

INTERMAG

2005

Program of the 2005 IEEE
International Magnetics Conference

April 4-8, 2005
Nagoya, Japan



<http://www.intermag2005.jp>

Sponsors:

The Magnetics Society of Japan

The Magnetics Society of the IEEE

CONFERENCE PROGRAM AT A GLANCE

APRIL 4

MONDAY MORNING

10:00 AM - 3:00 PM

Technical Tour to Toyota Motor Corp. *Grand Floor
Atrium (Meeting Place)*

MONDAY AFTERNOON

2:00 PM - 7:00 PM

Registration Desks Open *Grand Floor Atrium*

4:00 PM - 6:50 PM

TZ Tutorials *Room 141/142*

MONDAY EVENING

7:00 PM

Welcome Reception *Event Hall*

APRIL 5

TUESDAY MORNING

8:20 AM - 5:00 PM

Registration Desks Open *Grand Floor Atrium*

9:30 AM

AA GMR and Current Induced
Instabilities I *Reception Hall*

AB Symposium on Heat Assisted
Recording Technology *Room 141/142*

AC Nanocrystalline Materials *Room 234*

AD Films and Surfaces I *Room 224*

AE Motors I *Room 131/132*

AF Magnetic Recording System I *Room 133/134*

TUESDAY AFTERNOON

2:30 PM

BA Current Induced Switching I *Reception Hall*

BB Symposium on Advanced Perpendicular
Magnetic Recording *Room 141/142*

BC Clusters and Particles I *Room 234*

BD Magnetic Imaging I *Room 224*

BE Actuators and Power Devices *Room 131/132*

1:30 PM - 5:00 PM *Event Hall*

BP Magneto-Optical Recording and Heat Assisted
Recording

BQ Magnetic Semiconductors I

- BR** Nanocrystalline and Other Materials I
- BS** Hard Magnets
- BT** Films and Surfaces II
- BU** Films and Surfaces III
- BV** Magnetoimpedance
- BW** Magnetic Sensors and Sensing Systems
- BX** Magnetic Particles in Life Science

TUESDAY EVENING

6:00 PM - 8:00 PM

BZ Evening Symposium on MRAM

Room 141/142

APRIL 6

WEDNESDAY MORNING

8:20 AM - 5:00 PM

Registration Desks Open

Grand Floor Atrium

9:30 AM

CA Magnetic Tunnel Junctions

Reception Hall

CB Magnetic Recording Physics I

Room 141/142

CC Symposium on Biosensing with
Magnetic Beads

Room 234

CD Nanocrystalline and Other
Materials II

Room 224

CE Integrated Passives and
Devices I

Room 131/132

8:30 AM - 12 Noon

Event Hall

CP Inductive Heads & Materials

CQ Perpendicular Recording Media I

CR Spin Injection & Transport: Theory to Devices

CS Hard Magnet Applications I

CT Clusters and Particles II

CU Magnetic Imaging II

CV Motors II

CW Motors III

WEDNESDAY AFTERNOON

2:30 PM

DA Magnetic Semiconductors II

Reception Hall

DB Current Developments in Inductive
Heads & Materials

Room 141/142

DC Magnetic Nanoparticles in
Biomagnetism

Room 234

DD Applications of Soft Magnetic
Materials I

Room 224

DE New Phenomena & Applications	<i>Room 131/132</i>
DF Micromagnetic Simulations	<i>Room 133/134</i>

WEDNESDAY EVENING

4:10 PM

DZ Plenary Session	<i>Shirotori Hall</i>
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6:10 PM - 8:00 PM

Plenary Reception	<i>Event Hall</i>
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APRIL 7

THURSDAY MORNING

8:20 AM - 2:30 PM

Registration Desks Open	<i>Grand Floor Atrium</i>
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9:30 AM

EA MRAMs	<i>Reception Hall</i>
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EB FePt Media and Materials	<i>Room 141/142</i>
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EC Ferrites	<i>Room 234</i>
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ED Patterned Nanostructures I	<i>Room 224</i>
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EE Rare Earth-Transition Metal Magnets and Processing	<i>Room 131/132</i>
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EF Magnetic Sensors I	<i>Room 133/134</i>
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8:30 AM - 12 Noon	<i>Event Hall</i>
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EP Advanced Coding and Recording Channels	
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EQ Current Induced Switching II	
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ER Nanocrystalline and Other Materials III	
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ES Clusters and Particles III	
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ET Inductors and Transformers	
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EU Integrated Passives and Devices II	
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EV Biomagnetism and Applications I	
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EW Biomagnetism and Applications II	
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EX Domains & Interdisciplinary Topics	
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THURSDAY AFTERNOON

12:30 PM - 1:00 PM

IEEE Magnetism Society Annual General Meeting	<i>Room 131/132</i>
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2:30 PM

FA Physics of Spin Injection	<i>Reception Hall</i>
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FB Sensors, Mostly CPP I	<i>Room 141/142</i>
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FC Biomagnetism	<i>Room 234</i>
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FD Magnetic Sensors II	<i>Room 224</i>
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FE Intermetallic and Other Hard Magnetic Materials	<i>Room 131/132</i>
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FF Clusters and Particles IV	<i>Room 133/134</i>
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1:30 PM - 5:00 PM *Event Hall*

FP Perpendicular Recording Media II (SUL)

FQ Magnetic Recording Physics II

FR Patterned Media and FePt Media

FS Head Disk Interface I

FT Magnetic Actuators

FU Magnetoresistive Oxides & Halfmetallic Materials

FV Ferrites and Other Materials

FW Patterned Nanostructures II

FX Shielding and Magnetic Particles

THURSDAY EVENING

6:00 PM - 8:00 PM

FZ Town Meeting *Room 141/142*

APRIL 8

FRIDAY MORNING

8:20 AM - 2:30 PM

Registration Desks Open *Grand Floor Atrium*

9:30 AM

GA Symposium on Spin Electronics
Technology *Reception Hall*

GB Advanced Perpendicular
Recording Media *Room 141/142*

GC Coding and Recording Channels *Room 234*

GD Exchange Biasing and Fast
Switching I *Room 224*

GE Nanostructured Hard Magnetic
Materials *Room 131/132*

GF Magneto-Optic and Other Magnetic
Materials/Devices *Room 133/134*

8:30 AM - 12 Noon *Event Hall*

GP Magnetic Recording System II

GQ Sensors, Mostly CPP II

GR Particulate & Tape, Thin Film Media

GS GMR and Current Induced Instabilities II

GT Applications of Soft Magnetic Materials II

GU Magnetoelastic and Novel Magnetic Materials/Devices

GV Magnetic Measurements

GW Computational Magnetics

FRIDAY AFTERNOON

2:30 PM

HA Novel Magnetoresistive Oxides
& Halfmetallic Materials *Reception Hall*

HB	Head Disk Interface II	<i>Room 141/142</i>
HC	Symposium on High Magnetic Anisotropy $L1_0$ and Related Materials	<i>Room 234</i>
HD	Microwave and Magnetoelastic Materials/Devices	<i>Room 224</i>
HE	Hard Magnet Applications II	<i>Room 131/132</i>
1:30 PM - 5:00 PM		<i>Event Hall</i>
HP	MRAMs and Magnetic Tunnel Junctions	
HQ	Exchange Biasing	
HR	Exchange Biasing and Fast Switching II	
HS	Microwave and Magneto-Optic Materials/Devices	
HT	Crystalline and Transport Properties of Magnetic Materials	
HU	Unconventional Magnetic Properties	
5:00 PM		
Conclusion of the INTERMAG 2005 Conference		

WELCOME TO INTERMAG ASIA 2005

The INTERMAG ASIA 2005 Conference will be held in Nagoya, Japan, from Monday, April 4th, to Friday, April 8th, 2005. This conference, jointly sponsored by the IEEE Magnetics Society and the Magnetics Society of Japan, is certain to draw a large attendance. An exciting and informative technical program is planned including six invited symposiums, three tutorial topics, and a special plenary session & reception. All members of the international scientific and engineering communities interested in new developments in magnetism and associated technologies are invited to enjoy and to contribute to all the technical discussions. The conference will be held in the Nagoya Congress Center which is equipped with the most modern facilities and is conveniently close to the center of Nagoya city. A new related attraction nearby will be EXPO 2005 linked by a MAGLEV train connection and featuring a futuristic transit system based on magnetics technologies.

SCOPE OF CONFERENCE

Intermag is the major annual conference for the IEEE Magnetics Society and is the premier conference in its field. The conference addresses all basic and applied science and technology related to the field of magnetism. Topics include magnetic and magneto-optical recording, spin-electronics, soft magnetic materials and permanent magnet materials and applications, biomagnetics and many other magnetics related topics. The conference starts with the first day allocated to a technical tour of Toyota Motor Corporation and to tutorials on magnetic recording, spintronics, and biomagnetism in the afternoon. The four days of technical sessions will include invited symposia on perpendicular recording, hybrid recording, spin-electronics, biosensing, high-anisotropy materials, and MRAM. Altogether about 1,000 technical presentations will be given in either oral or poster sessions. These have been selected from the over 1,500 digests submitted. We expect the number of attendees to also approach one thousand. Many of the highest quality presentations will subsequently appear as papers in the October issue of the IEEE Transactions on Magnetics.

LOCATION

The Nagoya Congress Center is conveniently located in an area easily accessible from major train stations such as Nagoya and Kanayama. The Congress Center has been recently renovated and offers an appealing selection of food outlets and comfortable amenities.

Visitors can quickly and easily reach Nagoya by air or rail. The new Central Japan International Airport is scheduled to be completed in February 2005, and will be served by direct flights from the world's major cities.

The trip from the Central Japan International Airport to Nagoya will take approximately 1 hour by train. The city is also conveniently connected by Shinkansen bullet trains to Tokyo and Osaka, Japan's two major gateways.

The travel times are 1 hour and 40 minutes from Tokyo and 1 hour from Osaka.

CONFERENCE REGISTRATION

Participants can pay the registration fee either in Japanese yen or in U.S. dollars by credit card, bank transfer (yen only), or personal or corporate check (U.S. dollars only). Registration fee at a reduced rate is available, but fee **must be received** by the Secretariat no later than February 28th, 2005 in order to be eligible for **the reduced rate**. All Conference attendees, including speakers, must pay registration fees.

The Conference Registration Form and complete instructions for submission can be found on the INTERMAG 2005 website at: <http://www.intermag2005.jp>. Registration via the secure website is the most convenient way to register and is highly recommended so that you are registered well in advance of the deadline of February 28th, 2005. If you would like to know the flow of the registration procedure, go to <http://www.intermag2005.jp/flow.html>. On-line registration will be available until March 20th, however, Advance Registration at a reduced rate is available only until February 28th. Between March 1st and March 20th, registration via the website will still be available but only the higher registration fees will be accepted. March 21st and on, registration can only be made at the Registration Desks on the day of the Conference and at the higher fee. Forms not accompanied by payment or with incomplete or incorrect credit card information will be considered "late" and the higher rates will be collected on the day of the Conference.

All registrants paying the full registration fees will receive a copy of the Digest Book, which will be distributed at the Conference Registration Desks. They will also receive the Conference Proceedings, scheduled to be published in the *IEEE Transactions on Magnetics* (Fall 2005).

Registration Fees:	Until Feb. 28th	After March 1st
IEEE or MSJ Member	¥ 65,000/\$550	¥ 70,000/\$600
Non-Member	¥ 80,000/\$700	¥ 85,000/\$750
Student/Retiree	¥ 25,000/\$200	¥ 30,000/\$245

Students and unemployed retirees who register at the lower fees will not receive a copy of the Proceedings, except through their membership in the IEEE Magnetics Society. Non-member students registering for the Conference will be given IEEE and Magnetics Society memberships free of charge for the remainder of the year 2005 (April onwards). This offer is only valid if a completed IEEE membership application form is submitted at the Conference.

All attendees will be required to wear INTERMAG 2005 name badges to enter the Technical Sessions and Exhibits. **The use of cameras, videotaping and/or recording devices in the technical sessions is strictly prohibited.**

REMEMBER: All Advance Registration forms must be accompanied by full payment and must be received by February 28, 2005.

The Conference Registration Desks, located in the Grand Floor Atrium in front of the Event Hall, will be open during the following hours:

Monday, April 4 th	2:00 PM ~ 7:00 PM
Tuesday, April 5 th	8:20 AM ~ 5:00 PM
Wednesday, April 6 th	8:20 AM ~ 5:00 PM
Thursday, April 7 th	8:20 AM ~ 2:30 PM
Friday, April 8 th	8:20 AM ~ 2:30 PM

At the Registration Desks, each registrant will receive the receipt for registration payment, a bag, a name badge, a lunch map, and the Digest.

Registration Cancellation Policy: Cancellations of Advance Registrations must be submitted in writing and received by the Secretariat no later than February 28th, 2005. Refunds of the original payment, less ¥ 8,000 or \$70 service fee will be made following the Conference. After February 28th, cancellations can be made, but registration fees are not refundable.

VISA REQUIREMENTS FOR ENTRY INTO JAPAN

Citizens of countries other than Japan must carry a valid passport and visa to enter Japan. Participants requiring visas should contact the Japanese Embassy, Consulate, or Office of Tourism in their home country AS SOON AS POSSIBLE to determine their particular visa requirements. The application process for a visa should be started well in advance of the departure date (preferably two months). The Secretariat can is-

sue a signed letter of invitation and necessary documents to those participants who have completed both the registration and payment, and need a visa. Once you have registered AND made your payment, download the Application Form for the Invitation Letter from the INTERMAG 2005 Profile ID login User's Page, fill in all appropriate items, and mail it to the INTERMAG 2005 Secretariat. Upon confirmation of payment, the Invitation Letter will be issued and mailed to you. Be sure to provide your full name and complete mailing address so that the signed Invitation Letter can then be mailed to you via standard mail service. Refer to the VISA information section from your User's Page for details.

PLEASE NOTE that the INTERMAG 2005 Secretariat CANNOT contact or intervene with any Japanese Embassy or Consulate office abroad on your behalf.

PUBLICATIONS ROOM

The Publications Room will be located in Room 143 on the fourth floor of the Nagoya Congress Center. Authors can check the status of their manuscripts. The status of all papers can be located here and authors should check periodically on their individual papers. This room will be open 9:30 AM - 5:30 PM from Tuesday, April 5th to Thursday, April 7th and 9:30 AM - 12:00 Noon on Friday, April 8th.

SPEAKER PRACTICE ROOM

All presentations must be in English. Speakers will be allowed 12 minutes plus 2 minutes for discussion. Speakers should wait in the speaker waiting seats of their oral session rooms at least thirty minutes before their presentation. Oral presentations are given on Tuesday, Thursday, and Friday from 9:30 AM - 12:30 PM and 2:30 PM - 5:30 PM and on Wednesday from 9:30 AM - 12:30 PM and 2:30 PM - 4:00 PM. Speakers are reminded that the Conference is planning an all-electronic presentation format. Just prior to making their oral presentation, authors will attach their own laptop computers to digital projection equipment supplied by the Conference. Every speaker will be responsible for operating the equipments themselves. **You should come prepared with your presentation in Microsoft PowerPoint format for a PC, or else on a MAC. MAC presenters should bring the display cable that came with their PCs. If you are bringing your presentation in USB flash memory and plan to use the PC provided by the Conference, only presentations in Microsoft PowerPoint format will be accepted and authors should preview their material using the Windows PC in the Speaker Practice Room. Please take the time to test your computer with the in-house**

equipment provided in the Speaker Practice Room well before the day and time of your individual presentation.

To ensure smooth operation, a strict procedure will be enforced: detailed instructions will be sent to all speakers and will be posted on the INTERMAG 2005 website. *To keep the time schedule precisely as planned the presenters must also bring overhead transparencies.* In case a problem with a digital presentation occurs, which cannot be solved within a minute, the speaker will be asked to transfer to his/her transparencies. The session chairs will control precise schedule of the whole meeting.

Speakers may use Room 222 in Building 2 to practice their presentations. Audiovisual equipment will be available for authors to use to check connection of their laptops to the projectors provided from 2:00 PM until 7:00 PM on Monday, from 9:00 AM until 9:00 PM on Tuesday through Thursday, and from 9:00 AM until 4:00 PM on Friday. Speakers are urged to use the facility to practice their presentation, either alone or with colleagues.

POSTER SESSIONS

The hours of the Poster Sessions are 8:30 AM - 12:00 PM and 1:30 PM - 5:00 PM. Authors should set up their materials at least ten minutes before session start times. Clear descriptive visual material should be arranged within the board size of W1800cm X H2100cm. The hall will open at 8:00 AM for the morning session. They must be by their posters from 8:30 AM - 9:30 AM and 11:00 AM - 12:00 PM for the morning sessions, and from 1:30 PM - 2:30 PM and 4:00 PM - 5:00 PM for the afternoon sessions. **Authors are reminded to remove all of their materials, excluding the pushpins that have been provided by the Conference, promptly at the end of their session. Materials that are not removed will be discarded in order to prepare for the next session.**

PLENARY SESSION

During the Conference Plenary Session on Wednesday, April 6th, at 4:10 PM in the Shirotori Hall, the IEEE Magnetics Society will recognize its 2005 award recipients: the IEEE Reynold B. Johnson Information Storage Systems Award will be presented to Dr. Francois Dolivo, and the IEEE Magnetics Society Achievement Award will be presented to Dr. Robert E. Fontana, Jr. of Hitachi Global Storage Technologies.

The following newly elected IEEE Fellows will be recognized: Dr. Pavel J.D. Kabos of National Institutes of Standards and Technology, Dr. Nobutake Imamura of TeraHouse Corporation, Prof. Jaekyun Moon of University of Minne-

sota, Dr. Kent Ritter Davey of University of Texas and Dr. Giorgio Bertotti of IEN Galileo Ferrais. The INTERMAG Student Travel Award winners will also be announced.

Afterwards, a plenary lecture on "Future Power-train System for Sustainable Mobility" will be given by Mr. Kiyoshi Nakanishi, President of Genesis Research Institute, INC. and Advisor of Toyota Motor Corporation.

TUTORIALS

Three successive lectures will be presented on Monday, April 4th, 2005, from 4:00 PM to 6:50 PM in Room 141/142 in Tutorials as follows: "MODELING AND THE FUTURE OF MAGNETIC RECORDING" will be presented by Prof. Randall Victora, University of Minnesota; "MANIPULATION OF MAGNETIC MOMENTS BY SPIN TRANSFER: EXPERIMENTS AND THEORY" will be presented by Prof. Albert Fert, Unit é Mixte de Physique CNRS-Thales and Université Paris-Sud; "NEW HORIZON IN BIOMAGNETICS" will be presented by Prof. Shoogo Ueno, University of Tokyo.

IEEE MAGNETICS SOCIETY ANNUAL GENERAL MEETING

This meeting is open to all. Please come to learn what the IEEE Magnetics Society is doing for you. Or please come to find out the benefits of joining. Note that free membership is being offered to students attending this conference!

The meeting will be held from 12:30 PM to 1:00 PM on Thursday, April 7th in Room 131/132.

TECHNICAL TOUR

A tour of the hybrid car plant of Toyota Motor Corporation is planned for Monday, April 4th, from 11:30 AM to 1:30 PM. The cost of the tour is free. The meeting place will be located near the Conference Registration Desks. Two buses are reserved for a capacity of 80 persons and will leave from the Nagoya Congress Center at 10:00 AM and hope to be back at the Nagoya Congress Center by 3:00 PM; but due to EXPO 2005, traffic may be delayed. Boxed lunches (tea included) will be available at ¥ 1,050 payable on the day of the tour for those who wish, but carry-ins are also welcome. To reserve the tour (and lunch), please download and fill out an application form from the INTERMAG 2005 website at <http://www.intermag2005.jp> and send it as an attachment to Professor Gomi at gomi@mse.nitech.ac.jp. Seats are limited, so please make the reservation well ahead of time.

The hybrid car is a new-generation vehicle that achieves outstanding fuel economy and low emission levels. Currently,

medium class cars represented by Prius, which is the world's first mass-produced hybrid car, are manufactured in this plant. This plant has almost all the processes necessary to produce a car. It is a plant worth visiting.

CONFERENCE SOCIAL EVENT

Welcome Reception

Date: Monday, April 4th

Time: 7:00 PM ~

Place: Event Hall

Cost: Free (Included in the Registration Fee)

Please participate in the Welcome Reception after registering at the Registration Desks.

Plenary Reception

Date: Wednesday, April 6th

Time: 6:00 PM ~

Place: Event Hall

Cost: Free (Included in the Registration Fee)

BIERSTUBE AND COFFEE

Coffee service will be available on Tuesday through Friday mornings among the Poster Sessions and Exhibits in the Event Hall, from 8:30 AM to 10:00 AM. On Tuesday and Thursday evenings, the Bierstube will be held in the Event Hall from 5:00 PM to 6:00 PM.

SPOUSE HOSPITALITY

In keeping with recent INTERMAG Conferences, the Nagoya Conference will not include a specific program for accompanying spouses. However, we will have a hospitality area with seating available in Room 225 in Building 2 to provide a convenient meeting point.

LUNCH

Nagoya Congress Center has three dining locations: the Sky-view Restaurant Pastel with 120 seats, Cafeteria Cascade with 250 seats, and the Coffee Shop Yuri with 100 seats. Also, a map with nearby lunch locations will be provided at the Registration Desks.

STUDENT TRAVEL AWARD

The Conference awards travel grants of approximately \$1,000 each to a limited number of students working in basic and applied magnetism. These awards are intended to partially offset travel costs to attend INTERMAG 2005. Award is for current graduate students only; postdoctoral fellows or non-students are not eligible. Preference will be given to students who are nearing completion of their graduate studies and are presenting Conference Papers. The oral and poster presentation students have an equal chance to get the Student Travel Award. To apply, forms and instructions will be available at <http://www.intermag2005.jp>, under the category "Student Travel". Students must download and fill out an application form and send it as an attachment to the INTERMAG 2005 Secretariat at st-intermag@secretariat.ne.jp. The student must also download an advisor form and ask the advisor to fill it out and send it to the Secretariat. The forms may be sent together by the student, or separately by the student and the advisor. The INTERMAG 2005 Secretariat will forward those applications from students or advisors to Dr. Matthew Carey and Prof. Masahiko Yamamoto as they come in. Applications AND letters of endorsement must be submitted between January 1st and February 1st, 2005. (Applications closed on February 1st, 2005.)

PARTNER PROGRAM

The 1,500 professionals in attendance during the INTERMAG Conference are primarily scientists, engineers and managers representing a diverse range of disciplines related to the physics and engineering applications of magnetism and magnetic materials. Principal areas of interest cover both theory and applications, and include magnetic recording, magnetic thin films, magnetic computation, magnetism in the biological sciences, soft and hard magnetic materials, and microwave magnetics to name a few.

Contributions from our Partners help offset the expenditures involved with the screening process of papers and presentations, food and beverage and audiovisual needs. These contributions help keep down registration fees without compromising the quality of the program. We thank you for your consideration and appreciate any monetary support you are able to provide.

DIAMOND PARTNERSHIP..... More than \$2,000
PLATINUM PARTNERSHIP..... \$2,000
GOLD PARTNERSHIP..... \$1,500
SILVER PARTNERSHIP..... \$1,000
BRONZE PARTNERSHIP..... Less than \$1,000

To become a Partner, please contact us at:

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Terms Expiring December 31, 2005

G. Bertotti; T. Howell; D. Lambeth; R. O'Handley; C. Ross;
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Terms Expiring December 31, 2006

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Terms Expiring December 31, 2007

J. Chapman; W. Doyle; L. Folks; B. Hillebrands; H. Mu-
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FUTURE CONFERENCES

50th Conference on Magnetism and Magnetic Materials: Oc-
tober 30-November 3, 2005, San Jose, CA

INTERMAG Conference: May 8-12, 2006, San Diego, CA

10th Joint MMM-Intermag Conference: January 7-11, 2007,
Baltimore, MD

52nd Conference on Magnetism and Magnetic Materials: November 5-9, 2007, Tampa, FL

INTERMAG Conference: May 4-8, 2008, Madrid, Spain

53rd Conference on Magnetism and Magnetic Materials: November 10-14, 2008, Austin, TX

CONFERENCE ORGANIZATION

Conference Chairs	Susumu Uchiyama Roger Wood
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Social Program	Manabu Gomi
Exhibition	Yasuo Okazaki

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ADDITIONAL INFORMATION

If you would like to receive more information about INTERMAG 2005, please contact INTERMAG 2005 Secretariat at:

INTERMAG 2005 Secretariat

c/o Convention Linkage, Inc.

Asahiseimei Yabacho Bldg, 3-32-20, Sakae,

Naka-ku, Nagoya 460-0008, Japan

Phone: +81-52-262-5070

Fax: +81-52-262-5084

Email: info@intermag2005.jp

You may also access complete conference information through the Web at the INTERMAG home page at: <http://www.intermagconference.com>

GENERAL INFORMATION

TRANSPORTATION

The all-new Nagoya International Airport is being constructed and scheduled to begin operation on February 17th, 2005. The 24-hour airport is called "Centrair" and is located 35km south of Nagoya. The airport is about 40 minutes by car (about ¥15,000 by taxi) and 37 minutes by Meitetsu railway (about ¥700~¥1200) from central Nagoya. It's not just an airport, but also an amusement park full of entertainment with zones for shopping, relaxation, gourmet, events, etc. For more information, please visit

<http://www.cjiac.co.jp/foreign/english/index.html>

To get to places in Nagoya, there are three major railways, an extensive subway system, buses, and taxis. The subway is recommended for its convenience and ease. Visit the following

URL for the Nagoya Subway Network Diagram
<http://www.intermag2005.jp/subway.pdf>

NAGOYA CITY

Geographically located around the center of main island of Japan, Nagoya has been a cultural crossroad since ancient times. Due to its convenient location, it has served as a meeting place for the nation's eastern and western cultures.

Nagoya has outstanding features both in historical and modern aspects. Back in the 16th century, three very popular Samurai heroes - Oda, Toyotomi, and First Shogun Tokugawa - were all born in and out of Nagoya.

At present, the city enjoys prosperity as a center of various industries. It has a population of 2.17 million, making it the 4th largest city in Japan.

NAGOYA WEATHER

The temperature in Nagoya during the Conference period is quite pleasant, and it will range between 10-14 (50-57 °F). However, the average temperature last April was around 20 °C, so please come ready for any unpredictable weather.

ACCOMODATION

The travel agency, JTB, is assigned as the official travel agency for INTERMAG 2005. JTB has booked several hotels near some of the major stations in Nagoya that are conveniently located from the Conference site, but the number of rooms are limited. If you wish to reserve a hotel room or book a tour from our web site, please register for the Conference. After registration, you will receive your Profile ID, with which you can login to your own personal User's Page. Click on the Hotel & Travel link to access information on application for hotel reservation. If you already have a Profile ID, please follow the same direction as above. You may find difficulty in reserving hotel rooms due to EXPO 2005. Please reserve hotel rooms well in advance.

EXPO 2005

The first World Expo of the 21st century, EXPO 2005 Aichi, Japan, is to be held in the outskirts of Nagoya from March 25th until September 25th, 2005.

Japan's first maglev train service (HSST) is scheduled to begin its operation and provides access to the EXPO 2005 site. Within the site, an Intelligent Multimode Transit System (IMTS), utilizing magnetics technology, will be operating. EXPO 2005 visitors will experience futuristic intelligent transport systems (ITS) traveling to, between, and within the event exhibition areas.

The theme of EXPO 2005 is "Nature's Wisdom". For more information, please visit: <http://www.expo2005.or.jp>

CURRENCY EXCHANGE

The currency used in Japan is yen(¥) Foreign currency can be changed to yen at major banks, hotels or airports. Only Japanese yen is accepted at stores and restaurants. Bills come in units of 1,000, 2,000, 5,000 and 10,000 yen, and coins in units of 1, 5, 10, 50, 100 and 500 yen. The approximate exchange rate for US\$1.00 is 104 yen (as of December 2004) and it fluctuates daily depending on the money market.

Traveler's Checks

Traveler's checks are not as popular in Japan as in some other countries. Usually, only major banks and hotels accept them. It is necessary to show your passport for identification when exchanging traveler's checks.

Credit Cards

Visa, MasterCard, American Express, and Diners Club cards are widely accepted at hotels, department stores, shops and restaurants. However, credit card transactions are not always convenient outside big cities.

ATMs

Automatic Teller Machines (ATMs) are commonly available in large urban areas throughout Japan. However, most do not accept foreign credit cards or cash cards and their service hours are very often restricted: Many ATMs operate only during banking hours and weekend services are restricted to Saturday mornings.

For ATMs that accept credit cards, it is advised to contact each credit card company beforehand and check its availability as these conditions vary from machine to machine.

Most Japanese Post Office ATMs in Tokyo show the service availability with stickers indicating which cards are accepted. Cards from the Cirrus, Plus, Maestro and Visa Electron networks can be used. Accepted credit cards include Visa, MasterCard, American Express and Diners Club.

TIPPING

There is no custom of individual tipping in Japan. Instead, a service charge will be included in the bill where applicable. And 5% consumption tax applies to almost all consumer goods purchased in Japan.

ELECTRICAL APPLIANCES

The voltage used throughout Japan is uniformly 100 volts,

A.C. There are two frequencies in use; 50 Hertz in eastern Japan (including Tokyo) and 60 Hertz in western Japan (including Nagoya, Kyoto and Osaka).

A convertible type of electrical appliance such as a hair dryer, travel iron and shaver will therefore be handy; otherwise a step-down transformer is required to convert the voltage.

There are no columnar-shaped plugs or 3-pin plugs used in Japan but 2-flat-pin plugs as in North America are used instead. It is therefore advised to purchase a plug adapter beforehand.

SHOPPING

There are many department stores around major train/subway stations in Nagoya. They offer just about everything from grocery, clothing, to furniture and even goods from foreign countries. There are usually restaurants of different cuisine and nationality at the top level that people enjoy. The prices, however, are higher than average.

Underground shopping centers are also popular amongst the Japanese on rainy days. There are cafes, bookstores, shoe stores, clothing stores, you name it.

The Osu shopping arcade is popular amongst people looking for authentic Japanese mementos. There are traditional Japanese food concession stands, new and used kimono shops, and antique shops.

If you love shopping, you'll enjoy shopping in Nagoya.

USEFUL WEBSITES FOR TRAVELING IN JAPAN

The following website offers wide range of information about all of Japan.

- Japan National Tourist Organization

<http://www.jnto.go.jp/eng>

The following two websites offer information on Nagoya.

- Nagoya Convention and Business Bureau

http://www.ncvb.or.jp/index_e.html

- Nagoya InfoGuide

<http://www.japaninfoguides.com/>

Apr. 4

Room 141/142

**Session TZ
Tutorials**

Y. Miura

Shinsyu University

N. Matsushita

Tokyo Institute of Technology

16:00

***TZ-01 MODELING AND THE FUTURE OF MAGNETIC
RECORDING**

R. H. Victora, *MINT, Department of Electrical and Computer
Engineering, University of Minnesota, Minneapolis, United
States of America*

17:00

***TZ-02 MANIPULATION OF MAGNETIC MEMORY BY SPIN
TRANSFER: EXPERIMENTS AND THEORY**

A. Fert, *Unite Mixte de Physique CNRS-Thales and Universite
Paris-Sud, France*

18:00

***TZ-03 NEW HORIZON IN BIOMAGNETICS**

Shoogo Ueno, *Department of Biomedical Engineering,
Graduate School of Medicine, University of Tokyo, Japan*

Session AA

GMR and Current Induced Instabilities I

J.R. Childress

San Jose Research Center, Hitachi Global Storage
Technologies

AA-01 MICROWAVE DYNAMICS IN NANOSCALE

9:30 MULTILAYER CPP DEVICES DRIVEN BY SPIN-TRANSFER TORQUE

Sergey I. Kiselev¹, Jack C. Sankey², Ilya N. Krivorotov², Nathan C. Emley², Robert A. Buhrman², Daniel C. Ralph², ¹Hitachi GST, United States of America, ²Cornell University, United States of America

AA-02 SUB-NS MAGNETIZATION SWITCHING AND RF

9:45 EMISSION IN CoFe/Cu/CoFe PILLARS USING SPIN-TRANSFER EFFECT

Thibaut Devolder¹, Ashwin A. Tulapurkar², Paul Crozat¹, Claude Chappert¹, Yoshishige Suzuki², Kunji Yagami³, ¹Institut d'Electronique Fondamentale, CNRS UMR 8622, Bat. 220, Universite Paris Sud, France, ²NanoElectronics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan, ³SSNC, Semiconductor Technology Development Group, SONY Corp., Japan

AA-03 APPROXIMATE THEORY OF MICROWAVE

10:00 GENERATION IN A MAGNETIC NANO-CONTACT DRIVEN BY A SPIN-POLARIZED CURRENT

Andrei N. Slavin¹, Pavel Kabos², ¹Dept. of Physics, Oakland University, United States of America, ²Electromagnetics Division, National Institute of Standards, United States of America

AA-04 MAGNETIZATION SELF-OSCILLATIONS INDUCED

10:15 BY SPIN-POLARIZED CURRENTS

Roberto Bonin¹, Giorgio Bertotti², Claudio Serpico³, Isaak D. Mayergoyz⁴, Alessandro Magni², Massimiliano d'Aquino³, ¹Physics Dept., Polytechnic of Turin, Italy, ²Materials Dept., IEN Galileo Ferraris, Italy, ³Dept. of Electrical Engineering, University of Naples, Italy, ⁴Dept. of Electrical and Computer Engineering, University of Maryland, MD, United States of America

AA-05 PELTIER EFFECT IN METALLIC CPP STRUCTURES

10:30 Akio Fukushima¹, Hitoshi Kubota¹, Atsushi Yamamoto¹, Yoshishige Suzuki², Shinji Yuasa¹, ¹National Institute of Advanced Industrial Science and Technology, Japan, ²Graduate School of Engineering Science, Osaka University, Japan

- AA-06 THE RELATION BETWEEN NANOCONTACT
10:45 MAGNETORESISTANCE AND CONDUCTANCE
QUANTIZED STATES**
Koji Sekiguchi, Eiji Saitoh, Hideki Miyajima, *Dept. of Physics,
Keio University, Japan*
- AA-07 CPP CHARGE AND HEAT TRANSPORTS IN
11:00 MULTILAYERED NANOWIRES: THE SPIN-PELTIER
EFFECT**
Laurent Gravier, *Ecole Polytechnique federale de LAUSANNE,
Switzerland*
- AA-08 COMPOSITIONAL DEPENDENCE OF
11:15 MAGNETORESISTANCE IN TbFeCo AMORPHOUS
FILMS**
Md. Tofizur Rahman, Xiao Xi Liu, Mitsunori Matsumoto,
Akimitsu Morisako, *Dept. of Information Engineering, Faculty
of Engineering, Shinshu University, Japan*
- AA-09 CPP SPIN-VALVES UTILIZING ULTRA-STRONG Ir
11:30 COUPLED ANTIPARALLEL PINNED LAYERS FOR
THICK REFERENCE LAYER STABILIZATION**
Stefan Maat, Matthew Carey, Jordan Katine, Jeff Childress,
Hitachi Global Storage Technologies, United States of America
- AA-10 VARIATIONS OF MAGNETIC PROPERTIES FOR
11:45 VARIOUS NITROGEN CONCENTRATION IN Ta THIN
FILMS FOR SPIN VALVE STRUCTURE**
Yeonbong Choi¹, Soonchul Jo¹, Ji Seop So², Moon Kyu Song²,
Chang Woo², ¹*School of Electronics, Soongsil University,
Republic of Korea*, ²*Dept. of Nano & Electronic Physics,
Kookmin University, Republic of Korea*
- AA-11 CARRIER SCATTERING CAUSED BY
12:00 ANTIPARALLEL COUPLED PERPENDICULAR
MAGNETIC DOMAINS IN Co/Pd MULTILAYERS**
Tomoki Kobayashi, Sigeki Nakagawa, *Department of Physical
Electronics, Tokyo Institute of Technology, Japan*
- AA-12 IN-SITU MAGNETORESISTANCE MEASUREMENTS
12:15 OF A NANOCONSTRUCTED NICKEL-IRON FILM
WITH IN-PLANE CONFIGURATION**
Yuichi Ohsawa¹, Yuichi Ohsawa², ¹*CR & D Center, Toshiba
corp., Japan*, ²*RIEC, Tohoku University, Japan*

Apr. 5

Room 141/142

Session AB

Symposium on Heat Assisted Recording Technology

K. Nakagawa
Nihon University

- *AB-01 THERMAL MANAGEMENT IN HEAT ASSISTED
9:30 MAGNETIC RECORDING**
T. E. Schlesinger, E. J. Black, J. A. Bain, *Carnegie Mellon University, United States of America*
- *AB-02 PSEUDO-BINARY ALLOYS AND EXCHANGE
10:00 SPRINGS: A REVIEW OF MEDIA CONCEPTS FOR
THERMALLY ASSISTED MAGNETIC RECORDING**
Jan-Ulrich Thiele, *Hitachi Global Storage Technologies, San Jose Research Center, United States of America*
- *AB-03 NEAR FIELD ASSISTED MAGNETIC RECORDING
10:30** Shintaro Miyanishi, Naohiro Iketani, Kazuhisa Takayama, Kousuke Innami, Ippei Suzuki, Tazuko Kitazawa, Yasushi Ogimoto, Yoshiteru Murakami, Kunio Kojima, Akira Takahashi, *Devices Technology Research Lab. Sharp Co., Japan*
- *AB-04 CHARACTERIZATION OF BLUE- AND RED- VERY
11:00 SMALL APERTURE LASERS FOR HYBRID
RECORDING**
Tomoki Ohno¹, J. A. Bain², T. E. Schlesinger², ¹*Sharp Laboratories of America Inc., United States of America,* ²*Carnegie Mellon University, United States of America*
- *AB-05 LASER INDUCED ULTRAFAST MANIPULATION OF
11:30 SPINS IN ANTIFERROMAGNETIC MATERIALS: A
NEW AVENUE IN MAGNETIC MEMORY**
Theo Rasing, *IMM, Radboud University Nijmegen,*
- *AB-06 THERMO-MAGNETIC RANDOM ACCESS MEMORY:
12:00 A NEW ROUTE FOR LOW POWER APPLICATIONS**
Olivier Redon¹, Ioan Lucian Prejbeanu¹, Ricardo C. Sousa¹, Marta Kerekes¹, Bernard Dieny¹, Jean-Pierre Nozieres¹, Paulo P. Freitas², ¹*SPINTEC, France,* ²*INESC-MN, Portugal*

Apr. 5

Room 234

Session AC

Nanocrystalline Materials

K.Y. Kim

Korean Institute of Science and Technology

- AC-01 B CONTENT DEPENDENCE ON ANISOTROPY FIELD
9:30 OF CoFeB THIN FILM FOR GHz FREQUENCY USE**
Masashi Namikawa, Makoto Munakata, Sin-Ichi Aouki, Masaaki Yagi, *Energy Electronics Laboratory and Faculty of Engineering, Sojo University, Japan*

**AC-02 DEVELOPMENT OF SOFT MAGNETIC THIN FILMS
9:45 FOR GHz APPLICATIONS**

Jongsik Shim¹, Inyoung Kim¹, Jong-Ryoul Kim¹, Suk Hee Han², HeeJung Kim², Ki Hyeon Kim³, Masahiro Yamaguchi³, ¹*Dept. of Materials Engineering Science, Hanyang University, Republic of Korea*, ²*Nano Device Research Center, Korea Institute of Science and Technology, Republic of Korea*, ³*Research Institute of Electrical Communication, Tohoku University, Japan*

**AC-03 EXTRACTION OF COMPLEX PERMEABILITY ON
10:00 COPLANAR TRANSMISSION LINE BY MEASURING
SCATTERING PARAMETERS UP TO 20GHz**

Jaechon Sohn, Ki Hyeon Kim, Masahiro Yamaguchi, *Dept. of Electrical and Communication Engineering, Tohoku University, Japan*

**AC-04 DYNAMIC LOSSES AND DOMAIN REFINEMENT IN
10:15 NANOCRYSTALLINE TAPE WOUND CORES**

Sybillé Flohrer¹, Rudolf Schaefer¹, Jeffrey McCord¹, Stefan Roth¹, Giselher Herzer², Ludwig Schultz¹, ¹*IFW Dresden, Germany*, ²*VACUUMSCHMELZE GmbH & Co. KG, Germany*

AC-05 GROWTH RATE EFFECTS IN SOFT CoFe FILMS

10:30 Marian Vopsaroiu¹, Milena Georgieva², Phil J. Grundy², Mike J. Thwaites³, Kevin O'Grady¹, ¹*Department of Physics, University of York, England*, ²*Department of Physics, University of Salford, M5 4WT, United Kingdom*, ³*Plasma Quest Ltd., United Kingdom*

**AC-06 THE CHANGE OF MAGNETIC PROPERTIES BY ION
10:45 IRRADIATION IN THE Co-BASED AMORPHOUS
RIBBON**

Duck-Gun Park¹, Gi-Duck Kim¹, Jae-Hyung Lee¹, Cheol-Gi Kim², Jun-Hwa Hong¹, ¹*Dept. Development of Nuclear Material, Korea Atomic Energy Research Institute, Republic of Korea*, ²*Dept. of Materials Engineering, Chungnam National University, Republic of Korea*

**AC-07 INFLUENCE OF THE MAGNETOELASTIC
11:00 MECHANISM ON THE SWITCHING FIELD
FLUCTUATIONS ON Fe BASED AMORPHOUS
MICROWIRES**

K. L. Garcia¹, R. Varga², M.Vazquez¹, ¹*Materials Science Institute of Madrid, Spain*, ²*Institute of Physics, Faculty of Sciences, UPJS, Slovakia*

AC-08 HELICAL MAGNETIC STRUCTURE IN COLD-

11:15 RAWN Fe-RICH AMORPHOUS WIRE

A. Chizhik¹, C. Garcia¹, J. Gonzalez¹, J. J. del Val², J. M. Blanco³, D. N. Merenkov⁴, S. L. Gnatchenko⁴, Y. A. Shakhayeva⁴, A. N. Bludov⁴, ¹*Dep. Fisica de Materiales, Facultad de Quimica, UPV, San Sebastian, Spain*, ²*Unidad Fisica Materiales, CSIC-UPV/EHU, San Sebastian, Spain*, ³*Dep. Fisica Aplicada I, EUPDS, UPV/EHU, San Sebastian, Spain*, ⁴*Institute for Low Temperature Physics & Engineering, NAS of Ukraine, Kharkov, Ukraine*

AC-09 COMBINED SOFT MAGNETISM, GOOD CORROSION

11:30 RESISTANCE, AND HIGH MECHANICAL STRENGTH IN GLASSY Fe_{65.5}Cr₄Mo₄Ga₄P₁₂C₅B_{5.5}

Mihai Stoica, Stefan Roth, Uwe Gaitzsch, Annett Gebert, Ludwig Schultz, *IFW Dresden, Germany*

AC-10 THE INFLUENCE OF TRANSVERSE FIELD

11:45 ANNEALING ON MAGNETIC PROPERTIES OF (Fe_{1-x}Co_x)₈₁Nb₇B₁₂ (x=0.25, 0.33, 0.5, 0.66) NANOCRYSTALLINE ALLOYS

Ivan Skorvanek, *Inst. Exp. Physics SAS, Kosice, Slovakia*

AC-11 ORIGIN OF THE STRESS-INDUCED MAGNETIC

12:00 ANISOTROPY IN Fe-BASED NANOCRYSTALLINE ALLOY

Masato Ohnuma¹, Takeshi Yanai², Masaki Nakano², Hirotohi Fukunaga², Kazuhiro Hono¹, Yoshihito Yoshizawa³, ¹*National Institute for Materials Science, Japan*, ²*Nagasaki University, Japan*, ³*Hitachi Metals Ltd., Japan*

AC-12 ROLE OF HEAT OF FORMATION ON SOFT

12:15 MAGNETIC PROPERTIES AND STRUCTURE OF METAL-INSULATOR TYPE NANO-GRANULAR MAGNETIC FILMS

Shigehiro Ohnuma¹, Masato Ohnuma², Kazuhiro Hono², Hiroyasu Fujimori¹, Tsuyoshi Masumoto¹, ¹*The Research Institute for Electric and Magnetic Materials, Japan*, ²*National Institute for Materials Science, Japan*

Apr. 5

Room 224

Session AD

Films and Surfaces I

K. Takanashi

Institute for Materials Research, Tohoku University

AD-01 W AND Ag INDUCED MAGNETIZATION PROFILE IN

9:30 MULTILAYER WITH 3d METALS

Nicolas Jaouen, Fabrice Wilhelm, Andrei Rogalev, Jose Goulon, *European Synchrotron Radiation Facility (ESRF), France*

AD-02 SPIN-POLARIZED SCANNING TUNNELING

9:45 SPECTROSCOPY STUDY OF EPITAXIAL IRON(001) LAYERS ON BCT-MANGANESE(001)

Toyokazu Yamada¹, Amadeo L. Vazquez de Parga², Maarten M.J. Bischoff³, Tadashi Mizoguchi¹, Herman van Kempen³,
¹*Dept. of Physics, Gakushuin University, Japan*, ²*Dept. Fisica de la Materia Condensada, Universidad Autonoma de Madrid, Spain*, ³*Institute for Molecules and Molecular systems, Radboud University, Netherlands*

AD-03 ANTIFERROMAGNETIC Mn ON Fe(001) STUDIED

10:00 BY SPIN-POLARIZED SCANNING TUNNELING MICROSCOPY

U. Schlickum, N. Janke-Gilman, W. Wulfhekel, J. Henk, P. Bruno, J. Kirschner, *Max Planck Institute of Microstructure Physics, Germany*

AD-04 MAGNETISM AND MAGNETO-OPTICAL RESPONSE

10:15 FROM ULTRA-THIN Co FILMS EPITAXIALLY GROWN ON Pd SUBSTRATES

Marek Przybylski, Miroslav Nyvtl, Yisheng Shi, Long Yan, Jan Zukrowski, Jochen Barthel, Jurgen Kirschner, *Max-Planck-Institut fuer Mikrostrukturphysik, Germany*

AD-05 STRUCTURAL AND MAGNETIC ANISOTROPY

10:30 PROPERTIES IN EPITAXIAL Fe FILMS ON Al_{0.48}In_{0.52}As(001)

Nicolas Tournerie, Philippe Schieffer, Bruno Lepine, Claude Lallaizon, Guy Jezequel, *UMR CNRS 6627 PALMS, France*

AD-06 SPIN AND ORBITAL MOMENTS OF ULTRA-THIN Fe

10:45 FILMS ON VARIOUS SEMICONDUCTOR SURFACES

Jill S. Claydon¹, Daxin Niu¹, Yong Bing Xu¹, Neil D. Telling², Ian W. Kirkman², Gerrit van der Laan², ¹*Spintronics Laboratory, Department of Electronics, University of York, United Kingdom*, ²*Daresbury Laboratory, United Kingdom*

AD-07 ANNEALING INDUCED Fe OXIDE

11:00 NANOSTRUCTURES ON GaAs

Yong Xiong Lu¹, Ehsan Ahmad¹, Yong Bing Xu¹, Sarah M. Thompson², ¹*Spintronics Laboratory, Department of Electronics, University of York, United Kingdom*, ²*Department of Physics, University of York, United Kingdom*

AD-08 MAGNETIZATION RELAXATION IN SPUTTERED

11:15 THIN Fe FILMS: EVIDENCE OF SPIN-PUMPING EFFECT

Bijoy K. Kuanr¹, Alka V. Kuanr², R. E. Camley¹, Z. Celinski¹,
¹*Department of Physics, University of Colorado at Colorado Springs, CO, United States of America*, ²*College of Applied Sc. for Women, Delhi University, Delhi-92, India*

AD-09 HIGH WAVE VECTOR SPIN WAVES IN ULTRATHIN

11:30 Co-FILMS INVESTIGATED BY SPIN-POLARIZED ELECTRON ENERGY LOSS SPECTROSCOPY

M. Etzkorn¹, P. S. Anil Kumar¹, R. Vollmer¹, W. Tang¹, Y. Zhang¹, H. Ibach², J. Kirschner¹, ¹*Max-Planck Institute of Microstructure Physics, Germany*, ²*Institute of Surfaces and Interfaces, Research center Juelich, Germany*

AD-10 SYNTHESIS AND MAGNETIC MOMENT OF ALPHA

11:45 PRIME AND GAMMA PRIME-Fe-N PHASES WITH VARIOUS UNIT-CELL VOLUME

Kazuyuki Sunaga¹, Masakiyo Tsunoda¹, Migaku Takahashi², ¹*Dept. of Electronic Engineering, Tohoku University, Japan*, ²*New Industry Creation Hatchery Center, Tohoku University, Japan*

AD-11 HIGHLY (001) ORIENTED L1₀ FePt THIN FILM

12:00 USING NiTa SEED LAYER

Tomoyuki Maeda, *Corporate R&D Center, Toshiba Corporation, Japan*

AD-12 MICROSTRUCTURE OF HIGH COERCIVITY FePt

12:15 THIN FILMS FABRICATED AT 400 °C

Z. L. Zhao¹, J. S. Chen¹, J. Ding², J. B. Yi², B. H. Liu², J. P. Wang³, ¹*SMI Division, Data Storage Institute, Singapore*, ²*Dept. of Materials Science, National University of Singapore, Singapore*, ³*Dept. of Electrical and Computer Engineering, The Center for Micromagnetics and Information Technologies (MINT), University of Minnesota, United States of America*

Apr. 5

Room 131/132

Session AE

Motors I

D. Dorrell

The University of Glasgow

AE-01 IRON LOSS IN A MODULAR ROTOR SWITCHED

9:30 RELUCTANCE MACHINE FOR THE 'MORE-ELECTRIC' AERO-ENGINE

David J. Powell, Geraint W. Jewell, Stuart D. Calverley, David Howe, *Electronic and Electrical Engineering, University of Sheffield, United Kingdom*

AE-02 ASSESSING THE CORE LOSSES IN SWITCHED

9:45 RELUCTANCE MACHINES

Ivan Chindurza, David G. Dorrell, Calum Cossar, *Dept. of Electronics and Electrical Engineering, University of Glasgow, United Kingdom*

- AE-03 AN ACCURATE ANALYTICAL METHOD FOR
10:00 ESTIMATION OF FLUX-LINKAGE
CHARACTERISTICS OF A SWITCHED RELUCTANCE
MOTOR**
Nimit K. Sheth, K. R. Rajagopal, *Electrical Engineering
Department, Indian Institute of Technology Delhi, New Delhi,
India*
- AE-04 A NOVEL SWITCHED RELUCTANCE MOTOR WITH
10:15 WOUND-CORES PUT ON STATOR AND ROTOR POLES**
Kenji Nakamura, Tomoya Ono, Keisuke Sugano, Tadaaki
Watanabe, Hiroki Goto, Osamu Ichinokura, *Graduate School of
Engineering, Tohoku University, Japan*
- AE-05 DESIGN OPTIMIZATION OF PERMANENT MAGNET
10:30 MOTORS USING RESPONSE SURFACE
METHODOLOGY AND GENETIC ALGORITHMS.**
Laurent Jolly¹, M. A. Jabbar¹, Qing Hua Liu², *¹Dept. of
Electrical Engineering, National University of Singapore,
Singapore, ²ASM Specific Technology, Singapore*
- AE-06 DEVELOPMENT OF A WINDING METHOD AND AN
10:45 INVERTER CIRCUIT TO DRIVE A BLDC MOTOR AT
HIGH SPEED WITH LARGE STARTING TORQUE**
Gun Hee Jang, Chung Ill Lee, *PREM Lab., Hanyang University,
Republic of Korea*
- AE-07 ANALYSIS OF COGGING TORQUE IN BRUSHLESS
11:00 MACHINES HAVING NON-UNIFORMLY DISTRIBUTED
STATOR SLOTS AND STEPPED ROTOR MAGNETS**
Zi Qiang Zhu, Som Ruangsinchaiwanich, Dahaman Ishak,
David Howe, *Dept. of Electronic and Electrical Engineering,
University of Sheffield, United Kingdom*
- AE-08 ROTOR LOSS ESTIMATION IN PERMANENT
11:15 MAGNET MACHINES WITH CONCENTRATED
WINDINGS**
Oriano Bottauscio¹, Mario Chiampi², Paolo Guglielmi²,
Gianmario Pellegrino², Alfredo Vagati², *¹IEN Galileo Ferraris,
Torino, Italy, ²Dept. Ingegneria Elettrica, Politecnico di Torino,
Italy*
- AE-09 AN AUTOMATIC PIN IDENTIFICATION METHOD
11:30 FOR THE THREE-PHASE DC BRUSHLESS MOTOR**
Shyh-Jier Wang¹, Shir-Kuan Lin², Jau-Jiu Ju¹, Der-Ray Huang¹,
*¹Industrial Technology Research Institute, Opto-Electronics &
Systems Laboratories, Taiwan, ²Department of Electrical and
Control Engineering, National Chiao Tung University, Taiwan*

**AE-10 MEASUREMENT AND MODELLING OF CORE
11:45 LOSSES OF SOFT MAGNETIC COMPOSITES UNDER
3D MAGNETIC EXCITATIONS IN ROTATING MOTORS**
You Guang Guo, Jian Guo Zhu, Jin Jiang Zhong, Zhi Wei Lin,
*Faculty of Engineering, University of Technology, Sydney,
Australia*

**AE-11 ANALYSES OF A BEARINGLESS MACHINE WITH
12:00 DIVIDED WINDINGS**
Jossana M. S. Ferreira¹, Felipe E. F. Castro¹, Andres O.
Salazar¹, Mauro Zucca², Lorenzo Donadio², ¹*Computation and
Automation Dept., UFRN, Lagoa Nova, Brazil,* ²*Istituto
Elettrotecnico Nazionale Galileo Ferraris (IEN), Italy*

**AE-12 DRIVE OF HIGH-VOLTAGE SINGLE-PHASE
12:15 BRUSHLESS DC MOTORS BASED ON TORQUE
ANALYSIS**
Li Zhi Sun, Jing Shang, Ji Bin Zou, *Harbin Institute of
Technology, China*

Apr. 5

Room 133/134

**Session AF
Magnetic Recording System I**

D.C. Palmer
Seagate Technology

**AF-01 STUDY OF GMR SIDE READING EFFECT IN
9:30 PERPENDICULAR RECORDING SYSTEM**
Peng Luo, Yan Wu, Herbert G. Lin, *Maxtor Corporation,
United States of America*

**AF-02 GEOMETRY EFFECTS FOR PRINTING FINAL
9:45 SERVO PATTERNS ON PERPENDICULAR DISKS**
Bill R. Baker, *Redwood Technology, United States of America*

**AF-03 ALTERNATING-DC TRACK SERVO PATTERN FOR
10:00 PERPENDICULAR RECORDING**
Takehiko Hamaguchi¹, Hideaki Maeda¹, Kazuaki Usui¹,
Kazuhisa Shishida², ¹*Storage Research Center, Research &
Development Group, Hitachi, Ltd., Japan,* ²*Advanced &
Common HDD Technology, Hitachi Global Storage
Technologies, Japan*

**AF-04 THERMAL ASPERITY SUPPRESSION IN
10:15 PERPENDICULAR RECORDING CHANNELS**
George Mathew, Indrawan Tjhia, *Dept. of Electrical &
Computer Eng., National University of Singapore, and Data
Storage Institute, Singapore*

- AF-05 LOW CROSS TALK INTERCONNECT FOR
10:30 MAGNETIC RECORDING HEAD**
Ye Fu, Chao-Hui Yang, Li-Yan Zhu, Manuel A. Hernandez,
Ellis Cha, *SAE Magnetics, United States of America*
- AF-06 NUMERICAL SIMULATION OF SHOCK RESPONSE
10:45 OF A HARD DISK DRIVE AT OPERATIONAL STATE**
Qing Hua Zeng¹, Fu-Ying Huang¹, Hiroyasu Tsuchida², ¹*San Jose Research Center, Hitachi Global Storage Technologies, United States of America*, ²*Mobile BU, Hitachi Global Storage Technologies, Japan*
- AF-07 ON-OFF ROBUST DESIGN OF HARD DISK RAMP
11:00 LOADING**
Ke Xiu Liu¹, Ben M. Chen², Qing Wei Jia¹, ¹*Servo DE, Seagate Technology International, Singapore*, ²*ECE Dept., National University of Singapore, Singapore*
- AF-08 INTERACTION DECOUPLING CONTROL OF
11:15 MULTIPLE MILLIACTUATORS IN DUAL-STAGE SERVOS**
Chun Ling Du, Guo Xiao Guo, Jing Liang Zhang, *Mechatronics and Recording Channel, Data Storage Institute, A*STAR, Singapore*
- AF-09 ELECTRO-STATIC MICRO-ACTUATOR FOR HDD
11:30 TRACKING SERVO: COMPATIBILITY WITH CONTACT RECORDING**
Toshiki Hirano, Mathew Mate, Robert Payne, *San Jose Research Center, Hitachi Global Storage Technologies, United States of America*
- AF-10 ADAPTIVE NEAR TIME-OPTIMAL SEEK CONTROL
11:45 OF A DISK DRIVE ACTUATOR**
Pakorn Serikitkankul, Hiroaki Seki, Masatoshi Hikiu, Yoshitsugu Kamiya, *Dept of Mechanical Systems Engineering, Kanazawa University, Japan*
- AF-11 THE EFFECTS OF ACTUATOR ARM GEOMETRY ON
12:00 AIRFLOW AND READ/WRITE HEAD OFF-TRACK VIBRATION IN A MODELED HARD DISK DRIVE PART I: THE EFFECTS OF ACTUATOR ARM THICKNESS**
Hany M. Gross¹, Toru Watanabe², David B. Bogy³, Omer Savas³, ¹*Seagate Technology, United States of America*, ²*Fujitsu Ltd., Japan*, ³*University of California at Berkeley, United States of America*

**AF-12 DYNAMICS OF THE OIL-AIR INTERFACE IN HARD
12:15 DISK DRIVE BEARINGS**

Ferdinand Hendriks¹, Burt Tilley², John Billingham³, Paul Dellar⁴, Rob Hinch⁵, ¹*San Jose Research Center, Hitachi Global Storage Technologies, United States of America*, ²*F.W. Olin College of Engineering, Needham, United States of America*, ³*University of Nottingham, School of Mathematical Sciences, United Kingdom*, ⁴*The Oxford Centre for Industrial and Applied Mathematics, United Kingdom*, ⁵*Brasenose College, Oxford, United Kingdom*

Apr. 5

Reception Hall

Session BA

Current Induced Switching I

Y. Suzuki

Graduate School of Engineering Science, Osaka University

***BA-01 CRITICAL CURRENT DISTRIBUTION IN SPIN**

**14:30 TRANSFER SWITCHED MAGNETIC TUNNELING
JUNCTIONS**

M.Pakala, Y.Huai, T.Valet, Z.Diao, *Grandis Inc., United States of America*

BA-02 MAGNETIZATION SWITCHING DUE TO NON-

**15:00 OVAL SPIN INJECTION INTO SMALL
FERROMAGNETIC PARTICLE**

Takashi¹, Jaroslav Hamrle¹, Tao Yang¹, Yoshichika², ¹*Riken FRS, Japan*, ²*ISSP Univ of Tokyo, Japan*

BA-03 NANOMETER SCALE OBSERVATION OF CURRENT-

**15:15 INDUCED NARROW DOMAIN WALL DEPINNING IN
PERPENDICULAR SPIN VALVES**

D. Ravelosona, D. Lacour, J. A. Katine, B. D. Terris, *Hitachi Global Storage Technologies, San Jose Research Center, United States of America*

BA-04 CURRENT INDUCED MODIFICATIONS OF DOMAIN

15:30 WALL

Pierre-Oliver Jubert¹, Mathias Kläui², Andreas Bischof¹, Rolf Allenspach¹, C. A. F. Vaz³, G. Faini⁴, Ulrich Ruediger², ¹*IBM Research, Zurich Research Laboratory, Rueschlikon, Switzerland*, ²*Fachbereich Physik, Universitaet Konstanz, Universitaetsstr. 10, Konstanz, Germany*, ³*Cavendish Laboratory, University of Cambridge, Madingley Road, Cambridge, United Kingdom*, ⁴*Laboratoire de Photonique et de Nanostructures-CNRS, Route de Nozay, Marcoussis, France*

