagadougou et de Loumbila	Poster	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	KABORE Etienne, Dieudonné Joseph BATHIEBO; Sié KAM; Jean-Louis ZERBO	Etude des transferts hygrothermiques à travers les parois de l'enveloppe d'un bâtiment dans un contexte de changement climatique	Poster	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	Université de Lomé, Lomé
Togo	IPPS	BUF:01	West African Physical Society (SOAPHYS)	SAVADOGO Haidara, Eric KORSAGA, Dominique BONKOUNGOU, Toussaint Tilado GUINGANE, Zacharie KOALAGA, François ZOUGMORE	Stockage hybride par batteries et par supercondensateurs dans un système PV autonome	Poster	4ème Congrès de la Société Ouest Africaine de Physique (SOAPHYS)	Dec 5- 10	University of Lomé
Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	P. Nakamya, N.Kwarikunda and D.Okello	Assessment of Performance of A Low-Cost Solar Box	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	A. Agumenitwe, N. Kwarikunda, K. Nyeinga	Defect Characterization of Pv Modules Using Electroluminescence Imaging and I-V Curve Measurement Techniques	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	G. Niwebyona	Development and testing of a parabolic solar cooker Integrated with heat storage block	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	Jimmy Chaciga, Karidewa Nyeinga, Denis Okello, Ole J. Nydal	Experimental Investigation on Small Scale Single Tank System for Cooking Solutions	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru

Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	Alex Okello	Performance of Titanium-Graphene Nanostructures as Anode in Dye Sensitized Solar Cells	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Uganda	IPPS	MSSEESA/ UGA:01	MSSEESA, University of Eldoret Node	Katongole DN, KaridewaNyeinga, Denis Okello, Mukiibi Daniel, Mubiru James, Yeeko Kisira	Spatial and temporal solar potential variation analysis using measured data in Uganda	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
UK	IPICS	ZAM:01	Royal Society of Chemistry	James Nyirenda, George Kalaba, Onesmus Munyati	Synthesis and Characterisation of an Activated Carbon-Ag-SiO <sub>2</sub> Nanocomposite for Removal of Heavy metals and Organic waste from water	Poster	Commonwealth Chemistry	Oct 20	Virtual
UK	IPICS	BAN:04	The Royal Society	M Shoeb, K T Tasnim, S Akter, Md. M Islam, MIR Mamun	Occurrence of Microplastics in Freshwater and Marine Fish Samples of Bangladesh	Poster	Commonwealth Science Conference 2022	Feb 22- 26	Virtual, UK
United Kingdom	IPMS	EAALG	Prof Balazs Szendroi	David Ssevviiri	Reduced and coreduced modules	Oral	Abraham Gannibal Project Workshop	Feb 27- March	Chichelley Hall
United Kingdom	IPMS	EAALG	Prof Balazs Szendroi	Caroline Namanya	Pure Braid Groups, Presentations and Applications	Oral	Abraham Gannibal Project Workshop	March 1	Chichelley Hall, UK
United Kingdom	IPMS	EAALG	Prof Balazs Szendroi	Brian Makonzi	The Artin component of cyclic surface singularities	Oral	Abraham Gannibal Project Workshop	March 1	Chichelley Hall, UK
United Kingdom	IPMS	EAALG	University of Glasgow	Caroline Namanya	Pure braid group presentations via longest elements	Oral	Algebra and Number theory seminar	Oct 12	University of Glasgow
United Kingdom	IPMS	EAALG	Glasgow University	Brian Makonzi	The Artin component and simultaneous resolution via reconstruction algebras of Type A	Oral	Algebra and Number Theory Seminar	Oct 5	University of Glasgow
United Kingdom	IPMS	EAALG	Heriot-Watt University	Brian Makonzi	The Artin component of cyclic surface singularities	Oral	The Glasgow Edinburgh Algebra Research Seminar	May 30	Heriot-Watt University, Edinburgh
USA	IPICS	ANRAP	United Scientific Group	Prof Begum Rokeya	Medicinal Plants in the Treatment of Diabetes and its Complications	Oral	4th International Conference on Traditional Medicine and Phytochemistry and medicinal plants (Online Meeting)	Feb 7-8	Joined virtually from Dhaka
USA	IPICS	ZAM:02	Fulbright Program	James Nyirenda	Who wants to be Global Scholar in Chemistry/Chemical Sciences?	Oral	Global Careers Pathways Symposium	202204 30	Chicago
USA	IPPS	ETH:02	American Geophysical Union (AGU)		The 2015 earthquake swarm in the Fentale Volcanic Complex (FVC): a geohazard risk for Ethiopia's commercial route to the coast	Oral	AGU annual meeting	Dec 12- 16	Chicago

USA	IPPS	ETH:02	American Geophysical Union (AGU)	Sisay Alemayehu et al	Seismic structure of the crust uppermost mantle beneath the Ethiopia volcanic province: evidence from autocorrelation and 3D-ambient noise Rayleigh wave tomography	Poster	AGU annual meeting	Dec 12- 16	Chicago
Zambia	IPICS	ZAM:01	UNCTAD	Onesmus Munyati	Technology and Innovation needs for the energy sector in Zambia	Oral	UNCTAD Technology Assessment Project on Energy and Agriculture Using Science, Technology and Innovation as a Catalyst	April 8- 12	Twangale Park
Zambia	IPPS	MSSEESA/ ZAM:01	MSSEESA, University of Eldoret Node	K. Kabunda, P.C. Jain, R Rajan and R.O Manyala	Factors Affecting Performance of Solar Street Lights in Lusaka (Zambia)	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru
Zambia	IPPS	MSSEESA/ ZAM:01	MSSEESA, University of Eldoret Node	Mulaye Dorcas, Hatwaambo S, Samiji M, and Chanda G	Optical Conductivity of Bi2Se3	Oral	2022 MSSEESA Conference	Nov 16- 18	Nakuru

## 2.6.2 Regional conference contributions

Table 15. Number of poster and oral contributions to regional scientific meetings in the listed countries, by scientists in ISP supported groups and networks

Country	Doolog	Chen	nistry	Mathe	matics	Phy	sics	To	tal	Grand
Country	Region	Poster	Oral	Poster	Oral	Poster	Oral	Poster	Oral	total
Benin	Africa	0	13	0	0	0	0	0	13	13
Botswana	Africa	0	2	0	0	0	0	0	2	2
Burkina Faso	Africa	5	22	0	0	0	0	5	22	27
Ethiopia	Africa	1	0	0	0	0	0	1	0	1
Ivory Coast	Africa	0	1	0	0	0	0	0	1	1
Kenya	Africa	0	0	0	0	0	3	0	3	3
Rwanda	Africa	0	5	0	0	0	0	0	5	5
Tanzania	Africa	0	47	0	0	0	6	0	53	53
Uganda	Africa	0	0	0	0	0	1	0	1	1
Zambia	Africa	0	0	0	0	0	0	0	0	0
Zimbabwe	Africa	0	8	0	0	0	0	0	8	8
Total	Africa	6	93	0	0	0	7	6	100	106
Bangladesh	Asia	0	1	0	0	0	0	0	1	1
Laos	Asia	0	2	0	0	0	5	0	7	7
Myanmar	Asia	0	0	0	0	0	6	0	6	6
Total	Asia	0	3	0	0	0	11	0	14	14
All coun	tries	6	96	0	0	0	18	6	114	120

## Chemistry (IPICS), mathematics (IPMS) and physics (IPPS) contributions to regional conferences. Listed country-wise.

ISP program	Group / Network	Country	Organiser	Author(s)	Title of the presentation	Oral or Poster	Name of event	Dates
IPICS	BAN:04	Bangladesh	ANRAP	M Shoeb	Chemical and Biological Activity Studies of the Medicinal Plants of Oxalidacae Family	Oral	ANRAP National Seminar	Oct 29
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Nicéphore M. GLODJINON, Pacôme A. NOUMAVO, Brice A.M. OHIN, Noél S. Tovidé, Lamine BABAMOUSSA, Aly SAVADOGO, Farid BABA-MOUSSA	Composition chimique et détermination in vitro de l'activité antifongique des huiles essentielles de six plantes aromatiques et médicinales contre les moisissures contaminant le piment (Capsicum spp.) en plein champ au Bénin	Oral	Journée scientifique de l'Université D'abomey-Calavi	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Gautier ROKO, Harold NOUKPO, Haziz SINA, Akim SOCOHOU, Durand DAH NOUVLESSOUNON, Farid BABA-MOUSSA, Aly SAVADOG, Lamine BABAMOUSSA	Connaissances Endogènes de Production de l'Huile Rouge au Sud Benin	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	NIKIEMA Rocksane Octavia Kiswendsida, BATIONO Fabrice, Honoré KAM, Moussa GUIRA, Patrice ZERBO, Madjélia SOME/DAO, Soumabéré COULIBALY, Evariste KONDE, KANTE/TRAORE Hyacinte, SAMADOULOUGOU-KAFANDO Judith Marie Pingdwindé, SEMDE Zenabou, OUATTARA- SONGRE	Etude de la composition en micronutriments des feuilles de Moringa stenopetala, de Moringa oleifera et de sa variété PKM1 en culture expérimentale au Burkina Faso	Oral	"	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Michel Bakar DIOP	Le service à la communauté, levier des universités publiques sénégalaises pour renforcer les synergies des actions dans les systèmes agroalimentaires en vue de la qualité	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Corentin Akpode, Sylvestre Assogba, Ricardos Aguegue, Abdel Koda, Marcel Adoko, Olarewadjou Amogou, Nadège Agbodjato, Luckman Alao, Adolphe Adjanohoun, Lamine Baba-Moussa	Performance du biostimulant à base de trois souches de Champignons Mycorhiziens à Arbuscules indigènes sur la production du maïs (Zea mays L.) en milieu réel au centre du Bénin	Oral	п	Nov 26- 28

IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Iliassou MOGMENGA, Marius Kounbèsiounè SOMDA, Cheik Amadou Tidiane OUATTARA, Ibrahim KEITA, Yérobessor DABIRE, Camelia DIGUTA, Lewis I. EZEOGU, Jerry O. UGWUANYI, Aboubakar S. OUATTARA, Florentina MATEI	Probiotic properties of yeast strains isolated from Rabilé, a Burkina Faso traditional beer ferment	Oral	Journée scientifique de l'Université D'abomey-Calavi	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Mansouratou BETIRA, Omédine KOUKOUI, Sèdami MÉDÉGAN, Alban HOUNGBÈMÈ, Jean-Baptiste AMANGBEGNON, Santorin SETON, Fernand GBAGUIDI, Lamine BABA MOUSSA	Propriétés nutritionnelles et phytochimique de Launaea taraxacifolia et de Tridax procumbens, deux alicaments sous utilisés au Benin	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Karimou Rachidatou, Sina Haziz, Boya Bawa, Socohou Akim, Farid Baba-Moussa, Aly Savadogo, Lamine Baba-Moussa	Technologies de transformations des céréales en bouillies fermentées dans la partie septentrionale du Bénin	Oral	"	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Sina Haziz, Karimou Rachidatou, Boya Bawa, N'tcha Christine, Farid Baba-Moussa, Aly Savadogo, Lamine Baba-Moussa	Typologie des bouillies fermentées et caractéristiques sociodémographiques des répondants dans la partie septentrionale du Bénin.	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	NIMAGA Daouda, FOKOUO Kouamé Elie, KOUASSI Kouakou Nestor, ADOU Marc, N'DRI Yao Denis, TANO Kablan, AMANI N'Guessan Georges	nfluence du temps de stockage sur les caractéristiques physico-chimiques, microbiologiques et sensorielles des tranches de mangue séchées (Mangifera indica L. Var Kent) produites en Côte d'Ivoire	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	N'GUESSAN Jean-Marc, NIMAGA Daouda, ADOU Marc, KOUADIO James Halbin, AMANI N'Guessan Georges	Activite fongicide et toxicite aiguë de trois bio-pesticides elabores candidats a la conservation des noix de cola a l'etat frais	Oral	п	Nov 26- 28
IPICS	RABiotech	Benin	Unversité Abomey-Calavi	Adam ABDOULAYE, Agossou Damien Pacôme NOUMAVO, DAH NOUVLESSOUNON Durand, BADE Farid Toyigbénan, Brice Messan OHIN, Léopold Simplice GNANCADJA, Honoré Sourou BANKOLE5, Lamine BABA-MOUSSA2, Farid BABA MOUSSA1	Purification de la protéase des feuilles de moringa (Moringa oleifera) par partitionnement triphasé pour la coagulation du lait	Oral	п	Nov 26- 28
IPMS	BURK:01	Benin	IMSP	Hassirou Mouhamadou	Riemann-Poisson and Kahler-Poisson complex manifolds and structures	Oral	School on Lie algebra	Sept 12- 24
IPICS	ZAM:02	Botswana	Next Einsten Forum	Aluster Muyeba and Peter Cheuka	Antischistosomal Exploration of Zambian Plants Traditionally used to Treat Symptoms of Schistosomiasis	Oral	Africa Science Week	June 14- 16

IPICS	ZAM:02	Botswana	Next Einsten Forum	Hellen Phiri, James Nyirenda, Agape Lumai and Peter Cheuka	Phytochemical Screening and Quantitative Analysis of Flavonoids and Phenols in Methanolic and Ethanolic Extracts of Cucurbita moschata and Bidens pilosa	Oral	Africa Science Week	June 14- 16
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	Hamidou Têeda Ganamé, Yssouf Karanga, Issa Tapsoba, Mario Dicato, Marc F. Diederich, Claudia Cerella and Richard Wamtinga Sawadogo	Evaluation of the anticancer properties of Acacia macrostachya (Mimosaceae)	Oral	22èmes Journées Scientifiques Annuelles de la SOACHIM	Aug 8-12
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	Amidou Tall, Ali Iname, Yibor Fabrice R. Bako, Francisco Antônio Cunha, Marília O. Fonseca Goulart, Josué Carinhanha Caldas Santos, Issa Tapsoba	Facile synthesis of N, P-doped carbon dots with green emission and their use as efficient fluorescent nanoprobes for determination of Cr(VI) in water and soil samples	Oral	п	Aug 8-12
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	KARANGA Yssouf, NIKIEMA Wende-konté Hazael Conania, GANAME Têeda Hamidou, ILBOUDO Ousmane, TAPSOBA Issa, Gerbaux Pascal and Bonzi-Coulibaly Yvonne L.	Antidiabetic activity and identification of flavonoids in extracts of Euphorbia hirta L.	Oral	н	Aug 8-12
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	Wende-konté Hazael Conania NIKIEMA, Yssouf KARANGA, T. Hamidou GANAME, Ousmane ILBOUDO, Issa TAPSOBA	Antioxidant activities and inhibitory effects of Cassia occidentalis and Leptadenia hastata fractions on α- glucosidase	Oral	п	Aug 8-12
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	Ali Iname, Yibor Fabrice R. Bako, Amidou Tall, Issa Tapsoba	Carbon dots: synthesis, characterization and application test for the determination of 3-methyl-4-nitrophenol in aqueous media	Oral	п	Aug 8-12
IPICS	ANEC	Burkina Faso	West African Society of Chemistry (SOACHIM)	Aftare Nantchiliba, Inoussa Zongo, Issa Tapsoba	Treatment of a cyanide synthetic effluent by electrocoagulation with flat electrodes made of iron and aluminum	Oral	п	Aug 8-12
IPICS	BUF:01	Burkina Faso	West African Society of Chemistry (SOACHIM)	Bassalia Ouattara, Igor W. K. Ouédraogo, Irène Semay, Jean Claude W. Ouédraogo, Pascal Gerbaux and Yvonne Bonzi/Coulibaly	Optimisation de l'extraction des flavonoïdes des feuilles de Eucalyptus camaldulensis Dehn par méthodologie de surface de réponse (MSR), analyse LC-MSMS	Oral	п	Aug 2-12
IPICS	BUF:01	Burkina Faso	West African Society of Chemistry (SOACHIM)	Assétou Sankara, Jean Claude W. Ouédraogo, Schemaeza Bonzi, Irénée Somda et Yvonne Bonzi – Coulibaly	Activités antifongiques des résidus d'hydrodistillation de Cymbopogon citratus, Eucalyptus camaldulensis et Mentha piperita	Poster	п	Aug 2-12

IPICS	BUF:01	Burkina Faso	Univesité Norbert Zongo	Bassalia Ouattara, Igor W. K. Ouédraogo, Irène Semay, Jean Claude W. Ouédraogo Pascal Gerbaux et Yvonne Bonzi/Coulibaly	Composés phénoliques des feuilles de Cymbopogon citratus (DC) Stapf.: optimisation de l'extraction, dosage spectrophotométrique et pouvoir réducteur du fer (FRAP) des extraits hydroéthanoliques.	Oral	Colloque international de l'Université de Koudougou	Aug 2-12
IPICS	BUF:02	Burkina Faso	Doctoral days of "institut international de I'eau et de I'assainissement"	Ollé Rodrigue KAM, Corneille BAKOUAN, Inoussa ZONGO, Boubié GUEL	Élimination du thallium (I) des solutions aqueuses à l'aide de nanoparticules d'alumine gamma	Oral	10th edition of the 2iE Doctoriales	Dec 13- 15
IPICS	BUF:02	Burkina Faso	Doctoral days of "institut international de l'eau et de l'assainissement"	Ollé Rodrigue KAM, Issaka GARIKOE, Corneille BAKOUAN, Inoussa ZONGO, Boubié GUEL	BPA removal from aqueous solutions using alumina nanoparticles modified by CTAB	Poster	п	Dec 13- 15
IPICS	BUF:02	Burkina Faso	Doctoral days of "institut international de l'eau et de l'assainissement"	Régie Dimanche OUEDRAOGO, Corneille BAKOUAN, Brahima SORGHO, SAKIRA Abdoul Karim, Boubié GUEL, Touridomon Issa SOMÉ, Anne-Lise HANTSON, Eric ZIEMONS, Dominique MERTENS, Philippe HUBERT, Jean- Michel KAUFFMANN	Elimination de l'As (III) sur une colonne à lit fixe de latérite naturelle intercalée avec du charbon actif	Poster	п	Dec 13- 15
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Ousmane Tapsoba, Tambi Ramdé, Boubié Guel, Lucien Bonou	Amélioration de la résistance à la corrosion d'un alliage d'aluminium recyclé artisanalement par un traitement au 3-aminopropyltriéthoxysilane (APTES) par processus sol-gel	Oral	22nd Annual Scientific Days of the West African Chemistry Society	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Mamadou OUEDRAOGO, Tambi RAMDE, Boubié GUEL, Lucien BONOU	Analyse des paramètres de vieillissement naturel d'un revêtement organique à base de pigment jaune	Oral	п	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Jean Baptiste ZOUNGRANA, Corneille BAKOUAN, Brahima SORGHO, Dimanche Régie OUEDRAOGO, Boubié GUEL	Caractérisation physico-chimique des phosphates naturels de Kotchari pour une meilleure utilisation en agriculture	Oral	п	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Brice Alain KABORE, Souleymane KOLOGO, Corneille BAKOUAN, Ollé Rodrigue KAM, Boubié GUEL	Contribution au développement d'une méthode électrochimique pour la détermination du mercure inorganique dans l'eau	Oral	п	Aug 8-12

IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	AMADOU SOUKAIRATOU Moustapha, BAKOUAN Corneille, GUEL Boubié	Développement d'un capteur électrochimique pour la détermination de bisphénol A (BPA) dans les eaux environnementales	Oral	п	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Corneille BAKOUAN, Dimanche Régie OUEDRAOGO, Ollé Rodrigue KAM, Brahima SORGHO, Boubié GUEL et Anne-Lise HANTSON	Développement d'un système de filtration à base de matériaux latéritiques pour le traitement des eaux de forage à teneur élevée en arsenic dans les zones rurales au Burkina Faso	Oral	11	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	GORO Hadi Hamadoum, Corneille BAKOUAN, Brahima SORGHO, Dimanche Régie OUEDRAOGO, Boubié GUEL	Elaboration et caractérisation de nanoparticules d'argile pour une application à l'élimination du Cr(VI) en solution synthétique	Oral	11	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Régie Dimanche OUEDRAOGO, Corneille BAKOUAN, Brahima SORGHO, SAKIRA Abdoul Karim, Boubié GUEL, Touridomon Issa SOMÉ, Anne-Lise HANTSON, Eric ZIEMONS, Dominique MERTENS, Philippe HUBERT, Jean- Michel KAUFFMANN	Elimination de l'As(III) sur une colonne à lit fixe en latérite naturelle intercalée avec du charbon actif	Oral	п	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Issaka GARIKOE, Brahima SORGHO, Corneille BAKOUAN, Boubié GUEL and Ingmar PERSSON	Investigation structurale sur l'arrangement des molécules de bisphénol-A dans les espaces interfeuillets des organo-argiles	Oral	11	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Ollé Rodrigue KAM, Corneille BAKOUAN, Inoussa ZONGO, Boubié GUEL	Synthèse et caractérisation des nanoparticules d'alumine gamma à partir de la bauxite locale du Burkina Faso	Oral	11	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Régie Dimanche OUEDRAOGO1, Corneille BAKOUAN1,2, Brahima SORGHO1, SAKIRA Abdoul Karim, Boubié GUEL, Touridomon Issa SOMÉ, Anne-Lise HANTSON, Eric ZIEMONS, Dominique MERTENS, Philippe HUBERT, Jean- Michel KAUFFMANN	Valorisation des coques de noyaux de balanites aegyptiaca un charbon actif pour l'adsorption de As(III) sur une colonne à lit fixe de laterite	Oral	11	Aug 8-12
IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Ollé Rodrigue KAM, Issaka GARIKOE, Corneille BAKOUAN and Boubié GUEL	Low-cost synthesis of alumina nanoparticles and their usage for bisphenol-A removal from aqueous solutions	Poster	11	Aug 8-12

IPICS	BUF:02	Burkina Faso	West African Society of Chemistry (SOACHIM)	Régie Dimanche OUEDRAOGO, Corneille BAKOUAN, Brahima SORGHO, SAKIRA Abdoul Karim, Boubié GUEL, Touridomon Issa SOMÉ, Anne-Lise HANTSON, Eric ZIEMONS, Dominique MERTENS, Philippe HUBERT, Jean- Michel KAUFFMANN	Valorisation des coques de noyaux de balanites aegyptiaca un charbon actif pour l'adsorption de As(III) sur une colonne à lit fixe de laterite	Poster	п	Aug 8-12
IPICS	BUF:02	Burkina Faso	ECOWAS/ECREEE	Boubié GUEL	Green hydrogen: concept and production technologies	Oral	Ecowas Sustainable Energy Forum (ESEF)	Oct 31- Nov 1
IPICS	RABiotech	Burkina Faso	Institut de Recherche en Sciences Appliquées et Technologies (IRSAT)	ROUAMBA Vincent, OUEDRAOGO Lassané, COMPAORE Moussa, SAMA Hemayoro, KABORE Kabakdé, KIENDREBEOGO Martin	Valorisation de l'huile fixe des amandes de Ximenia americana L. (Olacaceae) comme huile alimentaire au Burkina Faso	Oral	Sixièmes Journées Scientifiques de l'Institut de Recherche en Sciences Appliquées et Technologies (IRSAT)	Oct 27-28
IPICS	BUF:01	Ivory Coast	INPH-HB	Hien Nabomo	Interactions flavonoïdes-cations métalliques en solution: mise en évidence par des analyses d'absorption UV-visible et de potentiel antioxydant de mélanges	Oral	Doctoriales of INPH	July 25-29
IPPS	KEN:03/ UGA:01/ MSSEESA	Kenya	MSSEESA	Francis Ochola, Nicholas Kwarikunda, KaridewaNyeinga, Denis Okello, and Jimmy Chaciga	Design of a Photovoltaic Heating System for Charging Thermal Energy Storage Tank	Oral	2028 MSSEESA Conference	Nov 16- 18
IPPS	MSSEESA/ KEN:02	Kenya	MSSEESA, University of Eldoret Node	Lynet Allan, Musembi Robinson, Julius M. Mwabora, and Winfred M. Mulwa	Investigating Thermoelectric Properties of the Half-Heusler Alloys ZrCoY (Y=Sb,Bi)	Oral	п	Nov 16- 18
IPPS	MSSEESA/ KEN:03	Kenya	MSSEESA, University of Eldoret Node	Christelle Arielle Mbouteu Megaptche, Sebastian Waita and Bernard Odhiambo Aduda	Variation of Loss of Power Supply Probability in the Optimal Design of a Photovoltaic Panels / Wind Turbine / Lithium Battery Storage System: Case of Cameroon	Oral	п	Nov 16- 18
IPICS	ANFEC	Laos	ANFEC	M Shoeb	Principles and analyzers of mass spectrometry	Oral	ANFEC Training on "Liquid Chromatography Mass Spectrometry for Antibiotics and Veterinary Drug Analysis in Food and Environment"	Nov 15- 25
IPICS	BAN:04	Laos	ANFEC	M Shoeb	Principles and analyzers of mass spectrometry	Oral	п	Nov 15- 25

IPPS	LAO:01	Laos	National University of Laos	S Singsoupho	Application of Advanced Technology for Subsurface Exploration	Oral	National Research Forum IX: "Sciences, Technology and Innovation for Sustainable Development"	Nov 4
IPPS	LAO:01	Laos	National University of Laos	C Keohavong, S Singsoupho, S Sompaserth, S Lueangaphai	Application of Electrical Resistivity Tomography (ERT) and Induced Polarization for Ore Deposit Exploration	Oral	п	Nov 4
IPPS	LAO:01	Laos	National University of Laos	K Bounvilaysan, S Singsoupho, S Sompaserth, S Leuangtakoun, B Tonpeng, C Phomahaxay	Estimation of volcanic rock boundary using aeromagnetic survey: A case study from Nambak District, Luangphabang Province	Oral	п	Nov 4
IPPS	LAO:01	Laos	National University of Laos	C Phomahaxay, S Leuangtakoun, S Singsoupho, S Sompaserth, K Bounvilaysan	Interpretation of geological Map by radiometric techniques A case study from Nambak District Luangprabang Province	Oral	п	Nov 4
IPPS	LAO:01	Laos	National University of Laos	S Phomsilalai, S Singsoupho, T Suansaundao	Iron Ore Deposit Exploration using Unmanned Aerial Vehicle (UAV) Magnetic Survey	Oral	п	Nov 4
IPPS	MYA:01	Myanmar	Myanmar Academy of Arts and Science, University of Yangon	May Zin Oo	Assessment of Heavy Metals Concentration in Water Samples from Mandalay City	Oral	22nd Research Conference: Myanmar Academy of Arts and Science	Dec 18- 19
IPPS	MYA:01	Myanmar	Myanmar Academy of Arts and Science, University of Yangon	Soe Ko Ko Aung, Thae Thinzar Lwin, Lin Zarchi Khaing, Mono Zaw, San Yu Swe	Can Endow High Purity Perovskite Phase in Ambient Air? Toward Low-Cost, Scalable, and Vacuum Free Perovskite Solar Cells	Oral	п	Dec 18- 19
IPPS	MYA:01	Myanmar	Myanmar Academy of Arts and Science, University of Yangon	Nay Min Hla, Aye Khaing Soe, Moe Sandar Than, Mono Zaw, San Yu Swe, Soe Ko Ko Aung	Evaluation of the Energy Gaps and Urbach Energies for ZnO Thin Films by the Effect of Annealing Temperatures	Oral	П	Dec 18- 19

IPPS	MYA:01	Myanmar	Myanmar Academy of Arts and Science, University of Yangon	Mono Zaw, Kyaw Kyaw, Nyein Wint Lwin, Than Zaw Oo	Investigation on Electrochemical Properties of Electrochromic Tungsten Trioxide Thin Films	Oral	п	Dec 18- 19
IPPS	MYA:01	Myanmar	Myanmar Academy of Arts and Science, University of Yangon	Yin Min Thant, Aye Thandar Htay	Investigation on Energy Level of Bottomonium	Oral	п	Dec 18- 19
IPPS	MYA:01	Myanmar	Mandalar Univeristy	Nay Min Hla, Aye Khaing Soe, Moe Sandar Than, Mono Zaw, Soe Ko Ko Aung, Aye Thandar Htay, San Yu Swe	Optical Properties of ZnO Quantum Dots on Polyethylene Glycol Composite for Efficient Electron Transport Layer	Oral	Research Seminar on 10th Years Anniversary of Mandalay University	Dec 2
IPICS	RWA:01	Rwanda	ANCAP	G. Manizabayo, D. Umereweneza, A. Onyewuchi, J. P. Nkurunziza1 T. Muhizi	Evaluation of Antioxidant and Anti- corrosion potential of Syzygium guineense, Bridelia retusa and Erucastrum arabicum plant extracts	Oral	The 15th ANCAP Symposium	Nov 22- 23
IPICS	RWA:01	Rwanda	ANCAP	Theoneste Muhizi	Assessment on the use of pesticides in Rwanda and risk human intoxication	Oral	п	Nov 22- 23
IPICS	RWA:01	Rwanda	ANCAP	Theoneste Muhizi	Assessment on the use of pesticides in Rwanda and risk human intoxication	Oral	п	Nov 22- 23
IPICS	RWA:01	Rwanda	ANCAP	Gervais Manizabayo	Synthesis and Evaluation of Natural Azo compounds as corrosion inhibitors	Oral	п	Nov 22- 23
IPICS	RWA:01	Rwanda	ANCAP	Gervais Manizabayo	Synthesis and Evaluation of Natural Azo compounds as corrosion inhibitors	Oral	11	Nov 22- 23
IPICS	ETH:01	Sweden	Chalmers University of Technology	Tadele Tamenu, Wendimagegn Mammo and Ergang Wang	Drinkable solvent-processable polymers for biodegradable or edible electronics	Poster	Nordic Polymer Days	June 1-3
IPICS	ANCAP	Tanzania	ANCAP	Amos Misi, P. Mushonga, M. F Zaranyika, Madzvamuse, P. Dzomba	A Review on Extraction Methods for the Removal of Sulfamethoxazole and Trimethoprim from Aquatic Environment Using Cleaner Techniques	Oral	The 15th ANCAP Symposium	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	MC Change, A. Madzvamuse, M.F. Zaranyika, N.M. Mukaratirwa	Adsorption Studies of Polar Organic Solvents by Typha Capensis Derived Ligno-Cellulosic Adsorbent Biopolymers	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Aviti John Mmochi	ANCAP Performance in 2021	Oral	п	Nov 22- 23

IPICS	ANCAP	Tanzania	ANCAP	Sai Ngassa, Elianaso Elimbinzi, Faustin N. Ngassapa, Jerry Mang'ena, Clarence Mgina	Ngassapa, Jerry Mang'ena, Clarence Mgina    Diasticizers and linked metabolites in Lake Victoria Aquatic Ecosystem		II	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	E. Nkurunziza, P. Habimana, V. Nyandwi, M. Nyandwi, A. Rutikanga, V. Habimana, T. Muhizi	Assessment on the use of pesticides in Rwanda and risk of intoxication	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Beatrice T Nyakia, Naswibu A Kasimua, Emanuel X Rickya, Makungu M Madirishaa, Lilian D Kaaleb, Noah P Makulac, Kessy F Kilulyaa, and Esther HJ Lugwishaa	Biochar Produced from Sawdust and Sugarcane bagasse for Soil Remediation and Climate Change Mitigation	Oral	.11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Rufus Sha'Ato	Chemicals Management: Best Practices for Chemical Security	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	E. N. Iornumbe, S. G. Yiase, J. Audu and B. O. Ozide	Comparative Analysis of Antifungal Property of Some Organotin (IV) Derivatives of Ethanedioic Acid and Butanedioic Acid With Active Centres	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Vane B. Ondierea, John O. Onyatta, Amir O. Yusuf, Vincent O. Madadi	Degradation of Selected Pre-painted Roofing Sheets Exposed under Marine Environment in Various sites in Kenya	Oral	"	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Marwa Mohammed Eisa Eltohami	Detection of Lead and Cadmium in Human Urine as Bio-indicators of Environmental Pollution in Two Localities (Umelgura and Eastern Gezira) in Gezira State, Sudan	Oral	п	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Yousif Osman Hussein Assad, Nabil Hamid Hassan Bashir and Samia Abou Obida Hassan	Development of Multiple and Cross- Resistance in Cotton Whitefly (Bemisia tabaci Gennadius) Population in Gezira, Sudan	Oral	П	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Walter Ojok, William Wanasolo, John Wasswa, James Bolender, Emmanuel Ntambi	Fluoride Contamination in Ndali-Kasenda Crater Lakes in Albertine Graben, Uganda: Assessment using multivariate statistics and human health risk	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Frank J. Kalago, Petro E. Mabeyo, Makungu M. Madirisha, Regina P. Mtei	Formulation and Performance of Metal- Organic Framework (MOF) from Bio- waste and Kaolin Clay Minerals for Onboard Storage of Natural Gas	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Habtamu Bekele and Negussie Megersa	Green analytical method based on salt assisted graphene oxide dispersive solid phase extraction of symmetrical triazine herbicides in environmental water	Oral	"	Nov 22- 23

					samples for liquid chromatographic determination			
IPICS	ANCAP	Tanzania	ANCAP	Vincent O. Madadi and Shem O. Wandiga	Insights into Opportunities and Challenges in the Africa Region on Addressing Science and Policy Interface	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Tertula T. Gabriel, Makungu M. Madirisha, Kessy F. Kilulya, Esther H. J. Lugwisha	Levels and Spatial Variation of Polycyclic Aromatic Hydrocarbons (PAHs) in Soils, and Combustion Residues from Kiwira Coal Mining in Tanzania	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Aida Nanyonjo, Florence Nantaba, Patrick Sssebugere, John Wasswa	Levels, profile and exposure of polybrominated diphenyl ethers (PBDEs) in Leptoptilos crumenifer and Gallus gallus domesticus from a waste disposal site in Kampala.	Oral	п	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Kinyua A, Mbugua J.K, Mbui D. N1, Kithure J.L, Wandiga S. O1 and Waswa A.G	Microbial Fuel Cell Bio-Remediation of Lambda Cyhalothrin, Malathion and Chlorpyrifos on Loam Soil Inoculated With Bio-Slurry	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Teshome Tolcha, Tura Gemechu, Said Al- Hamimi, Negussie Megersa, Charlotta Turner	Multivariate optimization of a combined static and dynamic supercritical fluid extraction method for trace analysis of pesticides pollutants in organic honey	Oral	"	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Josephine J. Gobry, Faustin Ngassapa, Hilda S. Bachwenkizi3, Oforo Kimambo4, Kessy F Kilulya	Occurrence of Harmful Algal Blooms in Freshwater Bodies and their Molecular Identification; A Case of Mindu and Nyumba ya Mungu Dams in Tanzania	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Theresia J. Lyasenga, Prosper L. Mfilinge, Daniel A. Shilla, John A. M. Mahugija	Organic matter sources and sewage pollution in human-impacted river estuaries of Wami and Pangani: A multidimensional approach of fatty acids and stable isotope of nitrogen	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Pamhidzai Dzomba, and Mark F. Zaranyika	Persistence and degradation kinetic models from environmental fate studies of pollutants	Oral	"	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Theresia J. Riwa, Silvia J. Mushi, Petro E. Mabeyo, Makungu M. Madirisha, Edgar C. Mapunda	Preparation of Activated Charcoal from Bio-waste as Adsorbents for Onboard Storage of Natural Gas	Oral	11	Nov 22- 23

IPICS	ANCAP	Tanzania	ANCAP	Rufus Sha'Ato	Principles of CHEMICAL Security	Oral	п	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Eliezer Brown Mwakalapa, Anuschka Polder	Eliezer Brown Mwakalapa, Anuschka Polder  Public and environmental health risk associated with consumption of fish contaminated with organo-halogenated compounds and heavy metals		п	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Reviewing two decades of research on Harieth Hellar-Kihampa micropollutants dynamics in the Tanzanian coastal zone: 2002 to 2022		Oral	п	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Florence Nantaba, John Wasswa, and Henrik Kylin  Spatial trends and ecotoxic risk assessment of selected pharmaceuticals in sediments from Lake Victoria, Uganda		Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	E. N. Iornumbe, S. G. Yiase and R. Sha'Ato	Studies on the Synthetic and Biological Activity of Some Organotin (IV) Derivatives of Hexanedioic Acid	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Iornumbe, E. N., Yiase, S. G., Sha'Ato, R., Tor- Anyiin, T. A.	Synthesis, Characterization and Antifungal Activity of Some Organotin (IV) Derivatives of Octanedioic Acid	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	Rehema Abdallah Mkalenda, Kessy F. Kilulya, Regina P. Mtei	The Occurrence and Distribution of Aflatoxins in Chicken	Oral	11	Nov 22- 23
IPICS	ANCAP	Tanzania	ANCAP	John A.M. Mahugija	Where to publish our African scientific articles and why?	Oral	11	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	Tertula T. Gabriel, Makungu M. Madirisha, Kessy F. Kilulya, Esther H. J. Lugwisha	Levels and Spatial Variation of Polycyclic Aromatic Hydrocarbons (PAHs) in Soils, and Combustion Residues from Kiwira Coal Mining in Tanzania	Oral	п	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	Tertula T. Gabriel, Makungu M. Madirisha, Kessy F. Kilulya, Esther H. J. Lugwisha	Levels and Spatial Variation of Polycyclic Aromatic Hydrocarbons (PAHs) in Soils, and Combustion Residues from Kiwira Coal Mining in Tanzania	Oral	п	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	Theresia J. Lyasenga, Prosper L. Mfilinge, Daniel A. Shilla, John A. M. Mahugija	Organic matter sources and sewage pollution in human-impacted river estuaries of Wami and Pangani: A multidimensional approach of fatty acids and stable isotope of nitrogen	Oral	"	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	Theresia J. Lyasenga, Prosper L. Mfilinge, Daniel A. Shilla, John A. M. Mahugija	Organic matter sources and sewage pollution in human-impacted river estuaries of Wami and Pangani: A multidimensional approach of fatty acids and stable isotope of nitrogen	Oral	П	Nov 22- 23