BA-05 SPIN TRANSFER EFFECT IN MAGNETIC TUNNEL

15:45 JUNCTION WITH LOW RESISTANCE

Hao Meng, Jian-Ping Wang, *Dept. of Electrical Engineering, University of Minnesota, United States of America*

- BA-06 ENHANCEMENT OF SPIN CURRENT BY
16:00 MODIFYING THE CHEMICAL POTENTIAL PROFILE
IN THE NANOPILLAR**
Tao Yang¹, Jaroslav Hamrle¹, Takashi Kimura¹, Yoshichika Otani², ¹FRS-RIKEN and CREST-JST, Japan, ²ISSP-University of Tokyo, FRS-RIKEN and CREST-JST, Japan
- BA-07 GREAT ENHANCEMENT OF THE CURRENT
16:15 INDUCED MAGNETIZATION SWITCHING EFFECT IN
EXCHANGE BIASED SPIN VALVES WITH NANO
OXIDE LAYER**
Nguyen Thi Hoang Yen, Hyun Jung Yi, Wang-Hyun Park, Sung-Jung Joo, Kyung-Ho Shin, *Nano Device Research Center, Korea Institute of Science and Technology, Republic of Korea*
- BA-08 INSPECTION OF INTRINSIC CRITICAL CURRENTS
16:30 FOR SPIN-TRANSFER MAGNETIZATION SWITCHING
BY LOW-TEMPERATURE MEASUREMENTS**
Kojiro Yagami¹, Ashwin Tulapurkar², Akio Fukushima², Yoshishige Suzuki³, ¹SSNC, Sony Corp., Japan, ²Nano-electronics Institute, AIST, Japan, ³Department of Materials Engineering Science, Osaka Univ., Japan
- BA-09 THERMAL EFFECTS ON THE MAGNETIC-FIELD
16:45 DEPENDENCE OF SPIN-TRANSFER-INDUCED
MAGNETIZATION REVERSAL**
Daniel Lacour, Jordan Katine, Neil Smith, Matthew Carey, Jeffrey Childress, *Hitachi San Jose Research Center, San Jose, CA, United States of America*
- BA-10 MAGNETIZATION REVERSAL BY SPIN POLARIZED
17:00 CURRENT IN NANO-PILLARS WITH A SYNTHETIC
ANTIFERROMAGNET FREE LAYER**
Nobuki Tezuka¹, Kazuhiro Yonezawa¹, Takao Ochiai¹, Yang Jiang², Satoshi Sugimoto¹, Koichiro Inomata¹, ¹Tohoku University, Japan, ²CREST-JST, Japan
- BA-11 CURRENT INDUCED MAGNETISATION SWITCHING
17:15 IN ASYMMETRIC NECKED WIRES**
Serban G. Lepadatu, Yong Bing Xu, *Department of Electronics, The University of York, United Kingdom*

Session BB
**Symposium on Advanced Perpendicular Magnetic
Recording**

H. Muraoka
Tohoku University

- *BB-01 EXCHANGE COUPLED COMPOSITE MEDIA FOR
14:30 PERPENDICULAR RECORDING**
R. H. Victora, Xiao Shen, *The Center for Micromagnetics and
Information Technologies (MINT), United States of America*
- *BB-02 AN OVERVIEW OF THE BENEFITS AND
15:00 CHALLENGES OF DISCRETE TRACK RECORDING
MEDIA**
David Wachenschwanz, Paul Dorsey, Andrew Homola, Wen
Jiang, David Treves, Bruce Harper, Norbert Staub, Shoji
Suzuki, Henry Nishihira, Crystal Tang, Eric Roddick, *Komag,
Inc., United States of America*
- *BB-03 MAGNETIC AND RECORDING PROPERTIES OF
15:30 PATTERNED PERPENDICULAR ISLANDS**
B. D. Terris¹, G. Hu¹, M. Albrecht¹, T. Thomson¹, C. T. Rettner²,
*¹Hitachi Global Storage Technologies, San Jose Research
Center, United States of America, ²IBM Almaden Research
Center, United States of America*
- *BB-04 NANOIMPRINT TECHNOLOGY AND APPLICATIONS
16:00 Akihiro Miyauchi¹, Chiseki Haginoya², Takashi Andou¹,
*¹Materials Research Laboratory, Hitachi Ltd., Japan, ²Storage
Technology Research Center, Hitachi Ltd., Japan***
- *BB-05 MICROMAGNETIC SIMULATION OF HIGH SPEED
16:30 HEAD DYNAMICS IN PERPENDICULAR RECORDING**
Werner Scholz, Sharat Batra, *Seagate Research, United States
of America*
- *BB-06 FUNDAMENTAL FEATURES OF PERPENDICULAR
17:00 MAGNETIC RECORDING AND THE DESIGN
CONSIDERATION FOR FUTURE PORTABLE HDD
INTEGRATION**
Yoichiro Tanaka, *Core Technology Center, Toshiba
Corporation, Japan*

Session BC
Clusters and Particles I

D.E. Nikles
University of Alabama

***BC-01 MODELLING EXCHANGE BIAS IN THIN FILMS
14:30 AND NANOSTRUCTURES**

Ulrich Nowak, B. Beckmann, G. Scholten, K. D. Usadel,
Universitat Duisburg-Essen, Germany

**BC-02 CONTROL OF THE SIZE OF OCTAHEDRAL FePt
15:00 NANO-DOTS AND THEIR MAGNETIC PROPERTIES**

Hirotaaka Ito¹, Toshiyuki Shima¹, Koki Takanashi¹, Yukiko Takahashi², Kazuhiro Hono², ¹*Institute for Material Research, Tohoku University, Japan*, ²*National Institute for Materials Science, Japan*

**BC-03 MICROSTRUCTURE AND MAGNETIC PROPERTIES
15:15 OF INTERFACIALLY DISORDERED FePt PARTICLES**

Y. K. Takahashi¹, K. Hono¹, S. Okamoto², O. Kitakami², Yutaka Shimada², ¹*National Institute for Material Science, Japan*, ²*IMRAM, Tohoku University, Japan*

**BC-04 QUANTITATIVE ANALYSIS OF ORDERING OF
15:30 EQUIATOMIC FePt NANOPARTICLES BY ELECTRON DIFFRACTION**

Takamichi Miyazaki¹, Yukiko K. Takahashi², Satoshi Okamoto¹, Osamu Kitakami¹, Yutaka Shimada¹, Zentaro Akase¹, Yasukazu Murakami¹, Daisuke Shindo¹, Kazuhiro Hono², ¹*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*, ²*National Institute for Materials Science, Japan*

**BC-05 NOVEL FABRICATION METHOD OF IBICVD FOR
15:45 FePt AND CoPt NANO-PARTICLES**

Qing Yu Xu, Yasuyuki Kageyama, Takao Suzuki, *Information Storage Materials Laboratory, Toyota Technological Institute, Japan*

**BC-06 EFFECT OF ALIGNING FIELD ON EASY-AXIS
16:00 ORIENTATION OF DIRECTLY SYNTHESIZED L1₀ NANOPARTICLES**

J. W. Harrell, David E. Nikles, Shishou Kang, Zhi Yong Jia, *Center for Materials for Information Technology, The University of Alabama, United States of America*

**BC-07 CRYSTALLOGRAPHIC ALIGNMENT OF
16:15 NANOPARTICLES DURING SELF-ASSEMBLY**

Shihai Kan, Madhur Sachan, Jennifer Kirchhoff, Sara A. Majetich, *Physics Dept., Carnegie Mellon University, United States of America*

**BC-08 XPS STUDY OF THERMAL EFFECTS ON FePt and
16:30 FePtAg Nanoparticles**
Tao Song¹, Tiejun Zhou¹, Chilong Chen¹, Hao Gong², ¹Data
Storage Institute, Singapore, ²Materials Science Department,
National University of Singapore, Singapore

**BC-09 MAGNETIC PROPERTIES AND MICROSTRUCTURE
16:45 OF ISOLATED Fe-Pt NANOPARTICLE-MONOLAYER
ASSEMBLY BY PROTECTIVE COATING**
Mu-Pei Chen, Kazuya Kuroishi, Yoshitaka Kitamoto,
Department of Innovative and Engineered Materials, Tokyo
Institute of Technology, Japan

**BC-10 CO-DEPOSITION OF FePt AND CoPt
17:00 NANOPARTICLES ON SILICON DIOXIDE**
L. Castaldi ¹, Giannakopoulos K.¹, Travlos A.¹, Niarchos D.¹,
Boukari S.², Beaurepaire E.², ¹Institute of Materials Science
NCSR Demokritos, Greece, ²IPCMS UMR 7504 CNRS-ULP,
France

**BC-11 STRUCTURAL PHASE TRANSFORMATION OF FePt
17:15 NANOPARTICLES BY ION IRRADIATION**
B. Rellinghaus¹, O. Dmitrieva², M.O. Liedke³, J. Fassbender³,
¹IFW Dresden, Institut für Metallische Werkstoffe, Germany,
²Experimentalphysik, AG Farle, Univ. Duisburg Essen,
Germany, ³Institut für Ionenstrahlphysik und
Materialforschung, Forschungszentrum Rossendorf, Germany

Apr. 5

Room 224

Session BD
Magnetic Imaging I
K. Sueoka
Hokkaido University

***BD-01 ADVANCES IN HIGH RESOLUTION MAGNETIC
14:30 FORCE MICROSCOPY**
H. J. Hug, University of Basel, Switzerland

**BD-02 DIRECT OBSERVATION OF FERROMAGNETIC
15:00 EXCHANGE BY MAGNETIC FORCE MICROSCOPY**
Antoine Vanhaverbeke, Michel Viret, Olivier Klein,
Commissariat de l'Energie atomique, Saclay, France

**BD-03 COMPARING MEDIUM MODELS TO PHYSICAL
15:15 MEDIA VIA MFM IMAGERY**
Clayton T. Miller, Ronald S. Indeck, Joseph A. O'Sullivan,
Marcel W. Muller, Dept. of Electrical and Systems Engineering,
Washington University in St. Louis, United States of America

BD-04 CHARACTERIZATION OF Fe/W SPIN-POLARIZED

15:30 TIPS BY MEANS OF HOLOGRAPHIC TEM AND SPIN-POLARIZED-STs OF OPTICALLY PUMPED P-GaAs

Tsuyoshi Matsuda¹, Akira Tonomura¹, Toyokazu Yamada², Daisuke Okuyama², Naosumi Mizuno², Amadeo L. Vazquez de Parga³, Herman van Kempen⁴, Tadashi Mizoguchi², ¹*Advanced Research Laboratory, Hitachi, Ltd., Japan*, ²*Dept. of Physics, Gakushuin University, Japan*, ³*Dept. Fisica de la Materia Condensada, Universidad Autonoma de Madrid, Spain*, ⁴*Institute for Molecules and Molecular systems, Radboud University of Nijmegen, Netherlands*

BD-05 LORENTZ MICROSCOPY STUDIES OF DOMAIN

15:45 WALL TRAP STRUCTURES

Stephen McVitie¹, Craig Brownlie¹, John N Chapman¹, Chris D W Wilkinson², ¹*Department of Physics and Astronomy, University of Glasgow, United Kingdom*, ²*Department of Electronics and Electrical Engineering, University of Glasgow, United Kingdom*

BD-06 MAGNETIC MICROSTRUCTURES IN NANO-

16:00 GRANULAR CoPt-Al-O THIN FILMS STUDIED BY ELECTRON HOLOGRAPHY AND LORENTZ MICROSCOPY

H. S. Park¹, D. Shindo¹, S. Mitani², K. Takanashi², ¹*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*, ²*Institute for Materials Research, Tohoku University, Japan*

BD-07 SCANNING HALL PROBE MICROSCOPY (SHPM)

16:15 USING QUARTZ CRYSTAL AFM FEEDBACK

Munir Dede¹, Koray Urkmen^{1,2}, Ahmet Oral², ¹*Dept. of Physics, Bilkent University, Turkey*, ²*Dept. of Physics, Bilkent University, Turkey*

BD-08 FOCUSED ION BEAM MODIFIED ATOMIC FORCE

16:30 MICROSCOPE TIPS FOR SCANNING HALL PROBE MICROSCOPY

Dorothee Petit¹, Sherri Johnstone², David Wood³, Russel P. Cowburn¹, ¹*Nanoscale Magnetics group, Dept. of Physics, University of Durham, United Kingdom*, ²*Centre for Electronic Systems, School of Engineering, University of Durham, United Kingdom*, ³*Microsystems Technology group, School of Engineering, University of Durham, United Kingdom*

BD-09 NONEQUILIBRIUM MAGNETIC DOMAIN

16:45 CONFIGURATIONS ASSISTED BY THERMALLY EXCITED MAGNONS

Byoung C. Choi¹, Grey Arnup², Mark R. Freeman², ¹*Dept. of Physics & Astronomy, Univ. of Victoria, Canada*, ²*Dept. of Physics, Univ. of Alberta, Canada*

BD-10 MAGNETO-OPTICAL IMAGING USING LIQUID

17:00 CRYSTAL MODULATOR

Takayuki Ishibashi, Zhihao Kuang, Shuta Yufune, Masaru Oda, Toshiro Tani, Yasufumi Imura, Katsuaki Sato, *Faculty of Technology, Tokyo University of Agriculture and Technology, Japan*

BD-11 EVOLUTION OF Co/Pt-COVERED NANOLINES

17:15 UNDER MAGNETIC FIELD USING COHERENT SOFT X-RAY RESONANT MAGNETIC SCATTERING

Guillaume Beutier¹, Frederic Livet², Alain Marty¹, Gerrit van der Laan³, Stefan Stanescu⁴, Virginie Chamard², Vincent Baltz⁵, ¹*CEA-SP2M, France*, ²*CNRS-LTPCM, France*, ³*Magnetic Spectroscopy Group, Daresbury Lab., United Kingdom*, ⁴*ESRF, France*, ⁵*CEA-Spintec, France*

Apr. 5

Room 131/132

Session BE

Actuators and Power Devices

K. Yamasawa

Shinshu University

BE-01 ADAPTIVE FUZZY LOGIC FOR THE

14:30 CHARECTERIZATION OF AC ACTUATORS

A. A. Arkadan, Mohamed Mneimneh, N. Alaawar, *Department of Electrical and Computer Engineering, Marquette University, United States of America*

BE-02 DEVELOPMENT OF A SLOTLESS TUBULAR

14:45 LINEAR INTERIOR PERMANENT MAGNET MICRO MOTOR FOR ROBOTIC APPLICATIONS

Hai Wei Lu, Jian Guo Zhu, Youguang Guo, *Faculty of Engineering, University of Technology, Sydney, Australia*

BE-03 DEVELOPMENT OF THE CONICAL SPRING LINEAR

15:00 VIBRATOR (CSLV) FOR MOBILE PHONE

Ju Ho Kim¹, Il Oung Park¹, Hwa Young Oh¹, Joon Choi¹, Sung Hong Won², ¹*Samsung Electro-Mechanics, Republic of Korea*, ²*Division of Electrical and Computer Engineering, Hanyang University, Republic of Korea*

BE-04 CYLINDRICAL MOVING MAGNET TYPE LINEAR

15:15 ACTUATOR HAVING LARGE MOTOR CONSTANT

Mizuno Tsutomu¹, Kawai Masanori¹, Tsuchiya Fumiaki¹, Kosugi Masashi¹, Yamada Hajime², ¹*Faculty of Engineering, Shinshu University, Japan*, ²*Doctoral International Collaboration Institute, Japan*

- BE-05 DESIGN OF A VOICE COIL MOTOR USED IN THE
15:30 FOCUSING SYSTEM OF A DIGITAL CAMERA**
Shyh-Jier Wang, Mei-Lin Lai, Hsing-Cheng Yu, Jau-Jiu Ju, Der Ray Huang, *Opto-Electronics & Systems Laboratories /ITRI, Taiwan*
- BE-06 IMPROVEMENT OF MAGNETIC CIRCUIT IN
15:45 LEVITATION SYSTEM USING HTS AND SOFT
MAGNETIC MATERIAL**
Mojtaba Ghodsi, Toshiyuki Ueno, Toshiro Higuchi, *Dept of Precision Machinery Eng., The Univ. of Tokyo, Japan*
- BE-07 EXPERIMENTAL DEVELOPMENT OF A1-D.O.F
16:00 CONTROLLED MAGNETIC LINEAR BEARING**
I. D. Silva¹, O. Horikawa², ¹*Escola Politecnica - University of Sao Paulo, Brazil*, ²*Escola Politecnica - University of Sao Paulo, Brazil*
- BE-08 DISTRIBUTED INDUCTOR DESIGN FOR VRM
16:15 APPLICATIONS**
Christina Collins, Maeve Duffy, *Dept. Electronic Engineering, NUIGalway, Ireland*
- BE-09 A PLANAR INDUCTOR USING Mn-Zn
16:30 FERRITE/POLYIMIDE COMPOSITE THICK FILM FOR
LOW-VOLTAGE, LARGE-CURRENT DC-DC
CONVERTER**
Isao Kowase, Toshiro Sato, Kiyohito Yamasawa, Yoshimasa Miura, *Faculty of Engineering, Shinshu University, Japan*
- BE-10 SIMULATION OF A MAGNETIC AMPLIFIER
16:45 CIRCUIT INCLUDING HYSTERESIS**
Lars Austrin¹, David Ribbenfjard², Goran Engdahl², ¹*Saab AB, Saab Aerosystems, Linkoping, Sweden*, ²*Electrical Engineering, Royal Institute of Technology, Stockholm, Sweden*
- BE-11 HYBRID PULSE TRANSFORMER WITH
17:00 PERMANENT MAGNET FOR FLYBACK CONVERTER**
Mizuno Tsutomu, Takata Yukinobu, Matsumoto Masashi, *Faculty of Engineering, Shinshu University, Japan*
- BE-12 A SYNCHRONOUS RECTIFICATION USING A
17:15 DIGITAL PLL TECHNIQUE FOR CONTACTLESS
POWER SUPPLYS**
Hidekazu Miura¹, Shinsuke Arai¹, Fumihiko Sato¹, Hidetoshi Matsuki¹, Tadakuni Sato², ¹*Graduate school of engineering, Tohoku University, Japan*, ²*NEC Tokin Corporation, Japan*

13:30-17:00

Session BP

**Magneto-Optical Recording and Heat Assisted
Recording**

T. Klemmer

Seagate Technology

A. Nakaoki

Sony Corporation

**BP-01 ON THE STUDY OF COERCIVITY AND INTERACTION
FIELD DISTRIBUTIONS FROM MICROHYSTERESIS
LOOPS**

Lin-Xiu Ye, Jia-Mou Lee, Te-Ho Wu, *Taiwan SPIN Research Center and Graduate school of Engineering Science & Technology, National Yunlin Univ. of Science and Technology, Taiwan*

BP-02 MECHANISM OF DOMAIN EXPANSION IN MAMMOS

Philipp Herget, T. E. Schlesinger, Daniel D. Stancil, *Data Storage Systems Center, Carnegie Mellon University, United States of America*

**BP-03 MEASUREMENTS OF MAGNETIC DAMPING IN
GdFeCo THIN FILMS**

Arata Tsukamoto¹, Katsuji Nakagawa¹, Akiyoshi Itoh¹, Arexei Kime², Daniel Stanciu², Andrei Kirilyuk², Theo Rasing², ¹*College of science and technology, Nihon University, Japan,* ²*NSRIM Institute, Radboud University Nijmegen, Netherlands*

**BP-04 FDTD ANALYSIS OF RECORDING LIGHT
DISTRIBUTION IN NEAR-FIELD MAMMOS
RECORDING SYSTEM**

Matthew M. Manfredonia¹, Paul W. Nutter¹, C. David Wright², ¹*School of Computer Science, University of Manchester, United Kingdom,* ²*School of Engineering and Computer Science, University of Exeter, United Kingdom*

**BP-05 DESIGN OF OPTICAL FLYING HEAD FOR MAGNETO
OPTICAL RECORDING**

Sang-Joon Yoon¹, Jong Soo Lee², Young-Pil Park³, Dong-Hoon Choi¹, ¹*iDOT, Hanyang University, Republic of Korea,* ²*Dept. Mech. Eng., Yonsei University, Republic of Korea,* ³*CISD, Yonsei University, Republic of Korea*

**BP-06 MAGNETO-OPTICAL PROPERTIES OF TbFeCo FILMS
ON A NANO-STRUCTURED SUBSTRATE**

Morio Nakatani¹, Yoshihisa Suzuki¹, Satoshi Sumi¹, Shinji Kobayashi², Sakae Tanemura³, ¹*HD Project BU, SANYO Electric Co., Ltd., Japan,* ²*Digital Systems Development Center BU, SANYO Electric Co., Ltd., Japan,* ³*Nagoya Institute of Technology, Japan*

- BP-07 THERMO-RESISTIVE FLYGHT ATTITUDE MEASUREMENTS OF FLYING HEADS IN NEAR FIELD MAGNETO-OPTICAL DATA STORAGE**
Hans H. Gatzert¹, Stephan Knappmann², Claudia Neumeister¹,
¹*Inst. for Microtechnology, Hanover University, Germany,*
²*Deutsche Thomson-Brandt GmbH, Germany*
- BP-08 THE EFFECT OF EXTERNAL MAGNETIC FIELD ON MARK SIZE DURING FIELD EMISSION ASSISTED MAGNETIC PROBE RECORDING ON CoNi/Pt MULTILAYERS**
Li Zhang¹, James A. Bain¹, Jian-Gang Zhu¹, Leon Abelmann²,
Takahiro Onoue², ¹*Data Storage Systems Center, Carnegie Mellon University, United States of America,* ²*MESA Research Institute, University of Twente, Netherlands*
- BP-09 IMPROVED PATTERNED MEDIA FOR PROBE-BASED HAMR**
Emmanuelle Algre, Gilles Gaudin, Ahmad Bsiesy, Jean Pierre Nozieres, *SPINTEC CNRS/CEA (URA2512), France*
- BP-10 TRANSIENT THERMAL RESPONSE OF A NANOSCALE HOT-SPOT IN A FILM WITH ALTERNATING MATERIALS**
Sartaj S. Ghai¹, Cristina H. Amon², Woo Tae Kim³, Myung S. Jhon¹, ¹*Department of Chemical Engineering, Data Storage Systems Center, and Institute for Complex Engineered Systems, Carnegie Mellon University, United States of America,* ²*Institute for Complex Engineered Systems, Carnegie Mellon University, United States of America,* ³*Department of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, United States of America*
- BP-11 REDUCTION OF COERCIVITY IN FePt/FeRh BILAYER FILMS BY HEATING**
Shigenobu Koyama¹, Hidehiro Ogata², Masaki Konno², Takao Goto², Kunihiro Koike³, ¹*Daido Electronics Co., Ltd., Japan,* ²*Faculty of Engineering, Tohoku Gakuin University, Japan,* ³*Faculty of Engineering, Yamagata University, Japan*
- BP-12 DAMPING PARAMETER AND WALL VELOCITY OF RE-TM FILMS**
Tadashi Kobayashi, Hideaki Hayashi, Yuji Fujiwara, Shigeru Shiomi, *Dept. of Physics Engng., Mie University, Japan*

Magnetic Semiconductors I**H. Munekata**

Imaging Science and Engineering Laboratory, Tokyo Institute of Technology

BQ-01 FERROMAGNETISM AND ANOMALOUS HALL EFFECT IN Mn-DOPED ZnO THIN FILMS GROWN BY REACTIVE SPUTTERING

Hyun Jung Kim¹, Jae Ho Sim², Hyojin Kim², Soon-Ku Hong², Dojin Kim², Young Eon Ihm², Woong Kil Choo¹, ¹*Dept. of Materials Science and Engineering, KAIST, Republic of Korea*, ²*Dept. of Materials Science and Engineering, Chungnam National University, Republic of Korea*

BQ-02 FERROMAGNETISM IN NEW DILUTED MAGNETIC SEMICONDUCTOR Si_{1-x}Mn_xTe CRYSTALS

Young Hun Hwang, Hye Kyeong Kim, Young Ho Um, *Department of Physics, University of Ulsan, Republic of Korea*

BQ-03 ROOM TEMPERATURE FERROMAGNETISM IN Co_xTi_{1-x}O₂ POWDERS MADE BY SOL-GEL METHOD: A NMR STUDY

Shi Hui Ge, Xin Wei Wang, Xiao Ming Kou, Xue Yun Zhou, Li Xi, Yalu Zuo, Xiao Lin Yang, Cheng Xian Li, *Key Laboratory for Magnetism and Magnetic Materials of Ministry of Education, Lanzhou University, China*

BQ-04 MAGNETIC AND HALF-METALLIC PROPERTIES OF Cr-DOPED BETA-SiC

Yoon-Suk Kim¹, Hanchul Kim², Yong-Chae Chung¹, ¹*Dept. of Ceramic Eng., Hanyang University, Republic of Korea*, ²*Materials Evaluation Center, Korea Research Institute of Standards and Science, Republic of Korea*

BQ-05 LOW TEMPERATURE HYDROGEN TREATMENT OF Fe DOPED ZnO FERROMAGNETIC SEMICONDUCTOR

Geun Young Ahn¹, Seung-Iel Park¹, Sam Jin Kim¹, Bo Wha Lee², Chul Sung Kim¹, ¹*Dept. of Physics, Kookmin University, Republic of Korea*, ²*Dept. of Physics, Hankuk University of Foreign Studies, Republic of Korea*

BQ-06 EFFECTS OF OXYGEN PRESSURE ON FERROMAGNETIC ORDERING IN Mn-DOPED ZnO THIN FILMS

Woo Young Shim¹, Kyung Il Lee¹, Kyung A Jeon², Sang Yeol Lee², Myung Hwa Jung³, Woo Young Lee¹, ¹*Department of Material Science Engineering, Yonsei University, Seoul, Republic of Korea*, ²*Department of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea*, ³*Korea Basic Science Institute, Daejeon 305-333, Republic of Korea*

- BQ-07 MAGNETIC PROPERTIES OF LOW TEMPERATURE GROWN Si:Ce THIN FILMS ON (001) Si SUBSTRATE BY MOLECULAR BEAM EPITAXY**
Takemi Terao, Yasuhito Yoshimizu, Yoshihiro Nishimura, Norifumi Fujimura, *Dept. of Applied materials science, Osaka prefecture university, Japan*
- BQ-08 MAGNETIC, ELECTRICAL PROPERTIES AND STRUCTURE OF Cr-AlN AND Mn-AlN THIN FILMS GROWN ON Si SUBSTRATES**
Yasushi Endo, Takanobu Sato, Ayumu Takita, Yoshio Kawamura, Masahiko Yamamoto, *Dept. of Materials Science and Engineering, Osaka University, Japan*
- BQ-09 MAGNETIC PROPERTIES OF MANGANESE GERMANIUM DIPHOSPHIDE AND MANGANESE PHOSPHIDE GROWN BY MOLECULAR BEAM EPITAXY TECHNIQUE**
Kazuyuki Minami, Jumpei Jogo, Manami Mori, Takayuki Ishibashi, Katsuaki Sato, *Tokyo University of Agriculture and Technology, Japan*
- BQ-10 EFFECT OF ANNEALING ON MAGNETIC PROPERTIES OF NEW (In, Al, Mn)As FERROMAGNETIC SEMICONDUCTORS**
Y. F. Chen¹, W. N. Lee², J. H. Huang¹, T. S. Chin¹, H. C. Ku³,
¹*Department of Materials Science & Engineering, Materials Science Center, National Tsing Hua University, Taiwan,*
²*Department of Materials Science & Engineering, National Chiao Tung University, Taiwan,* ³*Department of Physics, National Tsing Hua University, Taiwan*
- BQ-11 DILUTED FERROMAGNETIC PROPERTIES IN Fe- AND Co-DOPED TiO₂-THIN FILMS**
Kwang Joo¹, Young Ran Park¹, Geun Young Ahn², Chul Sung Kim², Jae Yun Park³, ¹*Department of Physics, Konkuk University, Republic of Korea,* ²*Department of Physics, Kookmin University, Republic of Korea,* ³*Department of Materials Science and Engineering, University of Incheon, Republic of Korea*
- BQ-12 MAGNETIC PROPERTIES OF Ti_{0.99}Fe_{0.01}O₂**
Eng Chan Kim, Su Ho Moon, Seung Il, Woo, Hyung Dong Kim, Byung Yong Kim, Sung Hyun Lee, Jong Ho Cho, Young Gull Joh, Dong Ho Kim, *Dept. of Physics, Yonungnam University, Republic of Korea*
- BQ-13 MAGNETOTRANSPORT PROPERTIES OF A ROOM TEMPERATURE FERROMAGNET (Ga,Mn)N**
Heikki Holmberg¹, Natalia Lebedeva¹, Sergei Novikov¹, Pekka Kuivalainen¹, Mathieu Malfait², Victor Moschalkov², Pasi Kostamo³, ¹*Electron Physics Laboratory, Department of Electrical and Communications Engineering, Helsinki University of Technology, Finland,* ²*Pulsvelde-LVSM,*

Katholieke Universiteit Leuven, Belgium, ³Optoelectronics Laboratory, Department of Electrical and Communications Engineering, Helsinki University of Technology, Finland

BQ-14 ROOM TEMPERATURE FERROMAGNETISM AND MAGNETORESISTANCE IN CHROMIUM-DOPED INDIUM TIN OXIDE

Hyoun Soo Kim¹, Sung Hwa Ji², Hyojin Kim², Dojin Kim², Soon Kil Yoon², Woong Kil Choo¹, ¹*Dept. of Materials Science and Engineering, KAIST, Republic of Korea, ²Dept. of Materials Science and Engineering, Chungnam National University, Republic of Korea*

BQ-15 Co VALENCE AND POSSIBLE SPIN TRANSFORMATION IN DILUTED MAGNETIC SEMICONDUCTORS Zn_{1-x}Mg_xO AND Zn_{1-x}Co_xO

Germanas Peleckis¹, Xiao Lin Wang¹, Ru-Shi Liu², Shixue Dou¹, ¹*Institute of Superconducting and Electronic Materials, University of Wollongong, Australia, ²Dept. of Chemistry, National Taiwan University, Taiwan*

Apr. 5

Event Hall

13:30-17:00

Session BR

Nanocrystalline and Other Materials I

A. Makino

Akita Prefectural University

BR-01 MAGNETIC PROPERTIES OF NANOCRYSTALLINE MECHANICALLY ALLOYED Fe_{86.5}Zr₇B₅Cu_{1.5} POWDERS AND THICK FILMS

Chun-Rong Lin, Wen-Jie Lee, *Dept. of Mechanical Engineering, Southern Taiwan University of Technology, Taiwan*

BR-02 MICROSTRUCTURE AND MAGNETIC PROPERTIES OF AMORPHOUS AND NANOCRYSTALLINE Fe₈₂Mn₈Zr₁₀ ALLOY

Alagarsamy Perumal¹, Veeturi Srinivas², M. Vasundara², V. V. Rao³, R. A. Dunlap⁴, ¹*Department of Physics, Indian Institute of Technology Guwahati, India, ²Department of Physics, Indian Institute of Technology, Kharagpur, India, ³Cryogenic Engineering Center, Indian Institute of Technology, Kharagpur, India, ⁴Department of Physics, Dalhousie University, Canada*

BR-03 NANO-STRUCTURE AND MAGNETIC PROPERTIES OF AS QUENCHED Fe BASED RIBBONS

Jifan Hu¹, Bo Li², Hong Wei Qin¹, Min Hua Jiang¹, ¹*Department of Physics, Shandong University, China, ²Central Iron & Steel Research Institute, China*

- BR-04 MAGNETIC PROPERTIES OF HIGH Bs NANOCRYSTALLINE FeCoCuNbSiB ALLOYS**
Yoshihito Yoshizawa, Yuichi Ogawa, *Advanced Electronics Research Lab., Hitachi Metals, Ltd., Japan*
- BR-05 SURFACE MAGNETIC CHARACTERISATION OF FeSiB AMORPHOUS RIBBONS**
Marius Dobromir¹, Maria Neagu¹, Gheorghe Popa¹, Horia Chiriac², Gheorghe Singurel¹, Cornelia Hison³, ¹*Al. I. Cuza University, Faculty of Physics, Romania*, ²*National Institute of R&D for Technical Physics, Romania*, ³*Dip.Ingegneria dei Materiali e della Produzione, Universita Federico II, Italy*
- BR-06 SOFT MAGNETIC TERNARY AND QUATERNARY Y-M-B BULK METALLIC GLASSES (M= Fe, Co, Ni)**
Chih Yuan, Tsung Shune Chin, *Department of Materials Science and Engineering, National Tsing Hua University, Taiwan*
- BR-07 DISTRIBUTION OF FLUCTUATIONS OF SWITCHING FIELD IN Fe-RICH WIRES UNDER TENSILE STRESS**
Przemyslaw Gawronski^{1,2}, Arcady Zhukov², Juan M. Blanco², Julian Gonzalez³, Krzysztof Kulakowski¹, ¹*Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Poland*, ²*Departamento de Fisica Aplicada I, Euscuela Universitaria Politecnica de Donostia, Universidad del Pais Vasco, Spain*, ³*Departamento de Fisica de Materiales, Facultad de Quimicas, Universidad del Pais Vasco, Spain*
- BR-08 HIGH TEMPERATURE SUPERPARAMAGNETISM IN BORON SUBSTITUTED FeZrMn ALLOYS**
A. N. Ulyanov¹, Seong-Cho Yu¹, Young-min Kang², Sang-Im Yoo², ¹*Department of Physics, Chungbuk National University, Cheongju, Republic of Korea*, ²*School of Materials Science and Engineering, Seoul National University, Republic of Korea*
- BR-09 MAGNETIC PROPERTIES OF MAGNETICALLY SOFT NANOCOMPOSITE Co-SiO₂ PREPARED VIA MECHANICAL MILLING**
Sanjay R. Mishra¹, Igor Dubenko², Joe Losby¹, Kanishka Marasinghe³, Mehdi Ali³, Nausad Ali², ¹*Department of Physics, The University of Memphis, United States of America*, ²*Department of Physics, Southern Illinois University, United States of America*, ³*Department of Physics, University of North Dakota, United States of America*
- BR-10 MAGNETIC SOFTNESS OF PERMALLOY GRANULAR FILMS PRODUCED BY CO-EVAPORATION**
Yutaka Shimada¹, Tetsuo Itoh², Shigeyoshi Yoshida², Satoshi Okamoto¹, Osamu Kitakami¹, ¹*Inst. for Multidisciplinary Research, Tohoku University, Japan*, ²*NEC Tokin Corporation, Japan*

BR-11 EFFECTS OF POST-ANNEALING ON THE MAGNETIC PROPERTIES OF FeCoBN THIN FILMS

Cheon Woon Ji, Inyoung Kim, Jong-Ryoul Kim, *Dept. of Materials Engineering Science, Hanyang University, Republic of Korea*

Apr. 5

Event Hall

13:30-17:00

Session BS

Hard Magnets

T. Iriyama

Daido Steel Co. Ltd

H. Kato

Graduate School of Engineering, Tohoku University

BS-01 MICROSTRUCTURE OF Fe/Pt(110) MULTILAYERS WITH HIGH IN-PLANE K_u

D. H. Wei¹, C. C. Yu², J. H. Chan³, Y. D. Yao², Y. Liou², W. C. Cheng³, T. S. Chin¹, *¹Department of Materials Science and Engineering, National Tsing-Hua University, Taiwan, ²Institute of Physics, Academia Sinica, Taiwan, ³Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan*

BS-02 MAGNETIC PROPERTIES OF Co-Zr-C ALLOYS

Tetsuji Saito¹, Yasushi Kamagata¹, Wen Quan Wang², *¹Dept. Mechancial Science and Engineering, Chiba Institute of Technology, Japan, ²Dept. Physics, Jilin University, China*

BS-03 STUDYING OF MAGNETOELASTIC EFFECTS IN $YFe_{10}V_2$ FERROMAGNETIC ALLOY

Hassan Khandan Fadafan¹, Mohammad Reza¹, Nasser Tajabor¹, Daniel Fruchart², *¹Dept. of Physics, Ferdowsi Univ. of Mashhad, Iran, ²Lab. de cristallographie, Poly CNRS, Grenoble, France*

BS-04 STRUCTURE TRANSITION AND MAGNETIC ANOMALY IN $(Nd_{1-x}Er_x)_3Fe_{18}Co_6Cr_5$ COMPOUNDS

Bao Dan Liu¹, Yoshio Bando¹, Yi Hua Gao², Cheng Chun Tang², Guangheng Wu¹, Fuming Yang¹, *¹Graduate School of Pure and Applied Science, University of Tsukuba, Japan, ²Advanced Materials Laboratory, National Institute for Materials Science, Japan*

BS-05 MAGNETOSTRICTIVE STRAIN EFFECTS IN $Pr_3Fe_{11}Ga_3$ ALLOY

Mohammad Reza Alinejad¹, Nasser Tajabor¹, Ahmad Amirabadizadeh², Faiz Pourarian³, *¹Dept. of Physics, Ferdowsi University of Mashhad, Mashhad, Iran, ²Dept. of Physics, University of Birjand, Birjand, Iran, ³Carnegie Mellon Univ., Pittsburgh, United States of America*

- BS-06 REDUCTION OF GRAIN SIZE AND ORDERING TEMPERATURE IN $L1_0$ FePt THIN FILMS**
 An-Cheng Sun¹, Po-Cheng Kuo¹, Jen-Hwa Hsu², Huei-Li²,
¹Institute of Materials Science and Engineering, and Center for Nanostorage Research, National Taiwan University, Taiwan, ²Department of Physics, National Taiwan University, and Center for Nanostorage Research, National Taiwan University, Taiwan
- BS-07 FABRICATION OF FePt/FeCo/FePt EXCHANGE SPRING TRILAYERS WITH VERY THIN FeCo LAYER FOR HIGH RESOLUTION MFM TIPS**
 Young Woo Rheem¹, Hitoshi Saito², Shunji Ishio², *¹Venture Business Laboratory, Akita University, Japan, ²Dept. of Materials Science and Engineering, Akita University, Japan*
- BS-08 MAGNETIC PROPERTIES AND MICROSTRUCTURE OF THE GRANULAR FILMS PROCESSED BY ANNEALING Fe-Pt BASED MULTILAYERS**
 Tomoko Seki¹, Yukiko Takahashi², Kazuhiro Hono², *¹Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan, ²National Institute for Materials Science, Japan*
- BS-09 ENERGY PRODUCT ENHANCEMENT IN $Fe_{49-x}Co_xPt_{51}$ THIN FILMS**
 Shi-Kun Chen¹, Shih-Nan Hsiao¹, Fu-Te Yuan¹, Wen-Cheng Chang², *¹Department of Materials Science and Engineering, Feng Chia University, Taiwan, ²Department of Physics, National Chung Cheng University, Taiwan*
- BS-10 PRODUCTION OF BULK NANOCOMPOSITE MAGNETS OF AN $Nd_xFe_{77.5}B_{18.5}$ ALLOY BY COMPRESSION SHEARING METHOD**
 Tetsuji Saito¹, Hiroyuku Takeishi¹, Noboru Nakayama², *¹Dept. Mechanical Science and Engineering, Chiba Institute of Technology, Japan, ²Dept. Machine Intelligence and Systems Engineering, Akita Prefectural University, Japan*
- BS-11 MAGNETIC PROPERTIES OF HIGH COERCIVITY MELT-SPUN Pr-Fe-Co-Ti-B-Si SYSTEM RIBBONS AND THEIR BONDED MAGNETS**
 Hiroshi Yamamoto, Ryuki Monma, *School of Science & Technology, Meiji University, Japan*
- BS-12 EFFECT OF Fe/Pt RATIO ON THE MAGNETIC PROPERTIES AND CORROSION BEHAVIOR OF NANOCOMPOSITE FePtB RIBBONS**
 C. W. Chang, H. W. Chang, C. H. Chiu, Wen-Cheng Chang, *Department of Physics, National Chung Cheng University, Taiwan*

- BS-13 CRYSTALLIZATION BEHAVIOR IN TWO-PHASE PrFeB MECHANICALLY MILLED POWDER**
 Melania Marinescu, Yong Zhang, Alexander Gabay, George C. Hadjipanayis, *Dept. of Physics & Astronomy, University of Delaware, United States of America*
- BS-14 EFFECT OF HIGH-MAGNETIC-FIELD ANNEALING ON THE MAGNETIC PROPERTIES OF Nd-Co-B NANOCOMPOSITE RIBBONS**
 Hiroaki Kato¹, Keiichi Koyama², Terunobu Miyazaki¹, ¹*Dept. of Applied Physics, Tohoku University, Japan, ²Inst. for Materials Research, Tohoku University, Japan*
- BS-15 PERPENDICULAR ORIENTATION OF BARIUM FERRITE THIN FILM WITH ALUMINUM TOPLAYER**
 Nazmun Nahar Shams, Xiao Xi Liu, Mitsunori Matsumoto, Akimitsu Morisako, *Dept. of Information Engineering Shinshu University, Japan*
- BS-16 SIMULATIONS AND EXPERIMENTS ON EDDY CURRENT IN Nd-Fe-B MAGNETS**
 Yasuaki Aoyama, Koji Miyata, Ken Ohashi, *Shin-Etsu Chemical Co. Ltd., Japan*
- BS-17 MAGNETIC PROPERTIES OF Nd-Fe-B HDDR THIN HOT PRESSED MAGNET**
 Katsuhiko Mori¹, Ryoji Nakayama¹, Koichiro Morimoto², ¹*Central Research Institute, Mitsubishi Materials Corp., Japan, ²Niigata Plant, Mitsubishi Materials Corp., Japan*
- BS-18 PRECISION ANALYSIS OF MAGNETIZATION PROCESS IN Nd₂Fe₁₄B SINTERED MAGNETS**
 Kurima Kobayashi¹, Kengo Itoh¹, Masato Sagawa², ¹*Dept. of Materials and Life Science, Shizuoka Institute of Science and Technology, Japan, ²Intermetallics Co.,Ltd., Japan*
- BS-19 MICROSTRUCTURE CONTROL IN HDDR PROCESS FOR HIGHER ANISOTROPIC Nd-Fe-B MAGNET POWDERS**
 Noriyuki Kuwano¹, Masaru Itakura², Yoshitsugu Tomokiyo², Ryoji Nakayama³, Koichiro Morimoto⁴, ¹*ASTECC, Kyushu University, Japan, ²Dept. of Appl. Sci. for Electr. Mater., Kyushu University, Japan, ³Central Res. Inst., Mitsubishi Materials Corp., Japan, ⁴Niigata Plant, Mitsubishi Materials Corp., Japan*
- BS-20 EFFECT OF BORON CONTENT ON THE MAGNETIC PROPERTIES, PHASE EVOLUTION AND MICROSTRUCTURE OF Pr₉Fe_{100-x}Ti_{2.5}B_x (x=7-15) NANOCOMPOSITES**
 C. H. Chiu, C. W. Chang, H. W. Chang, Wen-Cheng Chang, *Department of Physics, National Chung Cheng University, Taiwan*

BS-21 ANISOTROPIC THIN BONDED MAGNETS PREPARED BY COMPACTION USING SLIP-FLOW PHENOMENON

Fumitoshi Yamashita¹, Hirotohi Fukunaga², ¹*Matsushita Electric Industrial Co., Ltd., Japan*, ²*Faculty of Engineering, Nagasaki University, Japan*

BS-22 THE EFFECT OF H₂ ANNEALING ON THE MAGNETIC PROPERTIES OF ELECTRODEPOSITED CoPt

Fernando M. F. Rhen, J. M. D. Coey, *Physics Department, Trinity College, Ireland*

Apr. 5

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Session BT

Films and Surfaces II

S. Nakagawa

Tokyo Institute of Technology

BT-01 MAGNETIC REVERSAL STUDY OF Au/FePt THIN FILMS WITH VERY HIGH COERCIVITY

Fu-Te Yuan¹, Shi-Kun Chen¹, Lance Horng², Jia-Lin Tsai³, ¹*Dept. Materials Science and Engineering, Feng Chia University, Taiwan*, ²*Dept. Physics, National Changhua University of Education, Taiwan*, ³*Dept. Materials Science & Engineering, National Chung Hsing University, Taiwan*

BT-02 MICROSTRUCTURE AND MAGNETIC PROPERTIES OF GRANULAR NANOCOMPOSITE FePt/Ag MULTILAYER FILMS

S. C. Chen¹, P. C. Kuo², A. C. Sun², C. Y. Chou², Y. H. Fang², S. Y. Kuo³, ¹*Department of Mechanical Engineering, De Lin Institute of Technology, Taipei 236 and Center for Nanostorage Research, National Taiwan University, Taiwan*, ²*Institute of Materials Science and Engineering and Center for Nanostorage Research, National Taiwan University, Taiwan*, ³*Department of Civil Engineering, De Lin Institute of Technology, Taiwan*

BT-03 EFFECT OF Ru INTERLAYER ON EXCHANGE COUPLING IN FePt/Fe FILMS

Jian Hua Jiang, N. Tezuka, K. Inomata, *Department of Materials Science, Tohoku University, Japan*

BT-04 ELECTRODEPOSITION OF FePt MAGNETIC MATERIAL AND EMBEDDING INTO ANODIC ALUMINA-NANOHOLES

Shigeru Ichihara, Miki Ueda, Toru Den, *Inorganic Material Research, Canon Inc., Japan*

BT-05 Pt THICKNESS DEPENDENCE OF OSCILLATORY INTERLAYER EXCHANGE COUPLING IN [CoFe/Pt/CoFe]/IrMn MULTILAYERS WITH PERPENDICULAR ANISOTROPY

Jong Gu Choi¹, Jin Yong Lee¹, Mi Sun Kim¹, Sun Wook Kim¹, Do Guwn Hwang¹, Sang Suk Lee¹, Jang rho Rhee², ¹*Dept. of Computer and Electronic Physics, Sangji University, Republic of Korea*, ²*Dept. of Physics, Sooknyung Women University, Republic of Korea*

BT-06 THERMAL STABILITY STUDY IN CoFe/Os/OsMn FILMS

Tai-Yen Peng¹, Yeong-Der Yao², Chi-Kuen Lo³, Ta-Chang Tien⁴, San-Yuan Chen¹, ¹*The Department of Materials Science and Engineering, National Chiao Tung University, Taiwan*, ²*Opto Electronics and Systems Laboratories, Industrial Technology Research Institute, Taiwan*, ³*Institute of Phys., Academia Sinica, Taiwan*, ⁴*Material Research Laboratories, Industrial Technology Research Institute, Taiwan*

BT-07 MAGNETO-OPTICAL PROPERTIES OF SPIN VALVE STRUCTURE

Jung-Hwa Seo¹, Jae-Joon Lim¹, Lan Jin¹, Kwang-Enn Lee¹, E. A. Gan' shina², Cheo Gi Kim¹, Chong-Oh Kim¹, ¹*Dept. of Materials Science and Engineering, Chungnam National University, Republic of Korea*, ²*Physical Faculty, Moscow State University, Russian Federation*

BT-08 EFFECT OF RuCo AND PdSiO₂ UNDERLAYERS ON MAGNETIC PROPERTIES OF Co/PdSiO₂ MULTILAYERS

Won Bae, Byun, Taek Dong Lee, *Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Republic of Korea*

BT-09 MAGNETIC PROPERTY CALCULATIONS FOR B₂-Co_xAl_{1-x} STRUCTURE AT THE INTERFACE OF Co/Al MULTILAYER

Sang-Pil Kim¹, Seung-Cheol Lee², Kwang-Ryeol Lee², Yong-Chae Chung¹, ¹*Dept. of Ceramic Eng., Hanyang University, Republic of Korea*, ²*Future Technology Research Division, KIST, Republic of Korea*

BT-10 SELECTIVE MOCVD GROWTH OF Fe₃O₄ EPITAXIAL THIN FILMS FOR NANOSTRUCTURE

Manabu Gomi¹, Hiromitsu Nogi², ¹*Dept. of Environmental and Materials Engineering, Nagoya Institute of Technology, Japan*, ²*School of Materials Science, Japan Advanced Institute of Science and Technology, Japan*

13:30-17:00

Session BU

Films and Surfaces III**R. Nakatani**

Science and Technology Center for Atoms, Molecules and Ions Control, Graduate School of Eng, Osaka University

BU-01 SYNTHESIS AND CHARACTERIZATION OF FERROMAGNETIC MnSiC COMPOUND

Fumiyoshi Takano¹, Hironori Ofuchi², Jeung Woo Lee³, Koki Takita³, Hiro Akinaga¹, ¹*Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, Japan*, ²*Department of Materials Science and Engineering, Graduate School of Engineering, Nagoya University, Japan*, ³*Institute of Materials Science, University of Tsukuba, Japan*

BU-02 EPITAXIAL ABO₃-TYPE OXIDE FILMS PREPARED BY THE SOL-GEL METHOD

Takashi Taniguchi¹, Fukuoka Naoto¹, Ozawa Tadashi², Nagata Yujiro¹, Noro yoshihiko³, Samata Hiroaki⁴, ¹*Dept. of Electrical Engn. and Electronics, Aoyama Gakuin University, Japan*, ²*National Institute for Materials Science, Japan*, ³*Kawazoe Frontier Technologies, Co. Ltd, Japan*, ⁴*Faculty of Maritime Sciences, Kobe University, Japan*

BU-03 STUDY OF MAGNETIC INTERACTION IN METALLIC NANOWIRES NETWORKS

Ioan Dumitru¹, Feng Li², John B. Wiley², Dorin Cimpoesu³, Alexandru Stancu³, Leonard Spinu⁴, ¹*Advanced Materials Research Institute, University of New Orleans, United States of America*, ²*AMRI and Department of Chemistry, University of New Orleans, New Orleans, United States of America*, ³*Faculty of Physics, Al. I. Cuza University, Iasi, Romania*, ⁴*Department of Physics and AMRI, University of New Orleans, New Orleans, United States of America*

BU-04 THE MAGNETIZATION REVERSAL OF Fe FILMS ON Ag SUBMICROMETER PYRAMIDAL ISLANDS

Chin-Chung Yu¹, Yeong-Der Yao², Yung Liou², ¹*Dept. of Appl. Phys, National University of Kaohsiung, Taiwan*, ²*Institute of Physics, Academia Sinica, Taiwan*

BU-05 MAGNETIC AND ORDERING STUDIES OF SPUTTERING NANOSTRUCTURED Fe₅₀Ni₅₀ FILMS

Qi Zeng, Ian Baker, *Thayer School of Engineering, Dartmouth College, United States of America*

BU-06 TUNED MAGNETISM IN OFF-STOICHIOMETRIC YTTRIUM IRON GARNET THIN FILMS AND ITS RELATION TO PREFERENTIAL SITE-OCCUPATION

Niels Keller¹, Yves Dumont², Elena Popova³, David S. Schmool⁴, Sarbari Bhattacharya⁵, Branko Stahl⁵, Pierre Richard Dahoo¹, Michel Tessier¹, Marcel Guyot¹, ¹*LMOV, University of Versailles - CNRS, France*, ²*LPSC, University of Versailles - CNRS, France*, ³*Lab. Vaste-Stoffysica en Magnetisme, K.U. Leuven, Belgium*, ⁴*Departamento de Fisica and IFIMUP, Univ. do Porto, Portugal*, ⁵*Fachbereich Materialwissenschaft, TU Darmstadt, Germany*

BU-07 MAGNETIC PROPERTIES OF THIN CHROMIUM LAYERS IN Gd/Cr AND Y/Cr MULTILAYERS STUDIED USING ¹¹⁹Sn MOSSBAUER SPECTROSCOPY

Norihiko Jiko¹, Ko Mibu², Tomasz Baczewski³, ¹*Institute for Chemical Research, Kyoto University, Japan*, ²*Research Center for Low Temperature and Materials Sciences, Kyoto University, Japan*, ³*Institute of Physics, Polish Academy of Sciences, Poland*

BU-08 MODIFIED SURFACE STATE OF Cr(001) THIN FILM SURFACES OBSERVED BY SCANNING TUNNELING SPECTROSCOPY

Hirofumi Oka, Kazuhisa Sueoka, *Graduate School of Information Science and Technology, Hokkaido University, Japan*

BU-09 THEORETICAL STUDY OF IRON FILMS ON TUNGSTEN

Daniel Spisak, Juergen Hafner, *Dept. of Materials Science, Vienna University, Austria*

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Session BV

Magnetoimpedance

M. Vazquez

Instituto de Ciencia de Materiales de Madrid, CSIC

BV-01 CHARACTERISTICS OF HIGHLY ENHANCED PHASE DETECTION TYPE MAGNETIC FIELD SENSOR BY CONTROLLING AN ANNEALING TEMPERATURE

Tetsuya Ozawa, Chikako Yokota, Shin Yabukami, Ken-ichi Arai, *Research Institute of Electrical Communication, Tohoku University, Japan*

BV-02 HIGH FREQUENCY IMPEDANCE OF AMORPHOUS MAGNETIC TRANSMISSION LINES

Kwang-Ho Shin¹, Younghak Kim², Geon Sa-Gong³, Sang-Ho Lim⁴, ¹*Dept. of Multimedia Engineering, Kyungsung University, Republic of Korea*, ²*Department of Electrical Engineering, Pukyong National University, Republic of Korea*, ³*Department of Electrical Engineering, Dong-A University, Republic of Korea*, ⁴*Division of Materials Science and Engineering, Korea University, Republic of Korea*

BV-03 MAGNETOIMPEDANCE EFFECTS IN ELECTRODEPOSITING FeCoNi THIN FILMS DIRECTLY ON n-Si(100)

Z. Y. Zhong¹, H. W. Zhang¹, X. L. Tang¹, Y. Shi¹, S. Liu², ¹*College of Microelectronics and Solid-state Electronics, University of Electronic Science and Technology of China, China*, ²*College of Opto-electronics Information, University of Electronic Science and Technology of China, China*

BV-04 MICROMACHINED LAYERED THIN FILM MAGNETOIMPEDANCE ELEMENT

Hideya Yamadera¹, Yuji Nishibe¹, Norikazu Ohta¹, Atsushi Tsukada¹, Nobuyoshi Sugitani², ¹*Toyota Central Research & Development Laboratories, Inc., Japan*, ²*Toyota Motor Co., Japan*

BV-05 AC BIASED SUB NANO TESLA MAGNETIC FIELD SENSOR FOR LOW FREQUENCY APPLICATIONS UTILISING MAGNETO IMPEDANCE IN MULTILAYER FILMS

Paul Delooze, Larissa V. Panina, Desmond J. Mapps, *School of Computing, Communications and Electronics, University Of Plymouth, United Kingdom*

BV-06 CHARACTERIZATION OF INTERFACIAL PROPERTIES IN MAGNETIC TUNNEL JUNCTIONS BY BIAS-DEPENDENT COMPLEX IMPEDANCE SPECTROSCOPY

C. Y. Hsu, J. C. A. Huang, *Department of Physics, National Cheng Kung University, Taiwan*

BV-07 MAGNETO-IMPEDANCE EFFECT IN NiFeP/CuBe ELECRTOLESS-DEPOSITED WIRES BY DC JOULE ANNEALING

Shirong Wu, Wangzhi Yuan, Zhen Jie Zhao, Jian Zhong Ruan, Xie Long Yang, *Dept. of Physics, East China Normal University, China*

BV-08 THE INFLUENCE OF CURRENT AMPLITUDE ON ASYMMETRIC OFF-DIAGONAL MAGNETOIMPEDANCE IN FIELD-ANNEALED AMORPHOUS RIBBONS

Nikita A. Buznikov¹, Cheol Gi Kim¹, Chong Oh Kim¹, Seok-Soo Yoon², ¹*Research Center for Advanced Magnetic Materials, Chungnam National University, Republic of Korea,* ²*Department of Physics, Andong National University, Republic of Korea*

BV-09 IMPEDANCE MATCHING NETWORKS FOR POWER TRANSFER AND SENSITIVITY ENHANCEMENT IN GMI SENSORS

David de Cos¹, Serghei Sandacci², Alfredo Garcia-Arribas¹, Jose Manuel Barandiaran¹, ¹*Departamento de Electricidad y Electronica, Universidad del Pais Vasco, Spain,* ²*SoCCE, University of Plymouth, United Kingdom*

BV-10 EXPERIMENTAL EVIDENCE OF FERROMAGNETIC RESONANCE IN MAGNETOIMPEDANCE MEASUREMENTS

David de Cos, Alfredo Garcia-Arribas, Jose Manuel Barandiaran, *Departamento de Electricidad y Electronica, Universidad del Pais Vasco, Spain*

BV-11 3-AXIS AMORPHOUS WIRE TYPE GIANT MAGNETO-IMPEDANCE SENSORS

Chang Mei Cai, Michiharu Yamamoto, Hitoshi Aoyama, Masaki Mori, Yoshinobu Honkura, *Electronic & Magnetic product Div., Aichi Steel Corporation, Japan*

BV-12 ACCELEROMETER USING MI SENSOR

Hayato Takei, Masaki Mori, Eiji Kako, Hitoshi Aoyama, Michiharu Yamamoto, Yoshinobu Honkura, *Aichi Steel Corporation, Japan*

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Session BW

Magnetic Sensors and Sensing Systems

P.J.P. de Freitas

**Institute for Systems and Computer Engineering-
Microsistemas e Nanotecnologias**

Y. Takemura

Yokohama National University

BW-01 MAGNETIC FIELD SENSING BY A PIEZOELECTRIC/MAGNETOSTRICTIVE RESONATOR

Nobuyuki Yoshizawa¹, Yutaka Shimada², ¹*Salesian Polytechnic, Japan,* ²*IMRAM Tohoku Univ, Japan*

**BW-02 MICROMAGNETIC SIMULATION FOR NANOBEADS
DETECTION USING PLANAR HALL SENSORS**

Yao Wen Liu¹, Zong Zhi Zhang², Qing Yuan Jin², ¹*Dept. of Physics, Tongji University, Shanghai, China*, ²*Dept. of Optical Science and Engineering, Fudan University, Shanghai, China*

**BW-03 IMPROVED GMR SENSITIVITY OF
ELECTRODEPOSITED FeCoNi/Cu MULTILAYERS**

Jie Gong¹, W. H. Butler², G. Zangari³, ¹*MINT center, Materials Science Program, University of Alabama, Tuscaloosa, United States of America*, ²*MINT center, University of Alabama, Tuscaloosa, United States of America*, ³*Materials Science and Engineering and CESE, University of Virginia, United States of America*

**BW-04 HIGH-TEMPERATURE OPERATIONS OF ROTATION
ANGLE SENSORS WITH SPIN-VALVE-TYPE
MAGNETIC TUNNEL JUNCTIONS**

Takashi Takenaga, Beysen Sadeh, Takeharu Kuroiwa, Hiroshi Konbayashi, Tatsuo Oomori, *Advanced R&D Center, Mitsubishi Electric Corporation, Japan*

**BW-05 CONDUCTIVE MICRO-BEAD ARRAY DETECTION BY
HIGH-FREQUENCY EDDY-CURRENT TESTING
TECHNIQUE WITH SV-GMR SENSOR**

Sotoshi Yamada¹, Komkrit Chomsuwan¹, Takeshi Hagino¹, Haiyan Tian², Masayoshi Iwahara¹, ¹*Institute of Nature and Environmental Technology, Kanazawa University, Japan*, ²*The Key Laboratory of High Voltage and New Technology, Chongqing University, China*

**BW-06 APPLICATION OF EDDY-CURRENT TESTING
TECHNIQUE FOR HIGH-DENSITY DOUBLE-LAYER
PRINTED CIRCUIT BOARD INSPECTION**

Komkrit Chomsuwan¹, Sotoshi Yamada¹, Masayoshi Iwahara¹, Hiroyuki Wakiwaka², Shigeru Shoji³, ¹*Institute of Nature and Environmental Technology, Kanazawa University, Japan*, ²*Dept. of Electrical Engineering, Shinshu University, Japan*, ³*TDK corporation, Japan*

**BW-07 ELECTROMAGNETIC NON-DESTRUCTIVE TESTING
OF RUST REGION IN STEEL**

Yuji Gotoh¹, Hiroshi Hirano², Masanori Nakano², Koji Fujiwara², Norio Takahashi², ¹*Kurume National College of Technology, Japan*, ²*Dept. Electrical and Electronic Eng. Okayama University, Japan*