IPICS	TAN:02	Tanzania	ANCAP	Harieth Hellar-Kihampa	Tanzanian coastal zone: 2002 to 2022		"	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	Harieth Hellar-Kihampa	Reviewing two decades of research on micropollutants dynamics in the Tanzanian coastal zone: 2002 to 2022	Oral	"	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	John A.M. Mahugija	Where to publish our African scientific articles and why?	Oral	"	Nov 22- 23
IPICS	TAN:02	Tanzania	ANCAP	John A.M. Mahugija	Where to publish our African scientific articles and why?	Oral	П	Nov 22- 23
IPICS	UGA:01	Tanzania	ANCAP	Walter Ojok, William Wanasolo, John Wasswa, James Bolender, Emmanuel Ntambi	Fluoride Contamination in Ndali-Kasenda Crater Lakes in Albertine Graben, Uganda: Assessment using multivariate statistics and human health risk	Oral	и	Nov 22- 23
IPICS	UGA:01	Tanzania	ANCAP	Aida NANYONJO, Florence NANTABA, Patrick SSSEBUGERE, John WASSWA	Levels, profile and exposure of polybrominated diphenyl ethers (PBDEs) in Leptoptilos crumenifer and Gallus gallus domesticus from a waste disposal site in Kampala.	Oral	Н	Nov 22- 23
IPICS	UGA:01	Tanzania	ANCAP	Florence Nantaba, John Wasswa and Henrik Kylin	Spatial trends and ecotoxic risk assessment of selected pharmaceuticals in sediments from Lake Victoria, Uganda	Oral	"	Nov 22- 23
IPICS	ZiM:03	Tanzania	ANCAP	Amos Misi, P. Mushonga, M. F Zaranyika, Madzvamuse, P. Dzomba	A Review on Extraction Methods for the Removal of Sulfamethoxazole and Trimethoprim from Aquatic Environment Using Cleaner Techniques	Oral	п	Nov 22- 23
IPICS	ZiM:03	Tanzania	ANCAP	MC Change, A. Madzvamuse, M.F. Zaranyika, N.M. Mukaratirwa	Adsorption Studies of Polar Organic Solvents by Typha Capensis Derived LignoCellulosic Adsorbent Biopolymers	Oral	"	Nov 22- 23
IPICS	ZiM:03	Tanzania	ANCAP	P. Dzomba and M.F. Zaranyika	Persistence and degradation kinetic models from environmental fate studies of pollutants.	Oral	"	Nov 22- 23
IPICS	ZIM:03	Tanzania	ANCAP	Pamhidzai Dzomba; Mark F. Zaranyika; Amos Misi; Paul Mushonga; Alfred Madzvamuse	' analysis of cotrimovazole from the		"	Nov 22- 23
IPICS	ZIM03	Tanzania	ANCAP	Magdalene C. Change; Netai Mukaratirwa- Muchanyerei; Alfred Madzvamuse; Mark F. Zaranyika	Magdalene C. Change; Netai Mukaratirwa- Muchanyerei; Alfred Madzvamuse; Mark F.  Adsorption studies of polar organic solvents by Typha Capensis derived		"	Nov 22- 23

IPPS	MSSEESA/ TAN:01	Tanzania	Kabarak University	Abdulmajid Khatib, Nuru Miyuka, Margaret Samiji	Influence of East-West Tracking of the sun on the power generated by a PV panel	Oral	Kabarak, International Conference	July 12
IPPS	TAN:01/ MSSEESA	Tanzania	MSSEESA	Beatrice T Nyaki	Biochar Produced from Sawdust and Sugarcane bagasse for Soil Remediation and Climate Change Mitigation.	Oral	2022 MSSEESA Conference	Nov 16- 18
IPPS	TAN:01/ MSSEESA	Tanzania	MSSEESA	Sawa Hezekiah, Nuru Mlyuka, Margaret Samiji	Chelating Agents in Sandstone Geothermal Formation: A Means to Enhance Permeability and Productivity.	Oral	п	Nov 16- 18
IPPS	TAN:01/ MSSEESA	Tanzania	MSSEESA	Justine J Tibaijuka, Nuru Mlyuka, Margaret Samiji and Mmantsae Diale	Effects of substrate temperature and AR- coating on the spectral selectivity of Cr selective absorbers thin films	Oral	п	Nov 16- 18
IPPS	TAN:01/ MSSEESA	Tanzania	MSSEESA	January S. Gwaydi, Lwitiko P Mwakyusa and Margaret Samiji	Influence of Annealing Conditions of DC Sputtered CZT-O Precursor from Metal Targets under Oxygen Atmosphere on the Properties of CZTS Absorber	Oral	п	Nov 16- 18
IPPS	TAN:01/ MSSEESA	Tanzania	MSSEESA	Mmary N, Mlyuka Nuru and Margaret Samiji	Investigation on the Influence of Deposition Temperature on Optical Properties of Low Emissivity-based ITO/VO2/MgO Multilayer Structure for Smart Window Application;	Oral	11	Nov 16- 18
IPPS	ZIM:01	Uganda	Ministry of Energy and Mineral Development	Luba Gilberta Thwala	Application of magnetics in geothermal exploration: a case study of Binga hot spring	Oral	Renewable Energy Conference 2022	Nov 3-5
IPICS	ZIM:01	Zimbabwe	Harare Institute of Technology	Auxillia Machingauta, Dexter Tagwireyi and Stanley Mukanganyama	Antibacterial activities and mode of action of extracts from Zimbabwean medicinal plants against Acinetobacter baumannii	Oral	Biotechnology Virtual Conference: "Accelerating industrialisation through modern technology, innovation and research" (joint symposium NAPRECA, BMBSZ and Harare Institute of Technology Journal of Biotechnology	Dec 15
IPICS	ZIM:01	Zimbabwe	Harare Institute of Technology	Ruvarashe Dakwa, Winnie Mozirandi and Stanley Mukanganyama	Antibacterial activities of Azanza garckeana and implications for use in COVID-19 secondary infections	Oral	п	Dec 15

IPICS	ZIM:01	Zimbabwe	п	Mugayi L.C., Tagwirei D., and Mukanganyama S.	Antifungal and antimycobacterial activity of seed and leaf extracts of Trichilia emetica	Oral	п	Dec 15
IPICS	ZIM:01	Zimbabwe	п	Makokoro M and Mukanganyama S	Development of a staining method to quantitate Candida albicans and biofilms using an Eve Cell counter	Oral	п	Dec 15
IPICS	ZIM:01	Zimbabwe	п	Sharon Netsai Chikafa, Dexter Tagwireyi, Stanley Mukanganyama	Efflux pump inhibitory activity of Combretum extracts	Oral	п	Dec 15
IPICS	ZIM:01	Zimbabwe	п	Mukanganyama S	Enzymes as targets for natural products	Oral	"	Dec 15
IPICS	ZIM:01	Zimbabwe	п	Makonese P.M, Sithole S, and Mukanganyama S	Evaluation of silver nanoparticles synthesized from Parinari curatellifolia on HL60 cells	Oral	п	Dec 15
IPICS	ZIM:01	Zimbabwe	Society for Medicinal Plants and Economic Development (SOMPED)	Mukanganyama S	Herbal remedies and Phytomedicines for Global Health	Oral	SOMPED, one-day online workshop	20220322

## 2.6.3 National conference contributions

**Table 16.** Number of poster and oral contributions to national/local scientific meeting.

C	D '	Chen	nistry	Mathe	matics	Phy	sics	To	otal	Grand
Country	Region	Poster	Oral	Poster	Oral	Poster	Oral	Poster	Oral	total
Burkina Faso	Africa	5	24	0	0	0	0	5	24	29
Ethiopia	Africa	1	1	0	0	0	0	1	1	2
Ivory Coast	Africa	0	0	0	0	0	3	0	3	3
Kenya	Africa	0	0	0	0	0	4	0	4	4
Rwanda	Africa	0	0	2	2	0	1	2	3	5
Senegal	Africa	2	5	0	0	0	1	2	6	8
Tanzania	Africa	1	0	0	0	0	2	1	2	3
Togo	Africa	0	0	0	0	0	2	0	2	2
Uganda	Africa	0	0	0	0	0	1	0	1	1
Zambia	Africa	0	11	0	0	0	0	0	11	11
Zimbabwe	Africa	0	9	0	0	0	0	0	9	9
Total	Africa	9	50	2	2	0	14	11	66	77
Bangladesh	Asia	4	31	0	0	0	5	4	36	40
Lao	Asia	1	2	0	0	0	0	1	2	3
Nepal	Asia	0	0	0	0	0	6	0	6	6
Total	Asia	5	33	0	0	0	11	5	44	49
Sweden	Europe	1	0	0	0	0	0	1	0	1
Total	Europe	1	0	0	0	0	0	1	0	1
Bolivia	Latin America	0	3	0	0	0	0	0	3	3
Total	Latin America	0	3	0	0	0	0	0	3	3
All co	untries	10	50	2	2	0	14	12	66	78

### Chemistry, mathematics and physics contributions to regional conferences. Listed country-wise.

ISP progra m	Group / Network	Country	Organiser	Author(s)	Title of the presentation	Oral or Poster	Name of event	Dates
IPICS	ANRAP	Bangladesh	ANRAP	Prof Iqbal Rouf Mamun	Chemical Studies of plant materials used in the treatment of diabetes	Oral	12th ANRAP workshop	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Md Mahedi Hassan Tusher	Concerns about care & use of laboratory animals for biomedical research. Animal ethics	Oral	н	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Dr Md Ranzu Ahmed	Experimental approaches for determining various bioactivities of herbal plant extracts	Oral	П	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Dr Md Shahinul Haque Khan	Fractionation, isolation and characterization of pure compounds from active extracts	Oral	п	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Prof Dr Begum Rokeya	Rodent model for toxicity testing with antidiabetic plant extracts	Oral	"	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Prof Dr Begum Rokeya	Screening of antidiabetic plant extracts for hypoglycemic/ antihyperglycemic properties using in vivo & in vitro & techniques	Oral	"	Oct3- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Prof Begum Rokeya	Experimental Animal Models for Diabetes Mellitus & its complications	Oral	П	Oct 30- Nov 3
IPICS	ANRAP	Bangladesh	ANRAP	Dr Rausan Zamir	Anti-diabetic Herbal Medicines and Their Composite Plant Materials: Safety Issues	Oral	16th ANRAP National Seminar on Antidiabetic Plant Materials: Separation Techniques & Biological Testing	202210 29
IPICS	BAN:04	Bangladesh	ANRAP	M Shoeb	Chemical and Biological Activity Studies of the Medicinal Plants of Oxalidacae Family	Oral	и	Oct 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Mohammad Shoeb	Chemical and Biological Studies of the Medicinal Plants of Oxalidacae Family	Oral	н	202210 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Shahinul Haque Khan	Phytochemical Screening, Antioxidant and Antimicrobial Activities of Aqueous Methanol Extract of Basella alba L	Oral	П	202210 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Begum Rokeya	Phytochemical studies and elucidation of the mechanism of antidiabetic activity of different extracts from some edible plants in rodent model of diabetes	Oral	п	202210 29

IPICS	ANRAP	Bangladesh	ANRAP	Dr Md Ranzu Ahmed	Scientific assessment of some antidiabetic polyherbal formulations available in Bangladesh	Oral	п	202210 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Dr.Bishnu Prasad Sarma	Scope of medicinal plants in management of Chronic diseases with special reference to North East India	Oral	П	202210 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Achyut Adhikari	Study of in vitro and in vivo anti-diabetic properties of traditionally used medicinal plants of Nepal	Oral	п	202210 29
IPICS	ANRAP	Bangladesh	ANRAP	Prof Begum Rokeya	Journey of ANRAP: paving the way towards capacity building and antidiabetic drug discovery research	Oral	webinar	202203 01
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	Z Samiha	Assessment of Physicochemical Properties and Plastic Microbeads in Personal Care Products (Face Wash)	Oral	5 <sup>th</sup> Young Scientist Congress	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	S M Joya	Assessment of Physicochemical Properties and Plastic Microbeads in Shampoo	Oral	11	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	N Islam	Biological activity studies of the aerial parts of Phyllanthus niruri L.	Oral	11	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	N Parvin	Determination of residual amoxicillin in beef meat and liver, chicken meat and liver samples by HPLC with UV-Vis detector	Oral	"	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	M Shoeb	Natural Products for Drug Discovery in Bangladesh	Oral	"	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	W Farha	Assesment of heavy metals in local vegetable samples and their impact in human health	Oral	"	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	F Sobnom	Assesment of pesticide residues and nutrient levels in some vegetable samples	Poster	"	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	L Nahar	Assessment of Water Quality Parameters, Pesticides and Microplastics in the Surface Water of Turag River	Poster	11	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	R Islam	Liquid Chromatography-Tandem Mass Spectrometry Analysis of Residual Sulfonamides in Beef, Poultry meat and Egg Samples	Poster	п	Nov 25- 27
IPICS	BAN:04	Bangladesh	Bangladesh Academy of Sciences	T Biswas	Chemical and Biological Activity Studies of Cucumis melo l.	Poster	"	Nov 25- 27

IPICS	BAN:04	Bangladesh	Bangladesh Crystallographic Association	W Farha	Assessment of mettalic content in local vegetable samples and their impact in human health	Oral	7 <sup>th</sup> Conference of Bangladesh Crystallographic Association	Dec 8-9
IPICS	BAN:04	Bangladesh	Bangladesh Crystallographic Association	M Shoeb	Structural Diversity and Biological Activities of Natural Products Chemistry	Oral	7 <sup>th</sup> Conference of Bangladesh Crystallographic Association	Dec 8-9
IPICS	BAN:04	Bangladesh	University of Dhaka	M Shoeb	Studies of Organic Pollutants in Food and Environment	Oral	Research Publication Fair 2022	Oct 22
IPICS	BAN:04	Bangladesh	Bangabandhu Science and Technology Trust	R Islam	Investigation of Antniotic Residues in Poultry Meat and Beef Samples	Oral	Seminar on 'Evaluation of Research Activities of The Students of Bangabandhu Science and Technology Trust	202206 29
IPICS	BAN:04	Bangladesh	BAN:04	M Shoeb	Community Based Activity to Achieve UN Sustainable Development Goals (SDGs)	Oral	Seminar on Food, Health and Environment for Sustainable Development	202202
IPICS	BAN:04	Bangladesh	Sweden Alumni Network	M Shoeb	Sources and Environmental Impacts of Plastics	Oral	The impact of plastics on the environment and human health	July 24
IPICS	BAN:04	Bangladesh	Sweden Alumni Network	M Shoeb	Sources and Environmental Impacts of Plastics	Oral	The impact of plastics on the environment and human health	July 24
IPICS	BAN:04	Bangladesh	Ministry of Education	M Shoeb	Plastic pollution in the environment	Oral	Workshop on plastic pollution in the Environment	June 28
IPICS	BAN:04	Bangladesh	Ministry of Education	M Shoeb	Plastic pollution in the environment	Oral	Workshop on plastic pollution in the Environment	June 28

IPPS	BAN:04	Bangladesh	World University of Bangladesh	K Siddique-e Rabbani	Applying Science to Life – Development of healthcare technology for the common people	Oral, Invited	Convocation 2022	Dec 3
IPPS	BAN:04	Bangladesh	Aspire to Innovation (a2i)	K Siddique-e Rabbani	How to take Telemedicine of the future to our Rural Population? - Experience achieved through Dhaka University Telemedicine Programme (DUTP)	Oral, Invited	Next Generation Webinar	April 25
IPPS	BAN:04	Bangladesh	Ibrahim Cardiac Research Institute	K Siddique-e Rabbani	A locally Developed UV-C Room Sterilizer with improved features	Oral, Invited	Seminar	May 27
IPPS	BAN:04	Bangladesh	TMSS, Bogura	K Siddique-e Rabbani	Homegrown Medical and Wellness devices at Dhaka University and BIBEAT Limited & Dhaka University Telemedicine Programme	Oral, Invited	Seminar	May 28
IPPS	BAN:04	Bangladesh	Empathy Nation	K Siddique-e Rabbani	Empathy through Technology	Oral, Invited	Webinar	May 13
IPICS	BOL:01	Bolivia	Universidad Autónoma Gabriel René Moreno (UAGRM)	Noelia Janko	Costumbres en el uso de abejas sin aguijón por parte de mujeres productoras del chaco chuquisaqueño	Oral	V Congreso Boliviano de Ecología	Oct 5-7
IPICS	BOL:01	Bolivia	Universidad Autónoma Gabriel René Moreno (UAGRM)	Luciana Escobar	Efecto sobre microorganismos de la miel de Tetragonisca angustula (Apidae: Meliponini)	Oral	V Congreso Boliviano de Ecología	Oct 5-7
IPICS	BOL:01	Bolivia	Universidad Autónoma Gabriel René Moreno (UAGRM)	Fabricio Cardozo	Polen anemófilo y su asociación con variables ambientales y contaminantes del aire	Oral	V Congreso Boliviano de Ecología	Oct 5-7
IPICS	ANEC	Burkina Faso	Polytechnical school of Ouagadougou	Aftare Nantchiliba	Treatment of a cyanide synthetic effluent by electrocoagulation with flat electrodes made of iron and aluminum	Oral	1st edition of the EPO Engineering Professions Days	202212 05
IPICS	BUF:01	Burkina Faso	IRD	SANKARA Assétou, OUEDRAOGO Jean Cl aude W., BONZI-COULIBALY Yvonne	Explorations de conditions de préparation de formulations biopesticides à base de feuilles d'eucalyptus".	Poster	Poster journée de la femme à l'IRD	202203 29
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Agbémébia Y. AKAKPO, Donatien KABORE, Marius K. SOMDA, Abdouramane SAWADOGO, Henriette	Potentiel activité antifongique de l'huile essentielle de Cymbopogon citratus (DC) Stapf et biostabilisation du lait de souchet (Cyperus exculentus) au Burkina Faso	Oral	Doctoriales de l'Université Joseph KI-ZERBO	Jan 16- 18

				B. MIHIN, Zenabou SEMDE, Aboubakar S. OUATTARA				
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Alima BAMBARA, Hamidou COMPAORE, Cheikna ZONGO, Clarisse S. COMPAORE, Fidèle W. TAPSOBA <sup>2</sup> , Hissein RATONGUE, Ignace SAWADOGO, Pane B. OUATTARA- SOURABIE, Donatien KABORE, Hagrétou SAWADOGO-LINGANI	Caractérisation des souches de Bacillus spp antagonistes des Aspergillus de la section Flavi contaminant le maïs	Oral	11	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Poussian Raymond BARRY, Kiessoun Konaté, Mamounata DIAO, Crépin I. DIBALA, Mamadou H. DICKO	Evaluation des potentialités nutritionnelles et activité antimicrobienne des extraits de feuilles et de fruits de Vitex doniana (Lamiaceae)	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Henriette B. Mihin, Marius K. Somda, Donatien Kaboré, Agbémébia Y. Akakpo, Zenabou Semdé, Souleymane Sanon, Cheik A. T. Ouattara, Aboubakar S. Ouattara	Activité antimicrobienne de la combinaison des huiles essentielles de Laggera aurita (L. f.) (Asteraceae) et Hyptis suaveolens Poit. (Lamiaceae)	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Patenema OUEDRAOGO, Mamounata DIAO, Charles PARKOUDA, Kiessoun KONATE, Crépin I. DIBALA, Linley C. Karltun, Mamoudou H. DICKO	Biochemical composition and nutritional qualities of four edible insects from Burkina Faso	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Salamata TIENDREBEOGO, Leguet GANOU, Clarisse Sidbewendé COMPAORE, Mamoudou H. DICKO	Qualité physicochimique, microbiologiques et organoleptiques de six formulations de nectar de pulpe du fruit de liane goïne (Saba senegalensis)	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	ZONGO Sandrine, Kiessoun KONATE, Fulbert NIKIEMA, Mamoudou Hama Dicko	Caractérisation des huiles de nouvelles variétés d'arachides produites au Burkina Faso par l'INERA	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	TAPSOBA Viviane Aurélie, Jérôme SOMÉ, Augustin ZEBA, Ella COMPAORÉ, Mamoudou H. DICKO	Analyse des politiques publiques et des actions gouvernementales et leurs contributions dans la création d'environnements alimentaires sains au Burkina Faso	Oral	п	Jan 16- 18
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	Roger Dakuyo, Kiessoun KONATE, Abdoudramane SANOU, Kiessoun KONATE, Hemayoro SAMA, Kabakdé KABORE, Crépin I. DIBALA, Mamounata DIAO et Mamoudou H. DICKO	Caractérisation biochimique, bioactive et propriétés nutritionnelles antioxydantes des fruits de l'anacardier (Anacardium occidentale L.) au Burkina Faso	Poster	п	Jan 16- 18

IPICS	RABiotech	Burkina Faso	Université de Dédougou	Kaboré K., Konaté K., Sanou A., Dakuyo R., Sama H., Dicko M.H.	Evaluation and physico-chemical parameters of leaves, peales and seeds of two tomato varieties (F1 Mongal and Petomech), Grown in four regions of Burkina Faso	Poster	п	Jan 26- 28
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Poussian Raymond BARRY, Kiessoun Konaté, Mamounata DIAO, Yerobessor DABIRE, Crépin I. DIBALA, Mamadou H. DICKO	Activité antimicrobienne des extraits de feuilles et de fruits de Vitex doniana(Lamiaceae) sur quelques bactéries impliquées dans la toxi-infection alimentaire	Oral	Premières journées scientifques de l'Université de Dédougou (JS- UDDG)	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Abdoudramane Sanou, Kiessoun Konaté, Kabakdé Kaboréa, Roger Dakuyoand Mahamadou Hama Dicko	Etude comparative des propriétés nutritionnelles et diurétiques des jus de bissap (Hibiscus sabdariffa) par plusieurs procédés d'extractions	Oral		Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Ernest KERE, Henriette MIHIN, Agbémébia Y. AKAKPO, Donatien KABORE, Marius K. SOMDA	Etude de l'effet synergique huiles essentielles-antibiotiques sur des souches de bactéries antibio-résistantes impliquées dans les toxi- infections alimentaires au Burkina Faso	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Ernest KERE, Henriette MIHIN, Agbémébia Y. AKAKPO, Donatien KABORE, Marius K. SOMDA	Evaluation des paramètres physico-chimiques et microbiologiques du Gappal (de Koudougou) et biostabilisation par les huiles essentielles de deux plantes (Cymbopogon citratus et Mentha piperita)	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou		Evaluation of some local plants, in improving the quality of water consumed in rural areas	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	KABORE Kabakdé, KONATE Kiéssoun, SAMA Hemayoro, DAKUYO Roger, SANOU Abdoudramane, BAZIE David, DIAO Mamounata, DICKO H. Mamoudou,	Evaluation of the physicochemical parameters of edible oils sold in three cities of Burkina Faso	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Dakuyo Roger Konaté Kiessoun, SANOU Abdoudramane, SAMA Hémayoro, KABORE Kabakdé, Dicko Hama Mahamadou	Pommes de cajou: pigments et facteurs antinutritionnels et leur thermo sensibilité	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Kaboré K., Konaté K., Dakuyo R., Sanou A.	Potentialités nutritionnelle et thérapeutique des graines et des peaux de tomates	Oral	"	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Salamata TIENDREBEOGO, Leguet GANOU, Clarisse Sidbewendé COMPAORE, Mamoudou H. DICKO	Potentialités nutritionnelles du fruit (pulpe et coque) de Saba senegalensis du Burkina Faso	Oral	II	Jan 12- 15

IPICS	RABiotech	Burkina Faso	Université de Dédougou	David BAZIE, Kiessoun KONATE, Kabakdé KABORÉ, Mamoudou Hama DICKO	Potentiel nutraceutique de la pulpe de cinq variétés de pastèque [Citrullus lanatus (Thunb)] cultivées au Burkina Faso	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Ecole Doctorale Sciences et Technologie, UJKZ	ZONGO Sandrine, Kiessoun KONATE, Fulbert NIKIEMA, Bazoin Sylvain Raoul BAZIE, Mamoudou Hama DICKO	Profil en acides gras des huiles de nouvelles variétés d'arachides produites au Burkina Faso par l'INERA	Oral	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Salamata TIENDREBEOGO, Leguet GANOU, Clarisse Sidbewendé COMPAORE, Mamoudou H. DICKO	Qualité physicochimique, microbiologique et acceptabilité de six formulations de nectar de pulpe de liane goïne	Oral	11	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Kaboré K., Konaté K., Dakuyo R., Sanou A., Sama H., Dicko M.H.	Technological, nutritional and therapeutic potential of tomato seeds and peels	Oral	"	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	KABORE Kabakdé, KONATE Kiéssoun, SAMA Hemayoro, DAKUYO Roger, SANOU Abdoudramane, BAZIE David, DIAO Mamounata, DICKO H. Mamoudou	Evaluation of the physicochemical parameters of edible oils sold in three cities of Burkina Faso	Oral	П	Jan 13- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	KABORE Kabakdé, KONATE Kiéssoun, DAKUYO Roger, SANOU Abdoudramane	Potentialités nutritionnelle et thérapeutique des graines et des peaux de tomates.	Oral	II .	Jan 13- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Roger Dakuyo, Kiessoun Konaté, Abdoudramane SANOU, Hémayoro SAMA, Kabakdé KABORE et Mahamadou Hama Dicko	Composition biochimique des fruits de l'anacardier (Anacardium occidentale) cultivé au Burkina Faso	Poster	п	Jan 12- 15
IPICS	RABiotech	Burkina Faso	Université de Dédougou	Abdoudramane Sanou, Kiessoun Konaté, Kabakdé Kaboréa, Roger Dakuyoand Mahamadou Hama Dicko	Evaluation of the acute, sub-acute toxicity and diuretic properties of the bioactive extract of Hibiscus sabdariffa Linn (Malvaceae).	Poster	п	Jan 12- 15
IPICS	ETH:01	Ethiopia	The Chemical Society of Ethiopia	Shimelis Admassie	Roll-to-roll (R2R) printed plastic electrodes for energy and environmental applications	Oral	35th Annual Congress of the Chemical Society of Ethiopia	Nov 18- 19
IPICS	ETH:01	Ethiopia	The Chemical Society of Ethiopia	Tadele Tamenu, Ergang Wang and Wendimagegn Mammo	Synthesis of glycolated DPP-based polymers with alkyl spacer for OECT application	Poster	п	Nov 18- 19
IPPS	AFR:04	Ivory Coast	Instrumentation , Image and Spectroscopy Laboratory	Hervé YAO	Development of Multimode and Multispectral Image Analysis Tools for the Diagnosis of Sickle Cell Disease	Oral	3rd Edition of Scientific day of Instrumentation, Image & Spectroscopy laboratory	Oct 1

IPPS	AFR:04	Ivory Coast	Instrumentation , Image and Spectroscopy Laboratory	Olivier BAGUI	Multispectral instrumentation as a plant identification tool	Oral	п	Oct 1
IPPS	AFR:04	Ivory Coast	Instrumentation , Image and Spectroscopy Laboratory	Benoit KOUAKOU	Study of mosquito habitat using entomological Lidar	Oral	п	Oct 1
IPPS	AFR:04	Kenya	Faculty of Science and Technology, University of Nairobi	J.J Okonda, H. K. Angeyo, A. Dehayem- Kamadjeu and A. E. Rogena	Diagnostic Analysis and Modeling of Trace Biometals as cancer biomarkers in Urinary Tract Cancers by Machine Learning Based X-Ray Fluorescence and Scatter Spectrometry	Oral	5th Annual Conference of the Faculty of Science and Technology	Oct 26- 28
IPPS	AFR:04	Kenya	Faculty of Science and Technology, University of Nairobi	Kilavi P. K., Kaniu M. I., Patel J. P., Usman I.T.	Estimation of dose and risk from exposure to enhanced environmental activity at the environs of a titanium mine: A case study from south coastal region of Kenya	Oral	п	Oct 26- 28
IPPS	KEN:04/AFR: 04	Kenya	Faculty of Science and Technology, University of Nairobi	G. Gitau, Kaniu M. I., J. P. Patel	Assessment of Elemental Content and Associated Radiological Exposure in Sand Beds of Tiva River, Kitui County	Oral	п	Oct 26- 28
IPPS	KEN:04/AFR: 04	Kenya	Faculty of Science and Technology, University of Nairobi	Annah M. Ondieki, Zephania Birech, Kenneth A. Kaduki & Peter W. Mwangi	Fabrication of Surface-Enhanced Raman Spectroscopy Substrates Using Silver Nanoparticles Produced by Laser Ablation in Liquids	Oral	п	Oct 26- 28
IPICS	LAO:04	Lao	Faculty of Pharmacy, University of Health Science	Phetdavanh Huksasouk, Phengxay Deevanhxay, Kesiny Phomkeona, Sysay Palamy, Chindaphathip Vongsouly	Quantification of Total Phenolic Content, Total Flavonoid Content, and Antioxidants in Some Medicinal Plants	Poster	1 <sup>st</sup> National Conference in Pharmacy	202209
IPICS	LAO:04	Lao	Department of Chemistry, Faculty of Natural Sciences, NUOL	Phetdavanh Huksasouk, Phengxay Deevanhxay, Kesiny Phomkeona, Sysay Palamy, Chindaphathip Vongsouly,	Quantification of gallic acid and quercetin in Some Medicinal Plants by using HPLC	Oral	Seminar on Natural Product Chemistry Research	202212 20
IPICS	LAO:04	Lao	Department of Chemistry, Faculty of	Phengxay Deevanhxay	Research group introduction: Analysis of Bioactive Compounds in Natural Products	Oral	Seminar on Natural Product	202212 20

			Natural Sciences, NUOL				Chemistry Research	
IPPS	NEP:01	Nepal	RTSTI-2022	Roshan Chalise, Raju Khanal	Enhancement of agricultural productivity by using Atmospheric pressure plasma	Oral	National conference on recent trends in science, technology and innovation	May 29- 30
IPPS	NEP:01	Nepal	RTSTI-2022	Dinesh K Chaudhary, R Shrestha, A N Shrestha, B poudyal, S P Shrestha, L P Joshi	Fe-Al doped ZnO films: A highly sensitive ethanol sensing	Oral	п	May 29- 30
IPPS	NEP:01	Nepal	RTSTI-2022	Leela Pradhan Joshi, D K chaudhary, P shrestha, R. Parajuli, S P Shrestha	Metal doping effect on ZnO semiconductor for gas sensing	Oral	"	May 29- 30
IPPS	NEP:01	Nepal	RTSTI-2022	Agrima N Shrestha, R. Shrestha, B poudyal, D K chaudhary, L P Joshi	Structural Optical and gas sensing properties of Fe-doped ZnO film	Oral	"	May 29- 30
IPPS	NEP:01	Nepal	RTSTI-2022	Rajesh Shrestha, A Nana shrestha, B poudyal, D K chaudhary, L P Joshi	Study on ZnO based gas sensing mechanism at room temperature towards ethanol vapour	Oral	"	May 29- 30
IPPS	NEP:01	Nepal	RTSTI-2022	Bhupal Poudyal, R Shrestha, A N Shrestha, D K chaudhary, L P Joshi	Study onopticcal structural, and gas sensing properties of Cu- ZnO films	Oral	"	May 29- 30
IPMS	EAUMP UR	Rwanda	UR-CST	Jean Marie Ntaganda, Venuste Nyagahakwa, Lydie Mpinganzima, Innocent Ngaruye, Denis Ndanguza, Ruganzu Leon Fidele	Mathematical Models for Predicting and Monitoring the Impact of COVID-19 in Rwanda	Poster	7 <sup>th</sup> NCST Council Meeting	Oct 6-7
IPMS	EAUMP UR	Rwanda	UR-CST	Lydie Mpinganzima	Compartmental mathematical modelling of dynamic transmission of COVID-19 in Rwanda	Oral	The First Rwandan Science and Technology and Innovation days "Leveraging the Potential of Science and Technology to Mitigate Challenges Associated with COVID-19 pandemic in Developing Countries"	March 31-April 1

IPMS	EAUMP UR	Rwanda	UR-CST	Denis Ndanguza	Stochastic Analysis of COVID-19 Pandemic Model	Oral	п	March 31-April 1
IPMS	EAUMP UR	Rwanda	UR-CST	Justine Dushimirimana and Jean Bosco Nyandwi	The Effect of Meteorological Factors on Extreme COVID-19 Infection in Rwanda: The Generalized Additive Extreme Value Modeling approach	Poster	11	March 31-April 1
IPPS	UGA:02	Rwanda	Department of Physics, University of Rwanda	D. Ayebare, G. Andima, P. Mungufeni, E. Jurua	Validation of Equatorial electrojet derived from Swarm observations using ground based magnetometers	Oral	Monthy presentations	Nov 25
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	D. Sall, B. Fall, D. Ka, M. Hémadi, A.K.D. Diaw, M. Fall	Elaboration d'un capteur électrochimique non-enzymatique à base de nanotubes de carbone fonctionnalisés par du disulfure de molybdène et décorés de nanoparticules de nickel (CV/CNT/MoS2/NINPS) appliqué à la détection et la quantification du glucose	Oral	5th Annual Days of Chemistry of Senegal (JACS 2022)	Nov 22- 23
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	B. Fall, D. Ka, D.D. Sall, C. Gaye, A.K.D. Diaw, M. Fall.	Electroanalyse des ions de mercure (ii) dans des échantillons d'eau du robinet à l'aide d'une électrode en carbone vitreux modifiée par du CNT/MoS2/Fe2O3	Oral	П	Nov 22- 23
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	C. Gaye, D.D. Sall, B. Fall, A.K.D. Diaw, M. Fall. H. Randriamahazaka	Elimination des ions chrome toxiques en milieu aqueux à l'aide d'un nouvel adsorbant à base de RGO@CNT@Fe2O3	Oral	11	Nov 22- 23
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	G. Diouf, A.K.D. Dimé, M.B. Boye, M. Fall	Traitement électrochimique des eaux situées dans une zone à forte pollution industrielle: optimisation des paramètres influençant le rendement de la dénitrification électrochimique de l'eau par l'électrode de Ti/RuO2	Oral	п	Nov 22- 23
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	E. H. Dièye, A. Fall, M. Fall, C.A. Ferreira, M.R.S. Silveira, A. F. Baldissera	Synthèse du polypyrrole et de la polyaniline via les liquides ioniques. Application des polymères à la détection et à l'élimination des métaux lourds,	Poster	11	Nov 22- 23
IPICS	ANEC	Senegal	Senegalese Committee for Chemistry	A.S. Gning, P.A. Diaw, M. Fall	Utilisation de la coque de mangue pour la dénitrification des eaux,	Poster	"	Nov 22- 23
IPPS	AFR:04	Senegal	West African Physical Society	Yawovi Mignanou Amouzouvi, Milohum Mikesokpo Dzagli	Evaluation of Pollutants Along the National Road N2 in Togo using the AERMOD Dispersion Model	Oral	4ème Congrès de la SOAPHYS	Dec 5- 10
IPICS	ETH:01	Sweden	Chalmers University of Technology	Tadele Tamenu, Wendimagegn Mammo and Ergang Wang	Edible electronics and synthesis of drinkable solvent-processable polymers	Poster	Science and Technology Day	202205 12
IPPS	TAN:01/2	Tanzania	Ministry of Energy	Margaret Samiji	Clean Energy Conference	Poster	Clean Energy	Nov 1-2

IPPS	TAN:01/2	Tanzania	TAN:01/2	Margaret Samiji	Technical barriers for adoption of solar cooking	Oral	Solar Cooking in Tanzania: Removing Technical Barriers: Dissemination Workshop	May 26
IPPS	TAN:01/2	Tanzania	TAN:01/2	Nuru Mlyuka	The Science of Solar Cookers	Oral	11	May 26
IPPS	AFSIN	Togo	West African Physical Society (SOAPHYS)	Milohum Mikesokpo Dzagli, Yawovi Mignanou Amouzouvi	Evaluation of Heavy Metals Contamination of Soil and Vegetation in the Vicinity of mining industries in South Togo	Oral	4ème Congrès de la SOAPHYS	Dec 5- 10
IPPS	AFSIN	Togo	West African Physical Society	K. Sesime, M. M. Dzagli, K. B. R. Afoudji	Green synthesis and characterization of zinc oxide nanoparticles using extracts of Artemisia annua l. grown in Togo	Oral	4ème Congrès de la SOAPHYS	Dec 5- 10
IPPS	UGA:02	Uganda	MUST	P. Opio, E. Jurua, G. Andima	Validation of the 350 km effective height of the Equatorial and 'low latitide region of East Africa	Oral	MUST 6th Annual PhD Symposium	May 7
IPPS	KEN:01/2	USA	Pediatric Academic Society	Karr CJ, Maleche-Obimbo E, Were FH, Riederer AM, Gatari M, Mutai BC, Seto E, Collett BR, McHenry MS, Wamithi S, Kipter VK, Larson TV, Marshall JD, Simpson CD, Richardson BA, McClelland RS, Stampfer O, Zuidema C, Benki- Nugent S	Air Pollution Exposures and Brain Development: ABC Study in Kenya	Poster	Pediatric Academic Society Meeting	April 21- 25
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Onesmus Munyati	Conducting polymers and their applications: organic solar cells	Oral	Nanostructured Materials for Chemical Sensors, Energy Conversion and Water Purification - Dissemination and Planning Workshop	Dec 19- 20
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	James Mwale	Imprinted polyaniline nanoparticles for solid-phase extraction of tetracycline hydrochloride	Oral	"	Dec 19- 20
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Simon Mwale	Preparation, characterization, and optimization of a porous polyaniline-copper anode microbial fuel cell	Oral	11	Dec 20- 21

IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	George kalaba	Thermodynamic studies of an activated carbon-supported silver- silicananocomposite for adsorption of heavy metal ions from water	Oral	п	Dec 20- 22
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Robert Singogo	Development of method for the rapid detection of the coronavirus: synthesis, characterization and method development	Oral	"	Dec 20- 23
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Shadrick Mbulwe	Synthesis and characterization of engineered Copper-based nanoparticles for drug delivery	Oral	п	Dec 20- 24
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Marina Xavier	Structural and Morphological evolution of metal impregnated Zeolites: A comparative study	Oral	п	Dec 20- 25
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Victor Isahi	The influence of post-annealing temperature on tin (IV) oxide films prepared by the sol-gel spin coating technique to improve optical properties.	Oral	п	Dec 20- 26
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Anasia Maro	Investigation of the Influence of barium Incorporation on the structural and optical properties of Cu₂ ZnSn(S,Se)₄ absorber layer	Oral	П	Dec 20- 27
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Richard Yaya	Bandgap tuning of cesium-based perovskite solar cells via A-site cation substitution	Oral	"	Dec 20- 28
IPICS	ZAM:01	Zambia	Department of Chemistry, UNZA	Нарру Mabo	Microwave Synthesis of Ga <sub>2</sub> Se <sub>3</sub> Quantum Dots for Geno-sensing of 5-Enolpyruvylshikimate-3-Phosphate Synthase (CP4EPSPS) DNA Segment in GM Cereal	Oral	ıı	dec 20- 29
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Auxillia Machingauta, Dexter Tagwireyi and Stanley Mukanganyama	Antibacterial activities and mode of action of extracts from Zimbabwean medicinal plants against Acinetobacter baumannii	Oral	Research Innovation and Industrialization Week 2022	July 25- 30
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Ruvarashe Dakwa, Winnie Mozirandi and Stanley Mukanganyama	Antibacterial activities of Azanza garckeana and implications for use in COVID-19 secondary infections	Oral	п	July 25- 30
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Sharon Netsai Chikafa, Dexter Tagwireyi, Stanley Mukanganyama	Antibiofilm potential of Combretum plant extracts against Mycobacterium smegmatis	Oral	П	July 25- 30
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Mugayi L.C., Tagwirei D., and Mukanganyama S.	Antifungal and antimycobacterial activity of seed and leaf extracts of Trichilia emetica	Oral	11	July 25- 30
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Loyce J Nyamwanza, Joey Chifamba, Dexter Tagwireyi, Stanley Mukanganyama	Antimicrobial potential of herbal creams based on extracts from Combretum zeyheri	Oral	п	July 25- 30

IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Molly Mombeshora, Loyce Nyamwanza, Gillian Gumimdoga, Winnie Mozirandi, Tinotenda Mavindze, Tanaka Prince Nguruwe, Alfred Mungofa, Panashe Maradza, Nyasha Zihumo, Joey Chifamba, Dexter Tagwireyi and Stanley Mukanganyama	Bioproduct Development-Scientific evaluation and validation of efficacy of medicinal chemicals from plants from Zimbabwe	Oral	п	July 25- 30
IPICS	ZIM:01	Zimbabwe	University of Zimbabwe	Gillian Gumindonga, Sharon Chikafa, Stanley Mukanganyama	Development and Formulation of an Antifungal Remedy Based on Phytochemicals from Erythrina abysinnica	Oral	II	July 25- 30
IPICS	ZiM:03	Zimbabwe	Bindura University of Science Education	Rudo Zhou, Pamhidzai Dzomba and Luke Gwatidzo	Plant Phytochemicals as Alternative Active Principal Components to Arrest Environmental Contamination and Resistance	Oral	Bindura University Research and Innovation Week (BUSE RIW)	July 12- 14
IPICS	ZiM:03	Zimbabwe	Bindura University of Science Education	P. Dzomba and R. Zhou	Use of herbicides in Agriculture, What we should know: a chemical perspective	Oral	Bindura University Research and Innovation Week (BUSE RIW)	July 12- 14

# 2.7 Arranged scientific meetings

Department seminars are not included in the statistcs below.

**Table 17.** Countries where meetings were arranged, with research groups or scientific networks as organizers or co-organizers. Number of meetings (No) is indicated, as well as total number of participants (Part) reported.

Pagion	Country	Chemi	stry	Math	ematics	F	hysics	T	otal
Region	Country	No	Part	No	Part	No	Part	No	Part
Africa	Burkina Faso	4	557	1	56	1	60	6	673
Africa	Cameroon	0	0	0	0	1	23	1	23
Africa	Congo Brazzaville	0	0	1	70	0	0	1	70
Africa	Ethiopia	0	0	1	150	1	70	2	220
Africa	Kenya	1	218	35*	2805	16	442	38	3465
Africa	Mali	0	0	0	0	4	135	4	135
Africa	Niger	0	0	1	30	0	0	1	30
Africa	Nigeria	0	0	0	0	1	300	1	300
Africa	Rwanda	1	22	6	173	2	40	9	235
Africa	Senegal	0	0	1	60	0	0	1	60
Africa	South Africa	0	0	0	0	1	100	1	100
Africa	Tanzania	1	33	6	411	3	123	10	567
Africa	Togo	0	0	0	0	1	250	1	250
Africa	Uganda	1	69	0	0	2	38	3	107
Africa	Zambia	0	0	1	13	0	0	1	13
Africa	Total	8	899	39	3768	33	1581	80	6 248
Asia	Bangladesh	15	239	0	0	1	22	16	261
Asia	Cambodia	2	115	0	0	0	0	2	115
Asia	Laos	1	9	0	0	1	20	2	29
Asia	Nepal	0	0	0	0	13	542	13	542
Asia	Total	18	363	0	0	<i>15</i>	584	33	947
	All countries	26	1 262	53	3768	48	2165	127	7 195

# Arranged scientific meetings are listed country-wise.

ISP program	Group/ Network	Country	Name of event	Venue, City	Dates	Number of participants	If applicable: Co- organizers
IPICS	ANRAP	Bangladesh	16th ANRAP National Seminar	BUHS, Dhaka	20221029	151	
IPICS	ANRAP	Bangladesh	12th ANRAP workshop	BUHS, Dhaka	20221003 20221103	19	
IPICS	BAN:04	Bangladesh	Seminar on Food, Health and Environment for Sustainable Development	Department of Chemistry, University of Dhaka, Dhaka	Feb 9	missing data	
IPICS	BAN:04	Bangladesh	Global Women's Breakfast 2022: Empowering Diversity in Science	IFRD, BCSIR, Dhaka	Feb16	missing data	
IPICS	BAN:04	Bangladesh	Breast Cancer Prevalence, Prevention and Management	Department of Chemistry, University of Dhaka, Dhaka	Nov 8	missing data	
IPICS	BAN:04	Bangladesh	The impact of plastics on the environment and human health	University of Dhaka, Dhaka	July 24	missing data	
IPICS	BAN:04	Bangladesh	Seminar for employing ENHANCE training kit	Department of Chemistry, University of Dhaka, Dhaka	July 24-26	missing data	
IPICS	BAN:04	Bangladesh	Workshop on plastic pollution in the Environment	Department of Chemistry, University of Dhaka, Dhaka	June 22	missing data	
IPICS	BAN:04	Bangladesh	Webinar on Partnerships on the occasion of International Women's Day by Laura McConnell	Dhaka	March 25	missing data	
IPICS	BAN:04	Bangladesh	Webinar to Celebrate, International Women's Day, Gender Equality Today for a Sustainable Tomorrow	Online, Dhaka	March 8	missing data	
IPPS	BAN:04	Bangladesh	Workshop: Essentials for Scientific Research	University of Dhaka, Dhaka	2022-12-19	22	
IPICS	NITUB	Bangladesh	78th NITUB Training Programme on the use, maintenance and trouble shooting of Gas chromatography	Department of Chemistry, University of Dhaka, Dhaka- 1000	20220327 20220331	11	Department of Chemistry, University of Dhaka
IPICS	NITUB	Bangladesh	79th NITUB Training Programme on the use, maintenance and trouble shooting of Common Medical Equipment	Bangladesh University of Health Sciences (BUHS), 125/1, Darus Salam, Mirpur, Dhaka	20220604 20220609	21	Bangladesh University of Health Sciences, Dhaka

IPICS	NITUB	Bangladesh	80th NITUB Training Programme on the use, maintenance and trouble shooting of Common Laboratory Equipment	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh- 2202, Bangladesh	20221015 20221022	23	Bangladesh Institute of Nuclear Agriculture (BINA), Mymensingh
IPICS	NITUB	Bangladesh	81st NITUB Training Programme on the use, maintenance and trouble shooting of Atomic Absorption Spectroscopy (AAS)	Institute of National Analytical Research and Service (INARS), BCSIR, Dr. Qudrat-E-Khuda Road, Dhanmondi, Dhaka-1205	20221224 20221230	14	Bangladesh Council of Scientific and Industrial Research (BCSIR), Dhaka
IPICS	BUF:01	Burkina Faso	PhD student seminar on scientific research	Ouagadougou	20220315 20220315	27	LABEV
IPICS	BUF:01	Burkina Faso	Poster conception workshop	Ouagadougou	20220519 20220519	33	
IPICS	RABiotech	Burkina Faso	Conference scientifique sur l'importance de la science et technologie pour le developpement de l'Afrique	Ouagadougou	20221105 20221105	350	UFR-SVT
IPICS	RABiotech	Burkina Faso	Colloque International sur la Sécurité Sanitaire des Aliments (CISSA)	Ouagadougou	20221215 20221217	147	University Joseph Ki- Zerbo
IPPS	BUF:01	Burkina Faso	10th Workshop of scientific exchanges in physics	University Joseph Ki-Zerbo, Ouagadougou	2022-12-27 2022-12-29	50-70	
IPMS	BURK:01	Burkina Faso	Colloque scientifique de Ouagadougou	Ouagadougou	2022-11-07	56	
IPICS	ANFEC	Cambodia	Training on Heavy Metal analysis in Food and Environment by Atomic Absorption Spectroscopy	Department of Chemistry, Faculty of Science, Royal University of Phnom Penh	20221221 20221224	29	Department of Chemistry, Faculty of Science, Royal University of Phnom Penh
IPICS	CAB-CCS	Cambodia	Small scale Chemistry training	Kampong Thom	20221027 20221028	86	Chemical Society of Thailand
IPPS	AFSIN	Cameroon	Spectroscopic data acquisition, processing and analysis in research for publications	Ebolowa	2022-07-24 2022-08-02	23	
IPMS	BURK:01	Congo Brazzaville	10th Pan-African Congress of Mathematicians (pacom 2022)	Brazzavillle	2022-08-01 2022-08-06	70	AMU

IPMS	AAU	Ethiopia	Advancement of Mathematics: Current Trenda and Future Perspects	Haromaya	2022-05-27 2022-05-28	150	Department of Mathematics, Haromaya University and Ethiopian Mathematics Professional Association
IPPS	ETH:01	Ethiopia	Ethiopian Physical Society Annual Conference	Madda Welabu University, Bale Robe	2022-02-18 2022-02-19	150	
IPPS	ETH:02	Ethiopia	Launching MSc program in Earth Systems Physics	Addis Ababa	2022-02-24	70	
IPICS	NAPRECA	Kenya	NAPRECA Summer School	Nairobi	20221030 20221105	218	NAPRECA EGYPT/KENYA
IPMS	EAUMP UoN	Kenya/Digital	African Mathematics Seminar*	Online	13 meetings, Feb 23 - Dec 7	>700	
IPMS	EAUMP UoN	Kenya	Kapek Kenya Mathematics Olympiad (KKMO) webinar	Nairobi	2022-06-02	2047	
IPMS	EAUMP UoN	Kenya	ICTP-EAUMP School on Mathematical Programming and Algorithms - an African Mathematical School	Nairibi	2022-07-11 2022-07-29	42	
IPMS	EAUMP UoN	Kenya	Nairobi workshop in Algebraic Geometry	Nairobi	2022-10-26 2022-10-28	16	
IPPS	KEN:01/2	Kenya	Women in Physical Sciences Meeting	INST, Nairobi	2022-01-21	12	
IPPS	KEN:01/2	Kenya	NDT Workshop	INST, Nairobi	2022-03-30	30	NDT Society
IPPS	KEN:01/2	Kenya	Pre Conference Presentation by Margaret Gitau on Source Identification of PM2.5 in Digested Filter Samples: Application of TXRF	INST, Nairobi	2022-06-21	14	
IPPS	KEN:01/2	Kenya	Seminar by Prof Francis Pope from University of Birmingham on A System Approach to Air Pollution in East Africa	INST, Nairobi	2022-06-27	15	
IPPS	KEN:01/2	Kenya	Meeting and Briefs of Off-Grid Laboratory Status and Needs: International Finance Corporation (IFC), UK Foreign Commonwealth and Development Office (UKFCDO), Tetra Tech International and INST Participants	INST, Nairobi	2022-07-01	16	
IPPS	KEN:01/2	Kenya	Nuclear Knowledge Management	INST, Nairobi	2022-07-07	16	IAEA
IPPS	KEN:01/2	Kenya	Women in Physical Sciences Meeting	INST, Nairobi	2022-08-13	19	

IPPS	KEN:01/2	Kenya	Seminar and collaboration meeting by Dr Nicholas K Cheruiyot, Postdoctoral Researcher, Center for Environmental Toxin and Emerging-contaminant Research from Cheng Shiu University, Taiwan	INST, Nairobi	2022-09-16	35	
IPPS	KEN:01/2	Kenya	Seminar by Prof Jan Blomgren on Global energy crisis: Lessons for the development of Kenya	INST, Nairobi	2022-09-22	28	
IPPS	KEN:01/2	Kenya	Development of BSc Program in Nuclear Science and Technology	Falcon Height Hotel, Nanyuki	2022-03-14 2022-03-18	13	
IPPS	KEN:01/2	Kenya	Implementation and Utilisation of the Delta Underwater Gamma Instrument (DUGS) and the Associated Methods	Nairobi Safari Club Hotel, Nairobi	2022-04-04 2022-04-08	18	IAEA
IPPS	KEN:01/2	Kenya	Off-Grid Products Testing overview of IEC TS 62257- 9-5:2018 and -9-8:2020 and Hands-on Testing Training for Ethiopian Group Members	Institutute of Nuclear Science and Technology Laboratories, University of Nairobi	2022-05-23 2022-06-23 and 2022-06- 202022-07- 08	9	UK Africa Clean Energy (ACE) through World Bank
IPPS	KEN:01/2	Kenya	Women in Physical Sciences Meeting	INST, Nairobi	2022-12-08 2022-12-09	16	
IPPS	KEN:02	Kenya	5th Annual conference of the Faculty of Science and Technology	Virtual/Chiromo Campus	2022-10-26 2022-10-28	100	Falculty cmtee members
IPPS	KEN:03	Kenya	Kabarak Conference	Nakuru	2022-07-12	31	
IPPS	KEN:02/MSEESSA/ TAN:01/2	Kenya, Tanzania	2022 MSSEESA Materials Science Conference	Kenya, Tanzania/Virtual	2022-11-16 2022-11-18	70	MSSEESA coordinators
IPICS	ANFEC	Laos	Workshop Program of ANFEC on Gas Chromatography	Center of Testing on Food Quality and Food Industry Product, Champasak University, Pakse Capital, Champasak province	20221226 20221226	9	Center of Testing on Food Quality and Food Industry Product
IPPS	LAO:01	Laos	Workshop on Physics laboratory preparation and practice	Laung Phabang	2022-11-21 2022-11-22	20	Souphanouvong University
IPPS	MAL:01	Mali	Workshop on research methodologies	FST, Bamako	2022-10-02	40	n/a
IPPS	MAL:01	Mali	Workshop on irrigation water management	Sector1 OPIB, Baguineda	2022-11-15	20	n/a
IPPS	MAL:01	Mali	Workshop on training to trainer on waste to energy	Grand hotel, Bamako	2022-11-23 2022-11-25	25	ITT, University of Applied Sciences, Germany

IPPS	MAL:01	Mali	School on sustainable circular economy and renewable energy	FST, Bamako and online	2022-12-12 2022-12-23	50	ITT, University of Applied Sciences, Germany
IPPS	NEP:01	Nepal	Protective measures against lightning exclusively in the perspective of electrical engineering practices	Lalitpur	2022-05-26	80	Institute of Engineering, Pulchowk, Lalitpur
IPPS	NEP:01	Nepal	Protecting communication towers, systems and data centers from lightning and electrical surges	Kathmandu	2022-05-27	35	SALNet and Franklin Solutions Pvt Ltd
IPPS	NEP:01	Nepal	Scientific Research for the prosperity of a nation	Amrit Campus, Kathmandu	2022-05-30	50	SALNet
IPPS	NEP:01	Nepal	Use of natural components for the protection against lightning and electrical hazards	Kathmandu	2022-05-31	36	SALNet and Franklin Solutions Pvt Ltd
IPPS	NEP:01	Nepal	Protective measures against hazards due to lightning and electrical faults	Lalitpur	2022-06-01	45	Nepal Engineers Association
IPPS	NEP:01	Nepal	Protective measures against hazards due to lightning and electrical faults	Pokhara	2022-06-02	70	Western Region Campus Pokhara
IPPS	NEP:01	Nepal	Meeting at Department of Urban Development and Building Construction and Civil Aviation Authority Nepal	Kathmandu	2022-06-04	10	SALNet
IPPS	NEP:01	Nepal	Training program for electricians on 'Electrical Fire Safety'	Dhangadhi, Far West Nepal	2022-09-20 2022-09-23	39	UNDP, LARC
IPPS	NEP:01	Nepal	Training program for electricians on 'Electrical Fire Safety'.	Jayaprithvi Municipality Far West Nepal	2022-11-01 2022-11-04	29	UNDP, LARC
IPPS	NEP:01	Nepal	Training program for electricians on 'Electrical Fire Safety'.	Amargadhi Municipality, Far West Nepal	2022-11-05 2022-11-08	35	UNDP, LARC
IPPS	NEP:01	Nepal	National Conference on Advances in Atmospheric and Material Science	Amrit Campus Kathmandu	2022-11-06 2022-11-07	53	SALNet, NSWIP, IEEE-EDS
IPPS	NEP:01	Nepal	Training program for engineers on 'Lightning Protection and Electrical Safety audit'.	Surkhet, Karnali Province	2022-12-04 2022-11-06	60	SALNet, Karnali Province Government
IPMS	BURK:01	Niger	Rencontre mathématique au Niger	Maradi	2022-12-23 2022-12-24	30	
IPPS	AFSIN	Nigeria	Regional Colloquium on Physics and Applications (CRéPAs) 2022, third edition	Obafemi Awolowo University, lle-Ife	2022-06-14 2022-06-16	300	