**BW-08 EDDY-CURRENT SCRATCH INSPECTION WITH HIGH
PROBE LIFT-OFF**

Haiyan Tian¹, Sotoshi Yamada¹, Masayoshi Iwahara¹, H.Watanabe², Hirotake Tooyama¹, ¹*Institute of biological measurement and applications, Kanazawa University, Japan*, ²*Research & Development Lab., Daido Steel Co.Ltd., Japan*

BW-09 EVALUATION OF FATIGUE DAMAGE IN AN AUSTENITIC STAINLESS STEEL (SUS304) USING THE EDDY CURRENT PROBE

Mohachiro Oka¹, Terutoshi Yakushiji², Yuji Tsuchida³, Masato Enokizono³, ¹*Dept. Computer and Control Engineering, Oita National College of Thechnology, Japan*, ²*Dept. Mechanical Engineering, Oita National College of Thechnology, Japan*, ³*Dept. of Electrical and Electronic Engineering, Oita University, Japan*

BW-10 NUMBER OF DETECTING PROBE AND SPECTRAL COMPONENTS IN TWO-DIMENSIONAL MAGNETIC FIELD VISUALIZATION BASED ON THE PROJECTION METHOD

Takashi Nishimura, Yoshihiro Miyamoto, Masayoshi Iwahara, Sotoshi Yamada, *Graduate School of Natural Science and Technology, Kanazawa University, Japan*

BW-11 MAGNETIC FIELD OPTICAL SENSORS USING (TbY)IG CRYSTALS WITH STRIPE MAGNETIC DOMAIN STRUCTURE

K. Okubo, O. Kamada, *Dept. of Electronic Engineering, Polytechnic University, Japan*

BW-12 PARAMETRIC MAGNETIC SENSOR WITH PULSE OSCILLATOR

Koichi Karasawa, Masaki Kurumisawa, *Nagano National College of Technology, Japan*

BW-13 A TORQUE SENSOR USING MAGNETOSTRICTIVE SLEEVE ATTACHED TO THE SHAFT BY SHRINK-FIT

Ichiro Sasada, Youhei Habata, Yoshiyuki Etou, *Dept. of Applied Science for Electronics and Materials, Kyushu Univerity, Japan*

BW-14 THE SEARCH SYSTEM FOR CRACKS IN THE DISTRIBUTION LINE USING MAGNETIC FIELD

Hideyuki Yamaguchi¹, Takashi Nonaka², Fumihiro Sato¹, Hidetoshi Matsuki¹, Tadakuni Sato³, ¹*Graduate School of Tohoku University, Japan*, ²*National College of Technology Hachinohe, Japan*, ³*NEC Tokin Corporation, Japan*

BW-15 DEVELOPMENT OF A MAGNETIC SEAT SENSOR FOR MONITORING CONDITION OF A CAR DRIVER

Yuji Tsuchida¹, Hiroyasu Shimoji¹, Takashi Todaka¹, Masato Enokizono¹, Hideyuki Yamane², Yoshimi Enoki², Etsunori Fujita², ¹*Faculty of Engineering, Oita University, Japan*, ²*Delta Tolling Co., Japan*

Magnetic Particles in Life Science**A. Sandhu**

Quantum Nanoelectronics Research Center, Tokyo Institute of Technology

BX-01 MgFe₂O₄ NANO-PARTICLE FOR INTERSTITIAL HYPERTHERMIA ON CANCER TREATMENTToshifumi Shimizu, Masaaki Matsui, *Dep. of Crystalline Material Science, Nagoya University, Japan***BX-02 MAGNETIC RESONANCE OF POLYASPARTIC ACID-COATED MAGNETITE NANOPARTICLES ADMINISTERED IN MICE**Neda Sadeghiani¹, Luzirlane Barbosa¹, Maria-Helena Guedes¹, Sacha Chaves¹, Judes Santos², Osni Silva³, Fernando Pelegrini³, Ricardo Azevedo¹, Paulo Morais², Zulmira G. M. Lacava¹, ¹*Instituto de Biologia, Universidade de Brasilia, Brazil*, ²*Instituto de Física, Universidade de Brasilia, Brazil*, ³*Instituto de Física, Universidade Federal de Goias, Brazil***BX-03 DIAMAGNETIC ACCUMULATION AND ALIGNMENT OF NUCLEOPROTEIN MICROPARTICLES IN HIGH GRADIENT MAGNETIC FIELD**Svetlana B.Norina, Kwang Sup Soh, Sang Hyun Park, Smig Il Cho, *Biomedical Physics Lab., School of Physics, Seoul National University, Russian Federation*, ²*Biomedical Physics Lab., School of Physics, Seoul National University, Republic of Korea***BX-04 MAGNETIC NANOPARTICLES ASSEMBLY ON PEPTIDE NANOTUBE**Mutsuhiro Shima¹, Ipsita A. Banerjee², Ling Tao Yu², Hiroshi Matsui², Tomoko Yoshino³, Haruko Takeyama³, Tadashi Matsunaga³, ¹*Dept. of Materials Science and Engineering, Rensselaer Polytechnic Institute, United States of America*, ²*Dept. of Chemistry and Biochemistry at Hunter College and the Graduate Center, The City University of New York, United States of America*, ³*Dept. of Biotechnology, Tokyo University of Agriculture and Technology, Japan***BX-05 PREPARATION OF CELLULOSE BASED BIOCOMPATIBLE SUSPENSION OF NANO SIZED - Al_xFe_{2-x}O₃**Nand Kishore Prasad¹, Dulal Panda², Sher Singh³, Dharendra Bahadur¹, ¹*Metallurgical Engineering and Materials Science, Indian Institute of Technology, Bombay, Powai, Mumbai, India*, ²*School of BioSciences & Bioengineering, Indian Institute of Technology, Bombay, Powai, Mumbai, India*, ³*Solid State Physics Division, Bhabha Atomic Research Centre, Mumbai, India*

BX-06 IN VIVO BIO-DISTRIBUTION OF INTRAVENOUSLY INJECTED Tc-99m LABELED FERRITE NANOPARTICLES BOUNDED WITH BIOCOMPATIBLE MEDICALS

Chao-Ming Fu¹, Yuh-Feng Wang², Tang-Yi Lin¹, Yu-Feng Guo¹, Fu-Wen Lee², ¹Physics department, National Kaoshiung Normal University, Taiwan, ²Department of Nuclear Medicine, Buddhist Dalin TzuChi General Hospital, Taiwan

BX-07 IN VITRO INVESTIGATION OF MICE BLOOD DOPED WITH MAGNETITE-COATED NANOPARTICLES

J. F. B. Santana¹, M. A. G. Soler¹, S. W. da Silva¹, M. H. Guedes², Zulmira G. M. Lacava², P. C. Morais¹, ¹Nucelo de Fisica Aplicada, Instituto de Fisica, Universidade de Brasilia, Brazil, ²Departamento de Genetica e Morfologia, Instituto de Ciencias Biologias, Universidade de Brasilia, Brazil

BX-08 DEXTRAN-COATED MAGNETITE NANOPARTICLES EFFECTS IN MICE: A TRANSMISSION ELECTRON MICROSCOPY INVESTIGATION

Leandro M. Lacava¹, Ricardo B. Azevedo¹, Sonia N. Bao¹, Paulo C. Morais², Zulmira G. M. Lacava¹, ¹Institute of Biology, University of Brasilia, Brazil, ²Institute of Physics, University of Brasilia, Brazil

BX-09 STYRENE COATED IRON NANOBEAD FOR MEDICAL USE

Carlos S. Kuroda¹, Masahito Maeda¹, Hiroshi Nishibiraki¹, Nobuhito Matsushita¹, Hiroshi Handa², Masanori Abe¹, ¹Dept. of Physical Electronics, Tokyo Institute of Technology, Japan, ²Dept. of Biological Information, Tokyo Institute of Technology, Japan

BX-10 MOSSBAUER STUDIES OF NANO-SIZE CONTROLLED IRON OXIDE FOR BIOMEDICAL APPLICATIONS

Sang Won Lee, Sam Jin Kim, In-Bo Shim, Chul Sung Kim, Dept. of Physics, Kookmin University, Republic of Korea

BX-11 SYNTHESIS OF NANO-SIZE MAGNETITE COATED WITH CHITOSAN FOR MRI CONTRAST AGENT BY SONOCHEMISTRY

Hui Ping Shao¹, Hyo Sook Lee², Yu Qiang Huang¹, Byung Kook Kwak³, Chong Oh Kim¹, ¹Department of materials engineering, ChungNam National University, Republic of Korea, ²Korea Institute of Geoscience & Mineral Resources, Republic of Korea, ³College of Medicine, Chung-Ang University, Republic of Korea

BX-12 IN VIVO AND IN VITRO INVESTIGATION OF PHOTOSENSITIZER-COATED SUPERPARAMAGNETIC NANOPARTICLES FOR PHOTODYNAMIC THERAPY

Sang-Im Park¹, Jong-Hwan², Jong-Hee Kim³, Chong-Oh Kim¹,
¹*Materials Engineering, Chungnam National University, Republic of Korea,* ²*Division of veterinary pharmacology and toxicology, Chungnam National University, Republic of Korea,* ³*Research Center for Advanced Magnetic Materials, Chungnam National University, Republic of Korea*

BX-13 EVALUATION OF NEW COMPLEXES OF BIOCOMPATIBLE MAGNETIC FLUID AND 3rd GENERATION OF PHOTOSENSITIZER USEFUL TO CANCER TREATMENT

Antonio C. Tedesco¹, Patricia P. Macaroff¹, Daniela M. Oliveira¹, Karina F. Ribeiro¹, Zulmira G. M. Lacava², Emilia C. D. Lima³, Paulo C. Morais⁴, ¹*FFCLRP, Universidade de Sao Paulo, Brazil,* ²*Instituto de Ciencias Biologicas, Universidade de Brasilia, Brazil,* ³*Instituto de Quimica, Universidade Federal de Goias, Brazil,* ⁴*Instituto de Fisica Nucleo de Fisica Aplicada, Universidade de Brasilia, Brazil*

Apr. 5

Room 141/142

18:00-20:00

Session BZ

Evening Symposium on MRAM

T. Miyazaki

Tohoku University

***BZ-01** Saied Tehrani, Freescale, United States of America

***BZ-02** Jim Deak, NVE, United States of America

***BZ-03** William Gallagher, IBM, United States of America

***BZ-04** Hiroaki Yoda, NEC-Toshiba, Japan

Session CA
Magnetic Tunnel Junctions

K.H. Shin

Korea Institute of Science and Technology

***CA-01 230% ROOM TEMPERATURE**

**9:30 MAGNETORESISTANCE IN CoFeB/MgO/CoFeB
MAGNETIC TUNNEL JUNCTIONS**

David D. Djayaprawira¹, Koji Tsunekawa¹, Motonobu Nagai¹, Hiroki Maehara¹, Shinji Yamagata¹, Naoki Watanabe¹, Shinji Yuasa², Koji Ando², ¹*Anelva Corporation, Japan*, ²*National Institute of Advanced Industrial Science and Technology (AIST), Japan*

CA-02 HIGH TUNNEL MAGNETORESISTANCE IN

**10:00 EPITAXIAL Co₂Cr_{0.6}Fe_{0.4}Al/MgO/CoFe TUNNEL
JUNCTIONS**

Takao Marukame, Takashi Kasahara, Ken-ichi Matsuda, Tetsuya Uemura, Masafumi Yamamoto, *Division of Electronics for Informatics, Graduate School of Information Science and Technology, Hokkaido University, Japan*

CA-03 EXTRAORDINARY TUNNEL MAGNETORESISTANCE

10:15 IN HALF METALLIC FERROMAGNETIC DEVICES

T. W. Kim¹, Injun Hwang¹, Y. K. Kim², R. Gambino³, Wanjun Park¹, ¹*Samsung Advanced Institute of Technology, Republic of Korea*, ²*Korea University, Republic of Korea*, ³*SUNY at Stony Brook, United States of America*

CA-04 INELASTIC ELECTRON TUNNELING

**10:30 SPECTROSCOPY IN MAGNETIC TUNNEL JUNCTIONS
WITH MgO(001) TUNNEL BARRIER**

Takefumi Miyakoshi¹, Yasuo Ando¹, Mikihiko Oogane¹, Terunobu Miyazaki¹, Hitoshi Kubota², Akio Fukushima², Taro Nagahama², Shinji Yuasa², Shinji Yuasa³, ¹*Dept. of Applied Physics, Tohoku University, Japan*, ²*National Institute of Advanced Industrial Science and Technology, Japan*, ³*PRESTO, Japan Science and Technology Agency (JST), Japan*

CA-05 SCANNING TUNNELING MICROSCOPY STUDY OF A

**10:45 TUNNELING MAGNETO-RESISTANCE DEVICE WITH
COHERENT TUNNELING TRANSPORTS**

Masaki Mizuguchi¹, Yoshishige Suzuki¹, Taro Nagahama², Shinji Yuasa², ¹*Osaka University / CREST, Japan*, ²*AIST / CREST, Japan*

CA-06 MAGNETORESISTANCE IN MAGNETIC TUNNEL

11:00 JUNCTIONS WITH AMORPHOUS ELECTRODES

Kentaro Nakajima, Gen Feng, John Miceal David Coey, *Physics Department, Trinity College Dublin, Ireland*

CA-07 FABRICATION AND CHARACTERIZATION OF

11:15 MAGNETIC TUNNEL JUNCTIONS WITH LI-ORDERED FePt ALLOY ELECTRODES

Seiji Mitani, Kazuhiko Tsukamoto, Takeshi Seki, Toshiyuki Shima, Koki Takanashi, *IMR Tohoku University, Japan*

CA-08 KONDO RESONANCE IN MAGNETIC DOUBLE

11:30 TUNNEL JUNCTIONS

Hyun Soo Yang, See-Hun Yang, Christian Kaiser, Stuart Parkin, *Stanford & IBM spintronics research center, United States of America*

**CA-09 THERMAL STABILITY OF MTJ USING Zr CAPPING
11:45 LAYER**

S. C. Oh, J. E. Lee, H.-J. Kim, Y. K. Ha, J. S. Bae, K. T. Nam, S. O. Park, H. S. Kim, U-In Chung, J. T. Moon, *Process Development Team, Samsung Electronics Co., Ltd., Republic of Korea*

**CA-10 FREQUENCY-ASSISTED CURRENT-DISTRIBUTION
12:00 EFFECT IN MAGNETIC TUNNEL JUNCTION**

Y. M. Chang¹, K. S. Li¹, S. Y. Tong², M. J. Tung², Minn-Tsong Lin¹, Minn-Tsong Lin², *¹Department of Physics, National Taiwan University, Taiwan, ²Material Research Lab., Industrial Technology Research Institute, Taiwan*

**CA-11 OXIDATION PROCESS OF METAL FILMS BY USING
12:15 HIGH CONCENTRATION OZONE IN MAGNETIC
TUNNEL JUNCTIONS**

Satoru Yoshimura¹, Yosuke Narisawa¹, Toshiharu Nozawa¹, Masakiyo Tsunoda¹, Migaku Takahashi², *¹Department of Electronic Engineering, Tohoku University, Japan, ²New Industry Creation Hatchery Center, Tohoku University, Japan*

Apr. 6

Room 141/142

Session CB

Magnetic Recording Physics I

H.J. Richter

Seagate Technology

Y. Suzuki

Tohoku University

CB-01 THE EFFECT OF WRITE HEAD STRUCTURES ON

9:30 WRITTEN TRANSITIONS IN PERPENDICULAR MEDIA

Simon J Greaves¹, Hiroaki Muraoka¹, Yasushi Kanai², *¹RIEC, Tohoku University, Sendai, Japan, ²Niigata Institute of Technology, Kashiwazaki, Japan*

- CB-02 PARTITIONING OF THE PERPENDICULAR WRITE
9:45 FIELD INTO HEAD AND SUL CONTRIBUTIONS**
Thomas Schrefl¹, Manfred E. Schabes², Dieter Suess³, Otmar Ertl³, Markus Kirschner³, Florian Dorfbauer³, Gino Hrkac³, Josef Fidler³, ¹*University of Sheffield, United Kingdom*, ²*HGST, United States of America*, ³*TU Vienna, Austria*
- CB-03 DYNAMIC MICROMAGNETIC STUDIES OF
10:00 ANISOTROPY EFFECTS IN PERPENDICULAR WRITE HEADS**
Manfred E. Schabes¹, Thomas Schrefl², Dieter Suess³, Otmar Ertl³, ¹*San Jose Research Center, Hitachi GST, United States of America*, ²*Dept. of Engineering Materials, University of Sheffield, United Kingdom*, ³*Dept. of Solid State Physics, Technical University Vienna, Austria*
- CB-04 OPTIMIZATION OF PERPENDICULAR RECORDING
10:15 WITH SHIELDED POLE HEAD**
Yu Hui Tang, Jiang-Gang Zhu, *Department ECE, CMU, United States of America*
- CB-05 EFFECT OF SIDE SHIELDS ON NEIGHBOR
10:30 INDUCED TRANSITION SHIFT**
Sissay G. Yoseph, Mohamed U. Khan, Randall H. Victora, *Center for Micromagnetics and Information Technology (MINT), Electrical and Computer Engineering, University of Minnesota, United States of America*
- CB-06 COMPUTER SIMULATION OF GRANULAR
10:45 PERPENDICULAR RECORDING MEDIA WITH DISPERSIONS OF GRAIN SIZE AND GRAIN SEPARATION**
Masukazu Igarashi¹, Fumiko Akagi¹, Miki Hara¹, Atsushi Nakamura¹, Yuzuru Hosoe¹, Yutaka Sugita², ¹*Storage Technology Research Center, Hitachi, Ltd., Japan*, ²*Tohoku Institute of Technology, Japan*
- CB-07 EXPERIMENTAL STUDY OF OVERWRITE
11:00 MODULATION IN PERPENDICULAR MAGNETIC RECORDING**
Yuchen Zhou, Jian-Gang Zhu, *Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, United States of America*
- CB-08 IMPROVED RECIPROCITY CALCULATION METHOD
11:15 FOR SENSITIVITY PROFILE OF GMR HEADS**
Yoshio Suzuki, Hajime Aoi, Hiroaki Muraoka, Yoshihisa Nakamura, *RIEC, Tohoku University, Japan*
- CB-09 WRITE PROCESS STUDY UTILIZING NON-LINEAR
11:30 DISTORTION (NLD) HARMONIC RATIO MEASUREMENTS AND MODELING**
Thomas Y Chang¹, David Seagle², ¹*Seagate Technology, United States of America*, ²*Hitachi Global Storage Technologies, United States of America*

**CB-10 FULL-TRACK PROFILE DERIVATIVE METHOD FOR
11:45 TRACK WIDTH MEASUREMENTS OF MAGNETIC
RECORDING HEAD**

Zhong-Heng Lin, Terence Lam, Xiao Dong Che, Xiao Yu Sui,
*Hitachi Global Storage Technologies, Inc., United States of
America*

**CB-11 REDUCTION OF WRITE POLE-TIP ERASURE IN
12:00 PERPENDICULAR MAGNETIC RECORDING BY
TRACK MAGNETIZATION STATE AND MEDIA
DESIGN**

Albert Chekanov, E. Noel Abarra, Gunn Choe, *MMC
Technology, United States of America*

**CB-12 UNLOCKING OF REMANENT MAGNETIZATION OF
12:15 POLE HEADS BY "RUMBLE STRIPS"**

Hans Juergen Richter, Elzbieta Haftek, Dean Palmer, *Seagate
Technology, United States of America*

Apr. 6

Room 234

Session CC

Symposium on Biosensing with Magnetic Beads

N. Matsushita

Tokyo Institute of Technology

***CC-01 MAGNETIC IMMUNOASSAY WITH SQUID AND
9:30 MAGNETIC MARKER**

Keiji Enpuku, *Research Institute of Superconductor Science and
Systems, Kyushu University, Japan*

***CC-02 SPINTRONIC BIOSENSORS FOR GENE OR MICRO-
10:00 ORGANISM DETECTION**

P. P. Freitas^{1,2}, H. Ferreira^{1,2}, D.Graham¹, N. Feliciano¹, C.
Carias^{1,2}, R. Ferreira^{1,2}, L. Clarke³, M. Amaral^{3,4}, P. Galvin⁵, V.
Martins^{1,6}, L. Fonseca⁶, J. S. Cabral⁶, ¹*INESC Microsystems and
Nanotechnologies, Portugal*, ²*Physics Department, Instituto
Superior Tecnico, Portugal*, ³*Chemistry and Biochemistry
Department, Faculty of Sciences, University of Lisbon,
Portugal*, ⁴*Center for Human Genetics, National Institute of
Health, Lisbon, Portugal*, ⁵*Tyndal Institute, Cork, Ireland*,
⁶*Bioengineering Research Group, Chemistry Department,
Instituto Superior Tecnico, Lisbon, Portugal*

***CC-03 REGENERATIVE MEDICINE UTILIZING MAGNETIC
10:30 BEADS**

H. Honda, Akira Ito, *Department of Biotechnology, School of
Engineering, Nagoya University, Japan*

- *CC-04 MEDICAL APPLICATION OF SMALL MAGNETIC
11:00 PARTICLES AND SQUID MAGNETIC SENSOR**
Saburo Tanaka, Zarina Aspanut, Chika Toriyabe, Yoshimi Hatuskade, Shinji Katsura, *Toyohashi University of Technology, Japan*
- *CC-05 ON-CHIP MAGNETIC PARTICLE TRANSPORT:
11:30 WHERE PHYSICS, CHEMISTRY AND BIOLOGY MEET**
Roel Wirix-Speetjens, Wim Fyen, Kai Dong Xu, Jo De Boeck, Gustaaf Borghs, *IMEC vzw., Belgium*
- *CC-06 PRACTICAL HALL EFFECT SENSORS FOR
12:00 BIOMEDICAL INSTRUMENTATION**
Adarsh Sandhu¹, Hiroshi Handa², ¹*Quantum Nanoelectronics Research Center, Tokyo Institute of Technology, Japan,* ²*Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Japan*

Apr. 6

Room 224

Session CD

Nanocrystalline and Other Materials II

M. Shima

Rensselaer Polytech. Inst.

- *CD-01 MECHANISM OF INDUCED MAGNETIC
9:30 ANISOTROPY IN METAL-NONMETAL GRANULAR FILMS AND THEIR ENHANCEMENT BY A HIGH FIELD ANNEALING**
Masato Ohnuma¹, Hideyuki Ohtsuka¹, Hiroyasu Fujimori², Kazuhiro Hono¹, ¹*National Institute for Materials Science, Japan,* ²*The Research Institute for Electric and Magnetic Materials, Japan*
- CD-02 MICROSTRUCTURAL STUDY OF
10:00 NANOCRYSTALLINE SOFT MAGNETIC THIN FILMS OF Fe-C AND Fe-Co-C DEPOSITED BY FACING TARGETS SPUTTERING**
Yoshitaka Kitamoto, Goro Kiyota, *Department of Innovative and Engineered Materials, Tokyo Institute of Technology, Japan*
- CD-03 HIGH-FREQUENCY RESISTIVITY OF SOFT
10:15 MAGNETIC GRANULAR FILMS**
Wei Dong Li, Yuqin Sun, Charles R. Sullivan, *Thayer School of Engineering, Dartmouth College, United States of America*

- CD-04 NEW FeNbB BASED BULK AMORPHOUS AND
10:30 NANOCOMPOSITE SOFT MAGNETS FOR
APPLICATIONS**
Horia Chiriac, Nicoleta Lupu, *National Institute of Research
and Development for Technical Physics, Iasi, Romania*
- CD-05 PROPERTIES OF HIGH DENSITY MAGNETIC
10:45 COMPOSITE (HDMC) FABRICATED FROM IRON
POWDER COATED WITH NEW TYPE PHOSPHATE
INSULATOR**
Shin Tajima¹, Mikio Kondoh¹, Takeshi Hattori¹, Hidefumi
Kishimoto², Masaki Sugiyama², Tadayoshi Kikko³, ¹*Toyota
Central R&D., Inc., Japan, ²Toyota Motor Corp., Japan,
³Finesinter, Japan*
- CD-06 LOW LOSS, HIGH FLUX DENSITY POWDER CORES
11:00 MADE OF FERRITE-PLATED Fe-Si POWDERS**
Yasunobu Yamada¹, Teruhiko Fujiwara¹, Shigeyoshi Yoshida¹,
Nobuhiro Matsushita², Masanori Abe², ¹*NEC Tokin Corporation,
Japan, ²Dept. of Physical Electronics, Tokyo Institute of
Technology, Japan*
- CD-07 EFFECT OF ATOMIC ORDER ON THE ELECTRICAL
11:15 AND MAGNETIC PROPERTIES OF Fe_{100-x}Si_x(6 < x < 14)
ALLOYS**
Daniel Ruiz¹, Tanya Ros-Yanez¹, Leticia Ortega¹, Laura Garcia¹,
Lode Vandenbossche², Luc Dupre², Bernard Legendre³, Robert
E. Vandenberghe², Yvan Houbaert¹, ¹*Dept. of Metallurgy and
Materials Science, Ghent University, Belgium, ²Dept. of
Electrical Energy, Systems and Automation, Ghent University,
Belgium, ³Lab. Chim. Phys. Mineral & Bioinorgan, Paris-Sud
University, France*
- CD-08 CURRENT DENSITY EFFECT ON MAGNETIC
11:30 PROPERTIES OF NANOCRYSTALLINE
ELECTROPLATED Ni₈₀Fe₂₀/Cu COMPOSITE WIRES**
Hang Li Seet, Xiao Ping Li, Zhen Jie Zhao, Lik Chee Wong,
Hui Min Zheng, *Department of Mechanical Engineering,
National University of Singapore, Singapore*
- CD-09 SWITCHING FILED DISTRIBUTION STUDY IN
11:45 AMORPHOUS MICROWIRES.**
Rastislav Varga¹, Arcady Zhukov², Juan M. Blanco², Julian
Gonzalez³, Valentina Zhukova⁴, Pavol Vojtanik¹, ¹*Inst. Phys.,
Fac. Sci., Park Angelinum 9, Slovakia, ²Dpto. Fisica Aplicada I,
EUPDS, UPV/EHU, Plaza Europa 1, Spain, ³Dpto. Fisica de
Materiales, Facultad de Quimica, UPV/EHU, San Sebastian,
Spain, ⁴"TAMag Iberica" S.L., Parque Tecnologico de Miramon,
San Sebastian, Spain*
- CD-10 A NUMERICALLY OPTIMIZED VECTOR
12:00 HYSTERESIS MODEL USING PLAY OPERATOR**
Julius Krah, *Dept. of Electrical Engineering, Royal Institute of
Technology, Stockholm, Sweden*

**CD-11 MODELING MICROSTRUCTURAL EFFECTS ON
12:15 BARKHAUSEN EFFECT SIGNALS IN SURFACE-
MODIFIED MAGNETIC MATERIALS**

Emily Kinser, Chester Lo, Tony Barsic, David Jiles, *Center for
Nondestructive Evaluation, Iowa State University, United States
of America*

Apr. 6

Room 131/132

**Session CE
Integrated Passives and Devices I**

T. Sato

Shinshu University

Z. Celinski

University of Colorado

***CE-01 ON-WAFER BAND-STOP AND BAND-PASS**

**9:30 MICROWAVE FILTERS BASED ON FERROMAGNETIC
RESONANCE**

Bijoy K. Kuanr, I. R. Harward, R. E. Camley, Z. Celinski,
*Center of Magnetism and Magnetic Nanostructures, University
of Colorado at Colorado Springs, United States of America*

CE-02 ROLE OF SHEET RESISTANCE AND MAGNETIC

**10:00 LOSS ON A NEAR FIELD NOISE SUPPRESSION
EFFECT OF MAGNETIC THIN FILMS ATTACHED ON
A MICROWAVE TRANSMISSION LINE**

Shigehiro Ohnuma¹, Tadayoshi Iwasa¹, Hiroshi Ono², Masahiro
Yamaguchi³, Tsuyoshi Masumoto¹, *¹The Research Institute for
Electric and Magnetic Materials, Japan, ²NEC Tokin Co.,
Japan, ³Dept. of Electronics, Tohoku University, Japan*

CE-03 STRESS-DEPENDENT MAGNETOIMPEDANCE IN

**10:15 Co-BASED AMORPHOUS WIRES AND APPLICATION
TO TUNABLE MICROWAVE COMPOSITES**

Sergei I. Sandacci¹, Dmitriy P. Makhnovskiy², Larissa V.
Panina², Vladimir S. Larin³, *¹Sensor Technology Ltd., United
Kingdom, ²School of Computing, Communications and
Electronics, University of Plymouth, United Kingdom, ³MFTI
Ltd., Republic of Moldova*

***CE-04 HIGH MAGNETIZATION FERROMAGNETIC SPIRAL**

10:30 INDUCTORS USING SHAPE ANISOTROPY

Sandrine Couderc¹, Bernard Viala², Anne-Sophie Royet², Pascal
Ancey¹, Guillaume Bouche¹, *¹STMicroelectronics, Crolles,
France, ²CEA-DRT-Leti, Grenoble, France*

**CE-05 CLOSED MAGNETIC CIRCUIT STRUCTURE FOR RF
11:00 INTEGRATED SPIRAL INDUCTOR**

Seok Bae¹, Ki Hyeon Kim¹, Masahiro Yamaguchi¹, Kenji Tan²,
Takayuki Kusumi², Kiyoshi Yamakawa², ¹*Dept. of Electrical
and Communication Engineering, Tohoku University, Japan,*
²*Akita Research Institute of Advanced Technology, Japan*

***CE-06 LEFT HANDED TRANSMISSION
11:15 CHARACTERISTICS OF RECTANGULAR
WAVEGUIDES PERIODICALLY LOADED WITH
FERRITE**

Tetsuya Ueda¹, Makoto Tsutsumi², ¹*Dept. of Electronics and
Information Science, Kyoto Institute of Technology, Japan,*
²*Dept. of Space Communication Engineering, Fukui University
of Technology, Japan*

**CE-07 SELF GENERATION OF SOLITARY CHAOTIC SPIN
11:45 WAVE PULSES**

Ming Zhong Wu¹, Boris A. Kalinikos², Carl E. Patton¹,
¹*Department of Physics, Colorado State University, United
States of America,* ²*St. Petersburg Electrotechnical University,
Russian Federation*

**CE-08 FABRICATION OF CIRCULATOR WITH COPLANER
12:00 WAVE GUIDE STRUCTURE**

Kazunori Oshiro¹, Hideto Mikami², Shigeo Fujii², Terumitsu
Tanaka¹, Hiroataka Fujimori¹, Mitsuru Matsuura¹, Setsuo
Yamamoto¹, ¹*Yamaguchi University, Japan,* ²*Hitachi Metals
Ltd., Japan*

**CE-09 POSSIBILITY OF DRASTIC MINIATURIZATION OF
12:15 MICROSTRIP Y-ISOLATOR**

Kazunori Oshiro, Terumitsu Tanaka, Hiroataka Fujimori, Mitsuru
Matsuura, Setsuo Yamamoto, *Faculty of Engineering,
Yamaguchi University, Japan*

Apr. 6

Event Hall

8:30-12:00

Session CP

Inductive Heads & Materials

I. Tagawa

Hitachi Ltd.

**CP-01 3DAP ANALYSIS OF FeCo ELECTRODEPOSITED SOFT
MAGNETIC FILMS WITH HIGH Bs**

Y. K. Takahashi¹, K. Hono¹, Y. Miyake², D. Kaneko³, H. Kanai²,
¹*National Institute for Material Science, Japan,* ²*Fujitsu Ltd.,
Japan,* ³*Fujitsu Lab.Ltd., Japan*

- CP-02 MECHANISM OF THE SOFTNESS OF HIGH Bs Fe-Co-AI-O FILMS WITH A THIN UNDERLAYER**
Kazuhiko Shintaku, Saori Watanabe, *Akita Research Institute of Advanced Technology, Japan*
- CP-03 HIGH MOMENT SOFT FeCoN/NiFe LAMINATED THIN FILMS**
Hai Jiang, Kyusik Sin, Ying Jian Chen, *Western Digital Corporation, United States of America*
- CP-04 SOFT ANISOTROPIC HIGH-MOMENT Fe₆₅Co₃₅ /Co THIN FILMS PREPARED BY FACING TARGETS SPUTTERING**
Yu Fu¹, Takuji Miyao², Shinya Chino², Xiao Xi Liu², Mitsunori Matsumoto², Akimitsu Morisako², ¹*Research Institute of Magnetic Materials, Lanzhou University, China*, ²*Department of Information Engineering, Shinshu University, Japan*,
- CP-05 MATERIAL PROPERTY AND DOMAIN STRUCTURE INFLUENCE ON POLE ERASURE OCCURRENCE IN PERPENDICULAR RECORDING HEADS**
Kei Hirata, Tetsuya Roppongi, Mitsuo Ohtsuki, Atsushi Yamaguchi, Kiyoshi Noguchi, *Head Business Group, TDK Corporation, Japan*
- CP-06 3-D FEM ANALYSIS OF SPT HEAD DIMENSION ON RECORDING CHARACTERISTICS**
Masaya Ohtake, Akifumi Sadatoshi, Norio Takahashi, *Dept. Electrical and Electronic Engineering, Okayama University, Japan*
- CP-07 NEWLY DEVELOPED WRAPAROUND SHIELDED POLE HEADS FOR PERPENDICULAR RECORDING**
Tomohiro Okada, Isao Nunokawa, Masafumi Mochizuki, Hisashi Kimura, Kimitoshi Etoh, Masahiko Hatatani, Moriaki Fuyama, Kazuhiro Nakamoto, *Storage Technology Research Center, Hitachi, Ltd., Japan*
- CP-08 DISTRIBUTION OF SLANTED WRITE FIELD FOR PERPENDICULAR RECORDING HEADS WITH SHIELDED POLE**
Z. J. Liu¹, J. T. Li¹, H. T. Wang¹, J. P. Wang², ¹*Data Storage Institute, National University of Singapore, Singapore*, ²*MINT, ECE Department, University of Minnesota, United States of America*

Perpendicular Recording Media I

G. Bertero

Komag Inc.

CQ-01 INTEGRATION OF HIGH-PERFORMANCE PMR COMPONENTS

Davide Guarisco, Bill E. Higgins, *Maxtor Corporation, United States of America*

CQ-02 EFFECT OF NiCr AND NiFeCr SEEDLAYER ON MAGNETIC PROPERTIES AND CRYSTALLOGRAPHY OF CoCrPt-SiO₂ PERPENDICULAR RECORDING MEDIA

Masahiro Shibamoto, Kazuto Yamanaka, David Djayaprawira, Naoki Watanabe, *Electron Device Equipment Division, ANELVA Corp., Japan*

CQ-03 TEM STUDY OF GRAIN BOUNDARY STRUCTURE IN CoCrPt-SiO₂/Ru FOR PERPENDICULAR MAGNETIC RECORDING MEDIA

Ryoko Araki, Yoshio Takahashi, *Storage Technology Research Center, Hitachi, Ltd., Japan*

CQ-04 ANISOTROPY ENHANCED DUAL MAGNETIC LAYER DESIGN FOR HIGH-DENISTY PERPENDICULAR RECORDING

B. Ramamurthy Acharya, Min Zheng, Gunn Choe, Ming Jun Yu, Paramjit Gill, E. Noel Abarra, *MMC Technology, United States of America*

CQ-05 A NEW Co-Pt-TiO₂ PERPENDICULAR MAGNETIC RECORDING MEDIUM

Jun Ariake, Takashi Chiba, Noriko Okada, Naoki Honda, *Akita Research Institute of Advanced Technology, Japan*

CQ-06 PRELIMINARY STUDY ON (CoPtCr/NiFe)-SiO₂ HARD/SOFT-STACKED PERPENDICULAR RECORDING MEDIA

Yuki Inaba¹, Takehito Shimatsu¹, Osamu Kitakami², Hideo Sato¹, Tadaaki Oikawa¹, Hiroaki Muraoka¹, Hajime Aoi¹, Yoshihisa Nakamura¹, ¹*Research Institute of Electrical Communication, Tohoku University, Japan*, ²*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*

CQ-07 EFFECT OF UNDERLAYER STRUCTURE ON THE PROPERTIES OF NdFeB THIN FILMS

T.Okumoto, K.Yamasawa, X.Liu, A.Morisako, M.Matsumoto, *Department of Information Engineering, Shinshu University, Japan*

CQ-08 SmCo₅ THIN FILMS WITH HIGH MAGNETIC ANISOTROPY FOR PERPENDICULAR MAGNETIC RECORDING

Junichi Sayama, Kazuki Mizutani, Yuki Yamashita, Toru Asahi, Tetsuya Osaka, *Waseda University, Japan*

CQ-09 SUPERPOSITION OF MAGNETO-ELASTIC AND MAGNETO-CRYSTALLINE ANISOTROPY IN TILTED MAGNETIC RECORDING

Wei Peng, Roy W. Chantrell, Yiao-Tee Hsia, Timothy J Klemmer, *Seagate Technology, United States of America*

CQ-10 ACTIVATION VOLUMES IN CoPtCr-SiO₂ PERPENDICULAR RECORDING MEDIA

Yuki Inaba¹, T. Shimatsu¹, H. Muraoka¹, James D. Dutson², Kevin O'Grady², ¹*Research Institute of Electrical Communication, Tohoku University, Sendai, Japan*, ²*Dept. of Physics, University of York, York, United Kingdom*

CQ-11 THERMAL DECAY IN PERPENDICULAR MEDIA

Andreas Moser, Byron Lengsfeld, Yoshihiro Ikeda, Bruce Wilson, *Hitachi Global Storage Technologies, San Jose Research Center, United States of America*

CQ-12 DEMAGNETIZATION EFFECTS IN COERCIVITY MEASUREMENTS: A GENERALIZED SHARROCK MODEL FOR PERPENDICULAR MEDIA

Byron H. Lengsfeld, Manfred E. Schabes, *Hitachi Global Storage Technologies, United States of America*

CQ-13 BULK AC ERASE TECHNIQUE FOR PERPENDICULAR RECORDING MEDIA: EFFECT OF EXCHANGE COUPLING

E. Noel Abarra, Paramjit Gill, B. Ramamurthy Acharya, Jia Ning Zhou, Min Zheng, Gunn Choe, *MMC Technology, United States of America*

CQ-14 FLUCTUATION FIELDS IN PERPENDICULAR MEDIA

Simon J. Greaves, Hiroaki Muraoka, *RIEC, Tohoku University, Sendai, Japan*

Spin Injection & Transport: Theory to Devices**M-H. Jung**

Korea basic science institute

CR-01 FULL TIGHT-BINDING CALCULATION OF TMR FOR Fe/MgO/Fe JUNCTION WITH RANDOMNESSHiroyoshi Itoh, Jun-ichiro Inoue, *Dept. of Applied Physics, Nagoya University, Japan***CR-02 EXTERNAL MAGNETIC FIELD INFLUENCE CORRECTIONS IN RKKY EXCHANGE COUPLING MODEL**Elena Gomony¹, Yevgen Pogoryelov², *¹Institute for Physics and Technology, National Ukrainian Technical University, Ukraine, ²Institute for Magnetism, National Academy of Sciences of Ukraine, Ukraine***CR-03 A TRIAL FOR FABRICATING A SPIN-FILTER OPERATING AT ROOM TEMPERATURE USING A FERROMAGNETIC INSULATOR**Ryota Goto¹, Nobuki Tezuka², Satoshi Sugimoto¹, Koichiro Inomata², *¹Graduate School of Engineering, Tohoku University, Japan, ²Graduate School of Engineering, Tohoku University and CREST-JST, Japan***CR-04 VERTICAL SPIN ELECTRONIC DEVICE WITH LARGE ROOM TEMPERATURE MAGNETORESISTANCE**Ehsan Ahmad, Alex Valavanis, Yong Bing Xu, *Spintronics Laboratory, Department of Electronics, University of York, United Kingdom***CR-05 A NOVEL TYPE OF SPIN INJECTION BARRIER IN A GaAs BASED TWO-DIMENSIONAL ELECTRON GAS SYSTEM**H. C. Koo, Hyun Jung Yi, J. D. Song, J. Y. Chang, Suk Hee Han, *Nano Device Research Center, Korea Institute of Science and Technology, Republic of Korea***CR-06 GENERALIZED DIFFUSIVE SPIN TRANSPORT THEORY IN MAGNETIC MULTILAYER STRUCTURES**Mansoor B. A. Jalil, *Electrical and Computer Engineering Department, National University of Singapore, Singapore***CR-07 DOMAIN WALL MAGNETORESISTANCE IN A QUANTUM WIRE**Arash Phirouznia, Mohammad Mehdi Tehranchi, Majid Ghanaatshoar, *Laser Research Institute and Dept. of Physics, Shahid Beheshti University, Iran*

CR-08 SPIN ACCUMULATION AND DETECTION IN AN InAs BASED TWO-DIMENSIONAL ELECTRON GAS WITH NOVEL MEASUREMENT GEOMETRY

Hyun Jung Yi¹, H. C. Koo¹, W. Y. Kim¹, Joon Yeon Chang¹, Suk Hee Han¹, Y. H. Cho², M. H. Jung², ¹*Nano Device Research Center, Korea Institute of Science and Technology, Republic of Korea*, ²*National Fusion R&D center, Korea Basic Science Institute, Republic of Korea*

CR-09 SILICON BASED SPIN VALVE DEVICE

Won Young Kim, Joon Yeon Chang, Hyun Jung, Hyun Cheol Koo, Suk Hee Han, Woo Young Lee, *Dept. of Materials Science & Engineering, Yonsei University, Republic of Korea*

CR-10 GEOMETRICAL EFFECT ON SPIN ACCUMULATION IN MAGNETIC NANO-STRUCTURES

Masahiko Ichimura^{1,2}, Saburo Takahashi¹, Sadamichi Maekawa¹, ¹*Institute for Materials Research, Tohoku University, Japan*, ²*Advanced Research Laboratory, Hitachi, Ltd., Japan*

CR-11 INFLUENCE OF Au CAPPING LAYER ON SPIN ACCUMULATION IN LATERAL SPIN-VALVE STRUCTURE

Takashi Kimura¹, Jaroslav¹, Yoshichika Otani², ¹*Riken FRS, Japan*, ²*ISSP Univ of Tokyo, Japan*

CR-12 CURRENT-INDUCED DOMAIN NUCLEATION IN FERROMAGNET

Junya Shibata¹, Gen Tatara², Hiroshi Kohno³, Yoshichika Otani⁴, ¹*RIKEN FRS, Japan*, ²*Graduate School of Science, Osaka University, Japan*, ³*Graduate School of Engineering Science, Osaka University, Japan*, ⁴*Institute for Solid State Physics, University of Tokyo, Japan*

CR-13 THICKNESS DEPENDENCE OF GIANT MAGNETORESISTANCE IN SINGLE, SYNTHETIC AND DUAL SPIN VALVES: INFLUENCE OF INTERFACE AND BULK SCATTERING

Li Wang¹, William Joseph McMahon¹, Guchang Han¹, Bo Liu¹, Yi Hong Wu², ¹*Data Storage Institute, DSI Building, 5 Engineering Drive 1, Singapore*, ²*Department of Electrical and Computer Engineering, National University of Singapore, Singapore*

CR-14 MAGNETITE SCHOTTKY BARRIERS ON GaAs SUBSTRATES

Steven M. Watts, Catherine Boothman, Sebastiaan van Dijken, J. M. D. Coey, *SFI Trinity Nanoscience Laboratory, Physics Department, Trinity College, Dublin, Ireland*

CR-15 LARGE SPIN SUSCEPTIBILITY OF HgCdTe TWO DIMENSIONAL ELECTRON GAS IN THE EXTREME QUANTUM LIMIT REGIME

Jinki Hong¹, Jinseo Lee¹, Sung Jung Joo¹, Kungwon Rhie¹, B. C. Lee², Se-Young An³, Jinsang Kim³, Kyung-Ho Shin³,
¹*Department of Physics, Korea University, Republic of Korea,*
²*Department of Physics, Inha University, Republic of Korea,*
³*Nano Devices Research center, KIST, Republic of Korea*

CR-16 CALCULATIONS OF IMPURITY DOPING EFFECTS IN CrO₂

Katsuhiko Suzuki¹, Hiroyuki Abe², ¹*Dept. Integrated Arts and Sciences, Miyagi National College of Technology, Japan,* ²*Dept. Applied Physics, Tohoku Univ., Japan*

CR-17 RECOILED PARTICLE IRRADIATION EFFECTS TO RE-TM FILMS AROUND COMPENSATION POINT OBSERVED BY FERROMAGNETIC HALL EFFECT

Mitsunobu Okuda, Sarbanoo Das, Tomoki Kobayashi, Shigeki Nakagawa, *Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*

CR-18 GATE EFFECT ON HALL VOLTAGE IN A InSb/FM DEVICE

Won Young Kim, Joon Yeon Chang, Suk Hee, Woo Young Lee, *Dept. of Materials Science & Engineering, Yonsei University, Republic of Korea*

Apr. 6

Event Hall

8:30-12:00

Session CS

Hard Magnet Applications I

F. Yamashita

Matsushita Electric Industrial Co., Ltd.

K. Ohmori

Sumitomo Metal Mining Co.

CS-01 DEVELOPMENT OF WOOFER MICROSPEAKERS USED CELLULAR PHONES

Ki-Chang Bang¹, Yong-Chang Yang¹, Gun-Yong Hwang², Sang-Moon Hwang¹, ¹*School of Mechanical Engineering, Pusan National University, Republic of Korea,* ²*School of Information and Communication Engineering, Youngsan University, Republic of Korea*

CS-02 APPLICATION OF THE REPUSIVE-TYPE MAGNETIC BEARING FOR MANUFATURING MICRO-MASS MEASURMENT BALANCE EQUIPMENT

Alaa A. Hussien¹, Sotoshi Yamada¹, Masayoshi Iwahara¹, Tomotada Okada¹, Takahisa Ohji², ¹*Institute of Nature and Environmental Technology, Kanazawa University, Japan*, ²*Dept. of Electrical and Electronic Engineering, Toyama University, Japan*

CS-03 ELECTROMAGNETICALLY ACTUATED ACTIVE BALANCER WITH FLUX GUIDES

Branislav Hredzak, Guo Xiao Guo, *A*Star, Data Storage Institute, Singapore*

CS-04 CHARACTERISTICS OF MOVING MAGNET ROTATOR OVER CONDUCTING PLATE

Nobuo Fujii, Yuichiro Ito, Takehiro Yoshihara, *Dept. of Electrical and Electronic Systems Engineering, Kyushu University, Japan*

CS-05 DYNAMIC CHARACTERISTIC ANALYSIS AND EXPERIMENTS OF MOVING-MAGNET LINEAR ACTUATOR WITH CYLINDRICAL HALBACH ARRAY

Seok Myeong Jang¹, Jang Young Choi¹, Han Wook Cho¹, Sung Ho Lee², ¹*Dept. of Electrical Engineering, Chungnam National University, Republic of Korea*, ²*LG Digital Appliance Lab., Republic of Korea*

CS-06 THE DESIGN FOR HIGH POWER DENSITY IN THE SLOTLESS TYPE PERMANENT MAGNET LINEAR SYNCHRONOUS MOTOR

Dong-Yeup Lee¹, Gyu-Tak¹, Jung-Keying Choi², ¹*Dep. of Electrical Engineering, Changwon National University, Republic of Korea*, ²*Dep. of Electronics Engineering, Changwon National University, Republic of Korea*

CS-07 EXPERIMENT AND CHARACTERISTIC ANANYSIS OF DISK TYPE PMLSM WITH HALBACH ARRAY

Seok-Myeong Jang, Jung-Chul Seo, Jeong-Ki Kwon, Jangyoung Choi, Han Wook Cho, *Dept. of Electrical Engineering, Chungnam Nat'l Univ., Republic of Korea*

CS-08 STIFFNESS ANALYSIS OF A MAGNETICALLY SUSPENDED BEARINGLESS MOTOR WITH PERMANENT MAGNET PASSIVE POSITIONING

Kazuyoshi Asami¹, Akira Chiba¹, Takeshi Hoshino², Atsushi Nakajima², ¹*Tokyo University of Science, Japan*, ²*Japan Aerospace Exploration Agency, Japan*

CS-09 EFFECTS OF SHIFTED STATOR POLE AND FLAT ROTOR POLES ON THE STATIC CHARACTERISTICS OF THE DOUBLY SALIENT PERMANENT MAGNET MOTOR

Angara. R. C. Sekhar Babu, K. R. Rajagopal, *Electrical Engineering Department, Indian Institute of Technology Delhi, New Delhi, India*

CS-10 DEVELOPMENT OF BLDC MOTOR WITH 3 TIMES OUTPUT

Yoshinobu Honkura, Daisuke Nagaya, Hiroshi Matsuoka, Hironari Mitarai, Norihiko Hamada, Kenji Noguchi, *Electronic & Magnetics Product Div., Aichi Steel Corporation, Japan*

CS-11 A COMPARATIVE STUDY OF HIGH-SPEED PERMANENT MAGNET SYNCHRONOUS MOTOR FOR AIR COMPRESSOR

Ju Lee, *Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

CS-12 DESIGN OF PERMANENT MAGNETS TO GUARANTEE FREQUENCY-CHANGING STARTUP FOR PM SYNCHRONOUS MACHINES

Yuan Gao, K. T. Chau, *Department of Electrical & Electronic Engineering, The University of Hong Kong, Pokfulam Road, Hong Kong, China*

CS-13 ANALYSIS ON THE EFFECT OF POLE ARC AND SALIENT POLE RATIO TO IMPROVE TORQUE CHARACTERISTICS OF IPMSM

Kab-Jae Lee¹, Ki-Chan Kim¹, Ju Lee², *¹Electro-Mechanical Research Institute, Hyundai Heavy Industry Co., Republic of Korea, ²Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

CS-14 PERFORMANCE AND APPLICATIONS OF A SMALL PERMANENT MAGNET GENERATOR

Chang-Chou Hwang¹, Ping-Huey Tang², *¹Dept. of Electrical Engineering, Feng Chia University, Taiwan, ²Dept. of Computer Applications Engineering, Far East College, Taiwan*

CS-15 DYNAMIC ANALYSIS OF SPOKE TYPE PERMANENT MAGNET GENERATOR WITH LARGE OVERHANG

Ki-Chan Kim¹, Kab-Jae Lee², Ju Lee¹, *¹Dept. of Electrical Engineering, Hanyang University, Haengdang, Seongdong, Seoul, Republic of Korea, ²Hyundai Heavy Industries Co., LTD. Mabook, Kuseong, Yongin, Republic of Korea*

Session CT
Clusters and Particles II

E. Kita

Institute of Applied Physics, University of Tsukuba

**CT-01 SUPERPARAMAGNETIC FLUCTUATION IN
MAGNETIC NANOPARTICLES: AN APPROACH TO
EXTREMELY SLOW RELAXATION**

Hiroaki Mamiya, Masato Ohnuma, Isao Nakatani, Takao Furubayashi, *National Institute for Materials Science, Japan*

**CT-02 PREPARATION OF Ni NANOPARTICLES MONO-
LAYER ON POLYIMIDE SUBSTRATE**

Chong Seung Yoon, Dong Hyun Im, Ik Su Chun, Ki Sik Ban, Sang Uk Lim, Kyung Sook Jeon, Ji Weon Kim, Chang Kyung Kim, Young Ho Kim, *Dept of Materials Science and Engineering, Hanyang University, Seoul, Republic of Korea*

**CT-03 PREPARATION AND PROPERTIES OF NOVEL IRON
NANOPARTICLES**

Hui Ping Shao¹, Hyo Sook Lee², Yu Qiang Huang¹, In Yong Ko³, Chong Oh Kim¹, *¹Department of materials engineering, ChungNam National University, Republic of Korea, ²Korea Institute of Geoscience & Mineral Resources, Republic of Korea, ³ChunBuk National University, Republic of Korea*

**CT-04 CONTROLLED MONODISPERSE Fe NANOPARTICLES
SYNTHESIZED BY CHEMICAL METHOD**

Wen Li Pei¹, Saku Kakibe², Ippei Ohta², Migaku Takahashi², *¹College of Materials and Metallurgy, Northeastern University, China, ²Department of Electronics Graduate School of Engineering, Tohoku University, Japan*

**CT-05 MICROSTRUCTURE AND MAGNETIC PROPERTIES
OF COBALT NANOCRYSTALS**

You Hui Gao¹, Zentaro Akase¹, Daisuke Shindo¹, Yu Ping Bao², Kannan Krishnan², *¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan, ²Department of Materials Science and Engineering, University of Washington, United States of America*

**CT-06 SYNTHESIS AND MAGNETIC PROPERTIES OF
CoPt(Ag) NANOPARTICLES ASSEMBLY**

Xiang Cheng Sun¹, Yunhe Huang², Zhi Yong Jia³, J. W. Harrell³, D.E. Nikles³, *¹Department of Nuclear Engineering, University of Michigan, United States of America, ²Department of Physics, University of Delaware, United States of America, ³Center for Materials for Information Technology, the University of Alabama, United States of America*

CT-07 SIZE CONTROL AND MAGNETIC PROPERTIES OF FePt NANOPARTICLES

Masafumi Nakaya, Toshiharu Teranishi, *Grad. School of Pure and Appl. Sci., Univ. of Tsukuba, Japan*

CT-08 USE OF THE PHOTOACOUSTIC SPECTROSCOPY FOR SURFACE CHARACTERIZATION OF NANOMETER-SIZED COBALT-FERRITE PARTICLES

Paulo C. Morais¹, Luciene B. Silveira¹, Judes G. Santos¹, Aderbal C. Oliveira¹, Alvaro L. Tronconi¹, Regiane L. Santos², Emilia C.D. Lima², Juliana M. Marchetti³, Antonio C. Tedesco⁴, ¹*Instituto de Física, Universidade de Brasília, Brazil*, ²*Instituto de Química, Universidade Federal de Goiás, Brazil*, ³*Departamento de Farmácia, Universidade de São Paulo, Brazil*, ⁴*Faculdade de Filosofia Ciências e Letras, Universidade de São Paulo, Brazil*

CT-09 SYNTHESIS OF FePtAu NANOPARTICLES IN HIGH-BOILING-POINT SOLVENTS

Zhi Yong Jia, Shishou Kang, David E. Nikeles, J. W. Harrell, *MINT Center, The University of Alabama, United States of America*

Apr. 6

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Session CU

Magnetic Imaging II

H. Koo

Korea Institute of Science and Technology

CU-01 A NOVEL INSTRUMENT FOR REAL TIME DYNAMIC DOMAIN OBSERVATION IN BULK AND MICROMAGNETIC MATERIALS

Anthony Moses, Paul Williams, Oleksandr Hoshtanar, *Wolfson Centre for Magentics Technology, School of Engineering, Cardiff University, United Kingdom*

CU-02 MAGNETIZATION CONFIGURATIONS IN MICROSTRUCTURED PERMALLOY NETWORKS

Jong-Ching¹, Ida Chang¹, Zung-Hang Wei², Mei-Feng Lai², Ching-Ray Chang², ¹*Taiwan SPIN Research Center and Department of Physics, National Changhua University of Education, Taiwan*, ²*Department of Physics, National Taiwan University, Taiwan*

CU-03 THE IRREVERSIBLE MAGNETIZATION PROCESS IN MICROSTRUCTURED PERMALLOY ELLIPSES

Yi-Chen Chang, Chia-Chi Chang, Che-Chinmr Chen, Jong-Ching Wu, *Taiwan SPIN Research Center and Department of Physics, National Changhua University of Education, Taiwan*

CU-04 HIGH-RESOLUTION MAGNETIC IMAGE BY HIGH-Tc SQUID PROBE MICROSCOPE

Tadayuki Hayashi¹, Hideo Itozaki², ¹*Sendai National College of Technology and National Institute for Materials Science, Japan,*
²*Osaka University and National Institute for Materials Science, Japan*

CU-05 ANTI-PHASE DOMAINS AND CHARGE ORDERING ON EPITAXIAL MAGNETITE FILMS STUDIED BY SPIN-POLARIZED SCANNING TUNNELING MICROSCOPY

Agus Subagyo, Kazuhisa Sueoka, *Graduate School of Information Science and Technology, Hokkaido University, Japan*

CU-06 APPLICATIONS OF HIGH-RESOLUTION MFM SYSTEM WITH LOW MOMENT PROBE AND Q-CONTROL IN VACUUM

Takehiro Yamaoka¹, Kazutoshi Watanabe¹, Yoshiharu Shirakawabe¹, Kazuo Chinone¹, Eiji Saitoh², Masaaki Tanaka², Hideki Miyajima², ¹*SII NanoTechnology Inc., Japan,* ²*Dept. of Phys., Keio University, Japan*

CU-07 MAGNETIZATION REVERSAL AND STRAY FIELD OF PERIODICALY MAGNETIC DOTS DETECTED BY BOTH MFM AND GMR READ HEAD

Kebin Li¹, Yuankai Zheng¹, Ping Luo¹, Zhi Yong Liu¹, Lihua An¹, Zai Bing Guo¹, Guchang Han¹, Yi Hong Wu², ¹*Data Storage Institute, Singapore, Singapore,* ²*Department of Electrical and Computer Engineering, National University of Singapore, Singapore*

CU-08 HIGH SENSITIVITY SCANNING HALL PROBE MICROSCOPY AND MAGNETIC IMAGING OF PERMANENT MAGNET

Masayoshi Shimizu¹, Hiromasa Saitoh¹, Eiji Saitoh¹, Hideki Miyajima¹, Hiroshi Masuda², Makoto Satoh², ¹*Dept. of Physics, Keio University, Japan,* ²*Toei Industry, Co., Ltd., Japan*

CU-09 LOW NOISE MFM WITH HIGH RESOLUTION BY TIP COOLING

Hitoshi Saito¹, Ryosuke Sunahara¹, Young Woo Rheem², Shunji Ishio¹, ¹*Dept. of Materials Science and Engineering, Akita University, Japan,* ²*Venture Business Laboratory, Japan*

CU-10 JUSTIFICATION OF AN ALTERNATIVE SYSTEM FOR ONE- AND TWO-DIMENSIONAL MAGNETIC MEASUREMENTS

Julius Krah, *Dept. of Electrical Engineering, Royal Institute of Technology, Stockholm, Sweden*

CU-11 MEASUREMENT AND VISUALIZATION OF THREE-DIMENSIONAL RADIAL AND VECTORED MAGNETIC FIELD DISTRIBUTION BY USE OF THE MAGNETIC CT METHOD

Yoshihiro Miyamoto, Takashi Nishimura, Masayoshi Iwahara, Sotoshi Yamada, *Graduate School of Natural Science and Technology, Kanazawa University, Japan*

CU-12 APPLICATION OF SPIN VALVE SENSOR FOR SCANNING MAGNETORESISTANCE MICROSCOPE

Taiichi Takezaki, Daiki Yagisawa, Kazuhisa Sueoka, *Graduate School of Information Science and Technology, Hokkaido University, Japan*

Apr. 6

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Session CV

Motors II

H.J. Guo

Tohoku Gakuin University

CV-01 VERIFICATION OF THE FROZEN PERMEABILITIES METHOD OF CALCULATING THE INTERIOR PERMANENT MAGNET MOTOR

Jill A. Walker, David G. Dorrell, *SPEED Laboratory, Dept. of Electronics & Electrical Engineering, University of Glasgow, United Kingdom*

CV-02 ROTOR OPTIMIZATION OF INTERIOR PERMANENT MAGNET SYNCHRONOUS MOTOR CONSIDERING MECHANICAL STRESS

Kab-Jae Lee¹, Ki-Chan Kim¹, Ju Lee², *¹Electro-Mechanical Research Institute, Hyundai Heavy Industry Co., Republic of Korea, ²Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

CV-03 AN INVESTIGATION ON INFLUENCE OF MAGNET ARC SHAPING UPON BACK ELECTROMOTIVE FORCE WAVEFORMS FOR DESIGN OF PERMANENT-MAGNET BRUSHLESS MOTORS

Min-Fu Hsieh, Yu-Sheng, *Dept. of Systems and Naval Mechatronic Engineering, National Cheng Kung University, Taiwan*

CV-04 CALCULATION OF DQ-AXIS INDUCTANCES OF PM BRUSHLESS AC MACHINES ACCOUNTING FOR SKEW

Yang Shen Chen, Zi Qiang Zhu, David Howe, *Dept. of Electronic and Electrical Engineering, University of Sheffield, United Kingdom*

CV-05 DESIGN OF PERMANENT MAGNETS TO CHAOTIC PM SYNCHRONOUS MOTORS FOR INDUSTRIAL MIXERS

Shuang Ye, K. T. Chau, *Dept. of Electrical and Electronic Engineering, The University of Hong Kong, China*

CV-06 EFFECT OF MATERIAL PROPERTIES ON MOTOR IRON LOSS

Horoaki Toda, Kunihiro Senda, Masayoshi Ishida, *Steel Research Laboratory, JFE Steel Corporation, Japan*

CV-07 COMPARISON AND ANALYSIS OF BLDC MOTOR WITH RADIAL AND POLAR ANISOTROPIC PLASTIC MAGNET

Seok Myeong Jang¹, Jang Young Choi¹, Dae Joon You¹, Hyun Sup Yang², ¹*Dept. of Electrical Engineering, Chungnam National University, Republic of Korea*, ²*SAMSUNG TECHWIN CO. LTD., Republic of Korea*

CV-08 FE ANALYSIS AND CAD OF RADIAL-FLUX SURFACE MOUNTED PERMANENT MAGNET BRUSHLESS DC MOTORS

Parag R. Upadhyay, K. R. Rajagopal, *Electrical Engineering Department, IIT Delhi, India*

CV-09 A NOVEL INTEGRAL-FORCE TECHNIQUE FOR THE ANALYSIS OF AN AXIAL-FIELD PERMANENT MAGNET BRUSHLESS DC MOTOR USING FE METHOD

Parag R. Upadhyay, K. R. Rajagopal, *Electrical Engineering Department, IIT Delhi, India*

CV-10 FE ANALYSIS OF MULTI-PHASE DOUBLY SALIENT PERMANENT MAGNET MOTORS

Angara. R. C. Sekhar Babu, K. R. Rajagopal, *Electrical Engineering Department, Indian Institute of Technology Delhi, New Delhi, India*

CV-11 PERMANENT MAGNET DEMAGNETIZATION CHARACTERISTICS ANALYSIS OF A VARIABLE FLUX MEMORY MOTOR USING COUPLED PREISACH MODELING AND FEM

Young-Jin Jang¹, Jung-Ho Lee¹, Jung-Chul Kim², ¹*Dept. of Electrical Engineering, Hanbat National University., Republic of Korea*, ²*LG Electronics Inc., DA Research Lab., Republic of Korea*

CV-12 DYNAMIC CHARACTERISTICS ANALYSIS IN A POLE CHANGING MEMORY MOTOR USING COUPLED FEM & PREISACH MODELING

Jung-Min Park, Sun-Bum Kwon, Jung-Ho Lee, *Dept. of Electrical Engineering, Hanbat National University, Republic of Korea*

**CV-13 BLDC SPINDLE MOTOR COGGING TORQUE
CALCULATION WITH THE MOVING MATERIAL
METHOD IN THE FINITE ELEMENT METHOD**

Sung Hong Won, Ju Lee, *Dept. of Electric Eng., Hanyang
University, Republic of Korea*

**CV-14 SENSORLESS DETECTION OF FREE-FALLING STATE
OF A HDD BY MONITORING ELECTROMECHANICAL
SIGNAL OF A SPINDLE MOTOR**

Gun Hee Jang, Sang Jin Park, *PREM Lab., Hanyang University,
Republic of Korea*

Apr. 6

Event Hall

8:30-12:00

**Session CW
Motors III**

O. Ichinokura

Tohoku University

**CW-01 A ROTOR ANGULAR POSITION ESTIMATION BASED
ON A SIMPLE MATHEMATICAL EXPRESSION OF
THE MAGNETIZING CHARACTERISTICS OF
SWITCHED RELUCTANCE MACHINES**

Takanori Suzuki¹, Motoichiro Terada¹, Akira Chiba¹, Masatsugu
Takemoto², Tadashi Fukao², *¹Tokyo University of Science,
Japan, ²Musashi Institute of Technology, Japan*

**CW-02 EFFECTS OF ROTOR ECCENTRICITY ON TORQUE IN
SWITCHED RELUCTANCE MOTORS**

David G Dorrell, Ivan Chindurza, Calum Cossar, *Dept. of
Electronics and Electrical Engineering, University of Glasgow,
United Kingdom*

**CW-03 VARIATIONS IN OVERALL DEVELOPED TORQUE OF
A SWITCHED RELUCTANCE MOTOR WITH AIRGAP
NONUNIFORMITY**

Nimit K. Sheth, K. R. Rajagopal, *Electrical Engineering
Department, Indian Institute of Technology Delhi, New Delhi,
India*

**CW-04 NOVEL POLE SHAPES FOR IMPROVED
PERFORMANCE OF SWITCHED RELUCTANCE HUB
MOTORS**

Kamal Pandey, K. R. Rajagopal, *Electrical Engineering
Department, Indian Institute of Technology Delhi, India*

CW-05 SPICE SIMULATION OF A SWITCHED RELUCTANCE MOTOR WITH NOVEL DRIVING CIRCUIT

Hiroki Goto¹, Hai-Jiao Guo², Osamu Ichinokura¹, ¹*Department of Electrical and Communication Engineering, Tohoku University, Japan*, ²*Department of Electrical and Information Engineering, Tohoku-Gakuin University, Japan*

CW-06 SPEED CONTROL WITH NEGATIVE TORQUE MINIMIZATION IN SINGLE PHASE SRM

Joon Seon Ahn, Hee-Kwan Park, Seung-Joo Kim, Jae-Hak Choi, Ju Lee, *Energy Conversion Lab., Department of Electrical Engineering, Hanyang University, Republic of Korea*

CW-07 OPTIMUM DESIGN CRITERIA BASED ON RATED WATT OF SYNCHRONOUS RELUCTANCE MOTOR USING A COUPLED FEM & SUMT

Sun-Bum Kwon¹, Jung-Ho Lee¹, Jung-Chul Kim², ¹*Dept. of Electrical Engineering, Hanbat National University, Republic of Korea*, ²*LG Electronics Inc.DA Research Lab., Republic of KOREA*

CW-08 EFFICIENCY EVALUATION OF PMASynRM VS. SynRM USING COUPLING FEM & PREISACH MODELING

Rae-Hwa Lee, Young-Jin Jang, Jung-Ho Lee, *Dept. of Electrical Engineering, Hanbat National University, Republic of Korea*

CW-09 IRON LOSS DISTRIBUTION OF FLUX-REVERSAL MACHINE ACCORDING TO VARIOUS PWM MODES

Tae Heoung Kim, Ki-Bong Jang, Seung-Bin, Jae-Nam Bae, Ju Lee, *Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

CW-10 STARTING AND HIGH SPEED DRIVING OF SINGLE PHASE FLUX REVERSAL MOTOR FOR VACUUM CLEANER

Ki-Bong Jang, Tae Heoung Kim, Seung-Bin Lim, Ju Lee, *Department of Electrical Engineering, Hanyang University, Republic of Korea*

CW-11 REDUCTION OF COGGING TORQUE IN FLUX-REVERSAL MACHINE BY ROTOR TEETH PAIRING

Tae Heoung Kim, Sung Hong Won, Jae-Nam Bae, Ju Lee, *Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

CW-12 EFFECT OF DESIGN VARIABLES ON IRREVERSIBLE PERMANENT MAGNET DEMAGNETIZATION IN FLUX-REVERSAL MACHINE

Tae Heoung Kim, Jae Nam Bae, Ju Lee, *Dept. of Electrical Engineering, Hanyang University, Republic of Korea*

**CW-13 ANALYSIS OF A LAMINATED CORE PARAMETRIC
INDUCTION MOTOR BASED ON THREE
DIMENSIONAL RELUCTANCE NETWORK MODEL**

Katsubumi Tajima¹, Masatoshi Hattori¹, Tsuyoshi Miyaji¹,
Tadashi Sato¹, Yoshinori Sakamoto², ¹*Department of Electrical
and Electronic Engineering, Akita University, Japan,*

²*Department of Kansei Design, Hachinohe Institute of
Technology, Japan*

Apr. 6

Reception Hall

Session DA

Magnetic Semiconductors II

M. Tanaka

The University of Tokyo

DA-01 TUNNEL MAGNETORESISTANCE IN II-VI/III-V

**14:30 HETEROSTRUCTURE Ga_{1-x}Mn_xAs/ZnSe/Ga_{1-x}Mn_xAs
MAGNETIC TUNNEL JUNCTIONS**

Hidekazu Saito, Shinji Yuasa, Koji Ando, *Nanoelectronics
Research Institute, National Institute of Advanced Industrial
Science and Technology, Japan*

DA-02 EFFECT OF CLUSTERING ON FERROMAGNETISM

14:45 IN (Ga,Mn)As

Hannes Raebiger¹, Andres Ayuela², Juhani von Boehm¹, Risto
M. Nieminen¹, ¹*COMP/Laboratory of Physics, Finland,*
²*Donostia International Physics Centre (DIPC), Spain*

DA-03 MAGNETIZATION REVERSAL WITH DOMAIN-

15:00 WALL PINNING IN (Ga,Mn)As WIRE

Takayoshi Koike¹, Kohei Hamaya¹, Naofumi Funakoshi²,
Yasushi Takemura², Yoshitaka Kitamoto¹, Hiroo Munekata³,
¹*Dept. of Innovative and Engineered Materials, Tokyo Institute
of Technology, Japan,* ²*Division of Electrical and Computer
Engineering, Yokohama National University, Japan,* ³*Imaging
Science and Engineering Laboratory, Tokyo Institute of
Technology, Japan*

DA-04 FERROMAGNETIC TRANSITION-METAL-DOPED

15:15 TIN DIOXIDE THIN FILMS

Nguyen Hoa Hong¹, Joe Sakai², Antoine Ruyter¹, Wilfrid
Prellier³, Awatef Hassini¹, Virginie Brize¹, ¹*Laboratoire LEMA,
University of Tours, France,* ²*School of Materials Science,
JAIST, Japan,* ³*Laboratoire CRISMAT, ENSICAEN, France*

DA-05 FERROMAGNETISM IN DILUTE MAGNETIC

15:30 SEMICONDUCTORS AND NEW MATERIALS FOR SPINTRONICS

Valery A. Ivanov¹, Victor Fleurov², Konstantin Kikoin³, Vladimir M. Novotortsev¹, Tel'man G. Aminov¹, Sergei F. Marenkin¹, Galina G. Shabunina¹, Ljudmila I. Koroleva⁴, Vladimir T. Kalinnikov⁵, Boris A. Aronzon⁶, Vladimir V. Rylkov⁶, Stanislav V. Gudenko⁶, ¹*N. S. Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences, Russian Federation*, ²*School of Physics and Astronomy, Tel Aviv University, Israel*, ³*Department of Physics, Ben-Gurion University, Israel*, ⁴*Department of Physics, M. V. Lomonosov Moscow State University, Russian Federation*, ⁵*I. V. Tananaev Institute of Chemistry and Technology of Rare Elements and Minerals, Russian Academy of Sciences, Russian Federation*, ⁶*Russian Scientific Center "Kurchatov Institute", Russian Federation*

DA-06 ABSENCE OF FERROMAGNETISM AND STRONG

15:45 ORBITAL COUPLING IN CARRIER RICH

Zn_{1-x}In_xCo_{0.075}O

Xiao Lin Wang, Germanas Peleckis, Shi Xue Dou, *Institute of Superconducting and Electronic Materials, University of Wollongong, Australia*

Apr. 6

Room 141/142

Session DB

Current Developments in Inductive Heads & Materials

K. Tagami

TDK Corporation

DB-01 ENHANCEMENT OF MAGNETIC FLUX DENSITY IN

14:30 SPUTTERED FeCoPd ALLOY AND [FeCo/Pd]_n SUPERLATTICE FILMS AT ROOM TEMPERATURE

Kenji Noma, Masaaki Matsuoka, Hitoshi Kanai, Yuji Uehara, *Advanced Head Technology Development Dept., Fujitsu Ltd., Japan*

DB-02 EXPERIMENTAL EVIDENCE FOR GYROMAGNETIC

14:45 DAMPING IN MAGNETIC HEADS DETERMINED BY IMPEDANCE MEASUREMENTS UP TO 9 GHz

Ahmet Kaya¹, James A. Bain², ¹*Data Storage Systems Center, Physics Dept., Carnegie Mellon University, United States of America*, ²*Data Storage Systems Center, Dept. of Electronics and Comp. Eng., Carnegie Mellon University, United States of America*

DB-03 WRITE HEAD ANALYSIS BY USING PARALLEL

15:00 MICROMAGNETIC-FEM

Ken-ichi Takano, El-Amine Salhi, Masanori Sakai, Moris Dovek, *Headway Technologies, United States of America*

DB-04 POLE-TIP SIZE EFFECT ON PERPENDICULAR

15:15 RECORDING HEAD REMANENCE

Yuchen Zhou, Jian-Gang Zhu, *Data Storage Systems Center, Carnegie Mellon University, Pittsburgh, United States of America*

***DB-05 CPP-GMR READER AND WRAPAROUND SHIELD**

15:30 WRITER FOR PERPENDICULAR RECORDING

Kazuhiro Nakamoto, Hiroyuki Hoshiya, Tomohiro Okada, Hiroyuki Katada, Masahiko Hatatani, Katsumi Hoshino, Nobuo Yoshida, Isao Nunokawa, Kimitoshi Etoh, Katsuro Watanabe, *Storage Technology Research Center, Hitachi, Ltd., Japan*

Apr. 6

Room 234

Session DC

Magnetic Nanoparticles in Biomagnetism

K. Noda

The Institute of Physical and Chemical Research (RIKEN)

DC-01 DETECTION OF CYSTIC FIBROSIS RELATED DNA

**14:30 TARGETS USING AC FIELD FOCUSING OF
MAGNETIC LABELS AND SPIN-VALVE SENSORS**

Hugo A. Ferreira¹, Daniel L. Graham¹, Nuno Feliciano¹, Luka A. Clarke², Margarida D. Amaral², Paulo P. Freitas¹, ¹*INESC - Microsystems and Nanotechnologies, Portugal*, ²*Chemistry and Biochemistry Department, Faculty of Sciences, University of Lisbon, Portugal*

DC-02 FUNCTIONALIZATION OF MICRO- HALL EFFECT

**14:45 SENSORS FOR BIOMEDICAL APPLICATIONS
UTILIZING SUPERPARAMAGNETIC BEADS**

Adam Lapicki¹, Hideaki Sanbonsugi², Takuya Yamamura³, Nobuhiro Matsushita², Masanori Abe², Hiroki Narimatsu⁴, Hiroshi Handa⁴, Adarsh Sandhu¹, ¹*Quantum Nanoelectronics Res. Center, Tokyo Inst. of Technology, Japan*, ²*Dept. of Physical Electronics, Tokyo Inst. of Technology, Japan*, ³*Dept. of Electrical Engineering, Tokyo Inst. of Technology, Japan*, ⁴*Grad. School of Bioscience and Biotechnology, Tokyo Inst. of Technology, Japan*

DC-03 EXPEDITING MAGNETIC SEPARATION BY USING

**15:00 Ni WIRES FOR ROBOT-MANIPULATED BIO-SENSING
SYSTEM**

Ryuuichi Shimazu¹, Masaru Tada¹, Nobuhiro Matsushita¹, Hiroshi Handa², Masanori Abe¹, ¹*Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*, ²*Dept. of Biological Information, Tokyo Institute of Technology, Japan*

**DC-04 DEVELOPMENT OF MAGNETIC DROPLET-
15:15 HANDLING SYSTEM FOR MICROFLUIDIC
BIOCHEMICAL ANALYSIS**

H. Ito¹, R. Kato¹, K. Takayanagi², M. Shikida², K. Sato², H. Honda¹, ¹*Dept. of Biotechnology, Nagoya University, Japan,*
²*Dept. of Micro-Nano Systems Engineering, Nagoya University, Japan*

**DC-05 SURFACE MODIFICATION OF
15:30 SUPERPARAMAGNETIC IRON OXIDE
NANOPARTICLES FOR CLINICAL APPLICATIONS**

Kyoungja Woo, Jang Won Hong, *Nano-Materials Research Center, Korea Institute of Science and Technology, Republic of Korea*

**DC-06 MAGNETIC HOLLOW SILICA NANOTUBES FOR
15:45 BIO-APPLICATIONS**

Peng Gao¹, Daniela Caruntu¹, Lei Shao¹, Ming Hui Yu¹, Jian Feng Chen², Charles J. O'Connor¹, Weilie L. Zhou¹, ¹*Advanced Materials Research Institute, University of New Orleans, United States of America,* ²*Research Center of the Ministry of Education for High Gravity Engineering and Technology, Beijing University of Chemical Technology, China*

Apr. 6

Room 224

Session DD

Applications of Soft Magnetic Materials

H. Chiriac

National Institute of Research and Development for
Technical Physics, Romania

DD-01 APPLICATION FOR ELECTRIC RESISTANCE

14:30 ELEMENT OF GRANULAR FILMS

Hideya Yamadera, *Toyota Central Research & Development Laboratories, Inc., Japan*

DD-02 EVALUATION OF INDUCED ELECTRIC CURRENTS

14:45 IN STRIP-WOUND AMORPHOUS CORES

Oriano Bottauscio¹, Valeria Chiado' Piat², Mario Chiampi³, Marco Codegone², Alessandra Manzin¹, ¹*IEN Galileo Ferraris, Torino, Italy,* ²*Dept. Matematica, Politecnico di Torino, Italy,* ³*Dept. Ingegneria Elettrica, Politecnico di Torino, Italy*

DD-03 INVESTIGATION OF GMI IN CoSiB AND NiFe TRI-

15:00 LAYER THIN FILM STRUCTURES

Amruta V. Borge, Kevin R. Coffey, *Advanced Materials Processing and Analysis Center, University of Central Florida, United States of America*

**DD-04 APPLICATION OF FeCoB HIGH-H_k HETERO
15:15 AMORPHOUS THIN FILM TO RF INTEGRATED
INDUCTOR**

Masahiro Yamaguchi¹, Ki Hyeon Kim¹, Takashi Kuribara¹,
Tadahiro Fukushima¹, Makoto Munakata², Masaaki Yagi², ¹*Dept.
of Electrical and Communication Engineering, Tohoku
University, Japan, ²Energy Electronics Lab., Sojo University,
Japan*

**DD-05 MAGNETIC REFRIGERATOR WITH ROTATING
15:30 POROUS HEAT EXCHANGER**

Peter W. Egolf, Andrej Kitanovski, Osmann Sari, *University of
Applied Sciences of Western Switzerland, Switzerland*

**DD-06 INFLUENCE OF SOFT MAGNETIC MATERIALS ON
15:45 THE DESIGN AND PERFORMANCE OF TUBULAR
PERMANENT MAGNET MACHINES**

Jia Bin Wang, David Howe, *Dept. of Electronic & Electrical
Engineering, University of Sheffield, United Kingdom*

Apr. 6

Room 131/132

Session DE

New Phenomena & Applications

Y.K. Kim

Korea University

***DE-01 DISCOVERY OF A NEW MAGNETIC FLUID:**

14:30 BMIM[FeCl₄] IONIC LIQUID

Hiro-o Hamaguchi, *Department of Chemistry, School of
Science, The University of Tokyo, Japan*

DE-02 MAGNETICALLY DEFINED DOMAIN ISOLATION

**15:00 FOR STUDIES OF NUCLEATION AND GROWTH
COERCIVITIES**

Philipp Hergert¹, Brian Knight¹, James A. Bain¹, T. E.
Schlesinger¹, Hiroyuki Awano², ¹*Data Storage Systems Center,
Carnegie Mellon University, United States of America,
²Development and Technology Division, Hitachi-Maxell, Ltd.,
Japan*

DE-03 AN ENERGY-BASED MODEL FOR DYNAMIC

15:15 HYSTERESIS AND EXTRA-LOSSES

O. Maloberti¹, V. Mazauric¹, G. Meunier², A. Kedous-Lebouc²,
O. Geoffroy³, Y. Rebiere¹, ¹*Schneider Electric Corporate
Reserch, France*, ²*Laboratoire d'Electrotechnique de
Grenoble(CNRS), France*, ³*Laboratoire Louis Neel(CNRS),
France*

DE-04 COUNTING INTRINSIC LOCALIZED MODES IN AN

15:30 ANTIFERROMAGNET

Masayuki Sato, Albert J. Sievers, *Laboratory of Atomic and
Solid State Physics, Cornell University, United States of
America*

DE-05 STABILIZATION OF MAGNET CURRENT USING

15:45 JOSEPHSON VOLTAGE STANDARD

Kyu-Tae Kim, Mun-Seog Kim, Po Gyu Park, *Electricity and
Magnetism Group, Korea Research Institute of Standards and
Science, Republic of Korea*

Apr. 6

Room 133/134

Session DF

Micromagnetic Simulations

M.E. Schabes

Hitachi Global Storage Technologies

DF-01 MULTISCALE CALCULATIONS OF

**14:30 MAGNETIZATION REVERSAL IN SOFT/HARD
MAGNETIC BILAYER**

Felipe Garcia-Sanchez¹, Oksana Chubykalo-Fesenko¹, Oleg
Mryasov², Roy W. Chantrell³, ¹*Instituto de Ciencia de
Materiales de Madrid, Spain*, ²*Seagate Research, Pittsburgh,
United States of America*, ³*University of York, United Kingdom*

DF-02 PHASE SHIFT OF SPIN WAVES TRAVELLING

14:45 THROUGH A 180° BLOCH DOMAIN WALL

Christian Bayer¹, Helmut Schultheiss¹, Burkard Hillebrands¹,
Robert L. Stamps², ¹*Fachbereich Physik and
Forschungsschwerpunkt MINAS, Technische Universitaet
Kaiserslautern, Germany*, ²*School of Physics, University of
Western Australia, Australia*

DF-03 VORTEX-ANTIVORTEX PAIR DRIVEN

15:00 MAGNETIZATION DYNAMICS

Ki-Suk Lee, Byoung-Woo Kang, Sang-Koog Kim,
*Nanospintronics Laboratory, School of Materials Science and
Engineering, Seoul National University, Republic of Korea*

**DF-04 FINITE ELEMENT MICROMAGNETIC SIMULATION
15:15 OF SWITCH DYNAMICS OF PERPENDICULAR MEDIA
UNDER TILTED WRITE FIELD**

H. H. Long¹, J. T. Li¹, J. P. Wang², Z. J. Liu¹, ¹*Data Storage Institute, National University of Singapore, Singapore*, ²*Dept. of Electrical and Computer Engineering, University of Minnesota, United States of America*

**DF-05 INFLUENCE OF EDDY CURRENT ON
15:30 MAGNETIZATION PROCESSES IN SUB-MICRON
PERMALLOY STRUCTURES**

Gino Hrkac¹, Thomas Schrefl², Otmar Ertl¹, Markus Kirschner¹, Dieter Suess¹, Josef Fidler¹, ¹*Solid State Physics, Technical University of Vienna, Austria*, ²*Dept. of Engineering Materials, University of Sheffield, United Kingdom*

**DF-06 ANALYTICAL STUDY OF TRANSIENTS LEADING TO
15:45 SELF-OSCILLATIONS IN SPIN-TORQUE-DRIVEN
MAGNETIZATION DYNAMICS**

Claudio Serpico¹, Roberto Bonin², Massimiliano d'Aquino¹, Giorgio Bertotti³, Isaak Mayergoyz⁴, ¹*Dept. of Electrical Eng., University of Naples, Napoli, Italy*, ²*Politecnico di Torino, Torino, Italy*, ³*IEN galileo ferraris, Torino, Italy*, ⁴*DECE University of Maryland, College Park, MD, United States of America*

Apr. 6

Shirotori Hall

Session DZ

16:10

Plenary Session

Apr. 7

Reception Hall

Session EA

MRAMs

Y. Saito

Corporate R&D Center, Toshiba Corporation

**EA-01 ORTHOGONAL SHAPE/INTRINSIC ANISOTROPY
9:30 TOGGLE- MRAM**

Sheng Yuan Wang, Hideo Fujiwara, *MINT Center and Department of Physics and Astronomy, University of Alabama, United States of America*

EA-02 DEVELOPMENT OF MAGNETIC TUNNEL

9:45 JUNCTION FOR TOGGLE-MRAM

H.-J. Kim, Y. K. Ha, S. C. Oh, J. S. Bae, K. T. Nam, J. E. Lee, S. O. Park, H. S. Kim, U-In Chung, J. T. Moon, *Samsung Electronics Co. Ltd., Republic of Korea*

EA-03 PRECESSION-DOMINATED REVERSAL OF

10:00 SYNTHETIC ANTIFERROMAGNETS AND SYNTHETIC FERRIMAGNETS

Cedric Maufroid¹, Joo-Von Kim², Thibaut Devolder², Richard Fournel¹, Claude Chappert², ¹*STMicroelectronics, France*, ²*Institut d'Electronique Fondamentale, CNRS/Univ. Paris-Sud, France*

EA-04 EFFECTIVE BIT ADDRESSING TIMES FOR

10:15 PRECESSIONAL MAGNETIZATION REVERSAL IN A MAGNETIC MEMORY CELL

H. W. Schumacher¹, C. Chappert², R. C. Sousa³, P. P. Freitas³, ¹*Physikalisch-Technische Bundesanstalt, Germany*, ²*Institut d'Electronique Fondamentale, UMR 8622, CNRS, Universite Paris Sud, France*, ³*Instituto de Engenharia de Sistemas e Computadores, Portugal*

EA-05 EDGE DOMAIN DEPENDENT PINNING EFFECT BY

10:30 THE STRAY FIELD IN THE PATTERNED MAGNETIC TUNNEL JUNCTION

Naoharu Shimomura¹, Tatsuya Kishi¹, Masatoshi Yoshikawa¹, Eiji Kitagawa¹, Yoshiaki Asao¹, Hiromitsu Hada², Hiroaki Yoda¹, Shuichi Tahara², ¹*Corporate Research & Development Center, Toshiba Corp., Japan*, ²*System Devices Laboratories, NEC Corp., Japan*

EA-06 A NEW SWITCHING ARCHITECTURE FOR MRAM:

10:45 LOCAL FIELD SWITCHING

Injun Hwang¹, Wanjun Park¹, Y. J. Cho¹, K. W. Kim¹, Y. M. Jang¹, W. C. Jeong², J. H. Oh², J. E. Lee², Hong Seog Kim³, T .W. Kim¹, ¹*Samsung Advanced Institute of Technology, Republic of Korea*, ²*Semiconductor R&D Division, Samsung Electronics, Republic of Korea*, ³*Division of Information Technology, PaiChai University, Republic of Korea*

EA-07 FLUX-CLOSED MRAM WITH ULTRA-LOW

11:00 SWITCHING CURRENT

Yuan Kai Zheng¹, Kebin B. Li¹, Jin Jun Qiu¹, Li Hua An¹, Ping Luo¹, Z. B. Guo¹, Hu Chang Han¹, Yi Hong Wu², ¹*Data Storage Institute, Singapore*, ²*Department of Electrical and Computer Engineering, National University of Singapore, Singapore*

EA-08 FABRICATION OF A VERTICAL MRAM DEVICE

11:15 Matthew T. Moneck, Jian-Gang Zhu, *Dept. of Electrical and Computer Engineering, Carnegie Mellon University, United States of America*

**EA-09 HIGH QUALITY MAGNETIC TUNNEL JUNCTIONS
11:30 FOR MRAM USING REACTIVELY SPUTTERED Al_2O_3
BARRIERS**

Takaaki Tsunoda¹, Daniele Mauri², ¹ANELVA Corporation,
United States of America, ²Hitachi Global Storage
Technologies, Inc., United States of America

**EA-10 STUDY OF INTERMEDIATE MAGNETIZATION
11:45 STATES IN DEEP SUBMICROMETER MRAM CELLS**

Tai Min¹, Po-Kang Wang¹, Mao-Min Chen¹, Cheng Horng¹, Xi
Zeng Shi², Yimin Guo¹, Liubo Hong¹, Otto Voegeli¹, Qiang
Chen¹, Son Le¹, ¹Headway Technologies, Inc, United States of
America, ²Applied Spintronics, Inc., United States of America

**EA-11 THERMALLY ASSISTED SWITCHING OF
12:00 EXCHANGE COUPLED BI-LAYER WITH DIFFERENT
ORDERING TEMPERATURE**

Yousuke Isowaki, Yukio Nozaki, Kimihide Matsuyama, *Dept. of
Electronics, Kyushu University, Japan*

**EA-12 CURIE POINT WRITING ON MICROFABRICATED
12:15 TbFe FILMS BY APPLYING A PULSE CURRENT**

Takumu Masubuchi¹, Takeshi Kato¹, Shigeru Tsunashima¹,
Satoshi Iwata², ¹Dept. of Electronics, Nagoya University, Japan,
²CCRAST, Nagoya University, Japan

Apr. 7

Room 141/142

**Session EB
FePt Media and Materials**

S.H. Lim
Korea University

**EB-01 TOWARD SELF ASSEMBLY OF $L1_0$ -FePt NANO
9:30 PARTICLES BY SPUTTERING**

Nobuhiro Katayama, Tomoaki Maekawa, Shuki Yamamoto,
Xiao Xi Liu, Akimitsu Morisako, Mitsunori Matsimoto, *Dept.
of Information Engineering, Shinshu University, Japan*

**EB-02 FABRICATION AND CHARACTERIZATION OF $L1_0$
9:45 FePt NANOPARTICLES**

Rumyana V. Petrova¹, R.R.Vanfleet², D.Richardson², B.Yao¹,
K.R.Coffey¹, ¹University of Central Florida, United States of
America, ²Department of Physics, Brigham Young University,
United States of America

**EB-03 HALL EFFECT STUDY OF SOFT MAGNETIC
10:00 PROPERTIES OF THIN FILMS ($FeCoB$, $NiFe$) STACKED
ON FePt THIN FILMS WITH PERPENDICULAR
MAGNETIC ANISOTROPY**

Sarbanoo Das, Tomoya Hatori, Sukefumi Ito, Taku Kitagawa,
Shigeki Nakagawa, *Dept. of Physical Electronics, Tokyo
Institute of Technology, Japan*

- EB-04 EFFECT OF BORON ADDITION ON THE ORDERING
10:15 PROCESS IN THE FePt THIN FILM**
Chan-Gyu Lee¹, Byeong-Seon Lee¹, Y. Shimada², O. Kitakami²,
S. Okamoto², T. Miyazaki², ¹*School of Nano . Advanced
Materials Engineering, Changwon National University,
Republic of Korea,* ²*Institute of Multidisciplinary Research for
Advanced Materials, Tohoku University, Japan*
- EB-05 FePt PERPENDICULAR RECORDING MEDIA WITH
10:30 Ag LAYER INSERTED**
J.S. Chen¹, Y.Z. Zhou², B.C. Lim¹, J. Zhang¹, G. M. Chow²,
¹*Data Storage Institute, Singapore,* ²*Department of Materials
Science, National University of Singapore, Singapore*
- EB-06 GROWTH OF PERPENDICULAR FePt THIN FILMS
10:45 AT LOW TEMPERATURE**
Chih-Huang Lai, Yun-Chung Wu, Chao-Chien Chiang,
*Department of Materials Science and Engineering, National
Tsing Hua University, Taiwan*
- EB-07 Fe(100) FORMATION IN Fe/Pt BILAYERS TO ATTAIN
11:00 (001) ORIENTATION OF FePt ORDERED ALLOY THIN
FILMS IN AS-DEPOSITED STATE**
Taku Kitagawa, Taro Kamiki, Shigeki Nakagawa, *Dept. of
Physical Electronics, Tokyo Institute of Technology, Japan*
- EB-08 MAGNETIC PATTERNING OF FePt THIN FILMS
11:15 USING ION IMPLANTATION**
Tsutomu Aoyama¹, Isamu Sato¹, Shunji Ishio², ¹*TDK
Corporation, Japan,* ²*Akita University, Japan*
- EB-09 REDUCTION OF ORDERING TEMPERATURE IN
11:30 SUBSTITUTED FePtNi NANOPARTICLES FORMED BY
CHEMICAL SYNTHESIS**
Hongli Wang¹, Yunhe Huang¹, Yong Zhang¹, Karl K. Unruh¹,
George C. Hadjipanayis¹, Dieter Weller², T Simopoulos³,
¹*Department of Physics & Astronomy, University of Delaware,
United States of America,* ²*Seagate Technology, United States of
America,* ³*IMS, NCSR DEMOKRITOS, Greece*
- EB-10 RECORDING PERFORMANCE OF GRANULAR-TYPE
11:45 FePt-MgO PERPENDICULAR MEDIA**
T. Suzuki¹, Z. Zhang², J. Yin¹, A. Singh¹, ¹*ISML, Toyota
Technological Institute, Japan,* ²*HGST, Japan*
- EB-11 THERMAL STABILITY OF GRANULAR-TYPE FePt-
12:00 MgO PERPENDICULAR RECORDING MEDIA WITH
SOFT UNDERLAYERS**
Amarendra K. Singh, Jin Hua Yin, Takao Suzuki, *ISML, Toyota
Technological Institute, Japan*
- EB-12 OXIDATION INDUCED ALLOY COMPOSITION AND
12:15 MAGNETIC PROPERTY CHANGE IN FePt THIN FILM**
Jun Yuan, Peiwen Wu, Xuerang Hu, Jun Qian, *Department of
Materials Science and Engineering, Tsinghua University, China*

Session EC

Ferrites

M-J. Tung

Industrial Technology Research Institute, Taiwan

Y-K. Hong

University of Idaho

- EC-01** Fe_3O_4 FILMS FOR GHz CONDUCTED NOISE
9:30 SUPPRESSORS DEPOSITED BY HIGH SPEED (>100 nm/min) SPIN SPRAY FERRITE PLATING
 Masaru Tada, Jin Miyasaka, Nobuhiro Matsushita, Masanori Abe, *Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*
- EC-02** SYNTHESIS OF LOW TEMPERATURE SINTERED
9:45 FERROELECTRIC-FERROMAGNETIC COMPOSITE MATERIALS
 Hui Zhong, Huai Wu Zhang, Hai Tao Zhou, Li Jun Jia, *School of microelectronics and solid-state electronics, University of electronic science and technology of China, China*
- EC-03** SOL-GEL FABRICATED $\text{CoFe}_2\text{O}_4/\text{SiO}_2$
10:00 NANOCOMPOSITES: SYNTHESIS AND MAGNETIC PROPERTIES
 Jana Vejpravova¹, Vladimir Sechovsky¹, Jiri Plocek², Daniel Niznansky², Alzbeta Huntlova³, J-L Rehspringer⁴, ¹*Charles University in Prague, Faculty of Mathematics And Physics, Department of Electronic Structures, Czech Republic*, ²*Charles University in Prague, Faculty of Natural Sciences, Department of Inorganic Chemistry, Czech Republic*, ³*Institute of Inorganic Chemistry - ASCR, Czech Republic*, ⁴*IPCMS, Groupe des Materiaux Inorganiques, France*
- EC-04** MAGNETIC PROPERTIES OF $\text{Fe}/(\text{NiZnCu})\text{Fe}_2\text{O}_4$
10:15 COMPOSITE FILMS PREPARED BY AEROSOL DEPOSITION METHOD
 Satoshi Sugimoto¹, Kazuaki Haga¹, Masahiro Nakata¹, Toshio Kagotani¹, Koichiro Inomata¹, Jun Akedo², ¹*Dept. of Materials Science, Graduate School of Engineering, Tohoku University, Japan*, ²*Institute of Advanced Industrial Science and Technology (AIST), Japan*
- EC-05** COMPLEX PERMITTIVITY AND PERMEABILITY OF
10:30 HEXAFERRITE AND CARBONYL IRON POWDERS USING RECTANGULAR WAVEGUIDE TECHNIQUE FROM 8.0-40.0 GHz
 Adil Bahadoor, Yong Wang, Mohammed Afsar, *ECE Department, Tufts University, United States of America*

- EC-06 COMPLEX PERMITTIVITY AND PERMEABILITY**
10:45 MEASUREMENTS OF FERRIMAGNETS AT
MILLIMETER WAVES WITH HIGH POWER SOURCES
 Mohammed N. Afsar, Konstantin A. Korolev, Lakshmi Subramanian, Igor I. Tkachov, *Department of Electrical and Computer Engineering, Tufts University, United States of America*
- EC-07 ELECTRO-MAGNETIC PROPERTIES OF A NEW**
11:00 FERRITE-CERAMIC LOW TEMPERATURE CO-
CALCINED (LTCC) COMPOSITE MATERIALS
 H.W. Zhang¹, H. Zhong¹, B.Y. Liu¹, Y.L. Jing¹, Y.Y. Liu², *¹School of Microelectronic and Solid-state Electronic, University of Electronic Science and Technology of China, China, ²Department of physics & Astronomy, University of Delaware, United States of America*
- EC-08 ELECTROMAGNETIC PROPERTIES OF Mn-Zn**
11:15 FERRITE-EPOXY NANOCOMPOSITES
 Hae-June Je, Byung-Kook Kim, *Mater. Sci. Tech. Div., Korea Institute of Sci. & Tech., Republic of Korea*
- EC-09 MAGNETIC BEHAVIOUR OF NANOCOMPOSITES**
11:30 CONTAINING SELF-ASSEMBLED MAGNETITE
PARTICLES DISPERSED IN A PARAFFIN WAX MATRIX
 Chun-Rong Lin¹, Ti-Wen Sung¹, Ray-Kuang Chiang², *¹Dept. of Mechanical Engineering, Southern Taiwan University of Technology, Taiwan, ²Dept. of Chemical Engineering, Far East College, Taiwan*
- EC-10 FMR STUDY ON SPIN-SPRAYED Ni-Zn-Co FERRITE**
11:45 FILMS WITH HIGH PERMEABILITY USABLE FOR
GHz NOISE SUPPRESSORS
 Koichi Kondo¹, Tatsuya Chiba¹, Shigeyoshi Yoshida¹, Satoshi Okamoto², Yutaka Shimada², Nobuhiro Matsushita³, Masanori Abe³, *¹NEC Tokin Corporation, Japan, ²Tohoku University, Japan, ³Tokyo Institute of Technology, Japan*
- EC-11 MICROWAVE FERROMAGNETIC RESONANCE OF**
12:00 COBALT AND NICKEL SUBSTITUTED U-TYPE
HEXAFERRITES
 Mohammed N. Afsar¹, Darja Lisjak², Adil Bahadoor¹, Yong Wang¹, *¹Tufts University, ECE Department, United States of America, ²Jozef Stefan Institute, Advanced Materials Department, Jamova 39, Slovenia*
- EC-12 INFLUENCE OF HIGH VALENCE CATIONS ON SOFT**
12:15 SPINEL PROPERTIES
 A. D. P. Rao¹, S.B. Raju², *¹Department of Nuclear Physics, Andhra University, India, ²Department of Physics, Andhra University, India*

Session ED
Patterned Nanostructures I

B. Hillebrands

Fachbereich Physik, TU Kaiserslautern

**ED-01 THERMALLY INDUCED VORTEX NUCLEATION IN
9:30 PERMALLOY ELEMENTS**

Rok Dittrich¹, Thomas Schrefl², Dieter Suess², Markus Kirschner², Josef Fidler², ¹*University of Sheffield, United Kingdom*, ²*TU Vienna, Austria*

**ED-02 MICROSTRUCTURES AND MAGNETIC PROPERTIES
9:45 OF THE FIB IRRADIATED Co/Pd MULTILAYER FILMS**

Edi Suharyadi, Shinji Natsume, Takeshi Kato, Shigeru Tsunashima, Satoshi Iwata, *Department of Electronics, Graduate School of Engineering, Nagoya University, Japan*

**ED-03 DETERMINATION OF MAGNETIC VORTEX
10:00 CHIRALITY USING LATERAL SPIN VALVE
GEOMETRY**

Yoshichika Otani¹, Takashi Kimura², Jaroslav Hamrle², ¹*ISSP, Univ. of Tokyo, Japan*, ²*Riken FRS, Japan*

**ED-04 NANOPATTERNING MAGNETIC THIN FILMS BY Ga
10:15 ION IRRADIATION**

D. R. McGrouther¹, Y. Wang¹, J. N. Chapman¹, S. McVitie¹, J. Ferre², ¹*Department of Physics & Astronomy, University of Glasgow, United Kingdom*, ²*LPS, Universite Paris-Sud, France*

**ED-05 MAGNETIZATION REVERSAL OF CIRCULAR
10:30 NANOSCALE FERROMAGNETIC ELEMENTS WITH
MODIFIED SHAPES**

Hao Hu¹, Hua Wang², Molly R. McCartney³, David J. Smith³, ¹*Dept. of Physics and Astronomy, Arizona State University, United States of America*, ²*Dept. of Chemical and Materials Engineering, Arizona State University, United States of America*, ³*Center for Solid State Science, Arizona State University, United States of America*

**ED-06 FLUX CLOSURE CONFIGURATION IN
10:45 FERROMAGNETIC DIAMOND-SHAPED
NANOMAGNETS**

Sarjoosing Goolaup¹, Navab Singh², Adekunle Olusola Adeyeye¹, ¹*Information Storage Materials Laboratory, Department of Electrical and Computer Engineering, National University of Singapore, Singapore*, ²*Institute of Microelectronics, Singapore*

ED-07 GEOMETRY-DEPENDENT HEAD-TO-HEAD

11:00 DOMAIN WALL PHASE DIAGRAM AND DOMAIN WALL WIDTHS IN FERROMAGNETIC RING STRUCTURES

Markus Laufenberg¹, Mathias Klaeui¹, R. Dunin - Borowski², Carlos A. F. Vaz³, J. A. C. Bland³, Laura J. Heyderman⁴, Frithjof Nolting⁴, Ernst Bauer⁵, Salia Cherifi⁶, Ulrich Ruediger¹, ¹*FB Physik, Universitaet Konstanz, Germany*, ²*Materials Sciences Department, University of Cambridge, United Kingdom*, ³*Physics Department, University of Cambridge, United Kingdom*, ⁴*Paul Scherrer Institut, Villigen, Switzerland*, ⁵*Physics Department, Arizona State University, United States of America*, ⁶*ELETTRA, Trieste, Italy*

ED-08 SiO₂ SUBSTRATE HAVING SELF ORGANIZED NANO

11:15 SCALE PORES AND Co DOT ARRAY ON IT AND COERCIVITY ENHANCEMENT IN RE-TM FILM

Akiyoshi Itoh¹, Arata Tsukamoto¹, K. Morisaki¹, K. Nanba¹, H. Sato¹, Y. Itoh¹, Joe Ohtsuki², Chi Won Ahn³, ¹*Dept. of Electronics and Computer Science, Nihon University, Japan*, ²*Dept. of Materials and Applied Chemistry, Nihon University, Japan*, ³*Dept. of Nanoscience, Delft University of Technology, Netherlands*

ED-09 SHAPE INDUCED ANISOTROPY IN HYBRID ANTI-

11:30 DOT ARRAYS FROM GUIDED SELF-ASSEMBLY TEMPLATES

Alexander A. Zhukov¹, Michael E. Kiziroglou², Alexander V. Goncharov¹, Richard Boardman³, Mohamed A. Ghanem⁴, Valentyn Novosad⁵, Goran Karapetrov⁵, Xiaoli Li², Hans Fangohr³, Cornelis H. de Groot², Philip N. Bartlett⁴, Peter de Groot¹, ¹*School of Physics and Astronomy, University of Southampton, United Kingdom*, ²*School of Electronics and Computer Science, University of Southampton, United Kingdom*, ³*School of Engineering Sciences, University of Southampton, United Kingdom*, ⁴*School of Chemistry, University of Southampton, United Kingdom*, ⁵*Materials Science Division, Argonne National Laboratory, United States of America*

ED-10 NANOFABRICATION AS A PROBE OF ANISOTROPY

11:45 DISTRIBUTION IN Co/Pd MULTILAYERS

Guo Han Hu, Thomas Thomson, Bruce D. Terris, *Hitachi GST, San Jose Research Center, United States of America*

ED-11 FABRICATION OF MAGNETORESISTIVE SENSORS

12:00 USING SELF ASSEMBLED NANOSPHERE MASK

Lalit Kumar Verma, Vivian Ng, *Information Storage Materials Laboratory, Electrical and Computer Engineering Department, National University of Singapore, Singapore*

ED-12 ABSENCE OF WEAK ELECTRON LOCALIZATION IN

12:15 FERROMAGNETIC Co-NANOWIRES

Mario Brands, Axel Carl, Guenter Dumpich, *Universitaet Duisburg-Essen, Experimentalphysik, AG Farle, Germany*

Session EE

Rare Earth-Transition Metal Magnets and Processing

O. Gutfleisch

IFW Dresden

S.K. Chen

Feng Chia University

- *EE-01 IMPROVED PERPENDICULAR ANISOTROPY AND
9:30 PERMANENT MAGNET PROPERTIES IN Co-DOPED
Nd-Fe-B FILMS MULTILAYERED WITH Ta**
Minoru Uehara¹, Norio Gennai², Makoto Fujiwara², Takeo
Tanaka², ¹NEOMAX Co., Ltd., Japan, ²Osaka Sangyo University,
Japan
- EE-02 Sm(Co,Cu)₅/Fe EXCHANGE SPRING MULTILAYER
10:00 FILMS WITH HIGH ENERGY PRODUCT**
J. Zhang, Y.K. Takahashi, R. Gopalan, K. Hono, *National
Institute for Material Science, Japan*
- EE-03 PLD-MADE ANISOTROPIC Nd-Fe-B THICK FILM
10:15 MAGNETS**
Masaki Nakano¹, Shuichi Sato¹, Hirotsoshi¹, Fumitoshi
Yamashita², ¹Dept. of Electrical and Electronic Engineering,
Nagasaki University, Japan, ²Matsushita Electric Industrial Co.,
Japan
- EE-04 EFFECT OF DEPOSITION IN THE PRESENCE OF
10:30 MAGNETIC FIELD ON THE MAGNETIC PROPERTIES
OF CVD COBALT**
Nirmalendu Deo¹, Micheal F. Bain¹, John H. Montgomery¹,
Brian L. Kelly², Harold S. Gamble¹, ¹School of Electrical and
Electronic Engineering, The Queen's University of Belfast,
United Kingdom, ²Seagate Technology R&D Division,
Londonderry, United Kingdom
- EE-05 RE-Fe-B POWDER COATING FOR IMPROVEMENTS
10:45 IN CORROSION RESISTANCE, FLUX AGING LOSS
AND MECHANICAL STRENGTH OF BONDED
MAGNETS**
Peter C. Guschl, Peter Campbell, *Magnequench, Singapore*
- EE-06 DEVELOPMENT OF ANISOTROPIC BONDED
11:00 MAGNET WITH HEAT RESISTANCE**
Norihiko Hamada, Kenji Noguchi, Chisato Mishima, Yoshinobu
Honkura, *Electronic & Magnetic Product Div., Aichi Steel
Corporation, Japan*
- EE-07 BONDED THIN CYLINDER MAGNET USING Sm-Fe-
11:15 N ANISOTROPIC POWDER**
Kenji Ohmori, Shinichi Hayashi, Takashi Sato, *Ichikawa
Research Laboratory, Sumitomo Metal Mining Co.,Ltd., Japan*

- EE-08 ANGULAR DEPENDENCE OF THE
11:30 DEMAGNETIZATION STABILITY OF SINTERED Nd-Fe-B MAGNETS**
Matthias Katter, *Permanent Magnets, Vacuumschmelze GmbH & Co. KG, Germany*
- EE-09 HIGH-COERCIVE Nd-Fe-B SINTERED MAGNETS
11:45 DIFFUSED WITH Dy OR Tb METAL AND THEIR APPLICATIONS**
Ken-ichi Machida¹, Shunji Suzuki¹, Takashi Kawasaki¹, Teruaki Kitamori², Kazuya Nakamura², Yukiharu Shimizu², ¹*Center for Advanced Science and Innovation, Osaka University, Japan,* ²*Motor Production Group, Namiki Precision Jewels Co., Ltd., Japan*
- EE-10 COERCIVITY STUDY OF HYBRID MAGNET
12:00 CONSISTING OF R-LEAN AND R-RICH PHASES**
Hae-Woong Kwon¹, George C. Hadjipanayis², ¹*Sch. of Mat. Sci. and Eng., Pukyong National University, Republic of Korea,* ²*Dept. of Phys. and Astro., University of Delaware, United States of America*
- EE-11 MAGNETIC PROPERTIES OF EXTREMELY SMALL
12:15 Nd-Fe-B SINTERED MAGNET**
Hajime Nakamura, Koichi Hirota, Takehisa Minowa, Masakatsu Honshima, *Magnetic Materials Research Center, Shin-Etsu Chemical Co., Japan*

Apr. 7

Room 133/134

**Session EF
Magnetic Sensors I**

C.G. Kim

Chungnam National University

- EF-01 RESONANT CIRCUITS FOR HYPERTHERMIA
9:30 EXCITED BY RF MAGNETIC FIELD OF MRI**
Megumi Morita¹, Takeshi Inoue¹, Tsutomu Yamada¹, Yasushi Takemura¹, Toru Niwa², Tomio Inoue³, ¹*Yokohama National University, Japan,* ²*Kanagawa Prefectural Cancer Center, Japan,* ³*Yokohama City University, Japan*
- EF-02 HIGH SENSITIVITY INDIUM ANTIMONIDE THIN
9:45 FILM MICRO-HALL SENSOR ARRAYS FOR SIMULTANEOUS MULTIPLE DETECTION OF MAGNETIC BEADS FOR BIOMEDICAL APPLICATIONS**
Kiyoshi Togawa¹, Hideaki Sanbonsugi², Adam Lapicki³, Masanori Abe², Adarsh Sandhu³, ¹*Dept. of Electrical and Electronics, Tokyo Institute of Technology, Japan,* ²*Dept. of Physical Electronics, Tokyo Institute of Technology, Japan,* ³*Quantum Nanoelectronics Research Center, Tokyo Institute of Technology, Japan*

EF-03 CURRENT-INDUCED MAGNETIC FIELD

10:00 DETECTION AROUND FINE CURRENT PATHS BY MAGNETIC FORCE MICROSCOPY

Daisuke Saida¹, Tomohiko Edura², Ken Tsutsui², Yasuo Wada², Takuji Takahashi¹, ¹*Institute of Industrial Science, University of Tokyo, Japan*, ²*Nanotechnology Research Laboratory, Waseda University, Japan*

EF-04 IMPROVEMENT OF MAGNETOMECHANICAL

10:15 PROPERTIES OF COBALT FERRITE BY MAGNETIC ANNEAL

Chester C. H. Lo¹, Andy P. Ring¹, John E. Snyder², David C. Jiles³, ¹*Center for Nondestructive Evaluation, Iowa State University, United States of America*, ²*Materials and Engineering Physics Program, Ames Laboratory, U. S. Dept. of Energy, United States of America*, ³*Materials Science and Engineering Department, Iowa State University, United States of America*

EF-05 3D FIELD RECONSTRUCTION FOR

10:30 NONDESTRUCTIVE DEFECT DETECTION

Iliana Marinova¹, Valentin Mateev¹, Hisashi Endo², Seiji Hayano³, Yoshifuru Saito³, ¹*Department of Electrical Apparatus, Technical University of Sofia, Bulgaria*, ²*Institute of Fluid Science, Tohoku University, Japan*, ³*College of Engineering, Hosei University, Japan*

EF-06 MAGNETOMECHANICAL EFFECTS UNDER

10:45 APPLIED STRESSES AND UNLOADED CONDITIONS BY A PROBE WITH INDIRECT PICKUP COIL

Tong Liu, Hiroaki Kikuchi, Katsuyuki Ara, Yasuhiro Kamada, Masaya Sato, Seiki Takahashi, *Faculty of Engineering, Iwate University, Japan*

EF-07 NOVEL PLANAR ELECTROMAGNETIC SENSORS

11:00 CHARACTERIZATION AND COMPARATIVE EVALUATION

Chinthaka P. Gooneratne¹, Subhas C. Mukhopadhyay¹, Sotoshi Yamada², ¹*Massey University, New Zealand*, ²*Kanazawa University, Japan*

EF-08 MAGNETIC VECTOR FIELD SENSOR USING

11:15 MAGNETOELECTRIC THIN FILM COMPOSITES

Eckhard Quandt¹, Simon Stein¹, Manfred Wuttig², ¹*Center of advanced european studies and research (caesar), Bonn, Germany*, ²*Dept. of Material Science and Engineering, University of Maryland, College Park, MD, United States of America*

EF-09 A HIGH PERFORMANCE ORTHOGONAL

11:30 FLUXGATE MAGNETOMETER BASED ON THE FUNDAMENTAL MODE OF OPERATION

Ichiro Sasada, Takashi Usui, *Dept. Applied Science for Electronics and Materials, Kyushu University, Japan*

EF-10 MICROFLUXGATES PERFORMANCES

11:45 IMPROVEMENT IN MICROT TECHNOLOGY

Helene Joisten¹, Bernard Guilhamat², Marcel Audoin¹, Jean-Michel Leger², Robert Cuchet¹, Gerard Barrois¹, Pierre Gaud¹, Didier Bloch¹, ¹*DIHS/LCFM LETI/CEA-Grenoble, France*, ²*DCIS LETI/CEA-Grenoble, France*

EF-11 HIGH SENSITIVE AND HEAT-RESISTIVE

12:00 MAGNETIC DISPLACEMENT SENSOR USING MAGNETOSTRICTIVE/PIEZOELECTRIC LAMINATE COMPOSITE

Toshiyuki Ueno, Toshiro Higuchi, *Dept of Precision Machinery Eng., the Univ. of Tokyo, Japan*

EF-12 NEW ABSOLUTE ROTOR-POSITION SENSORS FOR

12:15 INVERTER-DRIVEN MOTORS

Li Zhi Sun, Jing Shang, Ji Bin Zou, *Harbin Institute of Technology, China*

Apr. 7

Event Hall

8:30-12:00

Session EP

Advanced Coding and Recording Channels

H. Mutoh

Fujitsu Ltd.