IPICS	RWA:01	Rwanda	Characterization of Polychlorinated Biphenyl (PCBs) and Organochlorine Pesticides (OCPs) in Lake Kivu and Muhazi from Rwanda by Mr Nsanzimfura Jean Pierre from Rwanda Foods and Drugs Authority	University of Rwanda, Department of Chemistry, Kigali	20220112	22	
IPMS	EAUMP UR	Rwanda	First oral presentation of research findings	Kigali	2022-08-17	40	
IPMS	EAUMP UR	Rwanda	Research workshop in the department of Mathematics	Kigali	2022-11-17	35	
IPMS	EAUMP UR	Rwanda	Workshop on supervision in PhD Programme in Mathematics	Kigali	2022-11-17	35	
IPMS	EAUMP UR	Rwanda	Eastern Africa Algebra research Group (EAALG) Workshops on Algebra	Kigali	2022-12-04	25	EAALG Reseach group
IPMS	EAUMP UR	Rwanda	A four-days retreat for monitoring, evaluating and planning the EAUMP activities	Kigali	2022-10-06 2022-10-09	6	EAUMP
IPMS	PDEAAPP	Rwanda	Workshop on Nonlinear PDEs with variable exponents	Online	2022-11-23 2022-11-25	32	PDE control network
IPPS	RWA:01	Rwanda	Workshop on Python and Basic Astronomy for schools	Musanze	2022-12-10 2022-11-18	20	
IPPS	RWA:01	Rwanda	Workshop on Python and Basic Astronomy for schools	Musanze	2022-12-10 2022-12-18	20	
IPMS	BURK:01	Senegal	Ecole Polytechnique de Thiès	Thiès	2022-12-08 2022-12-09	60	
IPPS	KEN:02	South Africa	7th ASP2022 Conference	Nelson Mandela University	2022-11-28 2022-12-09	100	ICTP
IPICS	ANCAP	Tanzania	15th ANCAP Symposium	Arusha Techncal College, Arusha	20221122 20221123	33	
IPMS	EAUMP UDSM	Tanzania	Mathematics in Industries	Dar es Salaam	2022-05-01	45	Department of Mathematics
IPMS	EAUMP UDSM	Tanzania	Center Node EACMar	Dar es Salaam	2022-10-01	40	Department of Mathematics
IPMS	EAUMP UDSM	Tanzania	Sida-support for Mathematics in Secondary Schools	Pwani, East-Coastal	2022-10-02	120	Department of Mathematics
IPMS	EAUMP UDSM	Tanzania	EAUMP coordinators meeting	Dar es Salaam	2022-01-17 to 19	14	EAUMP-Nodes
IPMS	EAUMP UDSM	Tanzania	Mathematics Association of Tanzania	Morogoro	2022-08-29 2022-09-03	147	Department of Mathematics
IPMS	EAUMP UDSM	Tanzania	Girls Science Camp	Dar es Salaam	2022-10-03 2022-10-07	45	Physics Department

IPPS	TAN:01/2	Tanzania	Dissemination workshop on Solar Cooking in Tanzania - Removing Technical Barriers	University of Dar es Salaam New Library	2022-05-22	35	
IPPS	TAN:01/2	Tanzania	Science Camp for A-level Female students	Physics Department, University of Dar es Salaam	2022-10-03 2022-10-07	65	
IPPS	TAN:01/2	Tanzania	Solar PV Training	Physics Department, University of Dar es Salaam	2022-12-12 2022-12-16	23	
IPPS	AFSIN	Togo	4th Congress of SOAPHYS 2022	University of Lomé	2022-12-05 2022-12-10	250	
IPICS	NAPRECA	Uganda	One-day conference	Kampala	20220930 20220930	69	NAPRECA UGANDA
IPPS	ESARSWG	Uganda	Regional earthquake bulletin compilation workshop	Entebbe	2022-10-02 2022-10-06	18	
IPPS	UGA:02	Uganda	Data analysis workshop	Palace Hotel, Mbarara	2022-03-18 2022-03-22	20	
IPMS	EAUMP UNZA	Zambia	Curriculum Review workshop	Chisamba	2022-02-06 2022-02-10	13	

### \*List of all African Mathematics Seminar

Date	Speaker	Title
2022-05-01	David Fernandez-Breton	The combinatorics of the infinite
2022-05-25	Christian Bick	Coupled oscillators: Networks, symmetry, and synchrony
2022-05-25	Wiebke Toussaint Hutiri	Detecting and mitigating bias in voice activated technologies
2022-06-15	George Balla	The tropical symplectic Grassmannian
2022-06-29	Matilde Manzaroli	Real fibered morphisms of real del Pezzo surfaces
2022-07-13	Naina Ralaivaosaona	An analytic approach to the study of random digraphs
2022-07-27	Isaac Owino Okoth	Enumeration of k-noncrossing trees and related combinatorial structures
2022-08-24	Muthoni Masinde	A Prediction Model for Malaria using an Ensemble of Machine Learning & Hydrological Drought Indices
2022-09-15	Susan Wyche	Irrational Design: Considering Reflexivity, Speculation and Long-term Engagement in Human-Computer Interaction for Development (HCI4D)
2022-09-28	Ana Rita Pires	Infinite staircases in symplectic embeddings
2022-11-02	John Baez	Category Theory in Epidemiology
2022-11-16	Eric Lofgren	Computational Approaches to Emerging Infectious Diseases
2022-12-07	Simon Willerton	Looking at metric spaces as enriched categories

### 2.8 Expenditures

In 2022, the 63 ISP research group and scientific network partners were allocated in total about 29.9 MSEK, and were allowed to bring forward about 5.9 MSEK from 2021, in all having about 35.7 MSEK available for spending (*Tables 18 and 19*).

**Table 18.** Research groups' (RG) financial performance 2022 (BBF/BCF = balance brought /carried forward).

Region	Country	ISP Code	Start	BBF from 2020	Allocation	Loc.	ISP Paym.	Tot.	BCF to 2022
Africa	Burkina Faso	IPICS BUF:01	2008	0	315 000	260 200	45 000	305 200	0
Africa	Burkina Faso	IPICS BUF:02	2008	260 000	500 000	181 009	616 644	797 653	-37 653
Africa	Ethiopia	IPICS ETH:01	2002	199 388	450 000	0	711 715	711 715	-62 327
Africa	Ethiopia	IPICS ETH:02	2012	350 000	470 000	0	100 158	100 158	719 842
Africa	Rwanda	IPICS RWA:01	2014	-15 0687	450 000	122 214	234 748	356 962	77 351
Africa	Tanzania	IPICS TAN:02	2004	0	250 000	250 000	0	250 000	0
Africa	Uganda	IPICS UGA:01	2015	0	450 000	272 000	187 422	459 422	-9 422
Africa	Uganda	IPICS UGA:02	2016	-1 615	700 000	198 000	675 653	873 653	-175 268
Africa	Zambia	IPICS ZAM:01	2011	66 380	500 000	529 835	111 465	641 300	-74 920
Africa	Zimbabwe	IPICS ZAM:02	2008	26 000	400 000	66 000	143 135	209 135	216 865
Africa	Zimbabwe	IPICS ZIM:01	2006	0	386 000	249 122	117 938	367 060	0
Africa	Zimbabwe	IPICS ZIM:02	1999	9 658	500 000	113 097	415 813	528 910	-19 252
Africa	Zimbabwe	IPICS ZIM:03	2020	0	0	0	11 629	11 629	-11 629
Africa		IPICS RG, Total		894 124	5 371 000	2 241 477	3 371 320	5 612 797	623 587
Africa	Ethiopia	IPMS AAU	2005	-69 159	1 400 000	192 000	1 410 989	1 602 989	-272 148
Africa		IPMS RG, Total			1 370 000				
Africa	Burkina Faso	IPPS BUF:01	2013	93 000	430 000	300 000	0	300 000	223 000
Africa	Ethiopia	IPPS ETH:01	1990	170 000	430 000	339 130	260 870	600 000	0
Africa	Ethiopia	IPPS ETH:02	2005	643 000	420 000	0	746 929	746 929	316 000
Africa	Ethiopia	IPPS ETH:03	2021	0	230 000	32 602	223 879	256 482	-26 482
Africa	Kenya	IPPS KEN:01/2	1991	-179 802	480 000	335 845	169 451	505 295	-205 097
Africa	Kenya	IPPS KEN:02	1998	615 000	450 000	0	817 221	817 221	247 000
Africa	Kenya	IPPS KEN:03	1998	0	330 000	230 913	16 244	247 157	82 843
Africa	Kenya	IPPS KEN:04	2005	107 000	430 000	258 641	215 235	473 876	63 000
Africa	Kenya	IPPS KEN:05	2010	20 000	380 000		232 627	232 627	413 000
Africa	Mali	IPPS MAL:01	2011	0	430 000	154 566	285 075	439 641	-9 641
Africa	Rwanda	IPPS RWA:01	2014	91 000	425 000		560 183	560 183	-44 183
Africa	Tanzania	IPPS TAN:01/2	1989	0	480 000	263 347	538 850	802 197	-322 197
Africa	Uganda	IPPS UGA:01/2	1989	0	480 000	380 000	-44 183	335 817	100 000
Africa	Uganda	IPPS UGA:02	2013	-1 152	430 000	307 500	144 736	452 236	-23 388
Africa	Zambia	IPPS ZAM:01	1988	0	430 000	330 000	422 197	752 197	100 000
Africa	Zimbabwe	IPPS ZIM:01	2013	0	380 000	380 000	-23 388	356 612	0
Africa		IPPS RG, Total		1 558 046	6 635 000	3 312 543	4 565 926	7 878 470	913 855
Asia	Bangladesh	IPICS BAN:04	2003					512 841	
	Bangladesh	IPICS BAN:04		102 624	400 000	176 000	336 841		-10 217
Asia	<u> </u>		2013	0	500 000	500 000	5 400	505 400	102 624
Asia	Laos	IPICS LAO:01	2005	190 000	550 000	225 639	10 004	235 643	500 000
Asia	Laos	IPICS LAO:04	2020	0	450 000	147 689	205 010	352 699	97 000
Asia		IPICS RG; Total		292 624	1 900 000	1 049 328	557 255	1 606 583	689 407
Asia	Bangladesh	IPPS BAN:02/1	2018†	0	200 000	173 758	26 242	200 000	0
Asia	Bangladesh	IPPS BAN:02/2	2018	-4 655	280 000	136 601	154 927	291 529	-16 184
Asia	Bangladesh	IPPS BAN:04	2011	0	530 000	508 628	28 560	537 188	-7 188
Asia	Bangladesh	IPPS BAN:05	2014	0	306 000	2 144	294 001	296 145	0
Asia	Laos	IPPS LAO:01	2005	0	307 700	293 518	14 182	307 700	0
Asia	Myanmar	IPPS MYA:01	2016	566 000	300 000	0	514 464	514 464	351 000
Asia	Nepal	IPPS NEP:01	2021	64 000	300 000	0	287 392	287 392	76 000
Asia		IPPS RG, Total		126 000	290 000	93 133	322 867	416 000	0
Latin Am.	Bolivia	IPICS BOL:01	2018	0	440 000	440 000	0	440 000	0
Latin Am.	-	IPICS RG; Total		0	440 000	440 000	0	440 000	0
		Grand Tot., RG		3 426 980	18 259 700	8 443 130	11 548 125	19 991 257	2 358 329

Research groups had 60% of the total funding (59% in 2021) and accounted for 60% of the total expenditure (61% in 2021), 42% of which were transferred for local use (*Table 18*). Scientific networks had 40% of the total funding (39% in 2021) and accounted for 40% of the total expenditures (39% in 2021), 50% of which were transferred for local use (Table 19). It should be noted that funding transferred for local use may not be spent the same year as the transfer is conducted, but may be carried forward on a local account. This is accounted for in each partner's yearly financial report to ISP.

Considering the funding available to research groups (21.7 MSEK; Table 18), they've spent 92% (82% in 2021), while scientific networks (Table 19) spent 94% (77% in 2021) of available funding (14.0 MSEK). The increased spending in comparison to 2021 and 2020 may to an extent be an effect of lifted covid-19 restrictions from 2021 and onwards.

Considering the financial balance, research groups were allowed to carry forward totally 11% of their ISP funding (Table 18; 11% also in 2021), while scientific networks carried forward 4% (*Table 19*; 18% in 2021). The lower carry forward of networks, can primarily be explained by a higher share of negative balances among networks than among research groups. Negative balances at the end of the year are always deducted from the next year's awarded allocation.

Table 19. Scientific network's (NW) financial performance 2022 (BBF/BCF = balance brought /carried forward).

Region	ISP Code	Country of	Start	BBF from	Allocation	Loc	ISP	Tot.	BCF to
Region	isr code	coordination	Start	2021	Allocation	Use	Paym.	Exp.	2023
Africa	IPICS ANCAP	Tanzania	2001	-16 000	450 000	434 000	0	434 000	0
Africa	IPICS ANEC	Burkina Faso	2013	0	500 000	50 000	493 293	543 293	-43 293
Africa	IPICS NAPRECA	Uganda	1988	-9 571	550 000	357 655	70 106	427 761	0
Africa	IPICS RABiotech	Burkina Faso	2008	0	850 000	850 000	0	850 000	0
Africa	IPICS NW, Total			-25 571	2 350 000	1 691 655	563 399	2 255 054	-43 293
Africa	IPMS APREA	Kenya	2021	0	277 000	277 000	0	277 000	0
Africa	IPMS BURK:01	Burkina Faso	2003	593 000	980 000	968 052	226 371	1 194 423	320 000
Africa	IPMS CoRS	Ethiopia	2021	-59 121	315 000	0	247 365	247 365	8 514
Africa	IPMS EAALG	Uganda	2021	60 000	300 000	16 578	251 085	267 663	91 000
Africa	IPMS EAUMP	Uganda	2002	455 101	2 863 999	1 440 788	2 373 121	3 813 909	-494 809
Africa	IPMS PDEAPP	Rwanda	2021	43 400	300 000	293 470	19 926	313 396	30 000
Africa	IPMS NW, Total			1 092 380	5 035 999	2 995 888	3 117 868	6 113 756	-45 295
Africa	IPPS AFSIN	Ivory Coast	2011	428 000	830 000	77 186	1 248 791	1 325 976	-67 976
Africa	IPPS EAARN	Uganda	2014	-16 669	500 000	167 282	316 049	483 331	0
Africa	IPPS ESARSWG	Zimbabwe	1997	324 000	200 000	338 721	0	338 721	215 000
Africa	IPPS MSSEESA	Zambia	2009	381 000	460 000	86 560	404 932	491 492	349 508
Africa	IPPS NW, Total			1 116 331	1 990 000	669 749	1 969 772	2 639 521	496 532
Africa	ISP EANWoBAS	Uganda	2019	0	200 000	0	205 090	205 090	-5 090
Africa	ISP NW, Total			0	200 000	0	205 090	205 090	-5 090
Asia	IPICS ANFEC	Laos	2013	86 000	450 000	536 000	0	536 000	0
Asia	IPICS ANRAP	Bangladesh	1994	180 000	450 000	450 000	0	450 000	180 000
Asia	IPICS CAB-CCS	Cambodia	2017	0	88 000	87 820	0	87 820	0
Asia	IPICS NITUB	Bangladesh	1995	0	160 000	160 000	0	160 000	0
Asia	IPICS NW; Total			266 000	1 148 000	1 233 820	0	1 233 820	180 000
Asia	IPMS SEAMaN	Laos	2015	0	880 000	22 000	715 530	737 530	
Asia	IPMS NW, Total			0	880 000	22 000	715 530	737 530	0
	Grand Tot., NW			2 449 140	11 603 999	6 613 112	6 571 659	13 184 771	582 854

**Table 20.** Ranking of ISP's partner countries in Transparency International's <sup>13</sup> Corruption Perception Index. **Low** number = less corruption. 180 is the highest score (Somalia).

Corruption Perceptions Index <sup>14</sup>	Rating 2022 (2021)
Rwanda	54 (52)
Burkina Faso	77 (78)
Ethiopia	94 (87)
Tanzania	94 (87)
Zambia	116 (117)
Nepal	110 (117)
Kenya	123 (128)
Bolivia	126 (128)
Laos	126 (128)
Mali	137 (136)
Uganda	142 (144)
Bangladesh	147 (147)
Zimbabwe	157 (157)
Myanmar	157 (140)

https://www.transparency.org/en# 2023-05-17.
 https://www.transparency.org/en/cpi/2021 2023-05-16.

Table 21: List of other funding agenices/institutes etc that have given support to ISP supported groups in 2022.

Other funding (in alphabetical order)

AAU Women Researchers Fund, Ethiopia

Abraham Gannibal Project

African Maths Initiatives

ARC (Asia Research Center)

BIORAF (Institute of Botany of the Czech Academy of Sciences), Czech Republic

BLRI (Bangladesh Livestock Research Institute), Government of Bangladesh

CEA-MITIC (Center of Excellence in Mathematics, Computer Science, Information and

Communication Technologies), Senegal

Centennial Research Grant (CRG), University of Dhaka, Bangladesh

Center for International Helth LMU Klinikum, Germany

Chemical Society of Thailand (Bangkok Bank)

CIMPA (Centre International de Mathématiques Pures et Appliquées)

Comprehensive Research Fund (SSHEP/MOES, ADB)

COMSTECH (Standing Committee for Scientific and Technological Cooperation)

Deutsche Gesellschaft für Internationale Zusammenarbeit

EMS (European Mathematical Society

**EU-University Network in Energy** 

FONER (Fonds National pour l'Education et la recherche), Burkina Faso

FORMAS (the Swedish Research Council for Sustainable Development)

Foundation Compositio Mathematica

Graduate Students Grant, Ethiopia

Higher Life Foundation Delta Philanthropies Fellowship

ICTP (International Center for Theoretical Physics)

IFS (International Foundation for Science)

IMU (International Mathematical Union)

KAPEK KENYA

Korean Foundation for Advanced Study (KFAS)

Makerere University Research and Innovation Fund

Merck anti schistomiasis Grant

Ministery of Education, Myanmar

Ministry of Education (BMBF), Germany

Ministry of Education, Bangladesh

Ministry of Innovation and Technology, Ethiopia

Ministry of Science and Technology (MOST), Bangladesh

National Council for Science and Technology, Rwanda

National Research Fund (NRF), Kenya

National Science Technology Council (NSTC), Zambia

NORAD-Energy Technology Network

NORHED II

NSTC (National Science & Technology Council) Zambia - FNI (Fundo Nacional de Investigação)

Mozambique Grant

OPER foundation, CANADA

Organization for the Prohibition of Chenical Weapons (OPCW)

Pan Africa Regional Scholarship and Innovation Fund for Applied Sciences, Engineering and Technology (PASET-RSIF)

Queen Elizabeth Scholars, Canada

Regional Scholarship and Innovation Fund (RSIF), Kenya

Research and Innovation Fund, Government of Uganda

Research fund on Science, National University of Laos

Research fund, University Joseph Ki Zerbo, Burkina Faso

Seoul National University, Korea

Sida bilateral program

Technische Universität Berlin

TechWomen Emerging Leaders Mentorship, USA

UMMISCO (Unité Mixte de Modélisation mathématique et informatique de systèmes complexes, naturels, biologiques ou sociaux), France

UNIMAS, Malaysia

UR-Directorate of Reseach and Innovation

WOLIMODS (Working Life Interaction in Modelling and Data-Skills), Team Finland Knowledge program

### Appendix 3. OTHER ISP COOPERATION

Besides the ISP core program, reported in the previous section, ISP carries out different assignments by Sida and engages in collaboration with other bodies.