EP-01 REDUCED COMPLEXITY SIGNAL DETECTION AND TURBO DECODING FOR MULTITRACK MAGNETIC RECORDING CHANNELS

Naveen Mysore, Jan Bajcsy, *Dept. of Electrical and Computer Engineering, McGill University, Canada*

EP-02 CITI CODE BASED ON PR1 EQUALIZED LEVEL FOR PERPENDICULAR RECORDING

Yoshitake Kurihara¹, Mohammed Zaki Ahmed², Hisashi Osawa³, Yoshihiro Okamoto³, ¹*Niihama National College of Technology, Japan*, ²*Centre for Research in Information Storage Technology, University of Plymouth, United Kingdom*, ³*Faculty of Engineering, Ehime University, Japan*

EP-03 NOISE-PREDICTIVE TURBO EQUALIZATION FOR PARTIAL-RESPONSE CHANNELS

Sharon Aviran, Paul H. Siegel, Jack K. Wolf, *CMRR and ECE Dept., University of California, San Diego, United States of America*

EP-04 PERFORMANCE OF BCJR-DFE BASED DETECTORS OVER RECORDING CHANNELS USING PATTERN-DEPENDENT NOISE PREDICTION

Nitin Nangare¹, Xue Shi Yang², Erozan Kurtas², Krishna R. Narayanan¹, ¹*Dept. of Electrical Engineering, Texas A&M University, United States of America*, ²*Seagate Technology, United States of America*

- EP-05 DECODING FOR MAGNETIC RECORDING MEDIA WITH OVERLAPPING TRACKS**
 Naveen Singla, Joseph A. O'Sullivan, Clayton T. Miller, Ronald S. Indeck, *Department of Electrical and Systems Engineering, Washington University in St. Louis, United States of America*
- EP-06 PERFORMANCE EVALUATION OF LDPC CODES FOR PATTERNED MEDIA**
 Ioannis Ntoaks¹, Paul W. Nutter¹, Barry K. Middleton¹, C. J. Tjhai², Mohammed Zaki Ahmed², ¹*School of Computer Science, The University of Manchester, United Kingdom*, ²*School of Computing, Communications and Electronics, University of Plymouth, United Kingdom*
- EP-07 RATES AND EMPIRICAL PROPERTIES OF GOOD CODES FOR PARTIAL RESPONSE CHANNELS**
 Shao Hua Yang, Bruce Wilson, *Hitachi Global Storage Technologies San Jose Research Center, United States of America*
- EP-08 PARTITION-AND-SHIFT LDPC CODES FOR HIGH DENSITY MAGNETIC RECORDING**
 Jin Lu, Jose' Moura, *Data Storage Systems Center, Dept. of Electrical & Computer Engineering, Carnegie Mellon University, United States of America*
- EP-09 INTEGRATED INTERLEAVING ECC AND HIGH DIMENSIONAL PARITY CODES**
 Hiroshi Kamabe, Hironori Katou, *Dept. of Information Science, Gifu University, Japan*
- EP-10 UNIFORM LATIN SQUARE INTERLEAVING FOR CORRECTING TWO-DIMENSIONAL BURST ERRORS**
 Keitarou Kondou, Makoto Noda, *Core Technology Development Group, Micro Systems Network Company, Sony Corporation, Japan*
- EP-11 DETECTION OF MEDIA DEFECTS IN PERPENDICULAR RECORDING**
 Wei Jun Tan¹, J. R. Cruz², ¹*Storage Division, Agere Systems, United States of America*, ²*The University of Oklahoma, School of Electrical and Computer Engineering, United States of America*
- EP-12 ON LDPC CODES SATISFYING THE $(0, k)$ CONSTRAINT**
 Sharareh Babvey¹, Steven W. McLaughlin², ¹*Dept. of Compute Science, Georgia State University, United States of America*, ²*School of Electrical and Computer engineering, Georgia Institute of Technology, United States of America*

EP-13 A STUDY OF OBSERVATION OF NOISE RELATED TO DECISION ERROR IN PRML SYSTEM

Yoshihiro Okamoto¹, Yasuaki Nakamura¹, Hisashi Osawa¹, Hiroaki Muraoka², Yoshihisa Nakamura², ¹*Faculty of Engineering, Ehime University, Japan*, ²*Research Institute of Electrical Communication, Tohoku University, Japan*

EP-14 ON A METHOD FOR CHARACTERIZING READ SENSOR NONLINEARITY USING READ-BACK SIGNALS

Bruce A. Wilson, *Hitachi Global Storage Technologies, United States of America*

Apr. 7

Event Hall

8:30-12:00

Session EQ

Current Induced Switching II

S. Nakamura

Corporate R&D center, Toshiba Corporation

EQ-01 CURRENT INDUCED OSCILLATION OF A SINGLE MAGNETIC DOMAIN WALL

Eiji Saitoh¹, Mitsunaga Nozue¹, Hideki Miyajima¹, Takehiro Yamaoka², ¹*Dept. of Phys. Keio Univ., Hiyoshi, Yokohama,, Japan*, ²*SII NanoTechnology, Inc, Japan*

EQ-02 CRITICAL PARAMETERS FOR CURRENT-INDUCED DOMAIN WALL MOTION

Mathias Klauel¹, Pierre-Olivier Jubert², Rolf Allenspach², Carlos Vaz³, Giancarlo Faini⁴, Laurent Vila⁴, Ulrich Ruediger¹, ¹*FB Physik, Universitaet Konstanz, Germany*, ²*IBM Research, Zurich Research Laboratory, Switzerland*, ³*Cavendish Laboratory, University of Cambridge, United Kingdom*, ⁴*LPN-CNRS, France*

EQ-03 CURRENT DRIVEN DOMAIN WALL STUDY IN U-SHAPE PERMALLOY WIRE

Jai-Lin Tsai¹, K-W Lin¹, Y-D Yao², S-F Lee², Y Liou², ¹*Department of Materials Engineering, National Chung Hsing University, Taiwan*, ²*Institute of Physics, Academia Sinica, Taiwan*

EQ-04 DOMAIN WALL MAGNETORESISTANCE IN PERMALLOY HALF-RING WIRES

C. Yu¹, S. F. Lee¹, E. W. Huang¹, K. W. Cheng¹, D. C. Chen¹, Y. Liou¹, Y. D. Yao¹, C. R.Chang², ¹*Institute of Physics, Academia Sinica, Taiwan*, ²*Dept. of Physics, National Taiwan University, Taiwan*

EQ-05 CURRENT INDUCED MAGNETIZATION SWITCHING IN MAGNETIC TUNNEL JUNCTION WITH MgO (001) TUNNEL BARRIER

Hitoshi Kubota¹, Akio Fukushima¹, Yuichi Ootani², Shinji Yuasa¹, Koji Ando¹, Hiroki Maehara³, Koji Tsunekawa³, David D. Djayaprawira³, Naoki Watanabe³, Yoshishige Suzuki⁴, ¹National Institute of Advanced Industrial Science and Technology (AIST), Japan, ²Toho University, Japan, ³Anelva Corporation, Japan, ⁴Graduate School of Engineering Science, Osaka University, Japan

EQ-06 REDUCTION OF THE SWITCHING SPEED IN CURRENT-INDUCED MAGNETIZATION REVERSAL DUE TO DOMAIN STATES ON APPLYING NANO-SECOND CURRENT PULSES

Yoshishige Suzuki¹, Ashwin Tulapurkar², Kojiro Yagami³, Akio Fukushima², Thibaut Devolder⁴, P Crozat⁴, Claude Chappert⁴, Shinji Yuasa², ¹Graduate School of Engineering Science, Osaka University, Japan, ²National Institute of Advanced Industrial Science and Technology (AIST), Japan, ³SSNC, Semiconductor Technology Development Group, SONY Corp., Japan, ⁴Institut d'Electronique Fondamentale, CNRS UMR 8622, Batiment 220, Universite Paris Sud, France

EQ-07 ANALYTICAL INVESTIGATION OF SPIN TRANSFER DYNAMICS USING A PERPENDICULAR-TO-PLANE POLARIZER

Kyung-Jin Lee, Olivier Redon, Bernard Dieny, *SPINTEC, URA CEA-CNRS, France*

EQ-08 TUNNELING CURRENT-INDUCED BUTTERFLY-SHAPED DOMAINS AND MAGNETIZATION SWITCHING IN DOUBLE-BARRIER MAGNETIC TUNNEL JUNCTIONS

Sufen¹, Jing Zhao¹, Zhong Ming Zeng¹, Xiu Feng Han¹, Yasuo Ando², Terunobu², ¹State Key Laboratory of Magnetism, Institute of Physics, Chinese Academy of Sciences, China, ²Dept. of Appl. Phys., Graduate School of Engineering, Tohoku University, Japan, Japan

EQ-09 MICROMAGNETIC SIMULATION ON DYNAMICS OF SPIN TRANSFER TORQUE MAGNETIZATION REVERSAL

Kenchi Ito, *Hitachi Cambridge Laboratory, Hitachi Europe, Ltd., United Kingdom*

Nanocrystalline and Other Materials III**Y. Kitamoto**

Tokyo Institute of Technology

ER-01 FABRICATION AND STUDY OF Ni₇₅Fe₂₅-SiO₂ GRANULAR FILMS FOR HIGH FREQUENCY APPLICATION

Shi Hui Ge¹, Xiao Lin Yang¹, Kwang Youn Kim², Li Xi¹, Xiao Ming Kou¹, Dongsheng Yao¹, Binsheng Li¹, Xinwei Wang¹, ¹Key Laboratory for Magnetism and Magnetic Materials of Ministry of Education, Lanzhou University, China, ²Advanced Metals Research Center, Korea Institute of Science and Technology, Republic of Korea

ER-02 THE MAGNETOCALORIC EFFECT IN AMORPHOUS Fe_{80-x}Mn_xZr₁₀ (x=4,6,8,10) ALLOYS

Seong-Gi Min¹, Kyeong-Sup Kim¹, Seong-Cho Yu², Veeturi Srinivas², ¹Dept. of Physics, Chungbuk Nat'l University, Republic of Korea, ²Dept. of Physics, Indian Institute of Technology, India

ER-03 RESISTIVITY AND CORE SIZE DEPENDENCIES OF EDDY CURRENT LOSS FOR Fe-Si COMPRESSED CORES

Takanobu Saito, Satoshi Takemoto, Takahiko Iriyama, R&D Lab, Daido Steel Co.,Ltd, Japan

ER-04 ANNEALING CONDITIONS AND HIGH MAGNETIC INDUCTION IN THIN-GAUGED 3% Si-Fe ALLOY STRIPS

Sang Beom Kim¹, Kyung Min Park¹, Seong Soo Cho¹, Dong Il Lee², Nam Hoe Heo¹, ¹Advanced Technology Center, Korea Electric Power Research Institute, Republic of Korea, ²Power Transmission Technology Group, Korea Electric Power Research Institute, Republic of Korea

ER-05 FeHfN AND FeHfNO SOFT MAGNETIC FILMS FOR RF APPLICATIONS

Sandrine Couderc¹, Bernard Viala², Pascal Ancey¹, Guillaume Bouche¹, ¹STMicroelectronics, France, ²CEA-DRT-Leti, Grenoble, France

ER-06 MAGNETIC PROPERTIES OF Fe₃O₄ NANOSTRUCTURES

Seung Pil Ko, Joon-Young Soh, Young Keun Kim, Division of Materials Science and Engineering, Korea University, Republic of Korea

ER-07 2-D MAGNETIC ROTATIONAL LOSS OF ELECTRICAL STEEL AT HIGH MAGNETIC FLUX DENSITY

Keishiro Mori, Shunji Yanase, Yasuo Okazaki, Shuichiro Hashi,
Dept. of Electrical & Electronics, Gifu University, Japan

ER-08 TRANSPORT AND MAGNETIC PROPERTIES OF ENCAPSULATED Ni-NiO/ZrO₂ NANOSTRUCTURES

Bibhuti B. Nayak¹, Satish Vitta¹, A. K. Nigam², D. Bahadur¹,
¹*Department of Metallurgical Engineering and Materials Science, Indian Institute of Technology Bombay, India,*
²*Department of Condensed Matter Physics & Materials Science, Tata Institute of Fundamental Research Mumbai, India,*

ER-09 MAGNETIC PROPERTIES OF COBALT NANO DOTS FABRICATED BY A NEW LASER IRRADIATION METHOD: ENHANCED ANISOTROPY AND SUPERPARAMAGNETISM

Jung Yup Yang, Kap Soo Yoon, Young Ho Do, Jong Hyun Lee, Chae Ok Kim, Jin Pyo Hong, *Dept. of Physics, Hanyang University, Republic of Korea*

ER-10 AN ITERATIVE METHOD TO OBTAIN NON-UNIFORM FIELD DISTRIBUTION IN MAGNETIC SUBSTRATES

Ali Reza V. Farahani, Adalbert Konrad, *Dept. of E.C.E., University of Toronto, Canada*

Apr. 7

Event Hall

8:30-12:00

Session ES

Clusters and Particles III

J.P. Wang

University of Minnesota

ES-01 SYNTHESIS AND MAGNETIC CHARACTERIZATION OF ZnFe₂O₄ NANOSTRUCTURES IN AAO TEMPLATE

Jin-Seung Jung¹, Y.-K. Jung¹, E.-M. Kim¹, S.-H. Min², J.-H. Jun³, Leszek Malkinski⁴, Yuri Barnakov⁴, L. Spinu⁴,
¹*Department of Chemistry, Kangnung National University, Republic of Korea,* ²*Department of Metal and Materials Engineering, Kangnung National University, Republic of Korea,* ³*Department of Applied Chemistry, Konkuk University, Republic of Korea,* ⁴*Advanced Materials Research Institute, University of New Orleans, United States of America*

ES-02 SYNTHESIS AND CHARACTERIZATION OF CORE-SHELL Ag@Fe₃O₄ NANOPARTICLES

Chih-Huang Lai, Tsung-Feng Wu, *Dept of Materials Science and Engineering, National Tsing Hua University, Taiwan*

ES-03 INTERGRANULAR TUNNELING

MAGNETORESISTANCE OF MECHANICALLY ALLOYED (Cr-M)O₂ POWDER COMPACTS

Masakiyo Tsunoda¹, Tetsuya Sato¹, Qi Wu Zhang², Balachandran Jeyadevan³, Migaku Takahashi⁴, ¹*Dept. of Electronic Engineering, Tohoku Univeristy, Japan*, ²*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*, ³*Graduate School of Environmental Studies, Tohoku University, Japan*, ⁴*New Industry Creation Hatchery Center, Tohoku University, Japan*

ES-04 SUPERPARAMAGNETIC BEHAVIOUR OF

ANTIFERROMAGNETIC CuO NANOPARTICLES

Narsinga Rao Gade¹, Y. D. Yao¹, J. W. Chen², ¹*Institute of Physics, Academia Sinica, Taiwan*, ²*Department of Physics, National Taiwan University, Taiwan*

ES-05 FERROMAGNETIC, TRANSPARENT AND

CONDUCTING ITO-Fe-CLUSTER COMPOSITE FILMS

Dong Liang Peng, Kenji Sumiyama, Noriyuki Nozawa, Takehiko Hihara, *Department of Materials Science and Engineering, Nagoya Institute of Technology, Japan*

ES-06 PERCOLATION THRESHOLD AND TUNNELING

MAGNETORESISTANCE IN Ag/Ni NANOCOMPACTS

S. Y. Wu, M. T. Liao, P. J. Huang, F. C. Tsao, M. K. Chung, C. C. Yang, W. -H. Li, *Dep. of Physics, National Central University, Taiwan*

ES-07 FABRICATION OF Fe-Ce-O GRANULAR FILMS BY METAL-OXIDE CO-ELECTRODEPOSITION

Naoyuki Fujita¹, Masanobu Izaki², Mitsuteru Inoue³, ¹*Dept. of Electrical Engineering, Nara National College of Technology, Japan*, ²*Osaka Municipal Technical Research Institute, Japan*, ³*Dept. of Erectrical and Electronic Engineering, Toyohashi University of Technology, Japan*

ES-08 MAGNETISM OF Fe@C₂₀, Fe@C₂₀H₂₀, AND Fe₂@C₃₀

Chulsu Jo, Jae Il Lee, *Dept. of Physics, Inha University, Republic of Korea*

ES-09 MAGNETIC PROPERTIES OF CoSi CLUSTERS

Chulsu Jo¹, Dong Chul Kim², Jae Il Lee¹, ¹*Dept. of Physics, Inha University, Republic of Korea*, ²*School of Electrical Engineering, Halla University, Republic of Korea*

Inductors and Transformers

S. Okanuma

Fukushima University

M. Duffy

National University of Ireland

ET-01 OPTIMIZATION ALGORITHM FOR TRANSFORMER ADMITTANCE CURVES

Edvin Shehu¹, Adalbert Konrad¹, Luis Marti², ¹*Dept. of E.C.E., University of Toronto, Canada,* ²*Hydro One Networks Inc., Canada*

ET-02 AN IMPROVED METHOD FOR VIRTUAL AIR GAP LENGTH COMPUTATION

Adalbert Konrad¹, Jean F. Brudny², ¹*Dept. of E.C.E., University of Toronto, Canada,* ²*Elec. Eng. Dept., University of Artois, France*

ET-03 EVALUATION OF HEAT CONDUCTIVITY OF THERMOSENSITIVE FERRITE AS TEMPERATURE DEPENDENCE DEVICE

Yasuyuki Kakubari¹, Fumihiko Sato¹, Hidetoshi Matsuki¹, Tadakuni Sato², ¹*Graduate School of Engineering, Tohoku University, Japan,* ²*NEC Tokin Corporation, Japan*

ET-04 CURRENT CONTROLLABILITY OF THE LOW-VOLTAGE 10 kA INVERTER POWERS SOURCE

Yoshiaki Takasaki¹, Toshikatsu Sonoda², ¹*College of Computer Engineering, Fukuoka Institute of Technology, Japan,* ²*School of Humanity-Oriented Science and Engineering, Kinki University, Japan*

ET-05 IMPROVEMENT OF ZONE CONTROL INDUCTION HEATING EQUIPMENT FOR HIGH-SPEED PROCESSING OF SEMICONDUCTOR

Daisuke Miyagi¹, Aisha Saitoh¹, Norio Takahashi¹, Naoki Uchida², Kazuhiro Ozaki², ¹*Dept. of Electrical and Electronic Eng., Okayama University, Japan,* ²*Advanced machinery and Systems Dept. Mitsui Engineering & Shipbuilding Co., Ltd., Japan*

ET-06 THREE-DIMENTIONAL RELUCTANCE NETWORK ANALYSIS CONSIDERING AN IRON LOSS CHARACTERISTIC FOR AN EIE-CORE VARIABLE INDUCTOR

Kenji Nakamura¹, Shuichi Hayakawa¹, Sigeaki Akatsuka², Takashi Ohinata², Kazuo Minazawa², Osamu Ichinokura¹, ¹*Graduate School of Engineering, Tohoku University, Japan,* ²*Tohoku Electric Power Co., Inc., Japan*

ET-07 WINDING LOSS MECHANISM ANALYSIS AND THE DESIGN FOR A NEW STRUCTURE HIGH-FREQUENCY GAPPED INDUCTOR

Xing Kui Mao¹, Wei Chen², ¹*College of Electrical Engineering & Automation, Fuzhou University, China*, ²*Delta Power Electronics Center, Shanghai, China*

ET-08 EVALUATION OF EXPERIMENTAL METHODS FOR DETERMINING MAGNETICALLY NONLINEAR CHARACTERISTICS OF ELECTROMAGNETIC DEVICES

Gorazd Stumberger, Mostjan Polajzer, Bojan Stumberger, Matej Toman, Drago Dolinar, *Faculty of Electrical Engineering and Computer Science, University of Maribor, Slovenia*

ET-09 DESIGNING OF SUITABLE CONSTRUCTION OF HIGH-FREQUENCY INDUCTION HEATING COIL BY USING FINITE ELEMENT METHOD

Alexander K. Boadi, Hiroyasu Shimoji, Takashi Todaka, Masato Enokizono, *Department of electrical and electronic engineering, Oita university, Japan*

ET-10 INFLUENCE OF HYSTERETIC BEHAVIOUR IN FERRORESONANT LCR CIRCUITS

Oriano Bottauscio¹, Mario Chiampi², ¹*IEN Galileo Ferraris, Torino, Italy*, ²*Dept. Ingegneria Elettrica, Politecnico di Torino, Italy*

ET-11 COMBINED SYSTEM OF AC AND DC ELECTROMAGNETIC FIELD FOR STABILIZED FLOW IN CONTINUOUS CASTING

Ryu Hirayama, Keisuke Fujisaki, *Environment & Process Technology Center, Nippon Steel Corporation, Japan*

ET-12 INTEGRATED DESIGN FOR A HIGH SPEED PERMANENT MAGNET AXIAL FLUX GENERATOR

Patrick C.K. Luk¹, Tareq S. El-Hasan², ¹*Dept. of Aerospace, Power and Sensors, United Kingdom*, ²*KADDB, Jordan*

Apr. 7

Event Hall

8:30-12:00

Session EU

Integrated Passives and Devices II

M. Yamaguchi

Tohoku University

Y. Zhuang

HiTeC-Dimes, Delft University of Technology

EU-01 DESIGN OF INDUCTOR OPERATING IN GHz RANGES

Minsoo Choi, Joohyun Hong, Jong-Ryoul Kim, *Dept. of Material Engineering Science, Hanyang University, Republic of Korea*

- EU-02 INVESTIGATION OF ANOMALOUS LOSSES IN FERROMAGNETIC SPIRAL INDUCTORS USING THICK COPPER TECHNOLOGY**
 Bernard Viala¹, Anne Sophie Royet¹, Sandrine Couderc², ¹CEA-DRT-LETI Grenoble France, France, ²STMicroelectronics Crolles France, France
- EU-03 RF INTEGRATED INDUCTORS WITH VARIOUS SLIT PATTERNS USING CoFeBN SOFT MAGNETIC FILM**
 Masahiro Yamaguchi¹, Ki Hyeon Kim¹, Takashi Kuribara¹, Tadahiro Fukushima¹, Inyoung Kim², Jongryoul Kim², ¹Dept. of Electrical and Communication Engineering, Tohoku University, Japan, ²Metallurgy and Materials Engineering Department, Hanyang University, Republic of Korea
- EU-04 ON A TRANSMISSION LINE WITH PERIODICALLY LOADED GYRATOR**
 Kensuke Okubo¹, Makoto Tsutsumi², ¹Dept. of Communication Engineering, Okayama Prefectural University, Japan, ²Faculty of Engineering, Fukui University of Technology, Japan
- EU-05 AN INTEGRATED LTCC INDUCTOR**
 Hee-Jun Kim¹, Chan-Young Kim¹, Jong-Ryoul Kim², ¹School of Electrical and Computer Eng., Republic of Korea, ²Department of Metallurgical and Materials Eng., Republic of Korea
- EU-06 A THIN FILM SPIRAL MICROSTRIP TRANSMISSION-LINE USING CoZrNb SOFT MAGNETIC THIN FILM FOR A QUARTER WAVELENGTH TRANSFORMER**
 Hirotaka Suzuki¹, Namie Sugiyama¹, Toshiro Sato¹, Kiyohito Yamasawa¹, Yoshimasa Miura¹, Yuko Miyake², Masanori Akie², Yuji Uehara², ¹Faculty of Engineering, Shinshu University, Japan, ²Fujitsu Ltd., Japan
- EU-07 A COPLANAR-COUPLED-LINE COMMON-MODE FILTER USING CoZrNb SOFT MAGNETIC THIN FILM FOR GHz FREQUENCY BAND**
 Yuuki Sudo¹, Katsuhiko Watanabe¹, Toshiro Sato¹, Kiyohito Yamasawa¹, Yoshimasa Miura¹, Yuko Miyake², Masanori Akie², Yuji Uehara², ¹Faculty of Engineering, Shinshu University, Japan, ²Fujitsu Ltd., Japan
- EU-08 CONTROLLING ELECTROMAGNETIC WAVE ABSORPTION CHARACTERISTICS BY CHANGING MAGNETIC POWDER MIXING RATIOS FOR POWDER-TYPE MAGNETIC WOOD**
 Hideo Oka¹, Minekazu Terui¹, Hiroshi Osada¹, Fukumori Izumida², Yasuji Namizaki², ¹Dept. of Electrical & Electronic Engineering, Iwate University, Japan, ²Iwate Industrial Research Institute, Japan

EU-09 CONDUCTION NOISE ATTENUATION BY IRON PARTICLES-RUBBER COMPOSITES ATTACHED ON MICROSTRIP LINES

Sun-Tae Kim¹, Han-Sin Cho², Sung-Soo Kim¹, ¹*Department of Materials Engineering, Chungbuk National University, Republic of Korea, ²Ja Wha Electronics Cooperation, Republic of Korea*

EU-10 GHz RANGE ABSORPTION PROPERTIES OF $\text{Fe}/\text{Y}_2\text{O}_3$, $\text{FeCo}/\text{Y}_2\text{O}_3$ AND $\text{Fe}/\text{Fe}_3\text{B}/\text{Y}_2\text{O}_3$ NANOCOMPOSITES

Ken-ichi Machida¹, Jiu Rong Liu¹, Masahiro Itoh¹, ¹*Center for Advanced Science and Innovation, Osaka University, Japan*

EU-11 OPERATING MECHANISM OF RF ELECTROMAGNETIC NOISE SUPPRESSION SHEETS

Kaori Maruta¹, Masahiro Yamaguchi¹, Hiroshi Ono², ¹*Tohoku University, Japan, ²NEC Tokin Co., Japan*

EU-12 NOISE SUPPRESSOR BY USING NANOGRANULAR Co-Fe-Al-O MULTILAYER FILM WITH DIFFERENT THICKNESS

Jae Cheon Sohn¹, Dong Jin Byun¹, Sang Ho Lim¹, Suk Hee Han², Masahiro Yamaguchi³, ¹*Department of Materials Science and Engineering, Korea University, Seoul, Republic of Korea, ²Nano Device Research Center, Korea Institute of Science and Technology, Republic of Korea, ³Electrical and Communication Engineering, Tohoku University, Sendai, Japan*

EU-13 A FABRICATION OF DC-DC CONVERTER USING LTCC NiZnCu FERRITE THICK FILMS

Ki Woong Moon¹, Seung Hee Hong¹, Hee Jun Kim², Jongryoul Kim¹, ¹*Dept. of Materials Engineering Science, Republic of Korea, ²School of Electrical and Computer Engineering, Republic of Korea*

EU-14 A WIDEBAND COMMON-MODE NOISE FILTER WITH A Mn-Zn FERRITE AND Cu/POLYIMIDE TAPE WOUND COIL FOR SWITCHING POWER SUPPLIES USED IN ELECTRONIC MEASURING INSTRUMENTS

Koichi Yanagisawa¹, Fuchon Zhang¹, Toshiro Sato², Kiyohito Yamasawa², Yoshimasa Miura², ¹*R&D Dept., HIOKI Electric Corp., Japan, ²Faculty of Engineering, Shinshu University, Japan*

EU-15 4-PORT PACKAGE ANALYSIS AND MEASUREMENTS INCLUDING INDUCTIVE AND CAPACITIVE COUPLING BETWEEN LINES AT GHz FREQUENCIES

Adalbert Konrad¹, Shinji Tanabe², Junichi Abe², ¹*University of Toronto, Canada, ²Mitsubishi Electric Corporation, Japan*

EU-16 TUNABLE WIDEBAND MICROWAVE BAND-STOP AND BAND-PASS FILTERS USING YIG/GGG-GaAs LAYER STRUCTURES

Chen S. Tsai¹, G. Qiu¹, H. Gao¹, L.W. Yang², G.P. Li¹, S.A. Nikitov³, ¹*Dept. of Elec. Eng.& Comp Sci., University of California, Irvine, United States of America*, ²*Trans RF Corp., United States of America*, ³*Radioengineering and Electronics Inst., Russian Academy of Sciences, Russian Federation*

EU-17 AN EFFICIENT NONLINEAR FREQUENCY MULTIPLICATION MECHANISM IN FERRITE LOADED WAVEGUIDE STRUCTURES

Martha Pardavi-Horvath¹, Galina S. Makeeva², Oleg A. Golovanov³, ¹*Department of Electrical and Computer Engineering, The George Washington University, United States of America*, ²*Penza State University, Russian Federation*, ³*Penza Military Institute of Artillery, Russian Federation*

Apr. 7

Event Hall

8:30-12:00

Session EV

Biomagnetism and Applications I

K. Iramina

University of Tokyo

EV-01 THE REJECTION OF MAGNETIC NOISE FROM THE WIRE USING INDEPENDENT COMPONENT ANALYSIS FOR MAGNETOCARDIOGRAM

Koichiro Kobayashi¹, Yoshinori Uchikawa², Takayuki Simizu³, Kenji Nakai⁴, Masato Yoshizawa³, ¹*Dept. of Welfare Engineering, Iwate University, Japan*, ²*Dept. of Electronics and Computer Engineering, Tokyo Denki University, Japan*, ³*Laboratory Medicine, Iwate Medical University, Japan*, ⁴*Frontier Materials and Functional Engineering, Iwate University, Japan*

EV-02 COMPARISON OF CURRENT DISTRIBUTION BASED ON TISSUE IN-HOMOGENEITY IN MAGNETIC STIMULATION FOR TREATMENT OF URINARY INCONTINENCE

Masato Odagaki, Kazutaka Suga, Tadashi Sasaki, Hidehiro Hosaka, *Graduate school of Science and Engineering, Tokyo Denki University, Japan*

EV-03 QUANTITATIVE MEASUREMENT OF CREATINE CONTENT IN SKELETAL MUSCLE USING 1H-MRS

Takako Saotome¹, Masaki Sekino¹, Fumio Eto², Shoogo Ueno¹, ¹*Department of Biomedical Engineering, Graduate School of Medicine, University of Tokyo, Japan*, ²*Department of Rehabilitation Medicine, Graduate School of Medicine, University of Tokyo, Japan*

EV-04 STRESS FIBER CONTRIBUTES TO RAT SCHWANN CELL ORIENTATION UNDER MAGNETIC FIELD

Yawara Eguchi, Shoogo Ueno, *Dept. of Biomedical Engineering, Univ. of Tokyo, Japan*

EV-05 MAPPING OF STRAIN IN BIOLOGICAL TISSUES USING MAGNETIC RESONANCE

Masaki Sekino, Akihisa Kaneko, Shoogo Ueno, *Department of Biomedical Engineering, Graduate School of Medicine, University of Tokyo, Japan*

EV-06 SHORT-TERM EPISODIC MEMORY ENCODING IN THE HUMAN BRAIN: A MAGNETOENCEPHALOGRAPHY AND ELECTROENCEPHALOGRAPHY STUDY.

Klevest Gjini, Takashi Maeno, Keiji Iramina, Shoogo Ueno, *Dept. of Biomedical Engineering, University of Tokyo, Japan*

EV-07 THE CURRENT SOURCE ESTIMATION OF THE EVENT RELATED FIELD DERIVED FROM VISUAL ATTENTION TO THE HEMI-SPACE.

Takashi Maeno¹, Klevest Gjini¹, Keiji Iramina¹, Fumio Eto², Shoogo Ueno¹, ¹*Dept. of Biomedical Engineering, Graduate School of Medicine, University of Tokyo, Japan,* ²*Dept. of Rehabilitation, University of Tokyo Hospital, Japan*

EV-08 MEASUREMENT OF AUDITORY EVOKED MAGNETIC FIELD OF MICE WITH HIGH SPATIAL RESOLUTION

Keiji Iramina, Shoogo Ueno, *Dept. of Biomedical Engineering, Graduate School of Medicine, University of Tokyo, Japan*

EV-09 BIODISTRIBUTION OF CHITOSAN BASED NANO MAGNETITE SUSPENSION FOR TARGETED HYPERTHERMIA

Dong-Hyun Kim¹, Se Ho Lee¹, Kwang-Mahn Kim¹, Kyoung-Nam Kim¹, In-Bo Shim², Yong-Keun Lee¹, ¹*Brain Korea 21 Project for Medical Science, Yonsei University, Republic of Korea,* ²*Department of Electronic Physics, Kookmin University, Republic of Korea*

EV-10 THERMOTHERAPY WITH METALLIC STENT DEPEND ON EXTERNAL EXCITATION

Hodaka Shoji¹, Yoshihiro Ozu¹, Fumihiro Sato¹, Hidetoshi Matsuki¹, Yoshihiro Nihei², Yoshimochi Kurokawa², Tadakuni Sato³, ¹*Graduate School of Engng., Tohoku Univ., Japan,* ²*Graduate School of Medicine, Tohoku Univ., Japan,* ³*NEC Tokin Corporation, Japan*

**EV-11 THE EXAMINATION OF THE EXCITATION
CONDITION FOR THE HIGH TEMPERATURE
MAGNETIC HYPERTHERMIA**

Yukiko Sawaya¹, Nobutake Suzuki¹, Fumihiro Sato¹, Hidetoshi Matsuki¹, Tadakuni Sato², ¹*Graduate School of Tohoku University, Japan*, ²*NEC Tokin Corporation, Japan*

**EV-12 EXAMINATION OF CIRCUIT PARAMETER FOR
STABLE HIGH EFFICIENCY TESTS FOR THE
ARTIFICIAL HEARTS**

Shinsuke Arai¹, Hidekazu Miura¹, Fumihiro Satou¹, Hidetoshi Matsuki¹, Tadakuni Sato², ¹*Dept. of Electrical and Communication Engineering, Tohoku University, Japan*, ²*NEC Tokin Corporation, Japan*

**EV-13 BASIC EVALUATION OF SIGNAL TRANSMISSION
COIL IN TRANSCUTANEOUS MAGNETIC
TELEMETRY SYSTEM FOR ARTIFICIAL HEART**

Tetsuya Takura¹, Hirokazu Ishiai¹, Fumihiro Sato¹, Hidetoshi Matsuki¹, Tadakuni Sato², ¹*Dept. of Electrical and Communication Engineering, Tohoku University, Japan*, ²*NEC Tokin Corporation, Japan*

Apr. 7

Event Hall

8:30-12:00

Session EW

Biomagnetism and Applications II

K. Tsukada

Okayama University

**EW-01 EVALUATE DAMAGE IN DNA MOLECULES
RESULTING BY VERY-LOW-FREQUENCY MAGNETIC
FIELDS USING BACTERIAL GENE EXPRESSION
SYSTEM FOR MUTATION REPAIRING SYSTEM**

Akira Igarashi¹, Koichiro Kobayashi¹, Hidetoshi Matsuki², Ginro Endo³, Akira Haga³, ¹*Faculty of Engineering, Iwate University, Japan*, ²*Graduate School of Engineering, Tohoku University, Japan*, ³*Faculty of Engineering, Tohoku Gakuin University, Japan*

**EW-02 EFFECTS ON BACTERIAL CELLS BY EXPOSURE TO
VLF MAGNETIC FIELDS**

Makiko Kakikawa¹, Satoshi Tachi¹, Shoushin Hashimoto², Masayoshi Iwahara¹, Sotoshi Yamada², ¹*Graduate School of Natural Science and Technology, Kanazawa University, Japan*, ²*Institute of Nature and Environmental Technology, Kanazawa University, Japan*

EW-03 EFFECTS OF MAGNETIC STIMULATION ON TUMORS AND IMMUNE FUNCTIONS

Sachiko Yamaguchi, Mari Ogiue-Ikeda, Masaki Sekino, Shoogo Ueno, *Department of Biomedical Engineering, Graduate School of Medicine, University of Tokyo, Japan*

EW-04 FIREFLY LUCIFERIN-LUCIFERASE LUMINESCENCE BY MILLIGAUSS ULTRA-LOW FREQUENCY PULSED MAGNETIC FIELD APPLIED PURE WATER WITHOUT ATP

Masanori Fukushima¹, Takuji Kataoka², Norikazu Sugiyama², Kaneo Mohri³, *¹Translational Research Center, Kyoto University Hospital, Japan, ²System Division, Hamamatsu Photonics K.K., Japan, ³Graduate School of Electronics, Nagoya University, Japan*

EW-05 POWER DEPOSITION INSIDE A PHANTOM FOR TESTING OF MRI HEATING

Arslan Amjad, R. Kamondetdacha, Alexander Kildishev, Sung-Min Park, John Nyenhuis, *School of Electrical and Computer Engineering, Purdue University, United States of America*

EW-06 THE EFFECTS OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION ON THE INJURED NEURONS IN RATS

Hirofumi Funamizu¹, Mari Ogiue-Ikeda¹, Suguru Kawato², Shoogo Ueno¹, *¹Dep. of Bio. Eng., Tokyo Univ., Japan, ²Dep. of Bio. Phy., Tokyo Univ., Japan*

EW-07 MEASUREMENTS OF THE SPIN-SPIN RELAXATION TIME AND THE DEGREE OF ORIENTATION OF MAGNETICALLY ORIENTED COLLAGEN GELS

Michihiro Takeuchi¹, Masaki Sekino¹, Norio Iriguchi², Shoogo Ueno¹, *¹Department of Biomedical Engineering Graduate School of Medicine University of Tokyo, Japan, ²Center for Multimedia and Information Technologies University of Kumamoto, Japan*

EW-08 AUTOMATIC COMPENSATION OF EARTH MAGNETIC FIELD AND CALIBRATION SYSTEM OF MAGNETOMETERS BELOW 1 mT

Po Gyu Park¹, V. Ya. Shifrin², Young Gyun Kim¹, Mun-Seog Kim¹, Kyu-Tae Kim¹, *¹Electromagnetic Metrology, Korean Research Institute of Standards and Science (KRISS), Republic of Korea, ²Magnetic Measurements, Mendeleev Institute for Metrology (VNIIM), Russian Federation*

EW-09 DEVELOPMENT OF REALTIME AND HIGHLY ACCURATE WIRELESS MOTION CAPTURE SYSTEM UTILIZING SOFT FERRITE MAGNETIC CORE

Shuichiro Hashi¹, Yuuki Tokunaga¹, Shin Yabukami², Masaharu Toyoda¹, Kazushi Ishiyama², Yasuo Okazaki¹, Ken-ichi Arai², *¹Dept. of Materials Science & Technology, Gifu University, Japan, ²Research Institute of Electrical Communication, Tohoku University, Japan*

EW-10 A NOVEL PORTABLE MATERIAL CHARACTERIZATION SYSTEM USING AC MAGNETIZATION PROBE

Hisashi Endo¹, Mitsuharu Shiwa², Toshihiko Abe¹, Tetsuya Uchimoto¹, Toshiyuki Takagi¹, ¹*Institute of Fluid Science, Tohoku University, Japan*, ²*JAPEIC, Japan*

EW-11 ANALYTICAL APPROACH FOR FAST COMPUTATION OF MAGNETIC FLUX LEAKAGE DUE TO SURFACE DEFECTS

Yevgen Melikhov, Seong-Jae Lee, David C. Jiles, Rick Lopez¹, Lisa Brasche, *Center for Aviation Systems Reliability, Iowa State University, United States of America*

EW-12 MAGNETIC CHARACTERISTICS OF ARCHITECTURAL MATERIALS FOR NON-MAGNETIC BUILDINGS

Kazuo Kato¹, Keita Yamazaki¹, Koichiro Kobayashi², Akihiko Chiba², ¹*Research and Development Institute, Takenaka Corporation, Japan*, ²*Dept. of Welfare Engineering, Iwate University, Japan*

EW-13 GENERATION AND CONFINEMENT OF UNIFORM MAGNETIC FIELDS WITH DISTRIBUTIONS OF SURFACE CURRENTS

Manlio G. Abele, *New York University, United States of America*

Apr. 7

Event Hall

8:30-12:00

Session EX

Domains & Interdisciplinary Topics

H. Miyajima

Keio University

EX-01 BULK DOMAIN ANALYSIS IN IRON (111) CRYSTALS

Rudolf Schaefer, Sabine Schinnerling, *Inst. for Metallic Materials, IFW Dresden, Germany*

EX-02 DOMAIN EVOLUTION IN PERMALLOY STRUCTURES UNDER THE INFLUENCE OF MAGNETIC FIELD BY CURRENT APPLICATION

Vivian Ng, Kyaw Oo Aung, Adekunle Olusola Adeyeye, *Information Storage Materials Laboratory, Electrical and Computer Engineering Department, National University of Singapore, Singapore*

EX-03 SURFACE MAGNETIC RIPPLES INDUCED BY A LOCAL STRAY FIELD FROM A SCANNING MAGNETIC TIP

Hsin-I Wu¹, Ji-Shiuan Chen¹, Yaun-Ron Ma¹, Yuang Liou², Yeong-Der Yao², ¹*Dept. Physics, National Dong Hwa University, Taiwan*, ²*Institute of Physics, Academia Sinica, Taiwan*

EX-04 LOW-FIELD MAGNETIC EFFECT IN $\text{Pr}_{1-x}\text{Pb}_x\text{MnO}_3$ ($0.1 < x < 0.5$) PEROVSKITES

Manh-Huong Phan¹, Seong-Cho Yu², Nguyen Duc Tho³,
Nguyen Chau³, ¹*Department of Aerospace Engineering, Bristol University, United Kingdom*, ²*Department of Physics, Chungbuk National University, Republic of Korea*, ³*Center for Materials Science, National University of Hanoi, Hanoi, Viet Nam*

EX-05 A NEW SIMULTANEOUS METHOD OF HALL AND MAGNETORESISTANCE MEASUREMENTS AT LOW AND HIGH MAGNETIC FIELD ON LIQUID AND AMORPHOUS METALS, AND SEMICONDUCTORS

Masami Ogita¹, Takanori Ito¹, Mohd Hafezzullah¹, Hiroyuki Nonoyama¹, Masaaki Isai¹, Iwao Mogi², Satoshi Awaji², Kuniyoshi Yokoo³, ¹*Fac. of Eng., Shizuoka University, Japan*, ²*IMR, Tohoku University, Japan*, ³*RIEC, Tohoku University, Japan*

EX-06 NUMERICAL MODELING FOR ACTIVE MAGNETIC REGENERATIVE REFRIGERATION

Farid Allab, Afef Kedous-Lebouc, Jean Marc Fournier, Jean Paul Yonnet, *Laboratoire d'Electrotechnique de Grenoble, France*

EX-07 MAGNETIZATION OF COUPLED AND NON-COUPLED SUPERCONDUCTING FILAMENTS WITH DEPENDENCE OF CURRENT DENSITY ON APPLIED FIELD

Thitipong Satiramatekul, Frederic Bouillault, *LGEP, CNRS UMR 8507, SUPELEC, Paris 6 and Paris 11 Universities, France*

EX-08 MAGNETORHEOLOGICAL CHARACTERIZATION OF CARBONYL IRON-ORGANOCLAY SUSPENSIONS

Sung Taek Lim¹, Hyoung Jin Choi¹, Myung S. Jhon², ¹*Dept. of Polymer Sci. and Eng., Inha University, Republic of Korea*, ²*Dept. of Chem. Eng., Carnegie Mellon University, United States of America*

EX-09 HYSTERESIS IN JOSEPHSON CURRENT BY MAGNETIC FLUX QUANTUM

Norimichi Watanabe, Akiyoshi Nakayama, Susumu Abe, Kunimori Aizawa, *Faculty of Engineering, Kanagawa University, Japan*

EX-10 OBSERVATION OF CORRELATION BETWEEN H-R LOOP AND DOMAIN SWITCHING OF MTJ CELLS EMPLOYING MAGNETIC FORCE MICROSCOPE(MFM)

Jin Hee Heo¹, Seung Bae Park¹, Tae Wan Kim², Il Sub Chung¹, ¹*School of Information and Communications Engineering, Republic of Korea*, ²*Samsung Advanced Institute of Technology, Republic of Korea*

EX-11 MAGNETOCALORIC PROPERTIES OF $Mn_5Sn_{3-x}Ga_x$ ALLOYS

F. Q. Zhao¹, W. Dagula², O. Tegus², E. Bruck², K. H. J. Buschow², ¹*Department of Physics, Inner Mongolia Normal University, China*, ²*Van der Waals-Zeeman Instituut, Universiteit van Amsterdam, Netherlands*

Apr. 7

Reception Hall

**Session FA
Physics of Spin Injection**

J. Inoue
Nagoya University

FA-01 SPIN WAVE INSTABILITY BY SPIN-POLARIZED

14:30 CURRENT INJECTION

Yoshinobu Nakatani¹, Andre Thiaville², Jacques Miltat², ¹*Dept. of Computer-Science, University of Electro-Communications, Japan*, ²*CNRS & Universite Paris-sud, Lab. Physique des solides, France*

FA-02 withdrawn

14:45

FA-03 SPIN INJECTION FROM THE HEUSLER ALLOY

15:00 Co_2MnGe INTO $Al_{0.1}Ga_{0.9}As/GaAs$ HETEROSTRUCTURES

Xu Ying Dong¹, Xiao Hua Lou², Christopher Adelman¹, Jonathan Strand², Amanda K. Petford-Long³, Paul A. Crowell², Chris J. Palmstrom¹, ¹*Dept. of Chemical Engineering and Materials Science, University of Minnesota, United States of America*, ²*School of Physics and Astronomy, University of Minnesota, United States of America*, ³*Dept. of Materials, University of Oxford, United Kingdom*

FA-04 ELECTRODEPOSITION OF Ni-Si SCHOTTKY

15:15 BARRIERS

Michail E. Kiziroglou¹, Alexander A. Zhukov², Mamdouh Abdelsalam³, Xiao Li Li¹, Peter A. J. de Groot², Philip N. Bartlett³, Cornelis H. de Groot¹, ¹*School of Electronics and Computer Science, University of Southampton, Southampton, United Kingdom*, ²*School of Physics and Astronomy, University of Southampton, Southampton, United Kingdom*, ³*School of Chemistry, University of Southampton, Southampton, United Kingdom*

**FA-05 PROBING SPIN-POLARIZED TUNNELING AT HIGH
15:30 BIAS AND TEMPERATURE WITH A MAGNETIC
TUNNEL TRANSISTOR**

Byong Guk Park, Tamalika Banerjee, Byoung-Chul Min,
Johnny G.M. Sanderink, Cock Lodder, Ronnie Jansen, *SMI,
MESA Institute for Nanotechnology, University of Twente,
Netherlands*

**FA-06 SPIN-FILTERING OF NON-EQUILIBRIUM HOLES IN
15:45 A SEMICONDUCTOR-FERROMAGNET HYBRID
STRUCTURE**

E. Haq, T. Banerjee, M. H. Siekman, J. C. Lodder, R. Jansen,
*MESA Institute for Nanotechnology, University of Twente,
Netherlands*

**FA-07 FABRICATION OF THREE TERMINAL DEVICES
16:00 USING DOUBLE BARRIER MAGNETIC TUNNEL
JUNCTIONS**

Taro Nagahama¹, Yoshishige Suzuki², Shinji Yuasa¹, ¹*National
Institute of Advanced industrial Science and Technology (AIST),
Japan,* ²*Graduate School of Engineering Science, Osaka
University, Japan*

FA-08 SUB-MICRO SIZE SPIN-VALVE TRANSISTOR

16:15 Ying-Wen Huang¹, Chi-Kuen Lo², Yeing-Der Yao³, Der-Ray
Huang⁴, Jin-Hua Huang¹, ¹*Department of Material science &
Engineering, National Tsing Hua Univ., Taiwan,* ²*Lab. For
spintronics, OES, Industrial Technology Research Institute,
Taiwan,* ³*Institute of Physics, Academia Sinica, Taipei, Taiwan,*
⁴*OES, Industrial Technology Research Institute, Hsin Chu,
Taiwan*

**FA-09 THE OPTIMUM MAGNETO-CURRENT OF
16:30 COLLECTOR IN A SILICON BASE SPIN VALVE
TRANSISTOR**

Lan-Chin Hsieh¹, Ying-Wen Huang², Chi-Kuen Lo¹, Yeong-Der
Yao³, Der Ray Huang¹, ¹*Lab. For spintronics, OES, Industrial
Technology Research Institute, Taiwan,* ²*Department of Material
science & Engineering, National Tsing Hua Univ, Taiwan,*
³*Institute of Physics, Academia Sinica, Taiwan*

**FA-10 SINGLE SPIN-FET FOR PROGRAMMABLE LOGIC
16:45 GATES**

Tan Seng Ghee¹, Mansoor B.A. Jalil², Bala Kumar¹, Ghee Hwee
Lai¹, Teo Kie Leong², Thomas Liew¹, Chong Tow Chong¹, ¹*Data
Storage Institute, Singapore,* ²*ECE Dept., National University of
Singapore, Singapore*

**FA-11 SPIN-DEPENDENT EFFECTS IN ULTRATHIN
17:00 TRILAYER M/N/M FILM STRUCTURES**

Takao Suzuki¹, Yevgen Pogoryelov², ¹*ISML, Toyota
Technological Institute, Japan,* ²*Institute for Magnetism, NAS of
Ukraine, Ukraine*

FA-12 1/f NOISE IN SPIN TRANSISTORS

17:15 Y. T. Hwang¹, M. C. Lin², Y. W. Huang¹, C. K. Lo¹, Y. D. Yao¹, H. L. Huang³, ¹*Opto-Electronics & Systems Labs, Industrial Technology Research Institute, Hsinchu, Taiwan*, ²*Dep. of Photonics & Institute of Electro-Optical Engineering, National ChiaoTung University, Hsinchu, Taiwan*, ³*Dep. of Physics, National Taiwan University, Taipei, Taiwan*

Apr. 7

Room 141/142

Session FB

Sensors, Mostly CPP I

D. Wang

Non Volatile Electronics

FB-01 NOVEL SYNTHETIC FERRIMAGNET PINNED

14:30 LAYERS WITH SPIN BLOCKING LAYERS FOR METALLIC CPP SPIN VALVES REQUIRING HIGH PINNING-FIELD AND OUTPUT

Keiichi Nagasaka, Hirotaka Oshima, Arata Jogo, Takahiro Ibusuki, Yutaka Shimizu, Atsushi Tanaka, *Advanced Magnetic Recording Laboratory, Fujitsu Laboratories, Ltd., Japan*

FB-02 NARROW TRACK WIDTH CPP SPIN-VALVE GMR

14:45 HEADS UTILIZING HALF-METALLICITY MATERIALS

Masamichi Saito, Naoya Hasegawa, Yosuke Ide, Tomohiro Yamashita, Yasuo Hayakawa, Yoshihiro Nishiyama, Masahiko Ishizone, Shuuji Yanagi, Kazumasa Nishimura, Akira Takahashi, *ALPS Electric. Co., Ltd., Magnetic Devices Division, Japan*

FB-03 CPP-GMR WITH OXIDIZED Co-Fe LAYER ON

15:00 VARIOUS LOWER-ELECTRODE MATERIALS

Katsumi Hoshino, Hiroyuki Hoshiya, Hiroyuki Katada, Nobuo Yoshida, Katsuro Watanabe, Kazuhiro Nakamoto, *Storage Research Center, Hitachi Ltd., Japan*

***FB-04 ANGULAR DEPENDENCE OF SPIN-TORQUE**

15:15 CRITICAL CURRENTS FOR CPP-GMR READ HEADS

Neil Smith, Jordan A. Katine, Matthew J. Carey, Jeff R. Childress, *Hitachi Global Storage Technologies, United States of America*

***FB-05 CoFeB/MgO/CoFeB MAGNETIC TUNNEL JUNCTIONS**

15:45 WITH HIGH TMR RATIO AND LOW JUNCTION RESISTANCE

Koji Tsunekawa¹, Motonobu Nagai¹, Hiroki Maehara¹, Shinji Yamagata¹, David D. Djayaprawira¹, Naoki Watanabe¹, Shinji Yuasa², Yoshishige Suzuki³, Koji Ando², ¹*Anelva corporation, Japan*, ²*National Institute of Advanced Industrial Science and Technology (AIST), Japan*, ³*Graduate School of Engineering Science, Osaka University, Japan*

FB-06 LOW-FREQUENCY NOISE ANALYSIS OF TMR

16:15 HEADS

Shunji Saruki, Hiroshi Kiyono, Kazumasa Fukuda, Tetsuya Kuwashima, Nozomu Hachisuka, Kenji Inage, Takeo Kagami, Takumi Uesugi, Satoshi Miura, Kazuhiro Barada, *Head Business Group, TDK Corporation, Japan*

FB-07

16:30 withdrawn

FB-08 CURRENT INDUCED NOISE IN CPP AND CCP/ CPP

16:45 SPIN VALVE READ HEADS

Jimmy Zhu, Xiao Chun Zhu, *Data Storage Systems Center, Carnegie Mellon University, United States of America*

FB-09 AN MR FILM HEAD MINIMUM FEATURE

17:00 PERSPECTIVE ON FUTURE AREAL DENSITY GROWTH RATES

Robert E. Fontana Jr., *San Jose Research Center, Hitachi GST, United States of America*

FB-10 ROOM TEMPERATURE NOL EXCHANGE BIASING

17:15 SUPERIMPOSED ON AFM EXCHANGE BIAS IN SPECULAR SPIN-VALVES

Masaaki Doi¹, Masato Izumi¹, Hiroaki Endo¹, Hiromi Niu Fuke², Hitoshi Iwasaki², Naoya Hasegawa³, Masashi Sahashi¹, ¹*Dept. Electronic Engineering, Tohoku University, Japan*, ²*Corporate R&D, Toshiba Corporation, Japan*, ³*ALPS Electric Corporation, Japan*

Apr. 7

Room 234

Session FC

Biomagnetism

Y. Uchikawa

Tokyo Denki University

J.A. Nyenhuis

School of Electrical and Computer Engineering, Purdue University

***FC-01 EVENT-RELATED TIME-FREQUENCY ANALYSIS OF THE SPONTANEOUS MEG ACTIVITIES DURING 3-D OBJECT PERCEPTION**

Sunao Iwaki¹, Giorgio Bonmassar², John W. Belliveau², ¹*National Institute of Advanced Industrial Science and Technology, Japan*, ²*NMR Center, Massachusetts General Hospital, United States of America*

- FC-02 MAGNETENCEPHALOGRAPHIC MEASUREMENT
15:00 DURING TWO TYPES OF MENTAL ROTATIONS OF
THREE-DIMENSIONAL OBJECTS**
Hiroaki Kawamichi¹, Hiroaki Kawamichi², Yoshiaki Kikuchi³,
Shogoo Ueno¹, ¹*Graduate School of Medicine, University of
Tokyo, Japan*, ²*Systems Development Laboratory, Hitachi Ltd.,
Japan*, ³*Tokyo Metropolitan University of Health Sciences, Japan*
- FC-03 NEUROMAGNETIC RESPONSE OF BILATERAL
15:15 SOMATOSENSORY AREA TO STIMULUS REPETITION
FREQUENCIES WITH A 3-D MEG MEASUREMENT**
Yoshinori Uchikawa, Bong-Soo Kim, *Dept. of Electronic and
Computer Engineering, Tokyo Denki University, Japan*
- FC-04 SPATIAL ANALYSIS OF THE THREE DIMENSIONAL
15:30 COMPONENTS OF A MAGNETOCARDIOGRAM**
Keiji Tsukada¹, Toshihiko Kiwa¹, Kuniomi Ogata², Tsuyoshi
Miyashita², Akihiko Kandori², ¹*Okayama University, Japan*,
²*Central Research Lab, Hitachi Ltd., Japan*
- FC-05 MAGNETIC NOISE DUE TO ENVIRONMENTAL
15:45 VIBRATION IN MAGNETICALLY-SHIELDED ROOM**
Takayuki Abe¹, Keita Yamazaki¹, Norio Fujimaki², Satoshi
Miyachi², Koichiro Kobayashi³, Koji Fujiwara⁴, Kazuhiro
Muramatsu⁵, ¹*Research & Development Institute, Takenaka
Corporation, Japan*, ²*National Institute of Information and
Communications Technology, Japan*, ³*Dept. of Welfare Eng. ,
Iwate University, Japan*, ⁴*Dept. of Electrical and Electronic
Eng., Okayama University, Japan*, ⁵*Dept. of Electrical and
Electronic Eng., Saga University, Japan*
- FC-06 MRI SAFETY: RF-INDUCED HEATING NEAR
16:00 STRAIGHT WIRES**
John A. Nyenhuis, Sung-Min Park, Rungkiet Kamondetdacha,
Arslan Amjad, *ECE Purdue University, United States of
America*
- FC-07 MAGNETIC RESONANCE IMAGING OF
16:15 ELECTRICAL CONDUCTIVITY IN THE HUMAN
BRAIN**
Masaki Sekino¹, Yusuke Inoue², Shoogo Ueno¹, ¹*Department of
Biomedical Engineering, Graduate School of Medicine,
University of Tokyo, Japan*, ²*Department of Radiology, Institute
of Medical Science, University of Tokyo, Japan*

**FC-08 AN ELECTROMAGNETIC HEARING AID USING
16:30 COILS TO VIBRATE THE OSSICLES: EVALUATION OF
EXCITATION FORCE AND DISTORTION**

Shinji Hamanishi¹, Takuji Koike², Hidetoshi Matsuki³,
Toshimitsu Kobayashi⁴, Hiroshi Wada¹, ¹*Dept. of
Bioengineering and Robotics, Tohoku University, Japan,* ²*Dept.
of Mechanical Engineering and Intelligent Systems, The
University of Electro-Communications, Japan,* ³*Dept. of
Electrical and Communication Engineering, Tohoku University,
Japan,* ⁴*Dept. of Otorhinolaryngology - Head and Neck Surgery,
Tohoku University, Japan*

**FC-09 NOVEL SUPERPARAMAGNETIC CORE-SHELL
16:45 NANOPARTICLES FOR MAGNETIC TARGETED DRUG
DELIVERY AND HYPERTHERMIA TREATMENT**

Palash Gangopadhyay, Thierry Verbiest, Sebastien Gallet, Edith
Franz, Andre Persoons, *Laboratory for Molecular and Nano
Materials, Department of Chemistry, Katholieke University of
Leuven, Belgium*

**FC-10 MAGNETIC ACTUATOR FOR CAPSULE ENDOSCOPE
17:00 NAVIGATION SYSTEM**

Atsushi Chiba, Masahiko Sendoh, Kazushi Ishiyama, Ken-ichi
Arai, *RIEC, Tohoku University, Japan*

**FC-11 FOCUSED MAGNETIC NAVIGATION USING
17:15 OPTIMIZED MAGNETS FOR MEDICAL THERAPIES**

Francis M. Creighton, Rogers C Ritter, Peter Werp, *Stereotaxis
Inc, United States of America*

Apr. 7

Room 224

**Session FD
Magnetic Sensors II**

L.V. Panina

*School of Computing, Communication and Electronics,
University of Plymouth*

**FD-01 A NEW MAGNETORESISTIVE ANGULAR SENSOR
14:30 WITH ULTRA-LOW OFFSET**

Stefan Butzmann¹, Reinhard Buchhold², ¹*Institute for Electronic
Circuits and Measurement, Ruhr-Universitaet Bochum,
Germany,* ²*Philips Semiconductors GmbH, Hamburg, Germany*

**FD-02 ANGLE SENSOR USING SPIN VALVE WITH SAF
14:45 STRUCTURE**

Dexin Wang, Jay Brown, Tim Hazelton, Jim M. Daughton, *NVE
Corporation, United States of America*

FD-03 LARGE MAGNETORESISTANCE AT ROOM

15:00 TEMPERATURE IN SEMICONDUCTING POLYMER SANDWICH DEVICES

Markus Wohlgenannt¹, Thomas L. Francis², Omer Mermer¹, Govi Veeraraghavan², ¹*Department of Physics and Astronomy, The University of Iowa, United States of America*, ²*Department of Electrical and Computer Engineering, The University of Iowa, United States of America*

FD-04 MODELING OF GMR LINEAR ISOLATOR

15:15 UTILIZING SPIN VALVES

Seung-young Park, Soonchul Jo, *School of Electronic Engineering, Soongsil University, Republic of Korea*

FD-05 GEOMETRY OPTIMIZATION OF TMR CURRENT

15:30 SENSORS FOR ON-CHIP IC TESTING

Kim Le Phan, Hans Boeve, Frederik Vanhelmont, Ton Ikkink, *Philips Research, Royal Philips Electronics, Netherlands*

FD-06 MAGNETOIMPEDANCE (MI) IN NARROW FeNi/Au

15:45 MULTILAYER FILM SYSTEMS

David de Cos¹, Nicholas Fry², Larissa V. Panina², Inaki Orue¹, Alfredo Garcia-Arribas¹, Jose Manuel Barandiaran¹, ¹*Departamento de Electricidad y Electronica, Universidad del Pais Vasco, Spain*, ²*School of Computing, Communications and Electronics, University of Plymouth, United Kingdom*

FD-07 HIGH FREQUENCY MAGNETIC FIELD DETECTION

16:00 BY UHF CARRIER TYPE THIN FILM SENSOR

Kenji Tan¹, Masahiro Yamaguchi², Kiyoshi Yamakawa¹, ¹*Akita Research Institute of Advanced Technology, Japan*, ²*Dept. of Electrical and Communication Engineering, Tohoku University, Japan*

FD-08 MICROSCOPIC MAGNETIC AND HIGH FREQUENCY

16:15 PROPERTIES OF A STRESS SENSOR USING FeCoBSi MAGNETOSTRICTIVE THIN FILMS

Michael Frommberger¹, Stefan Glasmachers¹, Clemens Schmutz¹, Jeffrey McCord², Eckhard Quandt¹, ¹*smart materials group, research center caesar, Bonn, Germany*, ²*Institute for metallic materials, Leibniz Institute IFW Dresden, Germany*

FD-09 DEVELOPMENT OF A JAW-POSITION MEASURING

16:30 SYSTEM USING MAGNETO-IMPEDANCE (MI) SENSOR

Ryuji Masaki¹, Katsuhiko Tsuchida¹, Hitoshi Aoyama¹, Yoshinobu Honkura¹, Toyohiko Hayashi², Yoshihito Fujii³, Shoji Kohno³, ¹*Aichi Steel Corporation, Japan*, ²*Department of Biocybernetics, Faculty of Engineering, Niigata University, Japan*, ³*Division of Removable Prosthodontics, Graduate School of Medical and Dental Sciences, Niigata University, Japan*

FD-10 DOUBLE-CORE GMI CURRENT SENSOR

16:45 Michal Malatek¹, Pavel Ripka¹, Ludek Kraus², ¹*Faculty of Electrical Eng., Czech Technical University in Prague, Czech Republic,* ²*Institute of Physics, Czech Academy of Science, Czech Republic*

FD-11 EFFECT OF TENSILE STRESSES ON GMI OF Co-

17:00 RICH AMORPHOUS MICROWIRES.

Carlos Garcia¹, Arcady Zhukov¹, Juan M. Blanco¹, Valentina Zhukova², Mihail Ipatov³, Julain Gonzalez³, ¹*Dpto de Fisica Aplicada I, EUPDS, UPV/EHU, Plaza Europa 1, San Sebastian, Spain,* ²*"TAMag Iberica" S.L., Parque Tecnologico de Miramon, Spain,* ³*Dpto de Fisica de Materiales, Fac. Quimica, UPV/EHU, San Sebastian, 1072, 20080, Spain*

FD-12 A NEW FREQUENCY-MODULATION-TYPE MI

17:15 SENSOR

Z.M. Wu¹, X.L. Yang¹, J.X. Yang¹, Z.J. Zhao¹, L.P. Liu¹, ¹*Dept. of Physics, East China Normal University, China*

Apr. 7

Room 131/132

Session FE

Intermetallic and Other Hard Magnetic Materials

G.C. Hadjipanayis

University of Delaware

W. C. Chang

National Chung Cheng University

FE-01 A COMPARISON OF HIGHLY COERCIVE FePt FILMS

14:30 PREPARED BY PULSED LASER DEPOSITION AND ELECTRODEPOSITION

Sebastian Fahler, Martin Weisheit, Karin Leistner, Heike Schlorb, Jurgen Thomas, Ludwig Schultz, *IFW Dresden, Germany*

FE-02 FABRICATION OF L1₀-FePt THIN FILMS BY LAPID

14:45 THERMAL ANNEALING

Kyohei Aimuta¹, Kazuhiro Nishimura¹, Shuichiro Hashi², Mitsuteru Inoue¹, ¹*Dept. of Electrical and Electronic Eng., Toyohashi University of Technology, Japan,* ²*Dept. of Materials Science and Technology, Gifu University, Japan*

FE-03 HIGH COERCIVITY IN FePt-BASED BULK MAGNETS

15:00 Raghavan Gopalan, Andreas A. Kuendig, Masato Ohnuma, Kazuhiro Hono, *National Institute for Materials Science, Japan*

- FE-04 ELECTRODEPOSITED Co-Ni-Re-W-P THICK ARRAY**
15:15 OF HIGH VERTICAL MAGNETIC ANISOTROPY
 Ng Wei Beng¹, Akio Takada², Kanzo Okada¹, ¹*Singapore Research Laboratory, Sony Electronics (Singapore) Pte. Ltd., Singapore,* ²*MR Device Department, Magnetic Products Division, Device Solutions Company, Micro Systems and Network Company, Sony Corporation, Japan*
- FE-05 MAGNETIC AND STRUCTURAL PROPERTIES OF La-**
15:30 SUBSTITUTED FERRITES
 Michaela Kuepferling, Roland Groessinger, Guenter Wiesinger, Martin Pieper, Michael Reissner, *Dept. of Solid State Physics, Vienna University of Technology, Austria*
- FE-06 HIGH-COERCIVITY Co-FERRITE THIN FILMS ON**
15:45 SiO₂ (100) SUBSTRATE PREPARED BY SPUTTERING AND PLD
 Jian Hua Yin, Jun Ding, Bing Hai Liu, Yong Chao Wang, Jia Bao Yi, *Department of Materials Science, National University of Singapore, Singapore*
- FE-07 HIGH REMANENCE, EPITAXIAL SmCo₅ THIN FILMS**
16:00 A. Singh¹, V. Neu¹, R. Tamm², S. Faehler¹, W. Skrotzki², L. Schultz¹, B. Holzapfel¹, ¹*IFW Dresden, Germany,* ²*Institut fuer Kristallographie und Festkoerperphysik, Germany*
- FE-08 BULK MAGNETIC HARDENING IN Cu-ADDED**
16:15 (SmCo₅)_{1-x}(Sm₂Co₁₇), CAST ALLOYS
 Alexander Gabay, Yong Zhang, Melania Marinescu, Kyriakos Christodoulides, George C. Hadjipanayis, *Dept. of Physics and Astronomy, University of Delaware, United States of America*
- FE-09 EFFECT OF Cu SUBSTITUTION ON THE**
16:30 STRUCTURAL AND MAGNETIC PROPERTIES OF DyCo_{5-x}Cu_x
 Debjani Banerjee¹, K.G. Suresh¹, A.K. Nigam², ¹*Department Of Physics, IIT Bombay, Mumbai, India,* ²*Tata Institute Of Fundamental Research, Mumbai, India*
- FE-10 Nd-Fe-B THICK FILMS PREPARED BY SCREEN**
16:45 PRINTING
 Thanassis K. Speliotis¹, Dimitris Niarchos¹, Polycarpos Falaras¹, Dimitris Tsoukleris¹, John G. Pepin², ¹*NCSR "Demokritos" Institute of Materials Science, Greece,* ²*DuPont Electronic Technologies, Research Triangle Park North Carolina, United States of America*
- FE-11 HEAT RESISTANT PLASTIC MAGNETS**
17:00 Michiya Kume, Masaki Hayashi, Muneo Yamamoto, Kuniyasu Kawamura, Kohei Ihara, *Nichia Corporation, Japan*

FE-12 CORROSION KINETICS OF SPARK PLASMA

17:15 SINTERING Nd-Fe-B MAGNETS IN DIFFERENT ELECTROLYTES

Ming Yue, *School of Materials Science, Beijing University of Technology, China*

Apr. 7

Room 133/134

Session FF

Clusters and Particles IV

J.C. Lodder

SMI, MESA, University of Twente

O. Kitakami

Institute of Multidisciplinary Research for Advanced Materials, Tohoku University

FF-01 INFLUENCE OF THE INTERFACE ON THE

14:30 MAGNETIC MOMENT OF Co CLUSTERS IN A Cu MATRIX

Ana Garcia Prieto¹, M. Luisa Fdez-Gubieda¹, Jesus Chaboy², M. Angeles Laguna-Marco³, Takayuki Muro⁴, Tetsuya Nakamura⁴, ¹*Departamento de Electricidad y Electronica, Universidad del Pais Vasco, Spain*, ²*ICMA, CSIC-Universidad de Zaragoza, Spain*, ³*CITIMAC, Universidad de Cantabria, Spain*, ⁴*JASRI-SPring-8, Japan*

FF-02 LARGE COERCIVITY IN Mn₃O₄ NANOCRYSTALLITES

14:45 Ping Zhan Si¹, Ekkes Bruck², Zhi Dong Zhang¹, Chul Jin Choi³, Wei Shan Zhang¹, O. Tegus², K. H. J. Buschow², ¹*Inst. of Metal Res. Chinese Acad. of Sci., China*, ²*Van der Waals-Zeeman Inst. Univ. of Amsterdam, Netherlands*, ³*Korea Inst. of Machinery and Materials, Republic of Korea*

FF-03 MAGNETIC STRUCTURE AND ANISOTROPY OF

15:00 FCC-IRON NANOCLUSTERS TRAPPED IN CARBON NANOTUBE

Mutsuhiro Shima¹, Saroj K. Nayak¹, Pulickel M. Ajayan¹, Saburo Nasu², ¹*Dept. of Materials Science and Engineering, Rensselaer Polytechnic Institute, United States of America*, ²*Dept. of Physical Science, Osaka University, Japan*

FF-04 TETRAHEDRAL MAGNETIC CLUSTER EMBEDDED

15:15 IN METALLIC MATRIX: ELECTRON CORRELATION EFFECTS

Eduardo Cruz-Silva, Emilio Munoz-Sandoval, Mauricio Terrones, Florentino Lopez-Urias, *Instituto Potosino de Investigacion Cientifica y Tecnologica A.C., Mexico*

- FF-05 AB INITIO CALCULATION FOR MAGNETISM OF Pd
15:30 NANOPARTICLES**
Masahiko Nawate¹, Hiroshi Tanaka², Norihiko Nishimura¹,
Shigeo Honda¹, ¹*Dept. of Electronics and Control Systems,
Shimane University, Japan,* ²*Dept. of Material Science, Shimane
University, Japan*
- FF-06 FABRICATION OF CORE-SHELL TYPE MAGNETIC
15:45 NANOPARTICLES BY A NANOCLUSTER DEPOSITION
TECHNIQUE**
Jian Min Bai, Jian-Ping Wang, *MINT Center & Department of
Electrical and Computer Engineering, University of Minnesota,
United States of America*
- FF-07 EXCHANGE ANISOTROPY IN Fe-MnF₂
16:00 NANOGRANULAR FILMS**
Takao Furubayashi, Hiroaki Mamiya, *National Institute for
Materials Science, Japan*
- FF-08 CONTROL AND SELECTION OF THE MAGNETIC
16:15 ANISOTROPY OF COBALT NANOWIRES**
Michael Darques¹, Armando Encinas², Luc Piraux¹, Pascale
Guillemaud³, Adriana Popa³, Ursula Ebels³, ¹*Universite
Catholique de Louvain, Unite PCPM, Belgium,* ²*Instituto de
Fisica, Universidad autonoma de San Luis Potosi, Mexico,* ³*CEA-DRFMC, France*
- FF-09 DEVELOPMENT OF COERCIVITY IN Fe(Pt_{0.7}Ni_{0.3})/C
16:30 MULTILAYERS**
M. Zhou¹, M. J. Bonder¹, Y. Huang¹, Y. Zhang¹, G. C.
Hadjipanayis¹, D. Weller², ¹*Dept. of Physics, Univ of Delaware,
United States of America,* ²*Seagate Technology, United States of
America*
- FF-10 MAGNETORESISTANCE ANALYSIS OF NANOSCALE
16:45 MAGNETIC CORRELATION IN COSPUTTERED
Fe_{100-x}Ag_x FILMS**
Paolo Allia¹, Marco Coisson², Paola Tiberto², Franco Vinai²,
Diego Bisero³, Federico Spizzo³, ¹*Dept. of Physics, Politecnico
di Torino, Italy,* ²*Materials Dept., IEN Galileo Ferraris, Italy,* ³*Dept. of Physics, Universita' di Ferrara, Italy*
- FF-11 ANOMALOUS MAGNETIC BEHAVIOR IN Ni-Ag
17:00 NANOPARTICLES**
Aparna Roy¹, Sankar Ram², Srinivas¹, Chandrasekhar-Rao
Turumella³, ¹*Dept. of Physics, Indian Institute of Technology,
Kharagpur, India,* ²*Material Science Center, Indian Institute of
Technology, Kharagpur, India,* ³*TPPED, Bhabha Atomic
Research Center, Bombay, India*

**FF-12 EFFECT OF PARTICLE SIZE ON ELECTRICAL AND
17:15 MAGNETOTRANSPORT PROPERTIES OF
MANGANITE NANOPARTICLES**

C. Krishnamoorthy¹, R. Nirmala², K. Sethupathi¹, V. Sankaranarayanan¹, S. K. Malik², ¹*Dept. of Physics, Indian Institute of Technology Madras, India*, ²*Dept. of Condensed Matter Physics and Material Science, Tata Institute of Fundamental Research, India*

Apr. 7

Event Hall

13:30-17:00

Session FP

Perpendicular Recording Media II (SUL)

N. Honda

Akita Research Institute of Advanced Technology

**FP-01 EFFECT OF INTERFACE ROUGHNESS ON
EXCHANGE COUPLING IN SYNTHETIC
ANTIFERROMAGNETIC MULTILAYERS**

Mrugesh Desai¹, Arkajyoti Misra², William D. Doyle¹, ¹*MINT Center, University of Alabama, United States of America*, ²*Department of ECE, University of Minnesota, United States of America*

**FP-02 Fe-Co-B SOFT MAGNETIC UNDERLAYER WITH
RADIALLY ORIENTED HIGH ANISOTROPY FIELD
FOR PERPENDICULAR MAGNETIC RECORDING DISK**

Sukefumi Ito, Shigeeki Nakagawa, *Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*

**FP-03 CONTROL OF IN-PLANE MAGNETIC ANISOTROPY
FIELD OF Fe-Co-B/[Ni-Fe/Si] ON DISK SUBSTRATE**

Sok Hyun Kong¹, Kyung Hwan Kim², Shigeeki Nakagawa³, ¹*Venture Business Laboratory, Kagoshima University, Japan*, ²*Dept. of Electric and Information Engineering, Kyungwon University, Republic of Korea*, ³*Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*

**FP-04 NOBLE DEVELOPMENT OF Al/NiP SUBSTRATE WITH
SOFT MAGNETIC UNDERLAYER: FORMATION OF
NANO-CRYSTALLINE AND (111) ORIENTATION OF
PLATED NiFe FILM**

Atsushi Hashimoto¹, Shin Saito¹, Migaku Takahashi¹, Noriaki Mukai², ¹*Tohoku Univ., Japan*, ²*Toyo Kohan co., ltd., Japan*

FP-05 EFFECT OF FILM THICKNESS OF ELECTROLESSLY DEPOSITIED CoNiFeB SOFT MAGNETIC UNDERLAYER ON ITS MAGNETIC PROPERTIES

Atsushi Sugiyama¹, Ken Adachi¹, Mariko Sakagami¹, Masahiro Yoshino¹, Jun Kawaji¹, Toru Asahi¹, Toshihiro Tsumori², Tetsuya Osaka¹, ¹*Graduate School of Science and Engineering, Waseda University, Japan*, ²*Shin-Etsu Chemical Co., Ltd., Japan*

FP-06 EFFECTS OF RESIDUAL STRESS AND SURFACE MORPHOLOGY OF SUL ON MAGNETIC PROPERTIES AND GRAIN ISOLATION IN CoCrPtO PERPENDICULAR RECORDING MEDIA

Dae Hoon Hong, Sang Hwan Park, Taek Dong Lee, *Dept. of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Republic of Korea*

FP-07 THE ROLE OF SOFT UNDERLAYER PERMEABILITY IN WIDE AREA TRACK ERASURE IN HIGH-DENSITY PERPENDICULAR RECORDING

J. N. Zhou, B. R. Acharya, P. Gill, E. N. Abarra, M. Zheng, G. Choe, *MMC Technology, United States of America*

FP-08 INFLUENCE OF MEDIA BACKGROUND ON WRITE/READ PERFORMANCE IN PERPENDICULAR MEDIA WITH AN ANTIFERROMAGNETIC LAYER

Hwan-Soo Lee¹, James A. Bain¹, Sooyoul Hong², Hyung J. Lee², ¹*Data Storage Systems Center, Carnegie Mellon University, United States of America*, ²*Storage System Division, Samsung Information Systems America, United States of America*

FP-09 WIDE BAND ERASURE CAUSED BY SUL DOMAIN WALL IN PERPENDICULAR RECORDING MEDIA

Yasutaka Nishida, Reiko Arai, Kiwamu Tanahashi, Atsushi Nakamura, Ikuya Tagawa, *Storage Technology Research Center, Hitachi, Ltd., Japan*

FP-10 SPIKE NOISE IN SOFT UNDER LAYER FOR PERPENDICULAR RECORDING AND ITS IMPACT ON ERROR RATE

Min Xiao, Bruce A. Wilson, Kentaro Takano, Yoshihiro Ikeda, Hoa Do, Hal Rosen, *Hitachi GST, San Jose Research, United States of America*

Session FQ
Magnetic Recording Physics II

K. Gao

Seagate Technology

H. Kanai

Fujitsu Ltd.

FQ-01 EFFECTS OF READER DISTORTION ON NONLINEAR TRANSITION SHIFT MEASUREMENTS

A. Prabhakar¹, A. Thangaraj¹, M. Manikam², E. Louis²,
¹Electrical Engg., Indian Institute of Technology, Madras, India,
²Western Digital Corporation, Bang-pa In, Thailand

FQ-02 GAP DEPENDENCE OF THE SHIELDED POLE HEADS

Mike Mallary, Adam F. Torabi, Mourad Benakli, *Advanced Technology, Maxtor Corporation, United States of America*

FQ-03 READING PROCESS OF MR HEAD INVESTIGATED WITH MICROMAGNETIC MODEL

H.Ono, K.Yoshida, M.Sakurai, *Kogakuin University, Japan*

FQ-04 HARMONIC ANALYSIS METHOD FOR GAP WIDTH EVALUATION

Yipin Zhou¹, Bo Liu¹, Lewei Li², ¹Data Storage Institute of Singapore, Singapore, ²Dept. of Electrical and Computer Engineering, National University of Singapore, Singapore

FQ-05 WRITE-FIELD GRADIENT EFFECT ON TRANSITION WIDTH IN PERPENDICULAR RECORDING MEDIA

Masafumi Mochizuki, Miki Hara, Atsushi Nakamura, Masukazu Igarashi, *Storage Technology Research Center, Hitachi Ltd., Japan*

FQ-06 MICROMAGNETIC STUDY OF THE CORRELATION BETWEEN HEAD FIELD GRADIENT AND JITTER IN PERPENDICULAR RECORDING

Jason S. Goldberg, Hong Zhou, Pierre Asselin, *Research Division, Seagate Technology, United States of America*

FQ-07 EFFECT OF QUARTIC ANISOTROPY TERM ON READ/WRITE PROPERTIES OF PERPENDICULAR RECORDING MEDIA

Yoshinobu Nakatani¹, Nobuo Hayashi¹, Yasutaro Uesaka², Hiroshi Fukushima³, ¹Dept. of Computer-Science, University of Electro-Communications, Japan, ²Dept. of Electrical and Electronics Engineering, Nihon University, Japan, ³Individual Capacity, Japan

FQ-08 SIMULATION STUDY OF NONLINEAR TRANSITION SHIFT IN PERPENDICULAR MAGNETIC RECORDING MEDIA

Naoki Honda, Takanori Kiya, Kazuhiro Ouchi, *Akita Research Institute of Advanced Technology, Japan*

FQ-09 OVERWRITE AND ADJACENT TRACK ERASURE IN PERPENDICULAR RECORDING

Jimmy Zhu, *Data Storage Systems Center, Carnegie Mellon University, United States of America*

FQ-10 EFFECTS OF MEDIA ORIENTATION ON NOISE, TRACK WIDTH AND THERMAL STABILITY

Alexander Taratprom, Klaas B. Klaassen, Ernesto Marinero, *San Jose Research Center, Hitachi Global Storage Technologies, United States of America*

FQ-11 MINIMUM VOLUME OF TILTED AND COMPOSITE MEDIA CONSIDERING MAGNETO-STATIC INTERACTIONS

Akihiko Takeo¹, H. Neal Bertram², ¹*Core Technology Center, Toshiba Corporation, Japan*, ²*CMRR, University of California, San Diego, United States of America*

FQ-12 MAGNETIC REVERSAL FIELD MAP COMBINED WITH MEDIUM NOISE IMAGE IN PERPENDICULAR RECORDING MEDIA

Shunji Ishio¹, Jian Min Bai², Hitoshi Saito¹, ¹*Department of Materials Science and Engineering, Akita University, Japan*, ²*MINT&Department of Electrical and Computer Engineering, University of Minnesota, United States of America*

FQ-13 INFLUENCE OF THERMAL AGITATION ON READBACK WAVEFORMS IN PERPENDICULAR MAGNETIC RECORDING

Mitsuhiko Hashimoto, Toshiya Suzuki, Kenji Miura, Hiroaki Muraoka, Hajime Aoi, Yoshihisa Nakamura, *RIEC, Tohoku university, Japan*

Apr. 7

Event Hall

13:30-17:00

Session FR

Patterned Media and FePt Media

T. Thomson

Hitachi Global Storage Technologies

FR-01 EXPERIMENTAL AND MICROMAGNETICS STUDIES ON MAGNETISM OF Ni NANOWIRE ARRAYS PREPARED WITH MAGNETIC FIELD INDUCTION

Feng Tian, Dan Wei, Jing Zhu, *Dept. of MS&E, Tsinghua University, China*

FR-02 FABRICATION OF HEAD-FLYABLE NANO HOLE PATTERNED MEDIA AND DYNAMIC WRITE/READ MEASUREMENT WITH GMR HEAD

Hideyuki Kikuchi¹, Hiroshi Nakao¹, Kenji Yasui², Kazuyuki Nishio³, Takeshi Morikawa⁴, Kouji Matsumoto⁴, Hideki Masuda³, Kenichi Itoh¹, ¹*Yamagata Fujitsu Ltd., Japan*, ²*Tokyo Metropolitan University, Japan*, ³*Kanagawa Academy of Science and Technology, Japan*, ⁴*Fujitsu Laboratories Ltd., Japan*

FR-03 FABRICATION OF Co/Pt DOTS ARRAY

Chin-Chung Yu¹, Yeong-Der Yao², Kuo-Lung You², Sung-Chieh Chou², Yung Liou², ¹*Dept. of Appl. Phys., National University of Kaohsiung, Taiwan*, ²*Institute of Physics, Academia Sinica, Taiwan*

FR-04 PERFORMANCE EVALUATION OF DISCRETE TRACK PERPENDICULAR MEDIA FOR HIGH RECORDING DENSITY

Yoshikazu Soeno, Makoto Moriya, Akimasa Kaizu, Mitsuru Takai, *Devices Development Center, TDK Corporation, Japan*

FR-05 TRACKING ISSUES IN HIGH-DENSITY PATTERNED MEDIA STORAGE

Paul W. Nutter¹, Ioannis Ntokas¹, Barry K. Middleton¹, David T. Wilton², ¹*School of Computer Science, The University of Manchester, United Kingdom*, ²*School of Mathematics & Statistics, University of Plymouth, United Kingdom*

FR-06 MODELING AND DESIGN OF DISCRETE TRACK RECORDING MEDIA

Eric Roddick, Davie Wachenschwanz, *Komag, Inc., United States of America*

FR-07 PERPENDICULAR ANISOTROPY OF MBE-GROWN FePt GRANULAR FILMS

Satoshi Iwata¹, Tomoya Itoh², Takeshi Kato², Shigeru Tsunashima², ¹*CCRAST, Nagoya University, Japan*, ²*Dept. of Electronics, Nagoya University, Japan*

FR-08 FePt ORDERED ALLOY THIN FILM PREPARED BY 30 SECONDS ANNEALING WITH Fe-O UNDER-LAYER

Akira Yano, Tetsunori Koda, Satoshi Matsunuma, *Hitachi Maxell, LTD., Japan*

FR-09 GROWTH AND CHARACTERIZATION OF EPITAXIAL FePt FILMS

Francesca Casoli, Franca Albertini, Luigi Pareti, Simone Fabbri, Lucia Nasi, Claudio Bocchi, Roberta Ciprian, *IMEM-CNR, Italy*

13:30-17:00

Session FS
Head Disk Interface I

B. Marchon

Hitachi Global Storage Technologies

T. Yamamoto

Toshiba Corporation

FS-01 INVESTIGATION OF TRIBOLOGICAL AND READ-WRITE PERFORMANCE OF TEXTURED SLIDERS

Li Zhi Su¹, Saurabh Deoras¹, Akihiko Takeo², Frank E. Talke¹,
¹Center for Magnetic Recording Research, University of California, San Diego, United States of America, ²Core Technology Center, Toshiba Corporation, Japan

FS-02 THE EFFECTS OF SURFACE TEXTURE ON THE SLIDER STEADY STATE FLYING CHARACTERISTICS OF PICO SLIDERS

Jia Dong Zhang¹, Li Zhi Su¹, Frank E. Talke¹, *¹Center for Magnetic Recording Research, University of California, San Diego, United States of America*

FS-03 THE ADHESION BETWEEN SLIDER AND DISK AT LOW FLY HEIGHTS

George W. Tyndall¹, Larry E. Bailey, Jr.², Curtis W. Frank², Robert J. Waltman³, *¹Samsung Information Systems America, United States of America, ²Dept. of Chemical Engineering, Stanford University, United States of America, ³Hitachi Global Storage Technologies, United States of America*

FS-04 THERMAL STUDY OF NANOMETER SPACED HEAD-DISK SYSTEMS

Hui Li, Bo Liu, Tow-Chong Chong, *Data Storage Institute, Singapore*

FS-05 NITROGENATED AMORPHOUS CARBON FILMS PREPARED BY UNBALANCED MAGNETRON SPUTTERING FOR HIGH RECORDING DENSITY MEDIA

Jin Rong Shi, S.N. Piramanayagam, *Data Storage Institute, Singapore, Singapore*

FS-06 IMPROVING THE CORROSION RESISTANCE OF METAL-EVAPORATED TAPE USING DICARBOXY ACID AS A LUBRICANT

Tomoe Iwano, Ken Kobayashi, *Advanced Tape Storage Development Dept., Recording Media Company, Sony Corporation, Japan*

FS-07 ABSOLUTE HEAD MEDIA SPACING MEASUREMENT IN-SITU

Zhi-Min Yuan, Bo Liu, *Data Storage Institute, Singapore*

FS-08 LOAD/UNLOAD PROCESSES FOR SUB-5-nm FLYING HEIGHT SLIDERS

Ee-Ling Kek¹, Yan Sheng Ma¹, Sujeet Kumar Sinha², Bo Liu¹,
¹Data Storage Institute, Singapore, ²Department of Mechanical Engineering, National University of Singapore, Singapore

FS-09 FLYING-HEIGHT REDUCTION OF MAGNETIC HEAD SLIDER DUE TO THERMAL PROTRUSION

Masayuki Kurita¹, Jun Guo Xu¹, Mikio Tokuyama¹, Kazuhiro Nakamoto¹, Shozo Saegusa², Youji Maruyama², *¹Storage Technology Research Center, Hitachi, Ltd., Japan, ²Hitachi Global Storage Technologies Japan, Ltd., Japan*

FS-10 MOLECULAR DYNAMICS SIMULATION FOR ANALYSIS OF SURFACE MORPHOLOGY OF LUBRICANT FILMS WITH FUNCTIONAL ENDGROUPS

Susumu Ogata¹, Yasunaga Mitsuya², Hedong Zhang², Kenji Fukuzawa², *¹Dept. of Electronic-Mechanical Engineering, Graduate School of Engineering, Nagoya University, Japan, ²Dept. of Micro and Nano System Engineering, Graduate School of Engineering, Nagoya University, Japan*

FS-11 INVESTIGATION ON WEAR AND RECESSION OF THE GMR HEAD IN HELICAL-SCAN TAPE SYSTEM

Kikuji Kawakami, Yoshiteru Kamatani, Masayuki Kondo, Tadashi Ozue, Seiichi Onodera, *ATS Development Dept., MEM Div., MSNC-RM-company, SONY co., Japan*

FS-12 VOLTAGE PULSING FOR LOCALIZED CLEARANCE MEASUREMENT

Maik Duwensee¹, Bernhard Knigge², Peter Baumgart², Frank E. Talke¹, *¹University of California, San Diego, United States of America, ²Hitachi Global Storage Technologies, San Jose, United States of America*

FS-13 EFFECT OF SLIDER LUBRICANT PICKUP ON STABILITY AT THE HEAD-DISK INTERFACE

Rohit P. Ambekar¹, David B. Bogy², *¹Computer Mechanics Lab., UC Berkeley, United States of America, ²Dept. of Mechanical Engineering, UC Berkeley, United States of America*

FS-14 THICKNESS AND ADHESION FORCE DISTRIBUTIONS IN SPREADING REGION OF MOLECULARLY THIN LUBRICANT FILMS ON MAGNETIC DISKS

Hedong Zhang¹, Yasunaga Mitsuya¹, Eiji Nakai², Keiko Goto³, Kenji Fukuzawa¹, *¹Department of Micro-Nano System Engineering, Nagoya University, Japan, ²Sanyo Electric Co., Japan, ³NGB Corporation, Japan*

FS-15 HEAD-DISK INTERFACE MODELING WITH LATTICE BOLTZMANN METHOD

Woo Tae Kim¹, Yong Zhou², Ilya Staroselsky², Hudong Chen², Myung S. Jhon¹, ¹*Department of Chemical Engineering and Data Storage Systems Center, Carnegie Mellon University, United States of America*, ²*Exa Corporation, United States of America*

FS-16 FLYING HEIGHT-ATTITUDE TESTER: A NOVEL TECHNIQUE FOR SLIDER-LUBE-DISK INTERACTION STUDY

Yan Sheng Ma, Bo Liu, Jiang Zhou, *Data Storage Institute, Singapore*

FS-17 POLE-TIP PROTRUSION EFFECT ON HEAD-DISK INTERFACE AT LOW FLYING CLEARANCE

Zhong-Qing Gong, Jia Jay Liu, *MMC Technology, United States of America*

FS-18 RECENT FINDINGS CONCERNING WATER CONDENSATION ON PFPE LUBRICATED MAGNETIC RECORDING DISKS

George W. Tyndall¹, Robert J. Waltman², Margaret E. Best², ¹*Samsung Information Systems America, United States of America*, ²*Hitachi Global Storage Technology, United States of America*

FS-19 NUMERICAL INVESTIGATION OF FRACTURE OF SMALL FORM FACTOR GLASS DISKS AS A FUNCTION OF SHOCK LEVEL

Jian Feng Xu¹, Yutaka Okazaki², Frank E. Talke¹, ¹*CMRR, University of California at San Diego, United States of America*, ²*Sony Corporation, Japan*

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**Session FT
Magnetic Actuators**

T. Mizuno

Shinshu University

S. Yamada

Kanazawa University

FT-01 DYNAMIC DRIVE ANALYSIS THROUGH BASE SPEED DETERMINATION FOR OPTIMUM CONTROL BOUNDARY IN PMLSM WITH SELF LOAD

Won Bum Jang, Seok Myeong Jang, Dae Joon You, *Dept. of Electrical Engineering, Chungnam National University, Republic of Korea*

- FT-02 A SET OF EXPERIMENTS AND TEST RIG TO FULLY CHARACTERIZE LINEAR PM OSCILLATORY MACHINES**
 Lucian Tutelea¹, Myung Chin Kim², Tae-Heoung Kim², Ju Lee², Ion Boldea¹, ¹*University of Politehnica Timisoara, Romania*, ²*Hanyang University, Republic of Korea*
- FT-03 CHARACTERISTIC CALCULATION OF FLUX CONCENTRATION TYPED LOA**
 Ki-Bong Jang, Tae Heoung Kim, Seung-Bin Lim, Ju Lee, *Department of Electrical Engineering, Hanyang University, Republic of Korea*
- FT-04 DESIGN AND EXPERIMENTAL VERIFICATION OF LINEAR SYNCHRONOUS RELUCTANCE MOTOR**
 Seok Myeong Jang, Ji Hoon Park, Jeong Ki Kwon, Jang Young Choi, Han Wook Cho, Won Bum Jang, *Dept. of Electrical Engineering, Chungnam National University, Republic of Korea*
- FT-05 RELUCTANCE NETWORK METHOD BASED DYNAMIC MODEL OF RADIAL ACTIVE MAGNETIC BEARINGS**
 Riku Pollanen, Janne Nerg, Olli Pyrhonen, *Dept. of Electrical Engineering, Lappeenranta University of Technology, Finland*
- FT-06 ANALYSIS OF FLAT-TYPE VIBRATION MOTOR FOR MOBILE PHONE**
 Sung Hong Won, Ju Lee, *Dept. of Electric Eng., Hanyang University, Republic of Korea*
- FT-07 EVALUATION OF THE NORMAL FORCE OF A PLANAR ACTUATOR**
 Marilia Amaral da Silveira, Aly Ferreira Flores Filho, Roberto Petry Homrich, *Federal University of Rio Grande do Sul, Brazil*
- FT-08 TURNING PERFORMANCE OF FISH-TYPE MICROROBOT DRIVEN BY EXTERNAL MAGNETIC FIELD**
 Masahiro Tomie, Atsushi Takiguchi, Takashi Honda, Jiro Yamasaki, *Dept. of Applied Science for Integrated System Eng., Kyushu Institute of Technology, Japan*
- FT-09 MICROPUMP WITH MAGNETIC MICROMACHINE**
 Shin Ichi Hisatomi, Aya Yamazaki, Masahiko Sendoh, Shigeto Agatsuma, Kazushi Ishiyama, Ken-ichi Arai, *Research Institute of Electrical Communication, Tohoku University, Japan*
- FT-10 FABRICATION OF SPIRAL TYPE MAGNETIC MICROMACHINE FOR TRAILING A WIRE**
 Kenji Kikuchi, Aya Yamazaki, Masahiko Sendoh, Kazushi Ishiyama, Ken-ichi Arai, *Tohoku University, Japan*

- FT-11 WIRELESS MAGNETIC MICRO-MACHINE OF PLANAR STRUCTURE WITH MAGNETIC THIN FILM**
 Aya Yamazaki, Masahiko Sendoh, Kazushi Ishiyama, Ken-ichi Arai, *Research Institute of Electrical Communication, Tohoku University, Japan*
- FT-12 WIRELESS-TYPE MAGNETIC MICRO-ACTUATOR CAPABLE OF MOVEMENT IN A PIPE**
 Hiroyuki Yaguchi, Katsuo Turumoto, *Tohoku Gakuin University, Japan*
- FT-13 A 64 kHz LANGEVIN SANDWICH TRANSDUCER FABRICATED USING GIANT MAGNETOSTRICTIVE COMPOSITES**
 Chung Sheung Yung, Ching Yin Lo, Siu Wing Or, *Department of Applied Physics, The Hong Kong Polytechnic University, China*
- FT-14 DESIGN AND IMPLEMENTATION OF A NOVEL 6-DOF PLANAR MAGLEV POSITIONING SYSTEM**
 Yi-Chih Lai, Jia-Yush Yen, *Dept. of Mechanical Engineering, National Taiwan University, Taiwan*

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Session FU

Magnetoresistive Oxides & Halfmetallic Materials

H. Kubota

National institute of advanced industrial science and technology

- FU-01 FABRICATION OF HEUSLER-TYPE Co_2MnAl EPITAXIAL FILMS BY USING SPUTTERING METHOD**
 Yuya Sakuraba¹, Jun Nakata¹, Mikihiro Oogane¹, Hitoshi Kubota², Yasuo Ando¹, Hiroaki Kato¹, Akimasa Sakuma¹, Terunobu Miyazaki¹, *¹Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan, ²NanoElectronics Research Institute, AIST, Japan*
- FU-02 THE CHARACTERISTICS OF MAGNETIC TUNNEL JUNCTIONS USING THE Co_2MnSi HEUSLER ALLOY DEPENDING ON A COMPOSITIONAL VARIATION**
 Keewon Kim¹, Tae-Wan Kim², Soon-Ju Kwon¹, *¹Department of Materials Science and Engineering, POSTECH, Republic of Korea, ²Devices Lab. Samsung Advanced Institute of Technology (SAIT), Republic of Korea*

FU-03 HALF-METAL-POLYMER MAGNETORESISTIVE COMPOSITE

Sanjay Mishra¹, Kartik Ghosh², Joe Losby¹, Ted Kehl², Ann Viano³, ¹*Department of Physics, The University of Memphis, United States of America*, ²*Department of Physics, Astronomy, and Materials Science, Southwest Missouri State University, United States of America*, ³*Department of Physics, Rhodes College, United States of America*

FU-04 MAGNETIC AND ELECTRONIC PROPERTIES OF Fe_{1.2}Ti_{0.8}O₃/Fe₂O₃ BILAYERED FILMS

Tatsuo Fujii, Yusuke Takada, Makoto Nakanishi, Jun Takada, *Dep. Appl. Chem. Okayama Univ., Japan*

FU-05 MAGNETIC AND ELECTRICAL TRANSPORT PROPERTIES OF Fe₃O₄ THIN FILM AND NANOWIRE

Li Hongliang¹, Wu Yihong¹, Teo Kie Leong¹, Guo Zaibing², Wang Shijie³, Veres Teodor⁴, ¹*Dept. of Electrical and Computer Engineering, National University of Singapore, Singapore*, ²*Data Storage Institute, Singapore, Singapore*, ³*Institute of Materials Research and Engineering, Singapore*, ⁴*Industrial Materials Institute, National Research Council, Canada*

FU-06 EFFECTS OF SINTERING TEMPERATURE ON THE MAGNETORESISTANCE AND MICROSTRUCTURE OF THE MIXTURE OF Fe₃O₄ AND Cu-FERRITE POWDER

C. Y. Chou¹, P. C. Kuo¹, Y. D. Yao², C. H. Huang¹, J. W. Chen³, ¹*Institute of Materials Science and Engineering and Center for Nanostorage Research, National Taiwan University, Taiwan*, ²*Institute of Physics, Academia Sinica, Taiwan*, ³*Department of Physics, National Taiwan University, Taiwan*

FU-07 EFFECTS OF IMPURITY DOPING IN CrO₂

Katsuhiko Suzuki¹, Yuji Satoh¹, Makoto Itoh¹, Manabu Matsubara², Anjyu Sawada³, ¹*Miyagi National College of Technology, Japan*, ²*Nihon Ceratec Co. Ltd., Japan*, ³*Dept. of Physics, Kyoto Univ., Japan*

FU-08 MR EFFECTS IN HALF METALLIC CrO₂/MoO₂ MIXTURES

Yoshihide Kimishima, *Dept. of Phys., Graduate School of Engineering, Yokohama National University, Japan*

FU-09 STRUCTURE TUNING AND MAGNETOTRANSPORT PROPERTIES IN THE SYSTEM (Ba_{2-2x}Sr_{2x})FeMoO₆

Jen-Bin Shi, Y. Y. Fan, P. H. Peng, F. C. Jou, C. Y. Lee, *Dept. of Electronics Engineering, Feng-Chia University, Taiwan*

- FU-10 CURRENT-INDUCED ELECTRORESISTANCE IN CMR MATERIALS $\text{La}_{1-x}\text{Ba}_x\text{MnO}_3$**
 Feng-Xia¹, Feng-Xia Hu², Ju Gao², Zhi-He Wang³, ¹*Department of Physics, The University of Hong Kong, China,* ²*Department of Physics, Capital Normal University, China,* ³*Department of Physics, Nanjing University, China*
- FU-11 VARIATION OF TRANSPORT PROPERTY IN MAGNETORESISTIVE POLYCRYSTALLINE $\text{La}_{0.7-x}\text{Ln}_x\text{Pb}_{0.3}\text{MnO}_3$ (Ln=Pr, Nd, Gd, Dy, Sm and Y)**
 San-Lin Young, *Dep. of Electrical Eng., Hsiuping Institute of Technology, Taiwan*
- FU-12 INFRARED-ACTIVE PHONONS OF $\text{HoMn}_{1-x}\text{Co}_x\text{O}_3$ (x= 0-0.8)**
 Feng Gao, Xiao Lin Wang, M. Farhoudi, Roger A. Lweis, Shi Xue Dou, *Institute for Superconducting & Electronic Materials, University of Wollongong, Australia*
- FU-13 ENHANCEMENT OF FERROMAGNETIC INTERACTIONS IN MULTIFERRIC $(\text{Tb}_{1-x}\text{Na}_x)\text{MnO}_3$ SYSTEM**
 T. S. Chan¹, R. S. Liu¹, Y. H. Lien², C. Y. Huang², J. G. Lin³, J. M. Chen⁴, ¹*Department of Chemistry and Center for Nano Storage Research, Taiwan,* ²*Taiwan Spin Research Center, National Chung Cheng University, Taiwan,* ³*Center for Condensed Matter Sciences, National Taiwan University, Taiwan,* ⁴*National Synchrotron Radiation Research Center, Taiwan*
- FU-14 STRUCTURAL AND MAGNETIC PROPERTIES OF $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$**
 Kwon Kuk. Yu¹, Jung Soo. Park¹, Hea Ryon Bae¹, Jea Yong. Kim¹, Young Pak Lee¹, Youn Seoung Lee², Ji Hoon Kang³, ¹*Quantum Photonic Science Research Center and Department of Physics, Hanyang University, Republic of Korea,* ²*Division of information Communication and Computer Engineering, Hanbat National University, Republic of Korea,* ³*Samsung Electronics Co., Ltd. Process Development Team Memory Division, Republic of Korea*
- FU-15 EPR AND RESISTIVITY STUDY OF $\text{Pr}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$ MANGANITES**
 A. N. Ulyanov¹, H. D. Quang¹, N. E. Pismenova², S. C. Yu¹, ¹*Department of Physics, Chungbuk National University, Republic of Korea,* ²*Donetsk Physico-Technical Institute of National Academy of Sciences, Ukraine*
- FU-16 EFFECTS OF VANADIUM DOPING ON THE MAGNETIC PROPERTIES OF $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$**
 KyungHunn Han, Sang Yoon Park, Kwon Kuk Yu, Jung Soo Park, Young Pak Lee, *Quantum Photonic Science Research Center and Department of Physics, Hanyang University, Republic of Korea*

FU-17 MAGNETOCALORIC PROPERTIES OF $\text{La}_{1-x}\text{Pb}_x\text{MnO}_3$ ($x=0.1, 0.2, 0.3$) COMPOUNDS

Seong-Gi Min¹, Kyeong-Sup Kim¹, Seong-Cho Yu¹, Hang-Suk², Seoung-Won Lee³, ¹*Depr. of Physics, Chungbuk Nat'l University, Republic of Korea*, ²*Korea Insitute of Energy research, Republic of Korea*, ³*Dept. of Metallurgy of Engineering, Chungnam Nat'l University, Republic of Korea*

FU-18 INFLUENCE OF A-SITE SUBSTITUTION ON THE EPR PARAMETERS OF $\text{La}_{0.7}\text{A}_{0.3}\text{MnO}_3$ (A=Sr, Ba) COMPOUNDS

T. L. Phan¹, N. V. Khiem², J. Zidanic¹, N. X. Phuc³, S. C. Yu¹, ¹*Department of Physics, Chungbuk National University, Republic of Korea*, ²*Department of Natural Science, Hongduc University, Thanhhoa, Viet Nam*, ³*Institute of Materials Science, Academy of Science and Technology of Vietnam, Hanoi, Viet Nam*

FU-19 MAGNETORESISTANCE AND MAGNETOCALORIC EFFECTS IN $\text{La}_{0.7}\text{Sr}_{0.3}\text{Mn}_{0.8}\text{Ti}_{0.2}\text{O}_3$

N. V. Khiem¹, L. V. Bau¹, T. L. Phan², N. V. Dai³, N. X. Phuc³, S. C. Yu², ¹*Department of Natural Science, Hongduc University, Viet Nam*, ²*Department of Physics, Chungbuk National University, Republic of Korea*, ³*Institute of Materials Science, VAST, Viet Nam*

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Session FV

Ferrites and Other Materials

A. Morisako

Shinshu University

FV-01 MECHANICAL AND MAGNETIC PROPERTIES OF MULTILAYER FERRITE

Juji Kato, Rei Hanamura, Masayuki Inagaki, Yoshio Matsuo, *R&D, FDK Corporation, Japan*

FV-02 ANALYSIS OF POWER LOSS IN Ni-Cu-Zn FERRITES

Etsuo Otsuki, Jeong-Su Kim, *R & D Center, Samwha electronics co.,LTD, Republic of Korea*

FV-03 ACCURATE DETERMINATION OF DIELECTRIC PROPERTIES FOR Mn-Zn TOROIDS

Daming Zhang, Chek Fok Foo, *Nanyang Technological University, Singapore*

FV-04 EFFECTS OF P_2O_5 ADDITION ON MANGANESE ZINC FERRITES

Hua Su, Huai Wu Zhang, Xiao Li Tang, Xubo Dai, *Dept. of Micro-Electronics and Solid-Electronics, University of Electronic Science and Technology, China*

FV-05 A CALCULATION OF EXCHANGE INTERACTIONS AND ELECTRONIC STRUCTURE OF NICKEL FERRITE

Xu Zuo¹, Shao Lin Yan¹, Bernardo Barbiellini², Vincent G. Harris³, Carmine Vittoria³, ¹College of Information Technical Science, Nankai University, China, ²Physics Department, Northeastern University, United States of America, ³Department of Electrical and Computer Engineering, Northeastern University, United States of America

FV-06 FABRICATION TECHNIQUE FOR OVER 10 MICRONS THICK FERRITE PARTICULATE FILM AT ROOM TEMPERATURE

Shuichiro Hashi¹, Nobuo Takada¹, Kazuhiro Nishimura², Osamu Sakurada¹, Shunji Yanase¹, Yasuo Okazaki¹, Mitsuteru Inoue², ¹Dept. of Materials Science & Technology, Gifu University, Japan, ²Dept. of Electrical & Electronic Engineering, Toyohashi University of Technology, Japan

FV-07 EFFECT OF Cu ION ON THE FORMATION AND MAGNETIC PROPERTIES OF NANOCRYSTALLINE MAGNETITE PREPARED IN AN AQUEOUS SOLUTION

Taegyung Ko¹, Seung Han Hyun¹, Hyeon Yoon², Kyusuk Han¹, Jae-Hee Oh¹, ¹School of Materials Science and Engineering, Inha University, Republic of Korea, ²Hazardous Substances Research Team, Korean Basic Sciences Institute, Republic of Korea

FV-08 EFFECT OF ORGANIC MOLECULES ABSORPTION IN THE MAGNETIC PROPERTIES OF IRON OXIDE NANOPARTICLES

Dimitrios Niarchos, Panagiotis Dallas, Petridis Dimitrios, Institute Of Materials Science NRSC Demokritos, 15310 Agia Paraskevi Athens, Greece

FV-09 EVOLUTION OF MAGNETIC AND OPTICAL PROPERTIES IN SPINEL FERRITE $\text{Fe}_x\text{Co}_{3-x}\text{O}_4$ THIN FILM

Kwang Joo¹, Young Ran Park¹, Geun Young Ahn², Chul Sung Kim², Jae Yun Park³, ¹Department of Physics, Konkuk University, Republic of Korea, ²Department of Physics, Kookmin University, Republic of Korea, ³Department of Materials Science and Engineering, University of Incheon, Republic of Korea

FV-10 LOW TEMPERATURE SINTERING OF HEXAGONAL FERRITES FOR PREPARATION OF AN ULTRAHIGH FREQUENCY CHIP INDUCTOR

Osamu Kimura¹, Kazuo Shoji², Kouji Kikuhara³, Hiroshi Maiwa³, ¹Colobolative Research Center, Ashikaga Institute Of Technology, Japan, ²Dept. of Electrical and Electronic Engineering, Ashikaga Institute of Technology, Japan, ³Dept. of Materials Science and Engineering, Shonan Institute of Technology, Japan

**FV-11 MOLECULAR DYNAMICS STUDY OF Bi
SUBSTITUTION LIMIT IN YIG**

Tae-Youb Kim¹, Yohtaro Yamazaki², Masanori Abe¹, Teruyoshi Hirano¹, ¹*Dept. of Physical Electronics, Tokyo Institute of Technology, Japan*, ²*Dept. of Innovative and Engineered Materials, Tokyo Institute of Technology, Japan*

**FV-12 INVESTIGATION OF THE MAGNETIC
AFTEREFFECTS IN Ti-DOPED YIG**

Carlos Torres¹, Arnaldo Gonzalez Arias², Pablo Hernandez-Gomez¹, C.O. Kim³, K. Hisatake³, D. J. Kim³, ¹*Dpto. Electricidad y Electronica, Universidad de Valladolid, Spain*, ²*Dpto. Fisica Aplicada, Universidad de La Habana, Cuba*, ³*Research Center for advanced Magnetic Materials, Chungnam National University, Republic of Korea*

**FV-13 SYNTHESIS AND MOSSBAUER STUDIES OF
TbFe_{1-x}Mn_xO₃ NANOPARTICLES**

Bok Yeon Kum, Sung Yong An, Chul Sung Kim, *Dept. of Physics, Kookmin University, Republic of Korea*

**FV-14 STRUCTURAL AND MAGNETIC PROPERTIES OF
Fe_xCr_xO₄ FILMS GROWN ON MgO(001) BY
MOLECULAR BEAM EPITAXY**

C.C. Huang, D.S. Lee, G. Chern, *Dept. of Physics, National Chung Cheng University, Taiwan*

Apr. 7

Event Hall

13:30-17:00

Session FW

Patterned Nanostructures II

K. Rhie

Korea University

N. Inaba

Yamagata University

**FW-01 DOMAIN WALL DEVICE OF PERMALLOY
SUBMICRON HALF-RING IN SERIES WIRE**

Chwen. Yu¹, Y. Liou¹, S.F. Lee¹, E.W. Huang¹, D.C. Chen², K.W. Cheng¹, Y.D. Yao¹, C.R. Chang³, ¹*Institute of Physics, Academia Sinica, Taiwan*, ²*Dept. of Materials Science & Engineering, National Chiao Tung University, Taiwan*, ³*Dept. of Physics, National Taiwan University, Taiwan*

FW-02 SHAPE EFFECTS IN THE FERROMAGNETIC RESONANCE OF NANOSIZE RECTANGULAR PERMALLOY ARRAYS

Martha Pardavi-Horvath¹, Caroline A Ross², Robert D McMichael³, ¹*Dept. Electrical and Comp. Engineering, George Washington University, United States of America*, ²*Dept. Materials Science and Engineering, Massachusetts Institute of Technology, United States of America*, ³*Metallurgy Division, National Inst. of Standards and Technology, United States of America*

FW-03 MAGNETIZATION PROCESS OF HIGH ANISOTROPY CoPt NANOSIZED DOTS

Nobuaki Kikuchi¹, Rogelio Murillo¹, Cock Lodder¹, Kaname Mitsuzuka², Takehito Shimatsu², ¹*SMI, MESA, University of Twente, Netherlands*, ²*RIEC, Tohoku University, Japan*

FW-04 MICROMAGNETICS AND GALVANOMAGNETIC EFFECT IN PERMALLOY HONEYCOMB NANONETWORK

Masaaki Tanaka¹, Kisho Kaneko¹, Eiji Saitoh¹, Hideki Miyajima¹, Takehiro Yamaoka², ¹*Dept. of Physics, Keio University, Japan*, ²*SII NanoTechnology Inc., Japan*

FW-05 DEMAGNETIZING FIELD EFFECT ON THE MAGNETIZATION REVERSAL PROCESS OF COBALT NANOMAGNETS

Yun Song Huang¹, Navab Singh², Adekunle O. Adeyeye¹, ¹*Information Storage Materials Laboratory, Dept. of Electrical and Computer Engineering, National University of Singapore, Singapore*, ²*Institute of Microelectronics, Singapore*

FW-06 MAGNETIC DOMAIN STRUCTURE OF MICRO-PATTERNED PtMn/NiFe EXCHANGE BIAS BILAYERS

K. Potzger¹, L. Bischoff¹, M. O. Liedke², B. Hillebrands², M. Rickart³, P. Freitas³, J. McCord⁴, J. Fassbender¹, ¹*Forschungszentrum Rossendorf, Germany*, ²*Fachbereich Physik, TU Kaiserslautern, Germany*, ³*INESC MN, Portugal*, ⁴*Leibniz Institute for Solid State and Materials Research IFW Dresden, Germany*

FW-07 MAGNETIC PROPERTIES AND DOMAIN FORMATION IN AMORPHOUS FILMS ANISOTROPY PATTERNED BY ION IRRADIATION

J. McCord¹, J. Fassbender², M. Frommberger³, M.O. Liedke², R. Schaefer¹, E. Quandt³, ¹*Leibniz Institute for Solid State and Materials Research - IFW Dresden, Germany*, ²*Institut fuer Ionenstrahlphysik und Materialforschung - FZ Rossendorf, Germany*, ³*Research Center CAESAR, Germany*

FW-08 30nm-SCALE-FABRICATION OF MAGNETIC TUNNEL JUNCTIONS USING ELECTRON BEAM ASSISTED CVD HARD MASKS

Shinji Isogami¹, Masakiyo Tsunoda¹, Migaku Takahashi², ¹*Dept. of Electronic Engineering, Tohoku University, Japan*, ²*New Industry Creation Hatchery Center, Tohoku University, Japan*

FW-09 NON-LOCAL VOLTAGE SIGNAL FOR NON-COLLINEAR MAGNETIZATION

Jaroslav Hamrle¹, Takashi Kimura¹, Yoshichika Otani², ¹*FRS, RIKEN, Japan*, ²*ISSP University of Tokyo, Japan*

FW-10 MAGNETIC PROPERTIES IN EPITAXIAL L1₀ FePt DOT ARRAYS

Takeshi Seki¹, Toshiyuki Shima¹, Kay Yakushiji¹, Koki Takanashi¹, Guo Q. Li², Syunji Ishio², ¹*Institute for Materials Research, Tohoku Univ., Japan*, ²*Venture Business Laboratory, Akita Univ., Japan*

FW-11 STUDY ON MICRO-FABRICATION PROCESSES IN CoFeB/MgO/CoFeB MAGNETIC TUNNEL JUNCTIONS

Hiroki Maehara¹, Tomoaki Osada¹, Mihoko Doi¹, David D. Djayaprawira¹, Yoshimitsu Kodaira¹, Naoki Watanabe¹, Hitoshi Kubota², Akio Fukushima², Shinji Yuasa², Koji Ando², ¹*Anelva Corporation, Japan*, ²*National Institute of Advanced Industrial Science and Technology (AIST), Japan*

Apr. 7

Event Hall

13:30-17:00

Session FX

Shielding and Magnetic Particles

K. Yamazaki

Takenaka Corporation

FX-01 PORTABLE COMPREHENSIVE MAGNETIC SHIELDING CYLINDER FOR WEAK MAGNETIC FIELD SENSOR TESTING IN AN ISLAND FREE OF AC NOISE

Xiao Ping Li¹, Wu Chun Ng¹, Jie Fan¹, Victor Vvedensky², Alexander Getman³, ¹*Dept of Mechanical Engineering, National University of Singapore, Singapore*, ²*Kurchatov Institute, Moscow, Russian Federation*, ³*Faculty of Physics, Moscow State University, Russian Federation*

FX-02 PROPOSAL AND THEORETICAL EVALUATION OF THE ACTIVE SHIELD WITH SELF-TUNABLE LOOP-CURRENT ARRAY

Konrad Goleman, Ichiro Sasada, *Kyushu University, Japan*

- FX-03 THE EFFECT OF MAGNETIC SHAKING ON NON-ORIENTED SILICON STEELS**
 Kunihisa Tashiro, Mizuki Nagano, Takayuki Kimura, Ichiro Sasada, *Kyushu University, Japan*
- FX-04 A LOW-COST MAGNETIC SHIELD MADE FROM NON-ORIENTED SILICON STEEL**
 Kunihisa Tashiro, Ichiro Sasada, *Kyushu University, Japan*
- FX-05 ACTIVE MAGNETIC SHIELDING WITH A MAGNETIC FIELD SENSOR**
 Tetsuya Yamamoto, Toshikatsu Sonoda, Kiyotaka Tanaka, *Kinki University, Japan*
- FX-06 INCREMENTAL PERMEABILITY OF MU-METAL IN LOW MAGNETIC FIELDS FOR DESIGN OF MULTI-LAYER-TYPE OF MAGNETICALLY-SHIELDED ROOMS**
 Keita Yamazaki¹, Kazuo Kato¹, Kazuhiro Muramatsu², Akira Haga³, Koichiro Kobayashi⁴, Kiyotaka Kamata⁵, Koji Fujiwara⁶, Takao Yamaguchi⁷, *¹Research & Development Institute, Takenaka Corporation, Japan, ²Dept. of Electrical and Electronic Eng., Saga Univ, Japan, ³Dept. of Electrical Eng. and Information Technology, Tohoku Gakuin University, Japan, ⁴Dept. of Welfare Eng., Iwate University, Japan, ⁵Institute of National Colleges of Technology, Japan, Japan, ⁶Dept. of Electrical and Electronic Eng., Okayama University, Japan, ⁷Daido Steel Co., Ltd., Japan*
- FX-07 MAGNETORHEOLOGY OF SYNTHESIZED CORE-SHELL STRUCTURED NANOPARTICLE**
 Hyoung Jin Choi¹, I. B. Jang¹, J. Y. Lee¹, A. Pich², S. Bhattacharya², H. J. Alder², *¹Dept. of Polymer Sci. and Eng., Inha University, Republic of Korea, ²Inst. of Macromol. Chem. and Textile Chem., Dresden, Germany*
- FX-08 DECOMPOSITION OF ORGANIC SUBSTANCES USING MAGNETIC TITANIA PHOTOCATALYST PARTICLES**
 Shuntaro Kurinobu¹, Ken-ichi Tsurusaki², Mitumasa Kimata³, Masahiro Hasegawa³, *¹Dept. of Electronic and Electrical Engineering, Fukuyama University, Japan, ²Dept. of Environment and Information Science, Fukuyama University, Japan, ³Dept. of Chemistry and Chemical Engineering, Yamagata University, Japan*
- FX-09 THE SIMULATION OF FORCES ACTING ON PARTICLES AND THEIR TRAJECTORIES IN THE SURROUNDING OF THE ELLIPTIC CROSS-SECTION COLLECTOR IN MATRIX SEPARATOR**
 Ryszard Goleman, *Faculty of Electrical Engineering and Computer Science, Lublin University of Technology, Poland*

**FX-10 PREPARATION OF MAGNETIC NANOPARTICLES FOR
MAGNETIC FLUID HYPERTHERMIA**

Takashi Atsumi¹, Balachandran Jeyadevan¹, Yoshinori Sato¹,
Kazuchika Tamura², Setsuya Aiba³, Kazuyuki Tohji¹, ¹*Dept. of
Environmental studies, Tohoku University, Japan,* ²*Dept. of
Dental Medicine, Hokkaido University, Japan,* ³*Dept. Medicine,
Tohoku University, Japan*

**FX-11 RESPONSIVENESS OF FREE SURFACE FLOW TO M-
EMS EXCITING FREQUENCY**

Shoji Sato¹, Keisuke Fujisaki², ¹*Ohita Setubi Sekkei Corp.,
Japan,* ²*Environmental & Process Technology Center, Nippon
Steel Corp., Japan*

**FX-12 DOWNWARD FLOW DIFFUSION AND MENISCUS
FLOW BY ELECTROMAGNETIC STIRRING**

Keisuke Fujisaki¹, Yasuji Tomizawa², ¹*Environment & Process
Technology Center, Nippon Steel Corp., Japan,* ²*Hirohata
Branch, Taihei Kogyo Corp., Japan*

Apr. 7

Room 141/142

**Session FZ
Town Meeting**

M. Abe

Tokyo Institute of Technology

***FZ-01 NEW APPLICATIONS OF MAGNETISM**

18:00 Koichi Kitazawa, *Japan Science and Technologh Agency, Japan*

Session GA
Symposium on Spin Electronics Technology

K. Ando

National Institute of Advanced Industrial Science and
Technology

Y. Otani

Institute for Solid State Physics, University of Tokyo /
Frontier Research System, RIKEN (The Institute of Physical
and Chemical Research)

***GA-01 COHERENT SPIN-DEPENDENT TUNNELING IN
9:30 MAGNETIC TUNNEL JUNCTIONS WITH MgO(001)
TUNNEL BARRIER**

Shinji Yuasa¹, Hitoshi Kubota¹, Akio Fukushima¹, Taro
Nagahama¹, Toshikazu Katayama¹, Yoshishige Suzuki², Koji
Ando¹, ¹*NanoElectronics Research Institute, National Institute
of Advanced Industrial Science and Technology (AIST), Japan,*
²*Osaka University, Japan*

***GA-02 THEORY OF TUNNELING MAGNETORESISTANCE
10:00 FOR EPITAXIAL SYSTEMS**

W. H. Butler^{1,2}, X.-G. Zhang², M. Chshiev¹, S. Vutukuri¹, T. C.
Schulthess², ¹*MINT Center, University of Alabama, United
States of America, Tuscaloosa,* ²*Computer Science and
Mathematics Division, ORNL, United States of America*

***GA-03 SPIN-TRANSFER IN MAGNETIC METALLIC
10:30 NANOPILLARS**

Andrew D. Kent, *Department of Physics, New York University,
United States of America*

***GA-04 CURRENT INDUCED MAGNETIZATION REVERSAL
11:00 IN SEMICONDUCTORS**

Hideo Ohno, M. Yamanouchi, D. Chiba, F. Matsukura, *Tohoku
University, Japan*

***GA-05 THEORETICAL ASPECTS ON COHERENT
11:30 TUNNELING**

Stuart S. P. Parkin, *IBM, United States of America*

***GA-06 SPIN DEVICES FOR INTEGRATED CIRCUITS**

12:00 M. Tanaka, S. Sugahara, *Department of Electronic
Engineering, The University of Tokyo, Japan*

Session GB

Advanced Perpendicular Recording Media

Y. Hosoe

Hitachi Ltd.