### 3.1 Sida bilateral research cooperation

### 3.1.1 Bolivia

In 2022, ISP was assigned to coordinate the Swedish partners of the Sida-Bolivia bilateral research cooperation. The program run from 1 May 2021 to 31 December 2025. The cooperation includes two universities in Bolivia: Universidad Mayor de San Andres (UMSA) in La Paz, and Universidad Mayor de San Simón (UMSS) in Cochabamba.

The program run by UMSA is titled: *science, technology and innovation at University Mayor de San Andrés,* includes seven research areas:

- 1. Food science and technology for the sustainable development of Bolivia
- 2. Technological and productive development
- 3. Water and soil
- 4. Energy, renewable raw materials and mining
- 5. Health
- 6. Socioeconomics, education and culture
- 7. Research management

The program is articulated in 21 subprograms of which only one has no Swedish partners. The following Swedish university are involved in the Sida-UMSA bilateral research cooperation:

- Karolinska Institute (KI)
- KTH Royal Institute of Technology (KTH)
- Lund University (LU)
- Luleå University of Technology (LTH)
- Swedish University of Agricultural Sciences (SLU)
- University of Gothenburg (GU)
- Umeå University (UmU)
- Uppsala University (UU)

The Sida-UMSS bilateral research copperation program is entitled: *strengthening institutional research capacities at Universidad Mayor de San Simom,* and has 10 research areas and 12 subprograms, of these one is a continuation of a subprogram of the previous bilateral cooperation phase. Of these 12 new programs, three do not have Swedish partners.

- 0. Chemical technologies (continuation of an old program)
- 1. Agriculture, Livestock and Forestry
- 2. Sustainable management and governance of water and soil
- 3. Social sciences and humanities
- 4. Innovation and technology transfer (new and old subprograms)
- 5. Energy
- 6. Health and life sciences
- 7. Strengthen SICTI-UMSS management no Swedish partners
- 8. Institutional fund for science and technology (FOICyT) no Swedish partners
- 9. Research training quality assurance
- 10. Information communication technologies no Swedish partners (previous phase)

The Swedish partners in the Sida-UMSS program are:

- Lund University (LU)
- KTH Royal Institute of Technology (KTH)
- Stockholm University (SU)
- Swedish University of Agricultural Sciences (SLU)
- University of Gothenburg (GU)
- Umeå University (UmU)

### 3.1.2 Cambodia

On 14 January 2019, the agreement of Sida's new bilateral program with Royal University of Phnom Penh (RUPP) was signed. The Sida program builds on previous ISP core support to chemistry, mathematics, and physics at RUPP, but is expanded at Faculty of Science to include the Departments of Biology and Environmental Science. It also covers Information and Communication Technology (ICT), Department of Bioengineering at Faculty of Engineering, and the university's general support systems including financial administration. ISP has the task to coordinate the scientific cooperation, <a href="https://spidercenter.org/">https://spidercenter.org/</a> at Stockholm University coordinates the ICT part.

The Swedish science collaborators are:

- Linköping University (LiU)
- Lund University (LU)
- Stockholm University (SU)
- Swedish University of Agricultural Sciences (SLU)
- Umeå University (UmU)
- Uppsala University (UU)

### 3.1.3 Ethiopia

In 2021, ISP continued to coordinate the Swedish side of the Sida bilateral program for research cooperation with Armauer Hansen Research Institute (AHRI) in Addis Ababa, Ethiopia. The research focuses on infectious diseases in a broad sense.

This agreement includes four Swedish universities:

- Karolinska Institute (KI)
- Lund University (LU)
- Örebro University (OrU)
- Uppsala University (UU)

In 2022, ISP also continued the coordination at the Swedish side of the Sida bilateral program for research cooperation with Addis Ababa University (AAU) with participants in Electrical engineering, Biotechnology, Education, Economics and Management.

This agreement includes five Swedish universities:

- Chalmers University of Technology (CTH)
- Jönköping International Business School (JIBS)
- KTH Royal Institute of Technology (KTH)
- Swedish University of Agricultural Sciences (SLU)
- University of Gothenburg (GU)

### 3.1.4 Mozambique

ISP has been assigned by Sida to coordinate the bilateral research cooperation on the Swedish side with Eduardo Mondlane University (UEM), Maputo, for the period 1 November 2017 to 31 December, 2022, with a no-cost extension 1 January 2023 to 31 December 2024.

The program consists of 21 subprograms, grouped in six thematic areas: Population, Health and Well-Being of the Society, Agriculture, Nutrition and Food Security, Natural Resources, Environment and Climate Change, Technology and Innovation, Education, Culture, Good Governance, Ethics and Human Rights, and Key Supporting Elements.

The Swedish institutions involved are:

- Blekinge Institute of Technology (BTH)
- Chalmers University of Technology (CTH)
- Jönköping University (JU)
- Karolinska Institute (KI)
- KTH Royal Institute of Technology (KTH)
- Linköping University (LiU)
- Luleå University of Technology (LTU)
- Lund University (LU)
- Mälardalen University (MDH)
- Örebro University (OrU)
- Stockholm University (SU)
- Swedish University of Agricultural Sciences (SLU)
- Umeå University (UmU)
- University of Borås (HB)
- University of Gothenburg (GU)
- University of Gävle (HiG)
- Uppsala University (UU)

A number of universities in South Africa are also part of this collaboration, namely:

- North West University (NWU)
- Stellenbosch University (SUN)
- University of the Witswatersrand (Wits)
- University of Cape Town (UCT)
- University of Pretoria (UP)
- University of Western Cape (UWC)
- University of the Free State (UFS)
- University of South Africa (UNISA)

### 3.1.5 Rwanda

ISP has been assigned by Sida to coordinate the bilateral research cooperation with University of Rwanda (UR) on the Swedish side of the program in the period 1 July 2019 to 30 June 2024.

The program aims to increase the production and use of scientific knowledge of international quality that contributes to Rwanda's development and is grouped into five thematic areas:

- Environmental Research (3 subprograms)
- Natural Science and Mathematics Research (2 subprograms)
- Research for Health (3 subprogram)
- Social Sciences Research (5 subprograms)

Research Support (4 subprograms)

The cooperation comprises PhD training, postdoctoral fellowships, Master's training, research and innovation grants, support to research infrastructure like ICT and library and development of capacity for research management, as well as stengthening the research culture at University of Rwanda.

The Swedish institutions that are involved in the program 2022 are:

- Chalmers University of Technology (CTH)
- Jönköping University (JU)
- Linköping University (LiU)
- Lund University (LU)
- Örebro University (OrU)
- Stockholm University (SU)
- Swedish University of Agricultural Sciences (SLU)
- Umeå University (UmU)
- University of Borås (HiB)
- University of Gothenburg (GU)
- Uppsala University (UU)

### 3.1.6 Tanzania

In 2015, Tanzania entered into a new bilateral phase with Sida, covering support to three universities and one agency in Dar es Salaam:

- University of Dar es Salaam (UDSM)
- Ardhi University (ARU)
- Muhambili University of Health and Allied Sciences (MUHAS)
- Tanzania Commission for Science and Technology (COSTECH)

The agreement period, from 1 July, 2015 to 30 June, 2020, was extended until 31 December 2023. Sida entrusted ISP the coordination on the Swedish side. The emphasis for this program phase is on the development of local PhD programs in Tanzania.

The program consists of 32 subprograms which covers the broad spectrum of research areas, such as Capacity Building in Mathematics, Drinking Water Sources (DAFWAT), Food Security, Health Systems, HIV and Tuberculosis (TB), Land Resources, Malaria and Neglected Tropical Diseases, Molecular Biosciences, Real Estate Markets Dynamics, Research and Innovations, Research Communication, Research Training, Road Traffic Injury Prevention, Smart Grid Capacity, Strengthening Research Management, Sustainable Sanitation, Sustainable Water Resources, Tourism and Urban planning.

The Swedish partners involved in the program are:

- Karolinska Institute (KI)
- Linköping University (LiU)
- Lund University (LU)
- KTH Royal Institute of Technology (KTH)
- Stockholm University (SU)
- Swedish Research Council (VR)
- Swedish University of Agricultural Sciences (SLU)
- Umeå University (UmU)
- University of Gothenburg (GU)
- Uppsala University (UU)

### 3.1.7 Uganda

ISP was assigned by Sida to coordinate on the Swedish side the bilateral research cooperation with Uganda. The agreement period for the bilateral program was July 2015 - June 2020, but it was prolonged for a two-year period,1 July 2020 to 30 June 2022. The program consisted of 17 subprograms in various fields.

The program ended as planned on 30 June 2022, and a final dissemination conference was held in hybrid format, with most Swedish partners attending on-line, in Monyonyo, Uganda 9-10 May. Most of the enrolled students managed to graduate.

The five Ugandan universities were:

- Makerere University (MAK)
- Busitema University (BU)
- Kyambogo University (KYU)
- Gulu University (GU)
- Mbarara University of Science and Technology (MUST)

Support has been provided to 61 Postdocs, 113 PhD students and 180 Master students, some of them sandwich students in Sweden but the majority local students at Makerere University. Of these, all Postdocs but one have completed their projects, i.e., 23 PhD students and 115 Master students have graduated.

Before the Sida bilateral research cooperation started in Uganda there was less than 100 scientific publications per year. Today it is more than 370 publications per year.

The Swedish institutions involved in the program were:

- Chalmers University of Technology (CTH)
- Karolinska Institute (KI)
- KTH Royal Institute of Technology (KTH)
- Linköping University (LiU)
- Lund University (LU)
- Mälardalen University (MDH)
- Stockholm University (SU)
- Swedish University of Agricultural Sciences (SLU)
- University of Borås (HiB)
- University of Gothenburg (GU)
- Uppsala University (UU)

### 3.1.7 Payment of subsistence allowances to Sida bilateral students

In 2022, ISP continued the Sida assignment to administrate the payment of allowances and insurance costs while in Sweden for PhD students and postdocs in the bilateral programs on research cooperation with Bolivia, Cambodia, Ethiopia, Mozambique, Rwanda, Tanzania, and Uganda.

### 3.2 Stockholm University

In 2020, Stockholm University (SU) renewed the cooperation with ISP for 2021-2025. <sup>15</sup> The SU funding 2022 has been used for:

 $<sup>^{15}</sup>$  Full report of the ISP and SU cooperation 2011-2015 and  $\,\underline{2016\text{-}2019}.$ 

- Continued support to research groups in chemistry and physics at the Faculty of Science, National University of Laos, Vientiane, Laos.
- Continued support to a project together with the American Institute of Physics (AIP), distributing textbooks reviewed by AIP to ISP physics groups and networks.

Stockholm University staff members remain to been engaged in ISP collaboration, as host supervisors to students from ISP partners in Africa and Asia.

### 3.3 Thailand International Cooperation Agency (TICA)

The first admitted student in the Joint Thailand-Sweden PhD Scholarship Program, Ms Thiri Yadanar Htun, graduated in 2022 after studies at Suranaree University of Technology, Thailand and Chalmers University of Technology, Gothenburg, Sweden. She now works as a lecturer at University of Mandalay, Myanmar, and plans to apply for post-doctoral position during 2023.

The second and third admitted PhD student, Ms Moh Moh Aung (nuclear physics) and Mr Soe Ko Ko Aung (physical chemistry) arrived in Uppsala during 2019 and continued their PhD studies at Uppsala University until 2021 (prolonged because of the Covid-19 pandemic). In 2022, Moe Moe Aung is still studying in Thailand. Mr Soe Ko Ko Aung returned to the University of Mandalay after he successfully defended his PhD thesis at Sakon Nakhon Rajabhat University in Thailand, in September 2021. He now works as a lecturer there and is the new group leader for the ISP supported group IPPS MYA:01.

The fourth admitted student, Ms Ei Ei Phyo Myint, Myanmar graduated in 2022, at Tropical and Parasitic Research Unit, Faculty of Medicine, Mahasarakham University, Thailand. She was expected as a guest student at Umeå University in Sweden in 2021, but her visa application was declined by the Swedish embassy in Bangkok.

The fifth admitted student, Ms Su Yee Win, Myanmar, is presently admitted to a PhD program at the Laboratory of Biopolymers and Nanoengineering for Drug Delivery and Molecular Imaging, Faculty of Biomedical Engineering, Mahidol University, Thailand, and is due to graduate in late 2023.

### 3.4 Al Baha University

The agreement between Al Baha University (ABU) and Uppsala University was terminated in April 2019, with retroactive effect from the 31 December 2017.

In 2022, only one PhD student remained in the program, Mr Mohammed Albuhayri, who successfully defended his PhD thesis "Asymptotics of implied volatility in the Gatheral double stochastic volatility model" in November 2022 at Mälardalen University in Sweden. He has returned to ABU.

### 3.5 Thailand Center of Excellence in Physics (ThePCenter)

ISP has had a long-lasting cooperation in physics with University of Chang Mai<sup>17</sup>. In 2019, Prof Thiraphat Vilaithong, Executive Director of <u>ThePCenter</u>, visited ISP and requested a formalized cooperation based on previous relations. In January 2021, a memorandum of understanding (MoU) was signed between ISP and ThePCenter.

ThEPCenter acts as hosts for ISP physics postgraduate students and researchers in ISP partner countries. ISP acts as coordinator for Thai physics postdoctoral fellows at Swedish universities.

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<sup>&</sup>lt;sup>16</sup> Link to the thesis: http://sutir.sut.ac.th:8080/jspui/handle/123456789/9060.

<sup>&</sup>lt;sup>17</sup> Between 1982 and 2005. More information in <u>The International Science Programme in Sri Lanka and Thailand: Three decades of research cooperation</u> by Rebecca Andersson and Marta Zdravkovic, 2017.

The MoU will allow short-term research training for the duration of maximum one year in Thailand for ISP associated physics PhD students or postdoctoral fellows in a facility where ThEPCenter has affiliated academic and technical resources, including ThEPCenter member institutions. ThEPCenter will accept up to five such fellows per year from ISP partner institutions in Asia and Africa. The travel and living expenses, including health insurance, will be financed by ISP, whereas ThEPCenter will provide an in-cost and/or in-kind contribution according to Thai standards.

The same MoU will also facilitate postdoctoral research visits for the duration of maximum one year in Sweden for Thai PhD physics graduates in various areas of physics, where ISP has the competence to propose host institutions. ISP commits to introduce and arrange accommodation in Sweden to successful candidates, if necessary, but accommodation costs are in all cases to be paid by the visiting postdoctoral researcher.

### 3.6 International Year of Basic Sciences for Development (IYBSSD 2022)

### List of ISP's #IYBSSD2022 webinars.

Date	Title	Presenter	Country	Number of registrered participants
2022-01-18	Designing a research project	Prof Iqbal Parker	South Africa	75
2022-02-15	Celebrating IYBSSD2022 through the most iconic symbol of basic science, the Periodic Table of the Elements, the Kiswahili/English version	Dr Solomon Derese	Kenya	69
2022-03-01	Journey of ANRAP: paving the way towards capacity building and antidiabetic drug discovery research	Prof Begum Rokeya	Bangladesh	73
2022-03-08	Engendering Climate Change and Energy Transitions	Dr Kavya Michael and Dr Olufolahan Osunmuyiwa	Sweden and UK	30
2022-03-15	Research capacity building through regional collaboration	Prof Martin Singull	Sweden	71
2022-04-05	Global, regional, and local environmental occurrence and behaviour of organic pollutants	Prof Henrik Kylin	Sweden	16
2022-04-19	The Ethiopian Academy of Sciences: A journey since its establishment	Prof Teketel Yohannes	Ethiopia	12
2022-04-26	Presentation of EAALG - a new research group supported by ISP	Dr David Ssevviiri	Uganda	30
2022-05-03	From Laboratory to Commercialization - Challenges for Developing Countries	Prof Vijaya Kumar	Sri Lanka	37
2022-05-31	Without prioritizing research into life oriented technology and implementation of the outcomes, in turn creating an infrastructure for basic science research, the LMICs will not be able to make to the SDGs	Prof K. Siddique e- Rabbani	Bangladesh	50
2022-06-14	Secondary metabolites from African medicinal plants: chemotaxonomic markers and potential prototypes of medicines for neglected tropical diseases	Prof Jacob Midiwo	Kenya	117
2022-09-13	Science in Action: the Journey of an IPICS-initiated Biomedical Research Group in Bangladesh	Dr Liaquat Ali	Bangladesh	51

2022-10-11	50 years Bangladesh-Sweden Relationship and Contribution in the Development of Basic Sciences, University of Dhaka, Bangladesh	Prof Mohammad Shoeb	Bangladesh	100
2022-11-15	Competition in Sciences for Secondary School Students	Paul Vaderlind	Sweden	49

# Origin of participants in the ISP webinars: Countries and continents

Country	Continent
Australia	Oceania
Azerbaijan	Asia
Bangladesh	Asia
Belgium	Europe
Bolivia	Latin America
Botswana	Africa
Burkina Faso	Africa
Burundi	Africa
Cambodia	Asia
Cameroon	Africa
Canada	North America
Chad	Africa
Congo-Kinshasa	Africa
Djubouti	Africa
Dominican republic	Latin America
Ecuador	Latin America
Egypt	Africa
Eswatini	Africa
Ethiopia	Africa
France	Europe
Germany	Europe
Ghana	Africa
Hongkong	Asia
Hungary	Europe
India	Asia
Ivory Coast	Africa
Kenya	Africa
Lao PDR (Laos)	Asia
Malaysia	Asia
Mali	Africa
Mozambique	Africa
Myanmar	Asia
Namibia	Africa
Nepal	Asia
Niger	Africa
Nigeria	Africa
Pakistan	Asia

Peru	Latin America
Rwanda	Africa
Saudi Arabia	Asia
Senegal	Africa
Somalia	Africa
South Africa	Africa
South Korea	Asia
Sri Lanka	Asia
Sudan	Africa
Sweden	Europe
Switzerland	Europe
Tanzania	Africa
Thailand	Asia
Togo	Africa
Tunisia	Africa
Turkey	Europe
Uganda	Africa
United Kingdom	Europe
United States	North America
Zambia	Africa
Zimbabwe	Africa

# Appendix 4. MORE ABOUT ISP

### 4.1 Other ISP activities

List of delegations, travel and visits.