GB-01 NEW PERPENDICULAR MEDIA BY*9:30 ENGINEERING THE THERMAL STABILITY AND WRITING CAPABILITY SEPARATELY**

Jian-Ping Wang, Weikang Shen, Jian Min Bai, Nadia M. Khan,
*MINT Center & Electrical and Computer Engineering
Department, University of Minnesota, United States of America*

**GB-02 MICROSTRUCTURE IMPROVEMENT OF THIN Ru
10:00 UNDERLAYER FOR CoCrPt-SiO₂ GRANULAR
PERPENDICULAR MEDIA**

Ryoichi Mukai, Takuya Uzumaki, Atsushi Tanaka, *Advanced
Magnetic Recording Laboratory, Fujitsu Laboratories Ltd.,
Japan*

**GB-03 STACKED CoCrPt:SiO₂ LAYERS FOR
10:15 PERPENDICULAR RECORDING MEDIA**

S.N. Piramanayagam, Jian Zhong Shi, Hai Bao Zhao, Chee
Shong Mah, Jun Zhang, *Data Storage Institute, Singapore,
Singapore*

**GB-04 Ru/Ru-OXIDE INTERLAYER FOR CoCrPtO
10:30 PERPENDICULAR RECORDING MEDIA**

Unoh Kwon¹, Robert Sinclair¹, E.M.T. Velu², Sudhir Malhotra²,
Gerardo Bertero², ¹*Dept. of Materials Science and Engineering,
Stanford University, United States of America,* ²*Komag Inc.,
United States of America*

**GB-05 CoPtCr-SiO₂ PERPENDICULAR MEDIA WITH THE
10:45 HIGH ORDER ENERGY TERM OF MAGNETIC
ANISOTROPY FOR HIGH DENSITY RECORDING**

Takehito Shimatsu¹, Hideo Sato¹, Tadaaki Oikawa¹, Kaname
Mitsuzuka¹, Yuki Inaba¹, Hajime Aoi¹, Hiroaki Muraoka¹,
Yoshihisa Nakamura¹, Osamu Kitakami², Satoshi Okamoto²,
¹*Research Institute of Electrical Communication, Tohoku
University, Japan,* ²*Institute of Multidisciplinary Research for
Advanced Material, Tohoku University, Japan*

**GB-06 PERPENDICULAR RECORDING CoPtCrO
11:00 COMPOSITE MEDIA WITH PERFORMANCE
ENHANCEMENT CAPPING LAYER**

Gunn Choe, Min Zheng, B. Ramamurthy Acharya, E. Noel
Abarra, *MMC Technology, United States of America*

**GB-07 OPTIMIZATION OF EXCHANGE SPRING
11:15 PERPENDICULAR RECORDING MEDIA**

Dieter Suess, Thomas Schrefl, Markus Kirschner, Gino Hrkac,
Josef Fidler, *Vienna University of Technology, Institute of Solid
State Physics, Austria*

**GB-08 GENERALIZED δ HC-METHOD FOR THE
11:30 DETERMINATION OF INTRINSIC SWITCHING FIELD
DISTRIBUTIONS IN PERPENDICULAR MEDIA**

Andreas Berger¹, Byron Lengsfeld¹, Yoshihiro Ikeda¹, Yun-Hao Xu², Eric E. Fullerton¹, ¹*San Jose Research Center, Hitachi Global Storage Technologies, United States of America*, ²*Department of Electrical and Computer Engineering, University of Minnesota, United States of America*

**GB-09 REDUCTION OF GRAIN SIZE OF Co/Pd
11:45 MULTILAYERED MEDIA ON Pd SEEDS WITH
CONTROLLED MORPHOLOGY BY
ELECTROCHEMICAL PROCESS**

Jun Kawaji¹, Mutsumi Tanaka¹, Koji Kimura¹, Toru Asahi¹, Takayuki Homma¹, Toshihiro Tsumori², Tetsuya Osaka¹, ¹*Graduate school of Science and Engineering, Waseda University, Japan*, ²*Shin-Etsu Chemical Co., Ltd., Japan*

**GB-10 MATERIAL DEVELOPMENT OF NON-
12:00 FERROMAGNETIC ELEMENT BY DIFFUSION
ANALYSES FOR CoCrPt POST-ANNEALED
PERPENDICULAR MEDIA**

Norikazu Itagaki, Shin Saito, Migaku Takahashi, *Dept. of Electronic Engineering, Tohoku University, Japan*

**GB-11 TILTED MAGNETIZATION IN Cr/CoCrPt THIN FILM
12:15 RECORDING MEDIA**

Antony Ajan, A. Inomata, W. Yamagishi, *Advanced Magnetic Recording Laboratory, Fujitsu Laboratories, Ltd., Japan*

Apr. 8

Room 234

Session GC

Coding and Recording Channels

P.H. Siegel

University of California, San Diego

***GC-01 ADVANCED CHANNEL DETECTION AND
9:30 ITERATIVE DECODING FOR PERPENDICULAR
RECORDING**

Weijun Tan, Haitao Xia, J. R. Cruz, *The University of Oklahoma, United States of America*

**GC-02 TURBO EQUALIZATION UTILIZING SOFT
10:00 DECISION FEEDBACK**

Farshid Rafiee Rad, Jaekyun Moon, *Dept. of Electrical and Computer Engineering, Univ. of Minnesota, United States of America*

- GC-03 BEYOND PRML: LINEAR-COMPLEXITY TURBO
10:15 EQUALIZATION USING THE SOFT-FEEDBACK
EQUALIZER**
Elizabeth Chesnutt¹, Renato R. Lopes², John R. Barry¹, ¹*Georgia
Institute of Technology, United States of America*, ²*University of
Campinas, Brazil*
- GC-04 SOFT-OUTPUT DETECTOR FOR PARTIAL-
10:30 RESPONSE CHANNELS USING VECTOR
QUANTIZATION**
Brian M. Kurkoski¹, Paul H. Siegel², Jack K. Wolf², ¹*Dept. of
Information Engineering, University of Electro-
Communications, Japan*, ²*Center for Magnetic Recording
Research and Dept. of Electrical and Computer Engineering,
Univ. of California San Diego, United States of America*
- GC-05 A NEW PERFORMANCE EVALUATION TECHNIQUE
10:45 FOR ITERATIVELY DECODED MAGNETIC
RECORDING SYSTEMS**
Naveen Mysore¹, Mehmet Akcakaya¹, Jan Bajcsy¹, Hisashi
Kobayashi², ¹*Dept. of Electrical and Computer Engineering,
McGill University, Canada*, ²*Dept. of Electrical Engineering,
Princeton University, United States of America*
- GC-06 FIELD PROGRAMMABLE GATE ARRAY-BASED
11:00 INVESTIGATION OF THE ERROR FLOOR OF LOW
DENSITY PARITY CHECK (LDPC) CODES FOR
MAGNETIC RECORDING CHANNEL**
Ling Yan Sun¹, Hongwei Song², B.V.K. Vijaya Kumar¹, Zak
Keim², ¹*ECE Department, Carnegie Mellon University, United
States of America*, ²*Agere Systems, United States of America*
- GC-07 AN EFFECTIVE ERROR CORRECTION USING A
11:15 COMBINATION OF ALGEBRAIC GEOMETRIC CODES
AND PARITY CODES FOR HDD**
Seiichi Mita¹, Hajime Matsui¹, Masaharu Kondo², ¹*Toyota
Technological Institute, Japan*, ²*Storage Technology Research
Center, Hitachi, Ltd., Japan*
- GC-08 A NEW k-CONSTRAINT STRATEGY COMBINED
11:30 WITH POST-VITERBI PROCESSING FOR
PERPENDICULAR RECORDING**
Jihoon Park, Jaekyun Moon, *Dept. of Electrical and Computer
Engineering, University of Minnesota, United States of America*
- GC-09 LOW-DENSITY PARITY-CHECK CODES WITH
11:45 VARIABLE RATE AND RANDOMIZED CONSTRAINTS
FOR ADVANCED MAGNETIC TAPE RECORDING**
Zong Wang Li, Jin Xie, B.V.K. Vijaya Kumar, *Data Storage
Systems Center (DSSC), Carnegie Mellon University, United
States of America*

**GC-10 ROBUSTNESS OF PER-SURVIVOR ITERATIVE
12:00 TIMING RECOVERY IN PERPENDICULAR
RECORDING CHANNELS**

Piya Kovintavewat¹, John R. Barry², M. Fatih Erden³, Erozan M. Kurtas³, ¹*Faculty of Science and Technology, Nakhon Pathom Rajabhat University, Thailand*, ²*Dept. of Electrical and Computer Engineering, Georgia Institute of Technology, United States of America*, ³*Channels Dept., Seagate Technology, United States of America*

**GC-11 OPTIMAL TRAINING SYMBOL PLACEMENT FOR
12:15 FREQUENCY ACQUISITION ON MAGNETIC
RECORDING CHANNELS**

Aravind R. Nayak¹, John R. Barry², Steven W. McLaughlin², ¹*Agere Systems, United States of America*, ²*School of ECE, Georgia Institute of Technology, United States of America*

Apr. 8

Room 224

Session GD

Exchange Biasing and Fast Switching I

R. Chantrell

Physics Department, York University

***GD-01 TUNNELING OF SPIN WAVES THROUGH A
9:30 MAGNETIC FIELD INHOMOGENEITY**

Burkard Hillebrands¹, Alexandr Serga¹, Alexander Andre¹, Vladislav E. Demidov¹, Mikhail P. Kostylev¹, Sergej O. Demokritov², Andrei N. Slavin³, ¹*Technische Universitaet Kaiserslautern, Germany*, ²*Institut fuer Angewandte Physik, Westfaelische Wilhelms-Universitaet Muenster, Germany*, ³*Department of Physics, Oakland University, United States of America*

GD-02 MAGNETIZATION SWITCHING DYNAMICS

**10:00 DEPENDING ON AS-PATTERNED MAGNETIZATION
STATE IN MAGNETIC THIN FILM ELEMENTS**

Byoung C. Choi¹, Y. K. Hong², M. H. Park², H. Han², S. H. Gee², G. W. Donohoe³, ¹*Dept. of Physics & Astronomy, University of Victoria, Canada*, ²*Dept. of Materials Science and Engineering, University of Idaho, United States of America*, ³*Dept. of Electrical and Computer Engineering, University of Idaho, United States of America*

**GD-03 INCREASED MAGNETIC DAMPING OF PERMALLOY
10:15 UPON Cr IMPLANTATION**

J. Fassbender¹, J. McCord², M. Weisheit², R. Mattheis³, ¹*Forschungszentrum Rossendorf, Germany*, ²*Leibniz Institute for Solid State and Materials Research IFW Dresden, Germany*, ³*Institute fuer Physikalische Hochtechnologie Jena e. V., Germany*

GD-04 PHENOMENOLOGICAL DAMPING MODELS AS

10:30 DRIVE TO EQUILIBRIUM

Michael Kraemer, Carl E. Patton, *Department of Physics, Colorado State University, United States of America*

GD-05 SMALL AND LARGE ANGLE PRECESSION IN

10:45 EXCHANGE BIASED BILAYERS

Markus C. Weber¹, Hans Nembach¹, Burkard Hillebrands¹, Juergen Fassbender², ¹*Fachbereich Physik und Forschungsschwerpunkt MINAS, Technische Universitaet Kaiserslautern, Germany*, ²*Institut fuer Ionenstrahlphysik und Materialforschung, Forschungszentrum Rossendorf, Germany*

GD-06 FIELD DYNAMICS AND THERMAL ACTIVATION IN

11:00 EXCHANGE-BIASED Co/Pt MULTILAYERS

Jerome Moritz, Sebastiaan Van Dijken, Steven M. Watts, J.M.D. Coey, *SFI Trinity Nanoscience Laboratory, Physics Department, Trinity College, Ireland*

GD-07 EFFECT OF UNDERLAYER ON FORMATION OF L1₂

11:15 PHASE AND RESULTANT GIANT EXCHANGE ANISOTROPY IN Mn-Ir/Co-Fe BILAYERS

Masakiyo Tsunoda¹, Ken-ichi Imakita¹, Migaku Takahashi², ¹*Dept. of Electronic Engineering, Tohoku University, Japan*, ²*New Industry Creation Hatchery Center, Tohoku University, Japan*

GD-08 INFLUENCE OF LAYERING OF NiO/NiFe ON

11:30 EXCHANGE BIAS

Alka V. Kuanr¹, B. K. Kuanr², ¹*College of Applied Science for Women, Delhi University, India*, ²*Physics Department, University of Colorado at Colorado Springs, United States of America*

GD-09 LASER ANNEALING IN EXCHANGE-BIASED FILMS

11:45 WITH OUT-OF-PLANE AND IN-PLANE MAGNETIC ANISOTROPY

S. D. Choi¹, S. W. Kim¹, D. H. Jin¹, D. K. Yun¹, M. S. Lee¹, J. H. Ahn¹, H. W. Joo¹, K. A. Lee¹, S. S. Lee², D. G. Hwang², ¹*Department of Physics, Dankook University, Republic of Korea*, ²*Department of Computer and Electronic Physics, Sangji University, Republic of Korea*

GD-10 XMCD STUDIES OF (001) ORIENTED NiFe / Mn_{1-x}Pt_x

12:00 EXCHANGE COUPLED BILAYERS

Toshihiko Yamato¹, Taisuke Kume¹, Takeshi Kato¹, Tetsuya Nakamura², Yuji Fujiwara³, Satoshi Iwata⁴, Shigeru Tsunashima¹, ¹*Dept. of Electronics, Nagoya University, Japan*, ²*SPRING-8/JASRI, Japan*, ³*Dept. of Physics Engineering, Mie University, Japan*, ⁴*CCRAST, Nagoya University, Japan*

GD-11 ASYMMETRIC MOTION OF AN EXCHANGE-BIASED

12:15 MAGNETIC DOMAIN WALL IN MAGNETIC WIRES

J.L. Menendez¹, D. Ravelosona¹, C. Chappert¹, R. Stamps², ¹*Institut d'Electronique Fondamentale, Orsay, France*, ²*University of Western Australia, Australia*

Session GE

Nanostructured Hard Magnetic Materials

M. Katter

Materials and Fundamental Research Permanent Magnets,
VACUUMSCHMELZE GmbH & Co. KG

H.K. Kwon

Pukyong National University

GE-01 COMPACTION OF NANO-STRUCTURED SmCo/Fe**9:30 MAGNETS**

Madhur Sachan, Sara A. Majetich, *Physics Dept., Carnegie Mellon University, United States of America*

GE-02 EVOLUTION OF MAGNETIC MICROSTRUCTURE**9:45 WITH COERCIVITY IN SmCo 2:17 MAGNETS FOR HIGH TEMPERATURE APPLICATION**

O. Gutfleisch, K. Khlopkov, A. Yan, R. Schaefer, K.-H. Mueller, L. Schultz, *IFW Dresden, Germany*

GE-03 EFFECTS OF Nb ADDITION ON STRUCTURAL AND**10:00 MAGNETIC PROPERTIES OF Fe-B/Nd₂Fe₁₄B BASED NANOCOMPOSITE MAGNETS**

Toshio Miyoshi, Hirokazu Kanekiyo, Satoshi Hirosawa, *NEOMAX Co., Ltd, Japan*

GE-04 A COMPARATIVE STUDY OF THE**10:15 MICROSTRUCTURE AND MAGNETIC PROPERTIES OF MELT-SPUN RE₂Fe₁₄B/ -Fe AND RE₂Fe₁₄B/Fe₃B NANOCOMPOSITES**

Zhong Min Chen, David N. Brown, Bao-Min Ma, Peter Campbell, *Magnequench Technology Center, Magnequench Inc., Singapore*

GE-05 MAGNETIC PROPERTIES AND MICROSTRUCTURES**10:30 OF Fe₃B/Pr₂Fe₁₄B-TYPE NANOCOMPOSITE MAGNETS WITH Co AND Cr ADDITIONS**

Cai-yin You, D. H. Ping, K. Hono, *Materials Engineering Lab., National Institute for Materials Science, Japan*

GE-06 MAGNETIC PROPERTIES OF HIGH COERCIVITY**10:45 MELT-SPUN DIDYMIUM-Fe-Co-Nb-V-Tb-B SYSTEM RIBBONS AND THEIR BONDED MAGNETS**

Ko Furusawa, Hiroshi Yamamoto, *School of Science & Technology, Meiji University, Japan*

GE-07 MANIPULATION OF TEMPERATURE DEPENDENCE**11:00 OF COERCIVITY IN ISOTROPIC NANOCRYSTALLINE PERMANENT MAGNETS**

Yasutaka Shigemoto, Satoshi Hirosawa, *Research and Development Division, NEOMAX Co., Ltd., Japan*

**GE-08 MICROSTRUCTURE OF NANOCOMPOSITE R-Fe-B
11:15 DIE-UPSET MAGNETS (R = Pr, Nd) PRODUCED FROM
MECHANICALLY MILLED POWDERS**

Yong Zhang, Alexander M. Gabay, George C. Hadjipanayis,
*Dept. of Physics & Astronomy, University of Delaware, United
States of America*

**GE-09 MAGNETOCRYSTALLINE ANISOTROPY OF
11:30 PARTIALLY ORDERED Fe-Pt NANOPARTICLES
DIRECTLY SYNTHESIZED BY MICROWAVE-POLYOL
METHOD**

Yoshitaka Kitamoto¹, Rumiko Minami¹, Tsukasa Chikata²,
Shunsaku Kato², ¹*Department of Innovative and Engineered
Materials, Tokyo Institute of Technology, Japan,* ²*Research
Institute for Solvothermal Technology, Japan*

**GE-10 EXCHANGE-COUPLED FePt/Fe BILAYERS WITH
11:45 PERPENDICULAR MAGNETISATION**

Francesca Casoli, Franca Albertini, Simone Fabbri, Claudio
Bocchi, Lucia Nasi, Roberta Ciprian, Luigi Pareti, *IMEM -
CNR, Italy*

**GE-11 MAGNETIC PROPERTIES OF Co/(CoNi)Fe₂O₄
12:00 NANOCOMPOSITE MAGNET POWDERS**

Satoshi Sugimoto, Kazuaki Haga, Toshio Kagotani, Koichiro
Inomata, *Dept. of Materials Science, Graduate School of
Engineering, Tohoku University, Japan*

Apr. 8

Room 133/134

Session GF

Magneto-Optic and Other Magnetic Materials/Devices

K. Sato

Tokyo University of Agriculture and Technology

**GF-01 THE FARADAY EFFECT IN THREE-DIMENSIONAL
9:30 OPAL PHOTONIC CRYSTALS**

Alexander V. Baryshev¹, Tsuyoshi Kodama², Kazuhiro
Nishimura², Hironaga Uchida², Mitsuteru Inoue³, ¹*Ioffe Physico-
Technical Institute, Russian Federation,* ²*Toyohashi University
of Technology,* ³*CREST, Japan Science and Technology, Japan*

**GF-02 MAGNETO-OPTIC SPATIAL LIGHT MODULATOR
9:45 MADE BY SELECTIVE AREA GROWTH ON GARNET
MASK REDUCED IN HYDROGEN ATMOSPHERE**

Katsuhiro Iwasaki¹, Tetsu Yamanaka¹, Kazuma Takahashi¹,
Hiromitsu Umezawa¹, Mitsuteru Inoue^{2,3}, ¹*FDK Corporation,
Japan,* ²*Toyohashi University of Technology, Japan,* ³*JST-
CREST, Japan*

- GF-03 THERMAL ANNEALING OF MAGNETO-OPTICAL
10:00 (Cd, Mn)Te WAVEGUIDE FOR WIDER OPERATION
WAVELENGTH RANGE OF OPTICAL ISOLATOR**
Mukul C. Debnath, Vadym Zayets, Koji Ando, *Nanoelectronics
Research Institute, AIST, Japan*
- GF-04 PHASE TRANSITIONS IN SINGLE-CRYSTAL
10:15 Tb₅Si_{2.2}Ge_{1.8}**
Andrew P. Ring¹, Hattie L. Ziegler¹, T. Lagrasso¹, D. Schlagerl¹,
John E. Snyder², David C. Jiles², ¹*Materials and Engineering
Physics Program, Ames Laboratory, United States of America,*
²*Materials Science and Engineering Department, Iowa State
University, United States of America*
- GF-05 LARGE MAGNETOCALORIC EFFECTS AND
10:30 LANDAU COEFFICIENTS OF ITINERANT ELECTRON
METAMAGNETIC La(Fe_xSi_{1-x})₁₃ COMPOUNDS**
Asaya Fujita, Kazuaki Fukamichi, *Dept. of Mater. Sci., Grad.
Schl of Engng, Tohoku Univ., Japan*
- GF-06 MAGNETIC AND MAGNETOCALORIC PROPERTIES
10:45 OF THE INTERMETALLIC COMPOUND TbNiAl**
Niraj K. Singh¹, K. G. Suresh¹, R. Nirmala², A. K. Nigam², S.
K. Malik², ¹*Department of Physics, I.I.T. Bombay, Mumbai,
India,* ²*Tata Institute of Fundamental Research, Mumbai, India*
- GF-07 THE INFLUENCE OF COMPOSITION CHANGE ON
11:00 STRUCTURAL AND MAGNETIC PROPERTIES OF
NON-STOICHIOMETRIC Ni-Mn-Ga ALLOYS**
V. Nong, *Department of Molecular and Material Sciences,
Interdisciplinary Graduate School of Engineering Sciences,
Kyushu University, Japan*
- GF-08 THERMAL EXPANSION AND MAGNETOSTRICTION
11:15 IN Pr₃Ni₂Si₃ COMPOUNDS**
Sang-Hoon Song¹, John E. Snyder¹, Dong Mei Wu², Thomas A.
Lograsso¹, Kevin W. Dennis², R. William McCallum¹, Yuri
Janssen², David C. Jiles¹, ¹*Dept. of Materials Science and
Engineering, Iowa State University, United States of America,*
²*Materials and Engineering Physics Program, Ames
Laboratory, U. S. Dept. of Energy, United States of America*
- GF-09 FERROMAGNETIC AND DIELECTRIC BEHAVIOR
11:30 OF Mn DOPED BaCoO₃**
Tomohiro Inoue, Toshiyuki Matsui, Norifumi Fujimura, Kenji
Morii, *Graduate School of Engineering, Osaka Prefecture
University, Japan*
- GF-10 STRUCTURES, SPIN GLASS AND SPIN STATES IN
11:45 PEROVSKITE GdMn_xCo_{1-x}O₃ (x<=0.5)**
M. Mehdi Farhoudi¹, Xiao Lin Wang², ¹*Institute for
Superconducting Electronic Materials, University of
Wollongong, Australia,* ²*Institute for Superconducting
Electronic Materials, University of Wollongong, Australia*

GF-11 EXCHANGE INTERACTION BETWEEN A

12:00 FERROMAGNETIC SUBSTRATE AND ADSORBED METALLO-PORPHYRIN MOLECULES

Andreas Scheybal¹, Trond Ramsvik², Rolf Bertschinger¹, Magali Vuaroqueaux³, Thomas A. Jung¹, ¹Laboratory for Micro- and Nanostructures, Paul Scherrer Institute, Villingen, Switzerland, ²Swiss Light Source, Paul Scherrer Institute, Villingen, Switzerland, ³L2MP-CNRS, Faculte des Sciences de St Jerome, Marseille, France

GF-12 EVALUATION OF A MICRO MOTOR WITH

12:15 INTEGRATED MSM MATERIAL

Matthias Hahn¹, Emmanouel Pagounis², Hans H. Gatzel¹, ¹Institute for Microtechnology, Hanover University, Germany, ²AdaptaMat Ltd., Finland

Apr. 8

Event Hall

8:30-12:00

Session GP

Magnetic Recording System II

T. Yamaguchi

Hitachi Global Storage Technologies

GP-01 ASYNCHRONOUS INTERPOLATED SERVO DETECTION ALGORITHMS

Viswanath Annampedu¹, Pervez M Aziz², ¹Agere Systems, Read Channel Architecture, United States of America, ²Agere Systems, Serdes Channel Architecture, United States of America

GP-02 ACTUATED SUSPENSIONS WITH ENHANCED DYNAMICS FOR HDD

G. K. Lau¹, H. Du², ¹Delft University of Technology, Netherlands, ²School of MPE, Nanyang Technology University, Singapore

GP-03 MEASUREMENT OF DYNAMIC AZIMUTH OF MOVING MEDIA IN TAPE DRIVES

V. Kartik¹, Richard H. Dee², ¹Department of Mechanical Engineering, Carnegie Mellon University, United States of America, ²Storage Technology Corporation, United States of America

GP-04 ADAPTIVE IMC DESIGN FOR HDD SERVO CONTROL

Qing-Wei Jia¹, Tong-Heng Lee², Ke-Xiu Liu¹, ¹Seagate Technology International, Singapore, ²National University of Singapore, Singapore

GP-05 DROPOUT COMPENSATION BY EQUALIZER SELECTION AND TIMING RECOVERY HANG-UP FOR MAGNETIC TAPE SYSTEMS

Jin Xie, B.V.K. Vijaya, DSSC, ECE Dept., Carnegie Mellon University, United States of America

Session GQ
Sensors, Mostly CPP II

K. Fukuda
TDK Corporation

GQ-01 MR ENHANCEMENT OF CPP-GMR BY CCP-NOL SPACER AND Fe₅₀Co₅₀ MAGNETIC LAYERS

Hitoshi Iwasaki¹, Hideaki Fukuzawa¹, Hiromi Yuasa¹, Koichi Kubo¹, Katsuhiko Koi¹, Tomomi Funayama², Masayuki Takagishi², Yoichiro Tanaka², ¹Corporate R&D Center, Toshiba Corporation, Japan, ²Core Technology Center, Toshiba Corporation, Japan

GQ-02 IN-SITU OBSERVATION STUDY ON NANO CONSTRICTION SPACER NOL FOR CPPGMR BY CONDUCTIVE AFM

Kousaku Miyake, Masato Izumi, Syouhei Kawasaki, Masaaki Doi, Nasashi Sahashi, *Department of Electronic Engineering, TOHOKU University, Japan*

GQ-03 DIRECT OBSERVATION OF A CURRENT-CONFINED-PATH NANO-OXIDE-LAYER STRUCTURE BY THREE-DIMENSIONAL ATOM PROBE

Hideaki Fukuzawa¹, Hitoshi Iwasaki¹, Yoichiro Tanaka², Robert M. Ulfig³, David J. Larson³, ¹Corporate R&D Center, Toshiba Corporation, Japan, ²Core Technology Center, Toshiba Corporation, Japan, ³Imago Scientific Instruments Corporation, United States of America

GQ-04 SPIN DEPENDENT SCATTERING EFFECT IN CPP-GMR WITH CURRENT CONFINED PATH

Hiromi Yuasa¹, Hideaki Fukuzawa¹, Masayuki Takagishi², Hitoshi Iwasaki¹, Yoichiro Tanaka², ¹Toshiba Corporation, Corporate R & D Center, Japan, ²Core Technology Center, Toshiba Corporation, Japan

GQ-05 BREAKDOWN BEHAVIOR OF CPP DEVICES WITH NANO-OXIDE CURRENT SCREENING LAYERS

S. Maat¹, M.J. Carey¹, J.A. Katine¹, J.R. Childress¹, K. Hoshino², K. Watanabe², H. Hoshiya², K. Meguro², K. Nakamoto², ¹San Jose Research Center, Hitachi Global Storage Technologies, United States of America, ²Storage Technology Research Center, Hitachi, Ltd., Japan

GQ-06 SENSING CURRENT DEPENDENCE OF PEAK ASYMMETRY IN CPP-GMR HEADS

Hiroiyuki Katada, Katsumi Hoshino, Nobuo Yoshida, Kaori Suzuki, Katsuro Watanabe, Hiroiyuki Hoshiya, Kazuhiro Nakamoto, *Storage Technology Research Center, Hitachi, Ltd., Japan*

GQ-07 LOW RESISTANCE AND ENHANCED THERMAL AND ELECTRICAL STABILITY OF THE MAGNETIC TUNNEL JUNCTION WITH A Ti-ALLOYED Al-OXIDE BARRIER

Jin-Oh¹, Seong-Rae Lee¹, Hyun-Joon Shin², ¹*Div. of Materials Science and Engineering, Korea University, Republic of Korea,*
²*Pohang Accelerator Laboratory & Department of Physics, Pohang University of Science and Technology, Republic of Korea*

GQ-08 ELEMENT SPECIFIC HYSTERESIS LOOPS OF Co AND Fe IN ANNEALED CoFe/Cu MULTILAYERS

Mark S. Beal¹, Tom P. A. Hase², Sarah M. Thompson¹, Brian K. Tanner², Johannes C. Grabis³, Hartmut Zabel³, Chris H. Marrows⁴, ¹*Dept of Physics, University of York, United Kingdom,* ²*Dept of Physics, University of Durham, United Kingdom,* ³*Ruhr-Universitat Bochum, Germany,* ⁴*Univ Leeds, Sch Phys & Astron, EC Stoner Lab, Leeds, United Kingdom*

GQ-09 REDUCTION OF A COERCIVE FIELD WITHOUT SUBSTANTIAL CURRENT SHUNT BY AN ADDITIONAL CoFeB LAYER IN GMR SPIN-VALVE

Chung Hee Nam, Beong-Ki Cho, *Center for Frontier Materials, Dept. of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Republic of Korea*

GQ-10 STUDY ON BEHAVIORS OF PINNED LAYER BY HIGH FIELD TRANSFER CURVE

Sangmun Oh¹, K. Nishioka², H. Umezaki², H. Tanaka¹, T. Seki¹, S. Sasaki¹, K. Furusawa¹, ¹*Storage Technology Research Center, Hitachi, Ltd., Japan,* ²*Hitachi Global Storage Technologies, Ltd., Japan*

GQ-11 A STUDY OF NOISE EFFECTS DUE TO THE DIODE PROTECTION FOR SHIELD RESISTANCE MEASUREMENT OF GMR RECORDING HEADS

Apirat Siritaratiwat¹, Damrongsak Tongsoomporn², Komkrit Chooruang¹, Nitin Afzulpurkar², ¹*Department of Electrical Engineering, Khon Kaen University, Thailand,* ²*Microelectronic Program, Asian Institute of Technology, Thailand*

GQ-12 PROPERTIES OF SIDE-SHIELDED READ HEADS IN LONGITUDINAL AND PERPENDICULAR RECORDING

Masahiko Hatatani, Yoshio Suzuki, Hiroyuki Katada, Nobuo Yoshida, Katsuro Watanabe, Kazuhiro Nakamoto, *Storage Technology Research Center, Hitachi, Ltd., Japan*

Particulate & Tape, Thin Film Media**N. Abarra**

MMC Tech

GR-01 THE EXAMINATION OF NEWLY DEVELOPED METAL PARTICLE (MP) MEDIA FOR GREATER THAN 3Gbit/in²-RECORDING IN GMR HEAD BASED TAPE SYSTEMS

Noboru Sekiguchi¹, Kikuji Kawakami², Tadashi Ozue², Minoru Yamaga¹, Seiichi Onodera², ¹*Product Development Dept., CM Div., MSNC-RM-company, SONY co., Japan*, ²*Advanced Tape Storage Development Dept., ME Div.,MSNC-RM-company, SONY co., Japan*

GR-02 DEVELOPMENT OF NANOCAP (NANO COMPOSIT ADVANCED PARTICLES) TECHNOLOGY FOR HIGH DENSITY RECORDING

Yuji Sasaki, Naoki Usuki, Kazutaka Matsuo, Mikio Kishimoto, *Development and Technology Division, Hitachi Maxell, Ltd., Japan*

GR-03 PLAYBACK PERFORMANCE OF ULTRA HIGH CAPACITY TAPE MEDIA WITH NANOSIZED SPHERICAL METAL PARTICLES (NANOCAP)

Tetsutaro Inoue¹, Kazuhiko Nakiri¹, Hiroyuki Mitsunashi¹, Makoto Fukumoto¹, Tsugihiko Doi¹, Yuji Sasaki², Mikio Kishimoto², ¹*Advanced Tape Div., Hitachi Maxell, Japan*, ²*Development & Technology Div., Hitachi Maxell, Japan*

GR-04 SYNTHESIS OF NANO-SIZED SPHERICAL BARIUM FERRITE PARTICLES

Sung-Hoon Gee¹, Yang-Ki Hong¹, Fred J. Jeffers², ¹*Dept. of Materials Science and Engineering, United States of America*, ²*Advanced R & D, Iomega Corporation, United States of America*

GR-05 DISTRIBUTION FUNCTIONS OF TWO-Dimensionally Oriented Magnetic Particles

Osamu Kohmoto, Takashi Yamane, Junji Miyoshi, *Dept. of Physics, Okayama University, Japan*

GR-06 CORRELATION OF THERMAL STABILITY AND ANISOTROPY DISTRIBUTION IN DATA STORAGE TAPES PREPARED FROM ULTRA-FINE PARTICLES

Hiroaki Nishino, Hiroshi Yamamoto, *Faculty of Science and Technology, Meiji University, Japan*

GR-07 WRITABILITY ENHANCEMENT USING EXCHANGE SPRING MEDIA

Natacha Supper, Eric E. Fullerton, David T. Margulies, Andreas Moser, Hoa Do, Andreas Berger, *Hitachi, GST San Jose Research Center, United States of America*

GR-08 ROLE OF BOTTOM LAYER IN DOUBLE RECORDING FOR ANTIFERROMAGNETICALLY COUPLED LONGITUDINAL MEDIA

Tokyo Li¹, Daiji Hasegawa², Shin Saito², Hirohisa Ohyama¹, Makoto Imakawa¹, Migaku Takahashi², ¹*Fuji Electric Storage Device Co. Ltd., Japan*, ²*Dept. of Electronic Engineering, Tohoku University, Japan*

GR-09 DUAL LAYER MAGNETIC RECORDING MEDIA: A PATHWAY FOR IMPROVING THE MAGNETIC AND PERFORMANCE CHARACTERISTICS OF THE STORAGE MEDIUM

Ernesto E. Marinero, Hoa Do, Eric E. Fullerton, Manfred Schabes, Alex Taratorin, Hal Rosen, *Hitachi GST San Jose Research Center, United States of America*

GR-10 OBLIQUE ION NANO-TEXTURING TECHNOLOGY FOR LONGITUDINAL RECORDING MEDIA

Kenji Sato, Iwao Okamoto, Yoshito Kitamoto, Shoji Ishida, *Yamagata Fujitsu Ltd., Japan*

GR-11 POISONING OF ORIENTATION RATIO ON NiP-COATED SUBSTRATES

Thomas E. Karis, Xing-Cai Guo, Ernesto Marinero, Bing Yen, Bruno Marchon, *Hitachi GST, United States of America*

GR-12 POSSIBILITY OF CoPtCr-SiO₂ LONGITUDINAL FLEXIBLE DISK MEDIA

Ken-ichi Moriwaki, Kazuyuki Usuki, Makoto Nagao, *Research & Development Lab., Recording Media Products Div., Fuji Photo Film Co., Ltd., Japan*

Apr. 8

Event Hall

8:30-12:00

Session GS

GMR and Current Induced Instabilities II

K. Yagami

Semiconductor Technology Development Group, SSNC,
Sony corp.

GS-01 THICKNESS DEPENDENCE OF INTERLAYER FRINGE FIELD COUPLING IN SUB MICRON NiFe/Cu MULTILAYERED PILLARS

Ming Zhang, Yukio Nozaki, Kimihide Matsuyama, *Dept. of Electronics, Kyushu University, Japan*

- GS-02 INTERFACE INTERMIXING OF CoFe/IrMn AND IrMn/CoFe AND ITS INFLUENCE ON MAGNETORESISTIVE AND EXCHANGE COUPLING**
 Jong Soo Kim, Seong-Rae Lee, *Div. of Materials Science and Engineering, Korea University, Republic of Korea*
- GS-03 CURRENT-PERPENDICULAR-TO-PLANE GIANT MAGNETORESISTANCE IN FePt/Au LAYERED STRUCTURES**
 Takeshi Seki, Seiji Mitani, Kay Yakushiji, Toshiyuki Shima, Koki Takanashi, *Institute for Materials Research, Tohoku Univ., Japan*
- GS-04 PRESSURE DEPENDENCE OF MAGNETORESISTANCE FOR Fe/Cr MULTILAYERS**
 Kazufumi Suenaga¹, Syuhei Higashihara¹, Gendo Oomi¹, Kesami Saito², Seiji Mitani², Koki Takanashi², ¹*Dept. of Physics, Kyushu University, Japan*, ²*Institute for Materials Research, Tohoku University, Japan*
- GS-05 CPP-GMR ENHANCEMENT IN SPIN VALVES BY A THIN Ru LAYER INSERTION**
 Nobuki Tezuka, Shinya Abe, Koichiro Inomata, *Tohoku University, Japan*
- GS-06 MICROMAGNETIC ANALYSIS OF A MAGNETIC DOMAIN WALL IN A NANOCONTACT**
 Takashi Komine¹, Tomohiro Takahashi¹, Satoshi Ishii¹, Ryuji Sugita¹, Tetsuo Muranoi¹, Yasuhiro Hasegawa², ¹*Dept. of Media and Telecomm. Eng., Ibaraki University, Japan*, ²*Saitama University, Japan*
- GS-07 GMR AND MAGNETODYNAMICS OF MnIr SPIN VALVES DEPENDING ON GROWTH ORDER OF FM AND AFM LAYERS**
 Chan-Gyu Lee¹, V.S. Gornakov², Bon-Heun Koo¹, Keesam Shin¹, ¹*School of Nano Advanced Materials Engineering, Republic of Korea*, ²*Institute of Solid State Physics RAS, Russian Federation*
- GS-08 MODIFYING INTERLAYER COUPLING IN CoFe/Bi/Co TRILAYER JUNCTION BY POST-ANNEALING TREATMENTS**
 Jen-Hwa Hsu¹, D. Sahu¹, Zhi-Long Xue¹, A. C. Sun², Cheng-Hsuan Chen³, ¹*Dept. of Physics, National Taiwan University, Taiwan*, ²*Dept. of Material Science & Engineering, National Taiwan University, Taiwan*, ³*Center for Condensed Matter Science, National Taiwan University, Taiwan*

Applications of Soft Magnetic Materials II

S. Tanabe

Advanced Technology R&D Center, Mitsubishi Electric Co.

K. Yamada

Saitama University

GT-01 EFFECTS OF RF NOISE SUPPRESSION BY CARBON COATED PERMALLOY NANORODS ARRAY IN POROUS ANODIC ALUMINUM OXIDE

Ki Hyeon Kim¹, Takashi Kyotani², Masahiro Yamaguchi¹, ¹*Dept. of Electrical and Communication Engineering, Tohoku University, Japan,* ²*Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*

GT-02 CHARACTERISTICS OF RF NOISE SUPPRESSOR USING Fe FILLED IN CARBON NANOTUBE

Ki Hyeon Kim¹, Yung-Am Kim², Masahiro Yamaguchi¹, ¹*Dept. of Electrical and Communication Engineering, Tohoku University, Japan,* ²*Faculty of Engineering, Shinshu University, Japan*

GT-03 APPLICATION OF Co-BASED AMORPHOUS ALLOY RIBBONS WITH VARIOUS THICKNESSES TO A NOISE FILTER

Satake Hirotaka¹, Masaki Nakamura¹, Shinsuke Horikoshi¹, Shiro Kambe¹, Osamu Ishii¹, Yoshihito Yoshizawa², ¹*Yamagata University, Japan,* ²*Advanced Electronics Research Laboratory Hitachi Metals Ltd., Japan*

GT-04 EXPERIMENTAL STUDY OF ELECTROMAGNETIC WAVE ABSORBING CONTROL OF COATING-TYPE MAGNETIC WOOD USING A GROOVING PROCESS

Hideo Oka¹, Yu Kataoka¹, Fukumori Izumida², ¹*Dept. of Electrical & Electronic Engineering, Iwate University, Japan,* ²*Iwate Industrial Research Institute, Japan*

GT-05 EMBEDDED INDUCTOR USING Ni-Zn FERRITE FILM IN POLYMER SUBSTRATE

Seok Bae, Hyung-Mi Jung, Jin-Seok Moon, Yasuhiko Mano, *EMD Lab., Central Research Center, Samsung Electro-Mechanics, Republic of Korea*

GT-06 A SIMPLE PREDICTING METHOD FOR LOSSES OF ELECTRICAL STEEL SHEETS UNDER ARBITRARY INDUCTION WAVEFORM

Shunji Yanase, Hirotaka Kimata, Yasuo Okazaki, Shuichiro Hashi, *Dept. of Materials Science and Technology, Gifu University, Japan*

GT-07 DEVELOPMENT OF GAPPED IRON-CORE TYPE REACTOR USING NEW ADHESIVE COATED GRAIN ORIENTED ELECTROMAGNETIC STEEL SHEETS

Minoru Kuwata¹, Shuichi Nogawa¹, Norio Takahashi², Daisuke Miyagi², Kazutoshi Takeda³, ¹*Nissin Electric Co.,Ltd, Japan*, ²*Okayama University, Japan*, ³*Nippon Steel corporation, Japan*

GT-08 LOSSES OF SILICON STEEL SEGMENT CORES WITH SEVERAL POLE ROTORS

Hisashi Mogi¹, Chikara Kaido², ¹*Steel Research Lab., Nippon Steel Corp., Japan*, ²*Dept. of Appl. Science for Integrated System Engng., Kyushu Inst. of Tech., Japan*

GT-09 CALCULATION OF THE FLUX-LINKAGE CHARACTERISTICS OF A SWITCHED RELUCTANCE MOTOR BY FLUX TUBE METHOD

Nimit K. Sheth, K. R. Rajagopal, *Electrical Engineering Department, Indian Institute of Technology Delhi, New Delhi, India*

GT-10 ANALYSIS OF ELECTROMAGNETIC FORCE DISTRIBUTION ON THE END WINDING FOR MOTOR RELIANCE

Ki-Chan Kim¹, Kab-Jae Lee², Ju Lee¹, ¹*Dept. of Electrical Engineering, Hanyang University, Republic of Korea*, ²*Hyundai Heavy Industries Co., LTD. , Republic of Korea*

GT-11 EVALUATION OF EXPERIMENTAL PERMANENT MAGNET BRUSHLESS MOTOR UTILIZING NEW MAGNETIC MATERIAL FOR STATOR TEETH CORE

Yuji Enomoto¹, Motoya Ito¹, Haruo Koharagi¹, Ryoso Masaki², Shoji Ohiwa³, Chio Ishihara⁴, Masahiro Mita⁵, ¹*Hitachi Research Laboratory, Hitachi,Ltd., Japan*, ²*Hitachi Industrial Equipment Systems Co., Ltd., Japan*, ³*Japan Servo Co., Ltd., Japan*, ⁴*Hitachi Powder Metals Co., Ltd., Japan*, ⁵*Hitachi Metals, Ltd., Japan*

GT-12 APPLICATION OF FINE-GRAINED DOUBLY ORIENTED ELECTRICAL STEEL TO IPM SYNCHRONOUS MOTOR

Toshiro Tomida¹, Naoyuki Sano¹, Shigeharu Hinotani¹, Koji Fujiwara², Hidetoshi Kotera³, Noriyoshi Nishiyama⁴, Yasufumi Ikkai⁴, ¹*Corporate R&D Labs., Simitomo Metal Ind. Ltd., Japan*, ²*Dept. of Electrical and Electronic Engineering, Okayama University, Japan*, ³*Mechanical Engineering Dept., Kyoto University, Japan*, ⁴*Home Appliance & Automotive Motor Division., Motor Company, Matsushita Electric Ind. Co., Japan*

GT-13 MOTOR CORE IRON LOSS ANALYSIS EVALUATING SHRINK FIT AND STAMPING EFFECT BY FINITE ELEMENT METHOD

Keisuke Fujisaki, Ryu Hirayama, Takeshi Kawachi, Shouji Satoh, Chikara Kaidou, Masao Yabumoto, Takeshi Kubota, *Technical Development Bureau, Nippon Steel Corporation, Japan*

Magnetoelastic and Novel Magnetic Materials/Devices**A. Fujita**

Graduate School of Engineering, Tohoku University

**GU-01 A MODEL FOR HYSTERESIS AND
MAGNETOCALORIC EFFECT IN MAGNETIC FIELD
DRIVEN PHASE TRANSFORMATIONS**Vittorio Basso, Carlo P. Sasso, Martino LoBue, Giorgio Bertotti, *IEN Galileo Ferraris, Torino, Italy***GU-02 PHASE TRANSITIONS AND MAGNETIC ENTROPY
CHANGE IN Mn-RICH Ni-Mn-Ga ALLOYS**Franca Albertini¹, Massimo Solzi², Luigi Pareti¹, Antonio Paoluzi¹, Lara Righi³, Elena Villa¹, Stefano Besseghini⁴, ¹*IMEM-CNR, Italy*, ²*Dipartimento di Fisica, Università di Parma, Italy*, ³*Dipartimento di Chimica GIAF, Università di Parma, Italy***GU-03 EFFECT OF BORON ON THE STABILITY, MAGNETIC
AND ELECTRICAL PROPERTIES OF Y_{0.5}Gd_{0.5}Fe₂**J. Arout Chelvane, G. Markandeyulu, *Magnetism and Magnetic Materials Laboratory, Department of Physics, Indian Institute of Technology Madras, Chennai, India***GU-04 PREPARATION OF Sm-Fe GIANT
MAGNETOSTRICTIVE THIN FILMS BY DC
MAGNETRON SPUTTERING**Yoshihito Matsumura¹, Atsushi Kadowaki², Shingo Masuda², Keisuke Takahashi², You Tsukayama², Yoshitake Nishi², ¹*Department of Applied Science, School of Engineering, Tokai University, Japan*, ²*Department of Materials Science, School of Engineering, Tokai University, Japan***GU-05 MAGNETOSTRICTIVE CHARACTERISTICS OF Fe-Al
FILMS FORMED BY ION PLATING PROCESS**Konosuke Muramatsu¹, Noriyoshi Matsuoka¹, Mitsuaki Takeuchi¹, Masahide Morita², Tempei Tanakamaru², Yoshihito Matsumura², ¹*Department of Applied Science, Graduate School of Engineering, Tokai University, Japan*, ²*Department of Applied Science, School of Engineering, Tokai University, Japan***GU-06 AC PERMEABILITY OF FeCoGe/WC/PENOL
MAGNETOSTRICTIVE COMPOSITES**Kwang-Ho Shin¹, Younghak Kim², Sang Ho Lim³, ¹*Dept. of Multimedia Engineering, Kyungsoong University, Republic of Korea*, ²*Dept. of Electrical Engineering, Pukyong National University, Republic of Korea*, ³*Division of Materials Science and Engineering, Korea University, Republic of Korea*

**GU-07 MAGNETIC AND MAGNETOMECHANICAL
PROPERTIES OF TERFENOL-D 2-2 COMPOSITES**

Luis Garcia-Gancedo Garcia¹, Simon Busbridge¹, Stuart Eaton²,
¹*School of Engineering, University of Brighton, Lewes Road,
Brighton, United Kingdom,* ²*QinetiQ, Ively Road, Farnborough,
United Kingdom*

**GU-08 DYNAMIC MAGNETOELASTIC PROPERTIES OF
EPOXY-BONDED TERFENOL-D PARTICULATE
COMPOSITES WITH A PREFERRED [112]
CRYSTALLOGRAPHIC ORIENTATION**

Siu Wing Or¹, Gregory P. Carman², ¹*Department of Applied
Physics, The Hong Kong Polytechnic University, China,*
²*Mechanical and Aerospace Engineering Department,
University of California, Los Angeles, United States of America*

**GU-09 INFLUENCE OF GEOMETRIC FACTORS ON THE
POLARITY OF A REMANENT MAGNETIZATION**

Ivan J. Garshelis¹, Stijn P. L. Tollens², ¹*Magnova,
Inc./MagCanica, Inc., United States of America,* ²*MagCanica,
Inc., United States of America*

**GU-10 SPIN DYNAMICS AT LEVEL CROSSING IN Fe₁₀ AND
Cr₈ MOLECULAR RINGS PROBED BY NMR**

Edoardo Micotti¹, Alessandro Lascialfari¹, Ferdinando Borsa¹,
Claude Berthier², Mladen Horvatic², Marc Henry Julien³,
Andrea Caneschi⁴, Dante Gatteschi⁴, ¹*Department of Physics
"A.Volta" and INFN, Pavia University, Italy,* ²*Grenoble High
Magnetic Field Laboratory, CNRS and MPI-FKF, France,* ³*Lab.
de Spectrometrie Physique, Univ. J.Fourier Grenoble, France,*
⁴*Department of Chemistry and INSTN, Florence University,
Italy*

**GU-11 GIANT M-E EFFECT OF MULTIFERROIC BaTiO₃-
LaMnO₃ CERAMIC COMPOSITES**

Kenichiro Ban, Takeshi Shundo, Nobuaki Nishimura, Manabu
Gomi, *Dept. of Materials Science and Engineering, Nagoya
Institute of Technology, Japan*

**GU-12 MAGNETIC ENTROPY CHANGE IN Mn_{1-x}Fe_{0.9}P_{1-x}Ge_x
COMPOUNDS**

W. Dagula¹, O.Tegus¹, B. Fuquan², L. Zhang¹, P.Z. Si¹, M.
Zhang¹, W.S. Zhang¹, E. Bruck¹, F.R. de Boer¹, K.H.J.
Buschow¹, ¹*Van der Waals-Zeeman Instituut, Universiteit van
Amsterdam, Netherlands,* ²*Department of physics, Inner
Mongolia Normal University, China*

**GU-13 CONTROL OF LARGE MAGNETOCALORIC EFFECTS
AND HYSTERESIS OF La_{1-x}Ce_x(Fe_{0.86}Si_{0.14})₁₃ COMPOUNDS**

Shun Fujieda, Asaya Fujita, Kazuaki Fukamichi, *Graduate
School of Engineering Tohoku University, Japan*

GU-14 MAGNETOCALORIC EFFECT IN $\text{LaFe}_{11.8-x}\text{Co}_x\text{Si}_{1.2}$ MELT-SPUN RIBBONS

Aru Yan, Karl-Hartmut Mueller, Oliver Gutfleisch, *Leibniz Institute of Solid State and Materials Research Dresden, Germany*

GU-15 MAGNETOCALORIC EFFECTS AND MAGNETIC PROPERTIES IN INTERMETALLIC COMPOUNDS $\text{La}(\text{Fe}_{1-x}\text{Co}_x\text{Si})_{13}$

Akiko T. Saito, Hideyuki Tsuji, Tadahiko Kobayashi, *Corporate R&D Center, Toshiba Corporation, Japan*

GU-16 HEAT CAPACITY AND X-RAY ABSORPTION STUDIES ON THE INTERMETALLIC COMPOUND YbMn_2Sb_2

R. Nirmala¹, A. V. Morozkin², H.-D. Kim³, J.-Y. Kim³, B.-G. Park⁴, S.-J. Oh⁵, S. K. Malik¹, ¹*Tata Institute of Fundamental Research, India*, ²*Department of Chemistry, Moscow Lomonosov State University, Russian Federation*, ³*Pohang Accelerator Laboratory, Pohang University of Science and Technology, Republic of Korea*, ⁴*Department of Physics, University of Science and Technology, Republic of Korea*, ⁵*School of Physics and Center for Strongly Correlated Materials Research, Seoul National University, Republic of Korea*

Apr. 8

Event Hall

8:30-12:00

Session GV

Magnetic Measurement

J. Yamasaki

Kyushu Inst. Tech.

GV-01 A MODEL FOR QUANTITATIVE EVALUATION OF THE MAGNETIC FIELD CAUSED BY EDDY CURRENT INTERACTION WITH A FLAW IN CONDUCTOR PLATES

Hossein Bayani, Ichiro Sasada, *Dept. of Applied Science for Electronics and Materials, Kyushu University, Japan*

GV-02 IMPROVED MEASUREMENT WITH 2D ROTATING FLUXES CONSIDERING EFFECT OF MAGNETIZATION

Jin Jiang Zhong, Jian Guo Zhu, You Guang Guo, Zhi Wei Lin, *Faculty of Engineering, University of Technology, Sydney, Australia*

GV-03 FUSION OF ELECTROMAGNETIC INSPECTION METHODS FOR EVALUATION OF STRESS LOADED STEEL SAMPLES

Tomasz Chady¹, Ryszard Sikora¹, Grzegorz Psuj¹, Masto Enokizono², Takashi Todaka², ¹*Department of Electrical Engineering, Technical University of Szczecin, Poland*, ²*Faculty of Engineering, Oita University, Japan*

GV-04 FIELD IMPROVEMENT OF FINE MAGNETIC POLE PITCH FABRICATED ON PRINTED CIRCUIT BOARD USING A DUAL LAYER STRUCTURE

Kuo-Chi Chiu¹, Der-Ray Huang², Han-Ping D. Shieh¹,
¹Department of Photonics and Institute of Electro-Optical Engineering, National Chiao Tung University, Taiwan, ²Opto-Electronics & Systems Laboratories, Industrial Technology Research Institute, Taiwan

GV-05 INTEGRATED DRIVING AND READOUT CIRCUITS FOR CDMPI SENSOR

Xin Bo Qian¹, Xiao Ping Li¹, Yong Ping Xu², Jie Fan¹,
¹Neuroensors Lab, Department of Mechanical Engineering, Division of Bioengineering, National University of Singapore, Singapore, ²Department of Electrical and Computer Engineering, National University of Singapore, Singapore

GV-06 MAGNETIC CHARACTERIZATION OF THERMALLY SENSITIZED TYPE 304 AND 316 STAINLESS STEELS

Yasuhiro Kamada, Tsuyoshi Mikami, Seiki Takahashi, Hiroaki Kikuchi, Katsuyuki Ara, *NDE&Science Research Center, Faculty of Engineering, Iwate University, Japan*

GV-07 DIRECT MEASUREMENT OF PREISACH DIAGRAM FROM MICROHYSTERESIS LOOPS AT VARIOUS DELAY TIME

Lin-Xiu Ye, Jia-Mou Lee, Te-Ho Wu, *Taiwan SPIN Research Center and Graduate school of Engineering Science & Technology, National Yunlin Univ. of Science and Technology, Taiwan*

GV-08 VECTOR MAGNETOMETRY OF SYNTHETIC SPIN VALVES

Gerald Rutsch¹, Jamie Yang¹, William Van Drent², Daniele Mauri¹, Jinshan Li¹, *¹Hitachi Global Storage Technologies, United States of America, ²ADE Technologies, United States of America*

GV-09 INTERNAL MAGNETOSTRICTION OBSERVED BY X-RAY DIFFRACTION IN IRON

Etsuo Arakawa¹, Koh-ichi Maruyama², Koichi Mori³, Hidetaka Nishigaitsu¹, Noriyuki Aizawa¹, *¹Dept. of Physics, Tokyo Gakugei University, Japan, ²Dept. of Molecular Structure, Institute for Molecular Science, Japan, ³Dept. of Radiological Sciences, Ibaraki Prefectural University of Health Sciences, Japan*

GV-10 INTERFACIAL MIXING BEHAVIOR OF Fe/Al MAGNETIC THIN FILMS : MOLECULAR DYNAMICS SIMULATION

Chan-Yeup Chung, Yong-Chae Chung, *Dept. of Ceramic Engineering, Hanyang University, Republic of Korea*

Session GW
Computational Magnetics

C-R. Chang
National Taiwan University

GW-01 MICROMAGNETIC STUDY OF INTERGRANULAR EXCHANGE COUPLING IN TILTED PERPENDICULAR MEDIA

X. Z. Cheng, Mansoor B. A. Jalil, *Electrical and Computer Engineering Department, National University of Singapore, Singapore*

GW-02 MICROMAGNETIC MODELING WITH EDDY CURRENT AND CURRENT-INDUCED SPIN TORQUE EFFECTS

Pooja Wadhwa, Mansoor B. A. Jalil, *Electrical and Computer Engineering Department, National University of Singapore, Singapore*

GW-03 MODELING OF LONG-TIME THERMAL MAGNETISATION DECAY IN INTERACTING GRANULAR MAGNETIC MATERIALS

O.Chubykalo-Fesenko¹, R.W.Chantrell², *¹Instituto de Ciencia de Materiales de Madrid, CSIC, Spain, ²University of York, UK, United Kingdom*

GW-04 MICROMAGNETIC SIMULATION OF THE IMAGINARY PART OF THE TRANSVERSE SUSCEPTIBILITY

Dorin Cimpoesu¹, Alexandru Stancu¹, Ioan Dumitru², Leonard Spinu³, *¹Faculty of Physics, Al. I. Cuza University, Romania, ²Advanced Materials Research Institute - AMRI, University of New Orleans, United States of America, ³Department of Physics and AMRI, University of New Orleans, United States of America*

GW-05 REVERSIBLE MAGNETIZATION VARIATIONS IN LARGE FIELD RANGES ASSOCIATED TO PERIODIC ARRAYS OF ANTIDOTS

Jesus M. Gonzalez¹, Oksana A. Chubykalo-Fesenko¹, Felipe Garcia-Sanchez², Jose M. Torres-Bruna³, Juan Bartolome³, Luis M. Garcia Vinuesa³, *¹Unidad Asociada ICMM/IMA, Spain, ²ICMM-CSIC, Spain, ³ICMA-Universidad de Zaragoza, Spain*

**GW-06 MICROMAGNETIC DOMAIN STRUCTURES AND
MAGNETIZATION SWITCHING MECHANISM IN
SUBMICRON THIN FILM ELEMENTS**

Byoung C. Choi¹, B.R. Pujada¹, Y.K. Hong², M.H. Park², H. Han², S.H. Gee², G.W. Donohoe³, ¹*Department of Physics & Astronomy, University of Victoria, Canada*, ²*Department of Materials Science and Engineering, University of Idaho, United States of America*, ³*Department of Electrical and Computer Engineering, University of Idaho, United States of America*

**GW-07 MICROMAGNETIC SIMULATION OF NON UNIFORM
NANODOTS WITH PERPENDICULAR ANISOTROPY**

Ngocnga Dao, Nobuaki Kikuchi, Leon Abelmann, J. Cock Lodder, *Systems and Materials for Information Storage, University of Twente, Netherlands*

**GW-08 ON THE DEPENDENCE OF MAGNETIC STOCHASTIC
RESONANCE FEATURES ON MAGNETIC HYSTERESIS**

Rosario Nunzio Mantegna, Bernardo Spagnolo, Luigi Testa, Marco Trapanese, *Palermo University, Italy*

**GW-09 AN IDENTIFICATION METHOD OF PLAY MODEL
WITH INPUT-DEPENDENT SHAPE FUNCTION**

Tetsuji Matsuo, Masaaki Shimasaki, *Dept. Electrical Engineering, Kyoto University, Japan*

**GW-10 GIANT MAGNETIC ANISOTROPY ENERGY IN
MONATOMIC CHAINS: OPPORTUNITY TO
STABILIZE MAGNETIZATION IN ULTRA-SMALL 0D
AND 1D ENTITIES**

Ru Qian Wu¹, Ji Sang Hong¹, Ding-Sheng Wang², Jian-Tao Wang², ¹*Department of Physics and Astronomy, University of California, Irvine, United States of America*, ²*Institute of Physics, China*

**GW-11 A MAGNETIC MOLECULE DETECTION SYSTEM: A
COMPARISON OF DIFFERENT SETUPS BY
COMPUTER SIMULATION**

Willi Schepper, Joerg Schotter, Hubert Brueckl, Guenter Reiss, *Dept. of Physics, Bielefeld University, Germany*

**GW-12 MAGNETIC PROPERTIES OF TRANSITION METAL
ATOMS DOPED IN SILICON NANOTUBES WITH
HEXAGONAL PRISM STRUCTURE**

Y-R. Jang¹, Chulsu Jo², J. I. Lee², ¹*Department of Physics, University of Incheon, Republic of Korea*, ²*Department of Physics, Inha University, Republic of Korea*

**GW-13 EXCHANGE-INTERACTIONS AND CHEMICAL
BONDING IN CuO BY FIRST-PRINCIPLES**

Alessio Filippetti, *Dept. of Physics, University of Cagliari, Italy*

GW-14 FIRST PRINCIPLES CALCULATIONS OF MAGNETIC PROPERTIES OF Zr DOPED RARE EARTH-TRANSITION METAL (1:7) ALLOYS

Kentaro Oka, Teruo Kiyomiya, *FDK CORPORATION, Japan*

GW-15 A BOUNDARY MESHLESS METHOD FOR TRANSIENT EDDY CURRENT ANALYSIS

Yong Zhang¹, K.R. Shao¹, You Guang Guo², J.D. Lavers³,
¹*College of Electrical & Electronic Engineering, Huazhong University of Science and Technology, China,* ²*Faculty of Engineering, University of Technology Sydney, Australia,* ³*Department of Electrical and Computer Engineering, University of Toronto, Canada*

GW-16 NOVEL TOPOLOGY OPTIMIZATION FOR THE DESIGN OF MULTIPLE COILS

Woo Chul Kim, Jae Eun Kim, Yoon Young Kim, *Dept. of Mechanical and Aerospace Engineering, Seoul National University, Republic of Korea*

GW-17 THE CHARACTERISTIC ANALYSIS OF SWITCHED RELUCTANCE MOTOR CONSIDERING DC LINK VOLTAGE RIPPLE ON HARD AND SOFT CHOPPING MODES

Jae-Hak Choi, Joonseon Ahn, Ju Lee, *Energy Conversion Lab., Department of Electrical Engineering, Hanyang University, Republic of Korea*

Apr. 8

Reception Hall

Session HA

Novel Magneto-resistive Oxides & Halfmetallic Materials

H. Asano

Nagoya University

***HA-01 HEUSLER MATERIALS IN MAGNETIC TUNNEL**

14:30 JUNCTIONS

Guenter Reiss, Jan Schmalhorst, Hubert Brueckl, Andreas Huetten, S. Kaemmerer, *Dept. of Physics, University of Bielefeld, Germany*

HA-02 MAGNETIC PROPERTIES OF EPITAXIAL

15:00 Co₂Cr_{1-x}Fe_xAl FULL HEUSLER ALLOY THIN FILMS WITH THE L2₁ STRUCTURE

Atsufumi Hirohata¹, Hidekazu Kurebayashi², Susumu Okamura², Nobuki Tezuka¹, Koichiro Inomata¹, ¹*CREST, JST and Dept. of Mat. Sci., Tohoku Univ., Japan,* ²*Dept. of Mat. Sci., Tohoku Univ., Japan*

HA-03 INVESTIGATION OF INTRINSIC GILBERT

15:15 DAMPING CONSTANT IN Co_2MnAl HEUSLER ALLOY FILMS

Resul Yilgin, Mikihiko Oogane, Satoshi Yakata, Yasuo Ando, Terunobu Miyazaki, *Dept. of Applied Physics, Tohoku University, Japan*

HA-04 PROPERTIES OF Co_2YZ HEUSLER COMPOUNDS

15:30 Claudia Felser, Sabine Wurmehl, Gerhard Fecher, Thomas Block, *Dept. of Inorganic and Analytical Chemistry, University of Mainz, Germany*

HA-05 MAGNETISM AND TRANSPORT PROPERTIES OF

15:45 EPITAXIAL Co_2MnSi FILMS

Wen Hong Wang¹, Xiao Bing Ren¹, Guang Heng Wu², Przybylski Marek³, Przybylski Marek⁴, Barthel Jochen³, Kirschner Jürgen³, *¹National Institute for Materials Science, Japan, ²Institute of Physics, Chinese Academy of Sciences, China, ³Max-Planck Institute of Microstructure Physics, Germany, ⁴Solid State Physics Department, Faculty Physics and Nuclear Techniques, AGH University of Sciences and Technology, Poland*

HA-06 XPS AND XMCD STUDY OF $\text{Fe}_3\text{O}_4/\text{GaAs}$ INTERFACE

16:00 Yong Xiong Lu¹, Jill S. Claydon¹, Ehsan Ahmad¹, Yong Bing Xu¹, Sarah M. Thompson², Karen Wilson³, *¹Spintronics Laboratory, Department of Electronics, University of York, United Kingdom, ²Department of Physics, University of York, United Kingdom, ³Department of Chemistry, University of York, United Kingdom*

HA-07 SPIN FILTERING WITH PEROVSKITE AND SPINEL

16:15 OXIDES.