Name	Delegations, visits and travel	Start ( end)
Leif Abrahamsson, Ulrica Ouline	Virtual meetings with Makerere University, bilateral programme.	Several meetings
	Planning for the final conference in the bilateral programme	January-May 2022
Peter Sundin	Virtual participation and speech in the Seminar of Food, Health and Environment for Sustainable Development, Department of Chemistry, University of Dhaka, Bangladesh	2022-02-09
Peter Sundin	Visit to Bangladesh Embassy, Stockholm, Sweden. Participation in Executive Lounge Event on 50 Years of Diplomatic Relations between Bangladesh and Sweden, jointly organised by the Bangladesh Embassy, Stockholm, and the Sweden-Bangladesh Business Council (SBBC).	2022-03-23
Peter Sundin	Virtual participation in the Guild Agenda - North-South working group meeting	2022-03-30
Leif Abrahamsson, Chris Bengtsson	Virtual Annual Review Meeting, Uganda	2022-04-31
Therese Rantakokko	Visit to University Eduardo Mondlane for Sida bilateral research program	2022-05-01 2022-05-10
Peter Sundin	Lunch at Soyokafé restaurant, Stockholm, Swden, on invitation by the Ambassador of Mongolia, Mr. Janabazar Tuvdendorj	2022-05-02
Peter Sundin, Barbara Brena and Ulrica Ouline	Participation in Sida's event "Fira 50 år av utvecklingssamarbete med Bangladesh", Sida HQ, Stockholm, Sweden. Poster presentation of ISP's support in Bangladesh	2022-05-04
Archana Ganganaboina	Annual Planning Meeting for Sida bilateral program in Tanzania	2022-05-06 2022-05-14
Ulrica Ouline	On-line participation in the Final conference for the bilateral programme in Uganda	2022-05-09 2022-05-10
Leif Abrahamsson	Final conference for the bilateral programme in Uganda	2022-05-09 2022-05-10
Leif Abrahamsson	Visit to University of Nairobi, Kenya and University of Dar es Salaam, Tanzania	2022-05-11 2022-05-16
Mohammad Shoeb	Group leader for a ISP supported chemistry group at University of Dhaka, Bangladesh	2022-05-16
Bengt Ove Turesson, Therese Rantakokko	Visit to University of Rwanda for the Annual Planning Meeting (Sida bilateral research program)	2022-05-16 2022-05-20
Olle Terenius and Hossein Aminaey	Annual Review Meeting and 42-year anniversary at Addis Ababa University (AAU), Ethiopia. Inauguration of Cube of Hope	2022-05-17 2022-05-20
Khamphou Vone and Innavanh Namkhaluck	Erasmus+ ICM staff exchange from National University of Laos. One- afternoon visit to ISP	2022-05-23
Leif Abrahamsson	Virtual Annual Review Meeting, Mozambique	2022-05-30 2022-06-03
Barbara Brena, Carla Puglia and Ulrica Ouline	Ecsite Conference in Heilbronn, Germany	2022-06-01 2022-06-04
Peter Sundin	Visit to Linköping University, Sweden. Opponent to Master's Thesis at Department of Thematic Studies, Environmental Change	2022-06-02
Peter Sundin	Visit to KTH, Stockholm, Sweden. Participation in the interactive event "Rwanda today, from fragility to resilience", kointly organised by the Embassy of Rwanda to Sweden and the Living History Forum	2022-06-15
Hossein Aminaey	Erasmus+ ICM staff exchange from National University of Laos	2022-06-26 2022-07-09
Olle Terenius (and Ulrica Ouline)	Delegation from Royal University of Phnom Penh, Cambodia Preparation for Social Sciences program for RUPP. Rector and Deans for RUPP under SPIDER invitation	2022-08-31
Barbara Brena and Carla Puglia	Visit to supported research groups in Kenya	2022-09-09 2022-09-17

Peter Sundin	Visit to Nordita and KVA, Stockholm, Sweden. Introducing co-traveller Prof Manasse Mboyne, University of Rwanda, to the visited institutions.	2022-09-20
Peter Sundin	Virtual participation and speech "ISP Chemistry Cooperation in Kenya" in the 3rd International Inorganic Chemistry Conference, 29-30 September 2022, University of Nairobi, Kenya	2022-09-30
Hossein Aminaey and Bengt Ove Turesson	Visit to Nairobi, Kenya (IPMS)	2022-07-23 2022-07-28
Hossein Aminaey and Bengt Ove Turesson	Visit to Ethiopia for Sida bilateral research program	2022-11-06 2022-11-10
Anna Wallin	Visit to Royal University of Phnom Penh for the Annual Planning Meeting (Sida bilateral research program)	2022-11-08 2022-11-15
Carla Puglia and Archana Ganganaboina	Visit to Bolivia for the Sida bilateral research program	2022-11-10 2022-11-14
Barbara Brena	Stakeholder meeting at Sida HQ about Sweden's future development cooperation with Myanmar	2022-11-24
Leif Abrahamsson, Annika Kollstedt	Annual Planning Meeting for the bilateral programme in Mozambique	2022-11-28 2022-12-02
Peter Sundin, Solomon Tesfalidet and Ulrica Ouline	Travel to Ethiopia, Botswana, South Africa, Zambia and Zimbabwe. Visit to supported and formerly supported chemistry groups and networks. Presentation of EFFORT by Peter Sundin at the SANORD Conference in Polkwane, South Africa	2022-11-29 2022-12-09
Mohamed El Tom from Sudan	IPMS reference group member. Discussion with Stockholm University about the PACM (Pan African Centre for Mathematics)	2022-12-11 2022-12-17
Leif Abrahamsson	Virtual meetings with Eduardo Mondlane University and Embassy of Sweden, Mozambique. Planning of the prolongation 2023-2024	Several meetings during 2022
Leif Abrahamsson, Bengt Ove Turesson, Hossein Aminaey	Virtual meetings with IPMS-supported groups and networks. Planning for 2022 activities	Several meetings during 2022

### 4.2 ISP organization

#### **ISP Board**

The Board is appointed by the Vice Chancellor of Uppsala University in consultation with the Swedish International Development Cooperation Agency (Sida). The Board consists of:

- Uppsala University Vice Chancellor or whoever the Vice Chancellor assigns, also Chairperson
- Uppsala University University Director or another member of the university administrative leadership, as proposed by the Head of ISP
- a member from an international organisation, active in a field relevant to ISP, nominated by the Faculty Board
- three members who are scientists at Uppsala University, of which at least two in fields of science of direct relevance for the program, nominated by the Faculty Board
- one representative for the developing countries, nominated by the Board of ISP
- one member with considerable experience of work outside the academic sphere, of relevance to the program, nominated by the Board of ISP
- one representative of the students appointed by the student unions together,
- three deuty members representing different scientific disciplines within ISP, being common deputies for scientific members from Uppsala University and from other institutions of higher education, nominated by the Faculty Board

### For 2022, the Board constitutes of:

- Prof Johan Tysk (M), Vice-Rector, Uppsala University (Chairperson)
- Prof Kersti Hermansson (F), Dept of Chemistry-Ångström, UU (Vice Chairperson)
- Ms Minh Thao Nguyen, representative of the student organisations Uppsala University.
- Dr Jennifer Blanke (F), non-executive Director, African Risk Capacity (ARC) Group, South Africa
- Prof Lars Österlund (M), Dept of Engineering Sciences, Uppsala University

- Prof Giulia di Nunno (F), Dept of Mathematics, University of Oslo, Norway
- Dr Hans Corell (M), Ambassador (ret.), Former Under-Secretary-General for Legal Affairs and the Legal Counsel of the United Nations
- Ms Erika Dabhilkar, Director of Division for internationalisation, Uppsala University. Replaced 2022-08-01 by Dr Eva Söderman (F), Director of Division for internationalisation, Uppsala University
- Prof Ameenah Gurib-Fakim, former President of the Republic of Mauritius, and former member of the Scientific Reference Group to the ISP chemistry program
- Prof Olle Inganäs (M), Dept of Physics, Chemistry and Biology, Linköping University
- Prof Tom Britton, Department of Mathematics, Stockholm University
- Dr Veronica Crispin (F), Dept of Mathematics, Uppsala University. Replaced 2022-06-14 by Prof Fan Yang Wallentin (F), Dept of Statististics, Uppsala University
- Prof Klaus Leifer, representative of the personnel unions, Uppsala University

### Deputy Board members, Uppsala University:

- Prof Fan Yang Wallentin (F), Dept of Statistics, Uppsala University. Replaced 2022-06-14 by Dr Jian Qiu (M), Dept of Mathmatics, Uppsala University
- Prof Jonas Bergquist (M), Dept of Chemistry, Uppsala University
- Prof Vernon Cooray (M), Dept of Engineering Sciences, Uppsala University

### **ISP Executive Committee**

- Prof Kersti Hermansson (F), Dept of Chemistry-Ångström, Chairperson
- Prof Lars Österlund (M), Dept of Engineering Sciences, Vice Chairperson
- Dr Carla Puglia (F), Programme Director of IPPS
- Ms Erika Dabhilkar (F), Director of Division for internationalization. Replaced 2022-08-01 by Dr Eva Söderman (F), Director of Division for internationalisation
- Dr Leif Abrahamsson (M), Programme Director of IPMS
- Dr Veronica Crispin (F), Dept of Mathematics, Replaced 2022-06-14 by Prof Fan Yang Wallentin (F), Dept of Statistics
- Associate Prof Peter Sundin (M), Programme Director of IPICS
- Assoc Prof Solomon Tesfaldiet (M), Programme Director of IPICS, from 2022-11-01

#### The ISP Scientific Reference Groups

### The International Programme in the Chemical Sciences (IPICS)

- Prof Charlotta Turner (F), Lund University, Lund, Sweden
- Prof Henrik Kylin (M), Linköping University, Linköping, Sweden
- Prof Iqbal Parker (M), University of Cape Town, Cape Town, South Africa
- Prof James Darkwa (M), Botswana Institute for Technology Research and Innovation, Gaborone, Botswana
- Prof Jenny Ruales (F), Escuela Politecnica Nacional, Quito, Ecuador
- Prof Aji Palikunnel Mathew (F), Stockholm University, Sweden

#### The International Programme in the Mathematical Sciences (IPMS)

- Prof Fanja Rakotondrajao (F), University of Antananarivo, Antananarivo, Madagascar
- Prof Mohamed El Tom (M), Garden City College of Science and Technology, Khartoum, Sudan
- Prof Rikard Bøgvad, Stockholm University, Sweden
- Prof Martin Singull, Linköping University, Sweden.

#### The International Programme in the Physical Sciences (IPPS)

• Prof Ewa Wäckelgård (F), Uppsala University, Uppsala, Sweden

- Prof Magnus Willander (M), Linköping University, Linköping, Sweden
- Prof Malik Maaza (M), iThemba Labs, Cape Town, South Africa.
- Prof John Nkoma (M), University of Dar es Salaam, Tanzania
- Dr Stephan C. Buchert, Swedish Institute of Space Physics (IRF), Uppsala, Sweden

#### **ISP Staff members**

In 2022, ISP had the following **staff members** (50% female, 50% male). (Full time if not otherwise indicated.)

### Core Programme scientific staff

- Dr Peter Sundin (M), Programme Director of IPICS
- Dr Solomon Tesfalidet (M), Programme Director of IPICS from 2022-11-01
- Dr Cecilia Öman (F), Assistant Programme Director of IPICS (60%)
- Dr Leif Abrahamsson (M), Programme Director of IPMS
- Dr Bengt-Ove Turesson (M), Head of ISP, Assistant Programme Director of IPMS
- Prof Carla Puglia (F), Deputy Head of ISP, Programme Director of IPPS (80%)
- Dr Barbara Brena (F), Assistant Programme Director of IPPS (80%)

### Administrative staff

- Anna Wallin (F), Economy Administrator
- Archana Yadav Ganganaboina (F), Economy Assistant
- Chris Bengtsson (M), Administrative Assistant, until 2022-08-30. Replaced by Pernilla Eklund, Administrator, 2022-10-12 – 2022-11-13
- Hossein Aminaey (M), Administrator
- Peter Roth (M), Head of Administration
- Therese Rantakokko (F), Administrator, until 2022-05-30. Replaced by Annika Kolstedt, Administrator, from 2022-06-01
- Ulrika Kolsmyr (F), Economy Administrator

### Other staff

- Dr Olle Terenius (M), Coordinator Cambodia, Ethiopia and Tanzania (Sida bilateral programs)
- Ulrica Ouline (F), Project Manager, Communications Officer

### 4.3 ISP's objectives

Uppsala University established the International Science Programme (ISP) in 1961. ISP provides long-term support to institutionally based research groups and scientific networks in low and lower-middle income countries, to attain sustainable research activities and postgraduate training in the basic sciences physics, chemistry and mathematics. In a long-term perspective, the resulting outcomes and acquired skills are expected to favorably impact society.

*ISP's vision* is that development challenges are efficiently addressed in partner countries through increasing scientific knowledge.

*ISP's mission* is to strengthen the scientific knowledge, research capacity and postgraduate education in the basic sciences chemistry, mathematics and physics in countries where such capacity is non-existing or weak.

In the Annual report each of the ISP objectives and strategies are reviewed. Below all objectives and strategies are listed and to which section in the report they are linked to. The sections are marked with brackets [xx].

*Objectives*: In the period 2019-2024 ISP will strive to achieve the following specific objectives:

- 1) To improve supported partners' ability to
  - a) plan, manage, and carry out high-quality scientific research, [Supported groups and networks]
  - b) train high-quality postgraduates at the Master and PhD levels, [ISP Success stories, Graduated students]
  - c) disseminate research results at high-quality venues, [ISP Success storiesPublications, Conference contributions]
  - d) on a longer term, use research results and acquired skills and engage in outreach activities having a favorable impact on society. [Research findings & SDGs, Use of research results, Outreach]
- 2) To improve the gender equality in supported research groups and networks. [Gender]
- 3) To increase supported partners' financial independence of ISP, with the ultimate goal of becoming self-sufficient and sustain on grants awarded in open competition. [Expenditures: other funding]
- 4) To make better use of previously supported partners in the development of new support. [Challenges]

### **General strategies**

- To support scientific research groups in partner countries to develop their research activities and postgraduate training. [Supported groups and networks, Graduated students]
- To support scientific networks, linking scientists in partner and other countries. [Networks]
- To facilitate partners' collaboration with better resourced host institutions. [Networks]
- To build on local, needs-based ownership of research activities and training, applying a
  collegial approach to collaboration, and with a focus of improving the local conditions for
  developing scientific activities. [Supported groups and networks]

#### Strategies proposed in the 2013-2017 plan, that will continue

- To focus on supporting physics, chemistry and mathematics in present partner countries and to develop new collaboration in additional countries, where there is a need, and to promote interdisciplinary cooperation. [Supported groups and networks]
- To further increase the transparency in the "application by invitation" modality. [Challenges]

- To continue contributing to the enhancement of quality at all levels with supported partners, including establishment of a well-developed academic and scientific research culture. [Publications, Conference contributions]
- To continue increasing supported partner's skills with regard to financial management. [Expenditures]
- To develop and implement guideline criteria for the phase out of ISP support. [Challenges]
- To refine the monitoring and evaluation of ISP's performance to better show the results and the efficiency of the program. [Challenges]
- To continue promoting gender equality among supported partners. [Gender]
- To continue increasing the visibility of the program. [ISP Success stories, Acknowledgements, Conferences, Outreach]
- To continue supporting research groups in complementarity with Sida's bilateral programs and facilitate regional cooperation. [Supported groups and networks]
- To continue cooperation with other organisations to the benefit of the program. [TICA, SU, AIP, ThePCenter, UPE]

### New strategies 2019-2024

- To develop and implement an instrument for systematic baseline assessment and chronology of capacity development stages with supported partners. [Challenges]
- To develop an instrument for periodical planning of progress expectations with supported partners at a time course over a number of support agreement cycles. [Challenges]
- To further develop the Terms of Reference for, and operation of, the Scientific Reference Groups to obtain a more coherent scientific review and support process. [Challenges]
- To clarify the possibility to budget postdoctoral activities within awarded allocations. [Expenditures]
- To increase the use of capacity built in research groups and networks to facilitate the strengthening of more recently introduced partners. [Challenges]

### 4.4 How does ISP measure results?

To improve monotoring and evaluation of supported groups and networks, ISP uses indicators (since 2010) to measure the results. These indicators apply a Results Based Management (RBM) approach.

In a meeting with Sida in 2018 it was agreed that the number of indicators would be reduces for the next agreement period. The Annual report 2020 was the first report using the revised indicators.

### The following indicators are kept:

- d) Expenditures in relation to final yearly budgets.
- e) Yearly amount of funding granted from other sources than ISP.
- g) Gender proportion of staff.
- h) Gender proportion of PG students and graduates.
- i) Number of admitted students remaining or graduating/year.
- j) Duration of study of graduating PhDs, both total, and sandwich (SWH) and local (LOC) graduates.
- n) Total number of yearly scientific publications, and proportion in indexed journals.
- o) Total number of yearly conference contributions, and proportion international.
- p) Number of yearly Master's graduations.
- q) Number of yearly Doctoral graduations.

#### The following indicator is kept after revision:

c) ISP scientific reference group rating of received applications.

### The following indicators were abandoned (but ISP continues to collect data for internal use):

- a) Number of applications received in relation to invitations.
- b) Number of applications granted in relation to submissions.
- f) Number of activities phased out of support yearly because sustainability has been achieved.
- k) Number of external scientific collaborators per group, and share international (I), regional (R), national (N) and local (L).
- I) Share of groups and networks stating to be fully or to a large extent satisfied with the access to equipment needed to carry out research.
- m) Measures recommended by ISP to reduce natural environmental impact that have been implemented. ISP has revised the indicator and still publish results
- r1) Number and share of graduates having published results before thesis defense.
- r2) Number and share of graduates having published results two years after thesis defense.
- s) Total number of outreach activities reported and share of groups and networks reporting outreach activities.
- t) Total number of reported honors and share of groups and networks reporting honors.
- u) Total number of instances of use reported and share of groups and networks reporting instances of use.
- v) Share of graduates remaining in their home countries or regions after graduation.