M. Gajek¹, U. Luders², A. Barthelemy¹, M. Bibes², J. Fontcuberta², J-F. Bobo³, K. Bouzehouane¹, E. Jacquet¹, J. P. Contour¹, A. Fert¹, *¹Unite Mixte CNRS-Thales, Domaine de Corbeville, France, ²ICMAB, Spain, ³LPMC, France*

HA-08 GIGANTIC MAGNETOCAPACITANCE AND

16:30 MAGNETOSTRICTION IN FERROELECTRIC ANTIFERROMAGNET GdMnO_3

Kohei Noda, Shigeru Nakamura, Jun Nagayama, Hideki Kuwahara, *Dept. of Physics, Sophia University, Japan*

HA-09 PROPERTIES OF HALF-METALLIC DOUBLE-

16:45 PEROVSKITE THIN FILMS

Hidefumi Asano, Norihumi Koduka, Kazumasa Imaeda, Mikito Sugiyama, Masaaki Matsui, *Dept. of Crystalline Materials Science, Japan*

HA-10 TEMPERATURE DEPENDENCE OF THE MAGNETIC

17:00 PROPERTIES IN $\text{LaMnO}_{3.02}$

F. J. Palomares¹, F. Pigazo¹, J. J. Romero², J. Alonso², A. Arroyo², R. Cortes-Gil², J. M. Gonzalez-Calbet³, A. Hernando², M. Vallet-Regi⁴, J. M. Gonzalez⁵, ¹*Instituto de Ciencia de Materiales de Madrid. Sor Juana Ines de la Cruz s/n, Spain,* ²*Instituto de Magnetismo Aplicado UCM., Spain,* ³*Depto. De Quimica Inorganica I, UCM, Avda. Complutense s/n, Spain,* ⁴*Depto. de Quimica Inorganica y Bioinorganica, UCM Avda. Complutense s/n, Spain,* ⁵*Unidad Asociada ICMM-IMA, P.O. Box 155, 28230 Las Rozas (Madrid), Spain., Spain*

HA-11 FINE-TUNING OF MAGNETORESISTANCE IN

17:15 $\text{Nd}_{0.5}(\text{Ca}, \text{Sr})_{0.5}\text{MnO}_3$ SYSTEM

S. L. Cheng¹, Y. J. Chou², J. G. Lin¹, ¹*Center for Condensed Matter and Sciences and Nano-storage, Taiwan,* ²*Department of Material Engineer and Science, Taiwan*

Apr. 8

Room 141/142

Session HB

Head Disk Interface II

J. Lin

Komag Inc.

HB-01 THERMAL POLE-TIP PROTRUSION ANALYSIS OF

14:30 MAGNETIC HEADS FOR HARD DISK DRIVES

Ken-ichiro Aoki¹, Toshinori Hoshino², Takeshi Iwase³, Takahiro Imamura⁴, Keiji Aruga⁵, ¹*HDD Technology Development Dept., Fujitsu Limited, Japan,* ²*Component Technology Dept., Fujitsu Limited, Japan,* ³*HDI Engineering Dept., Fujitsu Limited, Japan,* ⁴*Magnetic Disk Drive Laboratory, Fujitsu Laboratories Ltd., Japan,* ⁵*1st H.D.D. Div., Fujitsu Limited, Japan*

HB-02 VERIFICATION OF THERMALLY INDUCED

14:45 NANOMETER ACTUATION OF THE MAGNETIC RECORDING TRANSDUCER TO OVERCOME MECHANICAL AND MAGNETIC SPACING CHALLENGES

Mike Suk¹, Masayuki Kurita², Hideaki Tanaka³, Shozo Saegusa³, Neil Robertson¹, ¹*Hitachi Global Storage Technologies, United States of America,* ²*Hitachi Storage Technology Research Center, Japan,* ³*Hitachi Global Storage Technologies, Japan*

HB-03 A METHOD TO ESTIMATE POLE TIP PROTRUSION

15:00 IN RECORDING HEADS

Vijay Prabhakaran, Wu Xing Gan, Suping Song, Eric Sladek, *Western Digital Corporation, United States of America*

- HB-04 MODELING AND DESIGN OF CONTROLLED
15:15 FLYING PROXIMITY SLIDERS FOR HEAD-MEDIA
SPACING VARIATION SUPPRESSION IN ULTRA-LOW
FLYING AIR BEARINGS**
Jia-Yang Juang, David B. Bogy, *Dept. of Mechanical
Engineering, University of California, Berkeley, United States
of America*
- HB-05 PARTIAL-CONTACT HEAD-DISK INTERFACE
15:30 APPROACH FOR HIGH-DENSITY RECORDING**
Jun Guo Xu¹, Hidekazu Kohira², Hideaki Tanaka², Shozo
Saegusa², ¹*Storage Technology Research Center, Hitachi Ltd,
Japan, ²Hitachi GST, Japan*
- HB-06 HAMR AND MECHANICAL STABILITY OF ITS
15:45 HEAD-DISK INTERFACE**
H. Li, B. Liu, H.Y. Ye, T.C. Chong, *Data Storage Institute,
Singapore*
- HB-07 DEGRADATION TESTING AND LIFETIME
16:00 PREDICTION OF GMR HEADS UNDER
MECHANICALLY AND THERMALLY ACCELERATED
CONDITIONS**
Takahiro Imamura¹, Kenrou Yamamoto², ¹*Magnetic Disk Drive
Laboratory, Fujitsu Laboratories Ltd., Japan, ²HDI Engineering
Dept., Fujitsu Ltd., Japan*
- HB-08 EMULATING MEDIA DEFECT CORROSION
16:15 Qing Dai¹, Guillermo Prada², Bing Yen¹, Bruno Marchon¹,
Charlie Rettner³, ¹*San Jose Research Center, Hitachi Global
Storage Technologies Inc., United States of America, ²Materials
Laboratory, Hitachi Global Storage Technologies Inc., United
States of America, ³IBM Almaden Research, United States of
America***
- HB-09 CHEMICALLY MODIFIED AIR-BEARING SURFACE
16:30 FOR THE NEAR CONTACT REGIME-PART 1:
CONCEPT AND CHARACTERIZATION**
Hiroshi Chiba¹, Takayuki Musashi², Yoshiharu Kasamatsu²,
Keiji Watanabe¹, ¹*Inorganic Materials & Polymers Laboratory,
FUJITSU LABORATORIES LTD., Japan, ²HDI Dept., FUJITSU
LTD., Japan*
- HB-10 CONFORMATION AND MOTION OF MONOLAYER
16:45 LUBRICANT MOLECULE ON MAGNETIC DISKS**
Kenji Fukuzawa, Shintaro Itoh, Kenta Suzuki, Yusuke Kawai,
Hedong Zhang, Yasunaga Mitsuya, *Dept. of Mirco-nano
Systems Engineering, Nagoya University, Japan*

**HB-11 VISCOSITY INCREASE DUE TO CONFINEMENT OF
17:00 MOBILE MOLECULES OF PERFLUOROPOLYETHERS
MEASURED BY FIBER WOBBLING METHOD**

Shintaro Itoh, Kenji Fukuzawa, Takamasa Ando, Hedong Zhang, Yasunaga Mitsuya, *Dept. of Micro-Nano Systems Engineering, Japan*

**HB-12 DUAL LAYER X-RAY PHOTOELECTRON
17:15 SPECTROSCOPY MODEL TO SIMULTANEOUSLY
DETERMINE A PFPE/A20H LUBRICANT MIXTURE
AND CARBON LAYER THICKNESSES ON HARD DISK
MAGNETIC MEDIA**

Dave Spaulding, Zunde Yang, Jia Jay Liu, *MMC Technology, United States of America*

Apr. 8

Room 234

Session HC

**Symposium on High Magnetic Anisotropy L1₀ and
Related Materials**

T. Suzuki

Toyota Technological Institute

***HC-01 FIRST PRINCIPLE CALCULATIONS OF FePt, CoPt,
14:30 Co₃Pt AND Fe₃Pt ALLOYS**

James M. Maclaren, Department of Physics, Tulane University, United States of America

***HC-02 GIANT MAGNETO-CRYSTALLINE ANISOTROPY OF
15:00 FCT Fe₃Pt ORDERED ALLOY THIN FILMS
FABRICATED ONTO MgO SUBSTRATES**

Md. Ariful Islam Nahid, *Information Storage Materials Laboratory, Toyota Technological Institute, Japan*

***HC-03 AN ATOMISTIC MODEL OF SWITCHING IN FePt
15:30 NANOPARTICLES**

Oleg Mryasov¹, Ulrich Nowak², Roy W. Chantrell³, ¹*Seagate Research, United States of America*, ²*University of Duisburg-Essen, Germany*, ³*University of York, United Kingdom*

***HC-04 MAGNETIZATION REVERSAL PROCESS IN FePt
16:00 NANOPARTICLES**

Satoshi Okamoto, *IMRAM, Tohoku University, Japan*

***HC-05 ORDERING PROCESS AND SIZE EFFECT OF FePt
16:30 MAGNETIC THIN FILMS**

Y.K. Takahashi, K. Hono, *National Institute for Materials Science, Japan*

***HC-06 COMBINED REACTIONS ASSOCIATED WITH L1,
17:00 ORDERING**

Timothy J. Klemmer, *Seagate Research, United States of America*

Apr. 8

Room 224

Session HD

Microwave and Magnetoelastic Materials/Devices

E. Quandt

Center of Advanced European Studies and Research

S. Yamamoto

Yamaguchi University

HD-01 MICROWAVE PROPERTIES AND ANISOTROPY

14:30 FIELD DISTRIBUTION IN NANOGRANULAR Fe-Co-Al-O FILMS

Massimo Pasquale¹, Marco Coisson¹, Sergio Perero¹, Sang-Ho Lim², ¹*Materials Department, IEN Galileo Ferraris Torino, Italy*, ²*Dept. of Materials Science and Eng., Korea Univ. Seoul, Republic of Korea*

HD-02 THE FORMATION OF BARIUM HEXAFERRITES

14:45 USING COPRECIPITATION METHODS

Darja Lisjak, Miha Drogenik, *Jozef Stefan Institute, Advanced Materials Dept., Slovenia*

HD-03 PREPARATION AND CHARACTERIZATION OF Mn-

15:00 Ir/Fe-Si EXCHANGE-COUPLED MULTILAYER FILM WITH Ru UNDERLAYER FOR HIGH-FREQUENCY MICROMAGNETIC DEVICES

Makoto Sonehara, Takatoshi Sugiyama, Toshiro Sato, Kiyohito Yamasawa, Yoshimasa Miura, *Faculty of Engineering, Shinshu University, Japan*

HD-04 EFFECT OF MAGNETIC POWDER SIZE OF BAND

15:15 PASS FILTER FOR ULTRA WIDEBAND(UWB) COMMUNICATION SYSTEMS

A.Saito¹, M.Okabe², ¹*Dept. of Electromagnetic Material, Daido Steel Co., Ltd., Japan*, ²*Research & Development Laboratory, Daido Steel Co., Ltd., Japan*

HD-05 MICRO-MACHINED MAGNETOSTATIC WAVE

15:30 COUPLED RESONATORS

Romolo Marcelli¹, Takuro Koike², ¹*CNR-IMM, Rome Section, Italy*, ²*Tamagawa University Research Institute, Japan*

- HD-06 GIANT VOLUME MAGNETOSTRICTION AT ROOM
15:45 TEMPERATURE AND ITS CONNECTION WITH
COLOSSAL MAGNETORESISTANCE IN $\text{La}_{0.7}\text{Ba}_{0.3}\text{MnO}_3$**
R.V. Demin¹, L.I. Koroleva¹, Ya.M. Mukovskii², ¹M.V.
Lomonosov Moscow State University, Russian Federation,
²*Moscow State Steel and Alloys Institute, Russian Federation*
- HD-07 TEMPERATURE DEPENDENCE OF REVERSIBLE
16:00 FIELD-INDUCED STRAIN AND MAGNETIZATION
CHANGES IN NiMnGa SINGLE CRYSTAL**
Oleg Heczko¹, Ladislav Straka², Simo-Pekka Hannula¹,
¹*Laboratory of Physical Metallurgy and Material Science,*
Helsinki University of Technology, Finland, ²*Laboratory of*
Biomedical Engineering, Helsinki University of Technology,
Finland
- HD-08 MAGNETOSTRAIN AND MAGNETIZATION OF THE
16:15 Ni-Mn-Ga SINGLE CRYSTAL**
Chengbao Jiang, Jing Min Wang, Hui Bin Xu, *Department of*
Materials Science and Engineering, Beijing University of
Aeronautics and Astronautics, China
- HD-09 MAGNETOSTRICTION OF Ni_2MnGa IN LOW AND
16:30 INTERMEDIATE TEMPERATURE PHASES**
Masaaki Matsui, Hidefumi Asano, Kazuhiko Ohmori, Daichi
Murakami, Toshinori Nakakura, *Dept. of Crystalline Materials*
Science, Nagoya University, Japan
- HD-10 MAGNETOSTRICTIVE PROPERTIES OF Tb-Fe-Co
16:45 SYSTEM THIN FILMS**
Teruo Kiyomiya¹, Yoji Yamada¹, Yoshio Matsuo¹, Hiroyuki
Wakiwaka², Yohei Torii², Mika Makimura³, ¹*FDK*
CORPORATION, Japan, ²*Shinshu University, Japan,* ³*Industrial*
Research Institute of Nagano Prefecture, Japan
- HD-11 SWITCHING OF MAGNETOSTRICTIVE MICRO-DOT
17:00 ARRAYS BY MECHANICAL STRAIN**
Markus Loehndorf¹, Maik-Thomas Bootsmann¹, Stefani
Dokupil¹, Tzvetan Ivanov², Nicolai Abedinov², Eckhardt
Quandt¹, ¹*Center of Advanced European Studies and Research*
(caesar), Bonn, Germany, ²*IMA, University of Kassel, Germany*
- HD-12 OPTIMAL DESIGN OF MAGNETIC CIRCUIT FOR A
17:15 MAGNETOSTRICTIVE ACTUATOR**
Young-Woo Park¹, Seok-Ho Lee², ¹*Dept. of Mechatronics*
Engineering, Chungnam National University, Republic of
Korea, ²*Mechatronics Engineering, Chungnam National*
University, Republic of Korea

Session HE
Hard Magnet Applications II

P. Campbell
Magnequench, Inc.

K. Ohashi
Shin-Etu Chemical Co. Ltd.

**HE-01 4-POLE ALIGNMENT RING-SHAPED MAGNET FOR
14:30 AUTOMOBILE DC MOTOR**

Hiroshi Matsuoka, Kenji Noguchi, Yoji Hayashi, Hironari Mitarai, Yoshinobu Honkura, *Electric & Magnetic Division, Aichi Steel Corporation, Japan*

**HE-02 RESEARCH ON THE MAGNETIZATION OF A
14:45 TANGENTIALLY MAGNETIZED BRUSHLESS DC
MOTOR**

Ping Zheng, Feng Chai, Yan Wang, Shu Kang Cheng, *School of Electrical Engineering and Its Automation, Harbin Institute of Technology, China*

**HE-03 CAD AND FE ANALYSIS OF RADIAL-FLUX
15:00 SURFACE MOUNTED PERMANENT MAGNET
BRUSHLESS DC MOTOR**

Parag R Upadhyay, K. R. Rajagopal, *Electrical Engineering Department, IIT Delhi, India*

**HE-04 A NOVEL MONOLITHICALLY FABRICATED
15:15 LORENTZ FORCE ACTUATOR USING POLYMER
MAGNETS**

Marco Feldmann, Stephanus Buettgenbach, *Institute for Microtechnology, TU-Braunschweig, Germany*

HE-05 A HALBACH ARRAY MAGNETIC SPRING

15:30 Will Robertson, Ben Cazzolato, Anthony Zander, *School of Mechanical Engineering, University of Adelaide, Australia*

HE-06 EFFICIENCY OF PERMANENT MAGNET

15:45 ASSEMBLIES FOR MRI DEVICE

Chun Li, Michael K Devine, *Dexter Magnetic Technologies, United States of America*

HE-07 SUPER-HIGH SPEED CRYOGENIC PMSM DESIGN

16:00 Liping Zheng¹, Thomas X. Wu¹, Dipjyoti Acharya², Kalpathy B. Sundaram¹, Jay Vaidya³, Li Mei Zhao¹, Chan H. Ham², Nagaraj Arakere⁴, Jay Kapat², Louis Chow², ¹*Department of ECE, University of Central Florida, United States of America,* ²*Department of MMAE, University of Central Florida, United States of America,* ³*Electrodynamics Associates, Inc., United States of America,* ⁴*Department of MAE, University of Florida, United States of America*

**HE-08 BASIC CHARACTERISTICS OF THE SYNCHRONOUS
16:15 GENERATOR USING MECAHNICAL VIBRATION**
Shunsuke Ohashi, Tatsurou Matsuzuka, *Dept. of Electrical
Engineering and Computer sciences, Kansai University, Japan*

**HE-09 LOSS ANALYSIS AND EFFICIENCY IMPROVEMENT
16:30 OF THE POWER SUPPLY SYSTEM USING MAGNETIC
COUPLING FOR MEDICAL IMPLANTS**
Shin-nosuke Suzuki, *Oyama National College of Technology,
Japan*

**HE-10 THE EFFECT OF NEUTRON IRRADIATION ON
16:45 Sm₂Co₁₇-BASED HIGH TEMPERATURE MAGNETS AND
Nd-Fe-B MAGNETS**
Christina H. Chen¹, Joseph Talnagi², Jin Fang Liu³, Payal Vora³,
Ashil Higgins¹, Michael H. Walmer³, Don Lee¹, Sam Liu¹,
¹*University of Dayton, United States of America*, ²*Ohio State
University, United States of America*, ³*Electron Energy Corp.,
United States of America*

Apr. 8

Event Hall

13:30-17:00

Session HP

MRAMs and Magnetic Tunnel Junctions

K. Kobayashi

Fujitsu Laboratory

T-W. Kim

SAIT: Samsung Advanced Institute of Technology

**HP-01 THERMAL STABILITY OF A SYNTHETIC
ANTIFERROMAGNET FREE LAYER**
Nobuki Tezuka, Kazutaka Sakurada, Koichiro Inomata, *Tohoku
University, Japan*

**HP-02 NANOMETER SCALED MAGNETIC TUNNEL
JUNCTIONS FABRICATED BY A SUBSTRATE BIASED
PLASMA ETCHING TECHNIQUE**
Lee K. I.¹, J. Y. Chang², S. H. Han², K. H. Shin², W. Y. Lee¹,
¹*Dept. of Materials Science and Engineering, Yonsei University,
Republic of Korea*, ²*Nano Device Research Center, Korea
Institute of Science and Technology, Republic of Korea*

**HP-03 IMPROVED SELECTIVITY OF SAF FREE LAYER IN
HIGH DENSITY MRAM ARRAY**
Injun Hwang¹, Woncheol Jeong², Jae Hyun Park², Wanjun Park¹,
Young Man Jang¹, Youngjin Cho¹, Soonwon Hwang¹, Taewan
Kim¹, ¹*Samsung Advanced Institute of Technology, Republic of
Korea*, ²*Semiconductor R&D Division, Samsung Electronics,
Republic of Korea*

- HP-04 HIGH DENSITY MAGNETIC RANDOM ACCESS MEMORY USING A PAIR OF ASYMMETRICAL CELL**
 Chee K. Lim¹, Yong S. Kim¹, No Y Park¹, J. Lee², ¹*HDD Program Team, Samsung Advanced Institute of Technology, Republic of Korea, ²Dept. of Electrical Engineering, Hanyang University, Republic of Korea*
- HP-05 PAIRED INTERACTION EFFECT ON SWITCHING BEHAVIORS OF PATTERNED "PAC-MAN" ARRAY**
 Hongmei Han¹, Yang-Ki Hong¹, Mun-Hyoun Park¹, Byung-Chul Choi², Sung-Hoon Gee¹, James F. Jabal¹, Gavin Abo¹, Andrew Lyle¹, Byron Wong¹, Gregory W. Donohoe³, ¹*Dept of Materials Science and Engineering, University of Idaho, United States of America, ²Dept. of Physics, University of Victoria, Canada, ³Dept. of Electrical and Computer Engineering, University of Idaho, United States of America*
- HP-06 LOW SWITCHING FIELD OF SUB-MICRON SIZED MTJs WITH SYNTHETIC FERRIMAGNET FREE LAYER BASED ON NiFe/Ru/NiFe MULTILAYERS**
 Young Min Lee¹, Hitoshi Kubota², Yasuo Ando¹, Terunobu Miyazaki¹, ¹*Dept. of Applied Physics, Tohoku University, Japan, ²Nanoelectronics Research Institute, AIST, Japan*
- HP-07 TUNNEL MAGNETORESISTANCE IN FULLY EPITAXIAL MgO DOUBLE BARRIER MAGNETIC TUNNEL JUNCTIONS**
 Takayuki Nozaki¹, Atsufumi Hirohata², Nobuki Tezuka¹, Satoshi Sugimoto¹, Koichiro Inomata¹, ¹*Department of Materials Science, Tohoku University, Japan, ²CREST, JST, Japan*
- HP-08 EFFECT OF CAPPING LAYER MATERIAL ON TUNNEL MAGNETORESISTANCE IN CoFeB/MgO/CoFeB MAGNETIC TUNNEL JUNCTIONS**
 Koji Tsunekawa, David D. Djayaprawira, Motonobu Nagai, Hiroki Maehara, Shinji Yamagata, Naoki Watanabe, *Anelva corporation, Japan*
- HP-09 TUNNEL MAGNETORESISTANCE IN MAGNETIC TUNNEL JUNCTIONS WITH A DISORDERED Co₂(Cr_{1-x}Fe_x)Al FULL-HEUSLER ALLOY FILM**
 Susumu Okamura¹, Aya Miyazaki¹, Nobuki Tezuka², Satoshi Sugimoto¹, Koichiro Inomata², ¹*Dept. of Materials Science, Tohoku University, Japan, ²Dept. of Materials Science, Tohoku University and CREST, JST, Japan*

HP-10 X-RAY ABSORPTION AND X-RAY MAGNETIC CIRCULAR DICHROISM STUDIES OF A MONATOMIC BCC-Co(001)LAYER FACING AN AMORPHOUS Al-O TUNNEL BARRIER

Toshikazu Katayama¹, Toshiaki Saito², Shinji Saito², Yoshinari Kurosaki¹, Koya Miyokawa², Tomoyuki Kamino², Kie Kobayashi², Yoshishige Suzuki³, Shinji Yuasa¹, Tsuneharu Koide⁴, ¹National Institute of Advanced Industrial Science and Technology, Japan, ²Dept. of Physics, Toho University, Japan, ³CREST-JST, Japan, ⁴KEK Photon Factory, IMSS, Japan

HP-11 NEGATIVE TMR IN MAGNETIC TUNNELING JUNCTIONS WITH Zr OXIDE BARRIER

Takahiro Moriyama¹, Xiao Hai Xiang¹, Wei Gang Wang¹, Fei-Fei Li², Tao Zhu², Jun Du², Ming-wen Xiao², Zheng-Zhong Li², An Hu², John Q. Xiao¹, ¹Dept. of Physics and Astronomy, University of Delaware, United States of America, ²National Laboratory of Solid State Microstructures, Nanjing University, China

HP-12 LARGE MAGNETORESISTANCE RATIO AND LOW RESISTANCE-AREA PRODUCT IN MAGNETIC TUNNEL JUNCTION WITH AlHfO₂ BARRIER

Kenji Noma, Koujiro Komagaki, Kouji Yamada, Hitoshi Kanai, Yuji Uehara, *Advanced Head Technology Development Dept., Fujitsu Ltd., Japan*

HP-13 BIAS-VOLTAGE DEPENDENCE OF TUNNEL MAGNETORESISTANCE DEPENDING ON THE CRYSTAL STRUCTURE OF BOTTOM FERROMAGNETIC ELECTRODE

Sung-Jin Ahn¹, Takeharu Kato¹, Hitoshi Kubota², Yasuo Ando¹, Terunobu Miyazaki¹, ¹Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan, ²Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan

HP-14 NOISE PROPERTIES OF MAGNETIC TUNNEL JUNCTIONS

Anis F. Md Nor, Yasuo Ando, Naoki Mochizuki, Terunobu Miyazaki, *Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan*

HP-15 SPIN IMBALANCE ENHANCED MAGNETORESISTANCE IN Co-Al-Co DOUBLE-TUNNEL JUNCTIONS

Jia-Hong Shyu¹, Fu-Yi Tang², Jenq-Wei Chen², Yeong-Der Yao¹, ¹Dept. of Physics, National Taiwan University, Taiwan, ²Institute of Physics, Academia Sinica, Taiwan

HP-16 THERMAL STABILITY OF MAGNETIC TUNNEL JUNCTIONS WITH NEW AMORPHOUS ZrAl ALLOY FILMS AS UNDER AND CAPPING LAYERS

Chul-Min Choi, Jin-Oh Song, Seong-Rae Lee, *Div. of Materials Science and Engineering, Republic of Korea*

HP-17 SPIN FILTER TYPE MAGNETIC TUNNEL JUNCTION USING EuO FERROMAGNETIC BARRIER

Tetsuro Matsumoto¹, Kenji Kawaguchi², Naoto Koshizaki², Satoru Kashiwaya³, Kiyoe Tani³, Katsuhiko Yamaguchi⁴, Koji Yamada¹, ¹*Department of Material Sciences, Saitama University, Japan*, ²*Nanoarchitectonics Research Center, National Institute of Advanced Industrial Science & Technology, Japan*, ³*Nanoelectronics Research Institute, National Institute of Advanced Industrial Science & Technology, Japan*, ⁴*Faculty of Education, Fukushima University, Japan*

HP-18 TUNNEL MAGNETORESISTANCE ENHANCEMENT IN FERROMAGNETIC TUNNEL JUNCTIONS WITH FERROMAGNETIC NANO-PARTICLE LAYER INSERTION

Hiroaki Sukegawa¹, Shinichi Nakamura², Atsufumi Hirohata³, Nobuki Tezuka⁴, Satoshi Sugimoto¹, Koichiro Inomata⁴, ¹*Dept. of Material Science, Tohoku University, Japan*, ²*Aoyama Gakuin University, Japan*, ³*CREST-JST, Japan*, ⁴*Dept. of Material Science, Tohoku University & CREST-JST, Japan*

HP-19 ROOM TEMPERATURE STABILITY STUDY IN SILICON BASE MAGNETIC TUNNELING TRANSISTOR

Ying Wen¹, Chi Kuen Lo², Yeong Der Yao³, Lan Ching Hsieh², Der Ray Huang², ¹*Dept. of Mater. Sci. & Engineer., Tsing Hua Univ., Taiwan*, ²*OES, Industrial Tech. Res. Inst., Taiwan*, ³*Inst. of Physics, Academia Sinica, Taiwan*

HP-20 INVERSE MAGNETORESISTANCE IN MAGNETIC TUNNEL JUNCTION WITH AN Fe₃O₄ ELECTRODE

Chando Park, Jian-Gang Zhu, Ying Guo Peng, David E. Laughlin, Robert M. White, *Dept. of Electrical and Computer Engineering, Carnegie Mellon University, United States of America*

HP-21 EFFECT OF NITROGEN INCORPORATION TO OXIDATION PROCESS ON THE RELIABILITY OF MAGNETIC TUNNEL JUNCTIONS

Kwang-Seok Kim¹, Beong-Ki Cho¹, ¹*Dept. of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Republic of Korea*

HP-22 DIELECTRIC TUNNEL CHARGE TRANSPORT CHARACTERISTICS OF MTJ FOR MRAM APPLICATION

Simon C. Li¹, J.M. Lee², M.F. Shu², J. P. Su¹, Te-Ho Wu¹, ¹*Taiwan SPIN Research Center, Taiwan*, ²*Graduate School of Engineering Science & Technology, Taiwan*

HP-23 ENHANCEMENT OF THE TUNNELLING MAGNETORESISTANCE EFFECT

Matthew E. Eames, John C. Inkson, *School of Physics, University of Exeter, United Kingdom*

HP-24 STUDY OF THE RELATIONSHIP BETWEEN SCALABILITY OF MTJ AND SWITCHING FIELD USING SPM

A. Fervin Moses¹, Seung Bae Park¹, Jin Hee Heo¹, Tae Wan Kim², Il Sub Chung¹, ¹*School of Information and Communications Engineering, Republic of Korea*, ²*Samsung Advanced Institute of Technology, Republic of Korea*

HP-25 EFFECTS OF Kr ION BOMBARDMENT FOR [Fe/MgO/Fe] BASED MAGNETIC TUNNELING JUNCTIONS

Yasuyoshi Miyamoto, Kenji Machida, Ken-ichi Aoshima, Nobuhiko Funabashi, Kiyoshi Kuga, *NHK Science & Technical Research Labs., Japan*

HP-26 MAGNETIC AND ELECTRONIC STATES OF A MONATOMIC Fe (001) LAYER FACING AN EPITAXIAL MgO(001) TUNNEL BARRIER STUDIED BY USING XAS AND XMCD MEASUREMENTS

Kouya Miyokawa¹, Shinji Saito¹, Tomoyuki Kamino¹, Koji Hanashima¹, Toshiaki Saito¹, Toshikazu Katayama², Yoshishige Suzuki², Kazutoshi Mamiya³, Tsuneharu Koide³, Shinji Yuasa⁴, ¹*Dept. of Physics, Toho University, Japan*, ²*NanoElectronics Reseach Institute, National Institute of AIST, Japan*, ³*Photon Factory, IMSS, KEK, Japan*, ⁴*PREST, Japan Science and Technology Agency (JST), Japan*

HP-27 MAGNETIZATION SWITCHING AND TUNNELING MAGNETORESISTANCE EFFECTS WITH SYNTHETIC ANTIFERROMAGNET FREE LAYERS CONSISTING OF AMORPHOUS CoFeSiB

Jae Youn Hwang¹, Soon Sub Kim¹, Jang Roh Rhee¹, Byong Sun Chun², Il Sang You², Byung Seok Oh², Young Keun Kim², Taewan Kim³, Wanjun Park³, ¹*Dept. of Physics, Sookmyung Women's University, Republic of Korea*, ²*Division of Materials Science and Engineering, Korea University, Republic of Korea*, ³*Materials and Devices Laboratory, Samsung Advanced Institute of Technology, Republic of Korea*

HP-28 CHARACTERISTICS OF THE Al₂O₃ BARRIER WITH CoFeB PINNED LAYER IN MAGNETIC TUNNEL JUNCTIONS

Ji Young Bae¹, Woo Chang Lim¹, Tae Wan Kim², Taek Dong Lee¹, ¹*Department of Materials Science and Engineering, KAIST, Republic of Korea*, ²*Devices Lab. SAIT, Republic of Korea*

HP-29 SWITCHING CHARACTERISTICS IN MAGNETIC TUNNEL JUNCTIONS WITH A SYNTHETIC ANTIFERROMAGNETIC FREE LAYER

Yun Ki Lee¹, Young Keun Kim¹, Tae Wan Kim², Wanjun Park², Injun Hwang², Won-Cheol Jeong³, Jangeun Lee³, ¹*Division of Materials Science and Engineering, Korea University, Republic of Korea*, ²*Samsung Advanced Institute of Technology, Republic of Korea*, ³*Samsung Electronics, Co., Ltd, Republic of Korea*

HP-30 SURFACE PLASMON RESONANCE ANALYSIS OF INSULATING AIO₂ BARRIER IN MAGNETIC TUNNEL JUNCTIONS PREPARED BY NATURAL OXIDATION METHOD

Young Ho Do, Jung Yup Yang, Kap Soo Yoon, Won Jun Choi, Ja Hyun Koo, Cae Ok Kim, Jin Pyo Hong, *New functional materials and devices lab, Department of Physics, Hanyang University, Republic of Korea*

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Event Hall

13:30-17:00

**Session HQ
Exchange Biasing**

M. Tsunoda

Tohoku University

HQ-01 EXCHANGE BIAS MODEL IN FERROMAGNETIC / ANTIFERROMAGNETIC BILAYER WITH L1₂-TYPE ORDERED ANTIFERROMAGNET

Chiharu Mitsumata¹, Akimasa Sakuma², Kazuaki Fukamichi³, ¹*Advanced Electronics Research Lab., Hitachi Metals, Ltd., Japan*, ²*Dept. of Applied Physics, Graduate School of Engineering, Tohoku University, Japan*, ³*Dept. of Material Science, Graduate School of Engineering, Tohoku University, Japan*

HQ-02 EXCHANGE BIAS CONTROL IN CoFeIrMn VIA GRAIN SIZE CONTROL

G. Vallejo Fernandez, M. Vopsaroiu, S. Manzoor, K. O'Grady, *Department of Physics, The University of York, United Kingdom*

HQ-03 EXCHANGE BIAS AND GIANT MAGNETORESISTANCE IN SPIN VALVES WITH PICO-SCALE ANTIFERROMAGNETIC LAYERS

Katherine L. Perdue¹, Matthew J. Carey², Patricia D. Sparks¹, James C. Eckert¹, ¹*Physics Department, Harvey Mudd College, United States of America*, ²*Hitachi Global Storage Technologies, United States of America*

HQ-04 MAGNETIZATION REVERSAL IN EXCHANGE BIASED MULTILAYERS DETECTED BY GIANT MAGNETORESISTANCE EFFECTS

Z. B. Guo¹, K. B. Li¹, J. J. Qiu¹, G. C. Han¹, Y. K. Zheng¹, P. Luo¹, L. H. An¹, Yi Hong Wu², ¹*Data Storage Institute, Singapore*, ²*Department of Electrical and Computer Engineering, National University of Singapore, Singapore*

HQ-05 EFFECT OF METALLIC Al CAP LAYER ON THE INTERLAYER COUPLING IN NANO-OXIDE ADDED SPIN VALVES

Kebin Li¹, Jin Jun Qiu¹, Guchang Han¹, Zai Bing Guo¹, Yuankai Zheng¹, Yihong Wu², ¹*Data Storage Institute, Singapore*, ²*Department of Electrical and Computer Engineering, National University of Singapore, Singapore*

HQ-06 CO-EXISTENCE OF BIQUADRATIC AND UNIDIRECTIONAL ANISOTROPY IN IrMn/Co/FeO_x/Co FILMS

Chih-Huang Lai, Chih-Ta Shen, *Department of Materials Science and Engineering, National Tsing Hua University, Taiwan*

HQ-07 EXCHANGE COUPLING OF Fe/NiO THROUGH NONMAGNETIC LAYER IN NiO

Jong-Min Kim, Young-Sung Kim, *Advanced Material Process of Information Technology, Sungkyunkwan University, Republic of Korea*

HQ-08 A MIXED BEHAVIOR OF TRAINING EFFECT AND TIME RELAXATION IN EXCHANGE BIASED SYSTEMS

Joong Hoe Dho¹, C. W. Leung¹, H. H. Kim², H. H. Kim³, M. G. Blamire¹, ¹*Department of Materials Science and Metallurgy, University of Cambridge, United Kingdom*, ²*Nanoscience Center, IRC in Nanotechnology, University of Cambridge, United Kingdom*, ³*Memory Division, Semiconductor Business, Samsung Electronics Co. Ltd., Republic of Korea*

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Session HR

Exchange Biasing and Fast Switching II

S. C. Shin

Center for Nanospinics of Spintronic Materials and Dept. of Physics, KAIST

HR-01 HYBRID EXCHANGE BIAS IN (FePt-FeMn)N MULTILAYERS

Nguyen N. Phuoc, Yevgen Pogoryelov, Takao Suzuki, *Information Storage Materials Laboratory, Toyota Technological Institute, Japan*

**HR-02 PERPENDICULAR EXCHANGE BIAS IN
NICKEL/ANTIFERROMAGNETIC BILAYERS**

Sebastiaan van Dijken, Matthew Crofton, J.M.D. Coey, *SFI Trinity Nanoscience Laboratory, Physics Department, Trinity College, Ireland*

**HR-03 THICKNESS AND ANNEALING TEMPERATURE
DEPENDENCES OF PERPENDICULAR EXCHANGE
BIASING IN [Pd/Co]/FeMn MULTILAYERS**

H. W. Joo¹, S. W. Kim², M. S. Lee¹, J. H. An¹, S. D. Choi¹, K. A. Lee¹, S. S. Lee², D. G. Hwang², ¹*Dept. of Physics, Dankook University, Republic of Korea*, ²*Dept. of Computer and Electronic Physics, Republic of Korea*

**HR-04 ANGULAR AND NiFe THICKNESS DEPENDENCE OF
IrMn/NiFe/IrMn THIN FILMS**

Yong-Goo Yoo¹, Seong-Gi Min², Mun-Cheol Paek¹, Kwang-Yong Kang¹, Seong-Cho Yu², ¹*Information Storage Device Team, Electronics and Telecommunications Research Institute, Republic of Korea*, ²*Department of Physics, Chungbuk National University, Republic of Korea*

**HR-05 ANGULAR DEPENDENCE OF EXCHANGE BIAS FIELD
AND COERCIVE FIELD IN Mn-Ir/Co-Fe EPITAXIAL
BILAYERS**

Dong Young Kim¹, Cheol Gi Kim¹, Chong Oh Kim¹, Migaku Takahashi², Masakiyo Tsunoda², Masohiro Shibata², ¹*ReCAMM, Chungnam National University, Republic of Korea*, ²*Department of Electronic Engineering, Tohoku University, Japan*

**HR-06 SWITCHING BEHAVIOR OF MAGNETIC ELLIPSES BY
PULSE FIELD**

Hyuk-Jae Jang¹, Doug Stone², Pete Eames¹, E. Dan Dahlberg¹, ¹*Dept. of Physics, University of Minnesota, United States of America*, ²*Physics Dept., St. Olaf College, United States of America*

**HR-07 SPIN-WAVE EXCITATIONS IN FINITE RECTANGULAR
ELEMENTS**

Christian Bayer¹, Joerg Jorzick¹, Burkard Hillebrands¹, Sergej O. Demokritov², Andrei N. Slavin³, Konstantin Guslienko⁴, Dmitri Berkov⁵, Natasha Gorn⁵, Mikhail P. Kostylev⁶, ¹*Fachbereich Physik and Forschungsschwerpunkt MINAS, Technische Universitaet Kaiserslautern, Germany*, ²*Institut fuer Angewandte Physik, Westfaelische Wilhelms-Universitaet Muenster, Germany*, ³*Department of Physics, Oakland University, Rochester, United States of America*, ⁴*Materials Science Division, Argonne National Laboratory, United States of America*, ⁵*INNOVENT e.V. Jena, Pruessingstrasse, Germany*, ⁶*St. Petersburg Electrotechnical University, Russian Federation*

HR-08 A STUDY OF SWITCHING PROBABILITY FOR ONE SPIN MAGNETIC PARTICLES

Florin Ciubotaru¹, Alexandru Stancu¹, Mihai Cerchez²,
¹*Alexandru Ioan Cuza University, Romania*, ²*Fachbereich Physik, Duisburg-Essen University, Germany*

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Session HS

Microwave and Magneto-Optic Materials/Devices

M. Inoue

Toyohashi University of Technology

HS-01 DAMPING IN NORMAL METAL/Ni₈₀Fe₂₀ MULTILAYERS

Rantschler James, Maranville Brian, McMichael D Robert,
Chen Pei Jei, William Eglehoff, Jr., *National Institute of Standards and Technology, United States of America*

HS-02 TEMPERATURE DEPENDENCE OF STATIC AND DYNAMIC MAGNETIC PROPERTIES OF AF-BIASED CoFe FILMS

Yann Lamy, Bernard Viala, *CEA-DRT-LETI Grenoble, France*

HS-03 THIN ELECTROMAGNETIC WAVE ABSORBER CONTAINING Fe-Co ALLOY FOR QUASI-MICROWAVE BAND

Yan Nie¹, Hua Hui He¹, Long You², ¹*Dept. of Electronic Science and Technology, Huazhong University of Science and Technology, China*, ²*Dept. of Electrical Engineering and Compute Science, Nagoya University, Japan*

HS-04 MICROWAVE COMPOSITES FILLED WITH FERROMAGNETIC FILMS

Igor T. Iakubov, Andrey N. Lagarkov, Sergey A. Maklakov,
Alexey V. Osipov, Konstantin N. Rozanov, Ilya A. Ryzhikov,
Sergey N. Starostenko, *Institute for Theoretical and Applied Electromagnetics, Russian Federation*

HS-05 NONLINEAR DYNAMIC EFFECTS IN MICRON-SIZED PERMALLOY LINES AND THEIR INFLUENCE ON HF FILTER APPLICATIONS

Tobias Korn¹, Marta Kerekes¹, Dana Stanescu², Pascal Xavier²,
Ursula Ebels¹, ¹*SPINTEC CEA/CNRS, France*, ²*IMEP CNRS-INPG-UJF, France*

HS-06 PROPERTIES AND APPLICATIONS OF MICROWAVE ABSORBING PAPERS

Sang Won Lee¹, Sam Jin Kim¹, In-Bo Shim¹, Ji Young Lee²,
Hyoung Jin Kim², Chul Sung Kim¹, ¹*Dept. of Physics, Kookmin University, Republic of Korea*, ²*Dept. of Forest Products, Kookmin University, Republic of Korea*

HS-07 FREQUENCY-INDEPENDENT EQUIVALENT CIRCUIT MODEL FOR FERROMAGNETIC RF INTEGRATED INDUCTORS

Kengo Sugahara¹, Shinji Tanabe¹, Masahiro Yamaguchi²,
¹*Advanced Technology R&D Center, Mitsubishi Electric Corporation, Japan,* ²*Department of Electrical and Communication Engineering, Tohoku University, Japan*

HS-08 FABRICATION OF Bi:YIG THIN FILMS WITH AEROSOL DEPOSITION METHOD AND THEIR PROPERTIES

Masahiko Mizoguchi¹, Kazuhiro Nishimura¹, Hironaga Uchida¹, Mitsuteru Inoue¹, Jun Akedo², ¹*Dept. of Electrical and Electronic Eng., Toyohashi University of Technology, Japan,* ²*National Institute of Advanced Industrial Science and Technology, Japan*

HS-09 MAGNETO-OPTICAL PROPERTIES OF Co-BASED NANOCOMPOSITES

E. A. Gan'shina¹, M. Yu. Kochneva¹, P. N. Scherbak¹, K. Aimuta², M. Inoue², ¹*Faculty of Physics, Moscow State University, Russian Federation,* ²*Toyohashi University of Technology, Japan*

HS-10 FARADAY ROTATIONS OF QUATERNARY DILUTED MAGNETIC SEMICONDUCTORS $Cd_{1-x-y}Mn_xHg_yTe$ CRYSTALS

Young Hun Hwang¹, Hye Kyeong Kim¹, Young Ho Um¹, Hyo Yeol Park², Gwang Soo Jeon³, ¹*Department of Physics, University of Ulsan, Republic of Korea,* ²*Department of Semiconductor Application, Ulsan College, Republic of Korea,* ³*Department of Physics, Pusan National University, Republic of Korea*

HS-11 SPECTRA OF THE TWO-DIMENSIONAL MAGNETOPHOTONIC CRYSTALS

Alexander Khanikaev¹, Mitsuteru Inoue¹, Alexander Granovsky², ¹*Electronic Engineering Department, Toyohashi University of Technologies, Japan,* ²*Faculty of Physics, Moscow State University, Russian Federation*

HS-12 AN INTEGRATED OPTICAL WAVEGUIDE ISOLATOR BASED ON MULTI MODE INTERFERENCE BY WAFER DIRECT BONDING

Jong Wook Roh¹, Jeong Su Yang¹, Seok Lee², Deok Ha Woo², Tetsuya Mizumoto³, Woo Young Lee¹, ¹*Department of Material Science and Engineering, Yonsei University, Seoul, Republic of Korea,* ²*Photonic Research Center, Korea Institute of Science and Technology, Seoul, Republic of Korea,* ³*Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Tokyo, Japan*

**HS-13 FABRICATION OF VOLTAGE-DRIVEN MAGNETO-
OPTIC SPATIAL LIGHT MODULATOR**

H. Takagi¹, J. H. Park², M. Mizoguchi², K. Nishimura², H. Uchida², M. Inoue², ¹*Toyota National College of Technology, Japan*, ²*Toyohashi University of Technology, Japan*

**HS-14 NONLINEAR OPTICAL PROPERTIES OF GARNET-
BASED ONE-DIMENSIONAL MAGNETOPHOTONIC
CRYSTALS**

Daisuke Kobayashi¹, Kazuhiro Nishimura¹, Hironaga Uchida¹, Andrey A. Fedyanin², Oleg A. Aktsipetrov², Mitsuteru Inoue¹, ¹*Dept. of Electrical and Electronic Engineering, Toyohashi University of Technology, Japan*, ²*Dept. of Physics, Moscow State University, Russian Federation*

**HS-15 FABRICATION OF TWO DIMENSIONAL
MAGNETOPHOTONIC CRYSTAL BY SELECTIVE-
AREA SPUTTER EPITAXY**

Jae-Hyuk Park, Rintaro Fujikawa, Kazuhiro Nishimura, Hironaga Uchida, Mitsuteru Inoue, *Dept. of Electrical and Electronic Engineering, Toyohashi University of Technology, Japan*

**HS-16 FABRICATION OF THREE-DIMENSIONAL MAGNETO-
PHOTONIC CRYSTAL USING 450 nm SiO₂ SPHERES**

Tsuyoshi Kodama, Hironaga Uchida, Alexander V. Baryshev, Kazuhiro Nishimura, Mitsuteru Inoue, *Dept. Electrical and Electronic Engineering, Toyohashi University of Technology, Japan*

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Session HT

**Crystalline and Transport Properties of Magnetic
Materials**

K. Sumiyama

Nagoya Institute of Technology

**HT-01 MAGNETIC ANISOTROPY AND MAGNETIZATION
VARIATION WITH TEMPERATURE**

Tamar Telem-Shafir, Gil Markovich, *School of Chemistry, Tel Aviv University, Israel*

**HT-02 DESTRUCTION OF THE MOTT-HUBBARD
INSULATING STATE UNDER HIGH PRESSURE IN
MANGANESE MONOCHALCOGENIDES WITH NaCl
STRUCTURES**

Yoshimi Mita, *Graduate School of Engineering Science, Osaka University, Japan*

- HT-03 ELECTRICAL TRANSPORT STUDIES ON $Gd_{4.5}Dy_{0.5}Si_2Ge_2$**
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Chooruang, K.	GQ-11	Couderc, S.	EU-02
Chou, C.Y.	BT-02	Cowburn, R.P.	BD-08
Chou, C.Y.	FU-06	Creighton, F.M.	FC-11
Chou, S.-C.	FR-03	Crofton, M.	HR-02
Chou, Y.J.	HA-11	Crowell, P.A.	FA-03
Chow, G.M.	EB-05	Crozat, P.	AA-02
Chow, L.	HE-07	Crozat, P.	EQ-06
Christodoulides, K.	FE-08	Cruz, J.R.	EP-11
* Chshiev, M.	GA-02	* Cruz, J.R.	GC-01
Chubykalo-Fesenko, O.	DF-01	Cruz-Silva, E.	FF-04
Chubykalo-Fesenko, O. ...	GW-03	Cuchet, R.	EF-10
Chubykalo-Fesenko, O.A.	GW-05		
Chun, B.S.	HP-27	D	
Chun, I.S.	CT-02	Dagula, W.	EX-11
Chung, C.-Y.	GV-10	Dagula, W.	GU-12
Chung, I.S.	EX-10	Dahlberg, E.D.	HR-06
Chung, I.S.	HP-24	Dahoo, P.R.	BU-06
Chung, M.K.	ES-06	Dai, N.V.	FU-19
Chung, U.-I.	CA-09	Dai, Q.	HB-08
Chung, U.-I.	EA-02	Dai, X.	FV-04
Chung, Y.-C.	BQ-04	Dallas, P.	FV-08
Chung, Y.-C.	BT-09	Dao, N.	GW-07
Chung, Y.-C.	GV-10	d' Aquino, M.	AA-04
Chung, Y.-C.	HT-07	d' Aquino, M.	DF-06
Cimpoesu, D.	BU-03	Darques, M.	FF-08
Cimpoesu, D.	GW-04	Das, S.	CR-17
Ciprian, R.	FR-09	Das, S.	EB-03
Ciprian, R.	GE-10	Daughton, J.M.	FD-02
Ciubotaru, F.	HR-08	de Groot, P.	ED-09
* Clarke, L.	CC-02	* Deak, J.	BZ-02
Clarke, L.A.	DC-01	Debnath, M.C.	GF-03
Claydon, J.S.	AD-06	Dede, M.	BD-07
Claydon, J.S.	HA-06	Dee, R.H.	GP-03
Codegone, M.	DD-02	del Val, J.J.	AC-08
Coey, J.M.D.	BS-22	Dellar, P.	AF-12
Coey, J.M.D.	CA-06	Delooze, P.	BV-05
Coey, J.M.D.	CR-14	* Demidov, V.E.	GD-01
Coey, J.M.D.	GD-06	Demin, R.V.	HD-06
Coey, J.M.D.	HR-02	* Demokritov, S.O.	GD-01
Coffey, K.R.	DD-03	Demokritov, S.O.	HR-07
Coffey, K.R.	EB-02	Den, T.	BT-04
Coisson, M.	FF-10	Dennis, K.W.	GF-08
Coisson, M.	HD-01	Deo, N.	EE-04
Collins, C.	BE-08	Deoras, S.	FS-01
Contour, J.P.	HA-07	Desai, M.	FP-01
Cortes-Gil, R.	HA-10	Devine, M.K.	HE-06
Cos, D.	BV-09	Devolder, T.	AA-02
Cos, D.	BV-10	Devolder, T.	EA-03
Cos, D.	FD-06	Devolder, T.	EQ-06
Cossar, C.	AE-02	Dho, J.H.	HQ-08
		* Diaio, Z.D.	BA-01

*Dieny,B.	AB-06	Dupre,L.	CD-07
Dieny,B.	EQ-07	Dutson,J.D.	CQ-10
Dimitrios,P.	FV-08	Duwensee,M.	FS-12
Ding,J.	AD-12		
Ding,J.	FE-06	E	
Dittrich,R.	ED-01	Eames,M.E.	HP-23
Djayaprawira,D.	CQ-02	Eames,P.	HR-06
*Djayaprawira,D.D.	CA-01	Eaton,S.	GU-07
Djayaprawira,D.D.	EQ-05	Ebels,U.	FF-08
*Djayaprawira,D.D.	FB-05	Ebels,U.	HS-05
Djayaprawira,D.D.	FW-11	Eckert,J.C.	HQ-03
Djayaprawira,D.D.	HP-08	Ecura,T.	EF-03
Dmitrieva,O.	BC-11	Eglehoff,W.	HS-01
Do,H.	FP-10	Egolf,P.W.	DD-05
Do,H.	GR-07	Eguchi,Y.	EV-04
Do,H.	GR-09	El-Hasan,T.S.	ET-12
Do,Y.H.	ER-09	Emley,N.C.	AA-01
Do,Y.K.	HP-30	Encinas,A.	FF-08
Dobromir,M.	BR-05	Endo,G.	EW-01
Dobrzynski,L.	HU-02	Endo,H.	EF-05
Doi,M.	FB-10	Endo,H.	EW-10
Doi,M.	FW-11	Endo,H.	FB-10
Doi,M.	GQ-02	Endo,Y.	BQ-08
Doi,T.	GR-03	Engdahl,G.	BE-10
Dokupil,S.	HD-11	Enoki,Y.	BW-15
Dolinar,D.	ET-08	Enokizono,M.	BW-09
Donadio,L.	AE-11	Enokizono,M.	BW-15
Dong,X.Y.	FA-03	Enokizono,M.	ET-09
Donohoe,G.W.	GD-02	Enokizono,M.	GV-03
Donohoe,G.W.	GW-06	Enomoto,Y.	GT-11
Donohoe,G.W.	HP-05	*Enpuku,K.	CC-01
Dorfbauer,F.	CB-02	Erden,M.F.	GC-10
Dorrell,D.G.	AE-02	Ertl,O.	CB-02
Dorrell,D.G.	CV-01	Ertl,O.	CB-03
Dorrell,D.G.	CW-02	Ertl,O.	DF-05
*Dorsey,P.	BB-02	Eto,F.	EV-03
Dou,S.X.	BQ-15	Eto,F.	EV-07
Dou,S.X.	DA-06	Etoh,K.	CP-07
Dou,S.X.	FU-12	*Etoh,K.	DB-05
Dovek,M.	DB-03	Etou,Y.	BW-13
Doyle,W.D.	FP-01	Etz Korn,M.	AD-09
Drofenik,M.	HD-02		
Du,C.L.	AF-08	F	
Du,H.	GP-02	Fabbrici,S.	FR-09
Du,J.	HP-11	Fabbrici,S.	GE-10
Dubenko,I.	BR-09	Fadafan,H.K.	BS-03
Duffy,M.	BE-08	Faehler,S.	FE-07
Dumitru,I.	GW-04	Fahler,S.	FE-01
Dumitru,I.	BU-03	Faini,G.	BA-04
Dumont,Y.	BU-06	Faini,G.	EQ-02
Dumpich,G.	ED-12	Falaras,P.	FE-10
Dunin - Borowski,R.	ED-07	Fan,J.	FX-01
Dunlap,D.	HU-06	Fan,J.	GV-05
Dunlap,R.A.	BR-02	Fan,Y.Y.	FU-09

Fang, Y.H.	BT-02	Fu, Y.	AF-05
Fangohr, H.	ED-09	Fu, Y.	CP-04
Farahani, A.R.V.	ER-10	Fujieda, S.	GU-13
Farhoudi, M.	FU-12	Fujii, N.	CS-04
Farhoudi, M.M.	GF-10	Fujii, S.	CE-08
Fassbender, J.	BC-11	Fujii, T.	FU-04
Fassbender, J.	FW-06	Fujii, Y.	FD-09
Fassbender, J.	FW-07	Fujikawa, R.	HS-15
Fassbender, J.	GD-03	Fujimaki, N.	FC-05
Fassbender, J.	GD-05	Fujimori, H.	AC-12
Fdez-Gubieda, M.L.	FF-01	*Fujimori, H.	CD-01
Fecher, G.	HA-04	Fujimori, H.	CE-08
Fedyanin, A.A.	HS-14	Fujimori, H.	CE-09
Feldmann, M.	HE-04	Fujimura, N.	BQ-07
*Feliciano, N.	CC-02	Fujimura, N.	GF-09
Feliciano, N.	DC-01	Fujisaki, K.	ET-11
Felser, C.	HA-04	Fujisaki, K.	FX-11
Feng, G.	CA-06	Fujisaki, K.	FX-12
Fernandez, G.V.	HQ-02	Fujisaki, K.	GT-13
Ferre, J.	ED-04	Fujita, A.	GF-05
*Ferreira, H.	CC-02	Fujita, A.	GU-13
Ferreira, H.A.	DC-01	Fujita, E.	BW-15
Ferreira, J.M.S.	AE-11	Fujita, N.	ES-07
*Ferreira, R.	CC-02	Fujiwara, H.	EA-01
Fert, A.	HA-07	Fujiwara, K.	BW-07
*Fert, A.	TZ-02	Fujiwara, K.	FC-05
Fidler, J.	CB-02	Fujiwara, K.	FX-06
Fidler, J.	DF-05	Fujiwara, K.	GT-12
Fidler, J.	ED-01	*Fujiwara, M.	EE-01
Fidler, J.	GB-07	Fujiwara, T.	CD-06
Filippetti, A.	GW-13	Fujiwara, Y.	BP-12
Fleurov, V.	DA-05	Fujiwara, Y.	GD-10
Flohrer, S.	AC-04	Fukamichi, K.	GF-05
Flores Filho, A.F.	FT-07	Fukamichi, K.	GU-13
*Fonseca, L.	CC-02	Fukamichi, K.	HQ-01
Fontana, R.E.	FB-09	Fukao, T.	CW-01
Fontcuberta, J.	HA-07	Fuke, H.N.	FB-10
Foo, C.F.	FV-03	Fukuda, K.	FB-06
Fournel, R.	EA-03	Fukumoto, M.	GR-03
Fournier, J.M.	EX-06	Fukunaga, H.	AC-11
Francis, T.L.	FD-03	Fukunaga, H.	BS-21
Frank, C.W.	FS-03	Fukunaga, H.	EE-03
Franz, E.	FC-09	Fukuoka, N.	BU-02
Freeman, M.R.	BD-09	Fukushima, A.	AA-05
Freitas, P.	FW-06	Fukushima, A.	BA-08
*Freitas, P.P.	AB-06	Fukushima, A.	CA-04
*Freitas, P.P.	CC-02	Fukushima, A.	EQ-05
Freitas, P.P.	DC-01	Fukushima, A.	EQ-06
Freitas, P.P.	EA-04	Fukushima, A.	FW-11
Frommberger, M.	FD-08	*Fukushima, A.	GA-01
Frommberger, M.	FW-07	Fukushima, H.	FQ-07
Fruchart, D.	BS-03	Fukushima, M.	EW-04
Fry, N.	FD-06	Fukushima, T.	DD-04
Fu, C-M.	BX-06	Fukushima, T.	EU-03

Fukuzawa,H.	GQ-01	GU-07
Fukuzawa,H.	GQ-03	Garcia-Sanchez,F.	DF-01
Fukuzawa,H.	GQ-04	Garcia-Sanchez,F.	GW-05
Fukuzawa,K.	FS-10	Garshelis,I.J.	GU-09
Fukuzawa,K.	FS-14	Gatteschi,D.	GU-10
Fukuzawa,K.	HB-10	Gatzen,H.H.	BP-07
Fukuzawa,K.	HB-11	Gatzen,H.H.	GF-12
Fullerton,E.E.	GB-08	Gaud,P.	EF-10
Fullerton,E.E.	GR-07	Gaudin,G.	BP-09
Fullerton,E.E.	GR-09	Gawronski,P.	BR-07
Funabashi,N.	HP-25	Ge,S.H.	BQ-03
Funakoshi,N.	DA-03	Ge,S.H.	ER-01
Funamizu,H.	EW-06	Gebert,A.	AC-09
Funayama,T.	GQ-01	Gee,S. H.	GR-04
Fuquan,B.	GU-12	Gee,S.H.	GD-02
Furubayashi,T.	CT-01	Gee,S.H.	GW-06
Furubayashi,T.	FF-07	Gee,S-H.	HP-05
Furusawa,K.	GE-06	*Gennai,N.	EE-01
Furusawa,K.	GQ-10	Geoffroy,O.	DE-03
Fuyama,M.	CP-07	Georgieva,M.	AC-05
*Fyen,W.	CC-05	Getman,A.	FX-01
G		Ghai,S.S.	BP-10
Gabay,A.	BS-13	Ghanaatshoar,M.	CR-07
Gabay,A.	FE-08	Ghanem,M.	ED-09
Gabay,A.M.	GE-08	Ghee,T.S.	FA-10
Gade,N.R.	ES-04	Ghods,M.	BE-06
Gaitzsch,U.	AC-09	Ghosh,K.	FU-03
Gajek,M.	HA-07	Giannakopoulos,K.	BC-10
*Gallagher,W.	BZ-03	Gill,P.	CQ-04
Gallet,S.	FC-09	Gill,P.	CQ-13
*Galvin,P.	CC-02	Gill,P.	FP-07
Gambino,R.	CA-03	Gjini,K.	EV-06
Gamble,H.S.	EE-04	Gjini,K.	EV-07
Gan,W.X.	HB-03	Glasmachers,S.	FD-08
Gangopadhyay,P.	FC-09	Gnatchenko,S.L.	AC-08
Gan' shina,E.A.	BT-07	Go,A.	HU-02
Gan' shina,E.A.	HS-09	Goldberg,J.S.	FQ-06
Gao,F.	FU-12	Goleman,K.	FX-02
Gao,H.	EU-16	Goleman,R.	FX-09
Gao,J.	FU-10	Golovanov,O.A.	EU-17
Gao,P.	DC-06	Gomi,M.	BT-10
Gao,Y.	CS-12	Gomi,M.	GU-11
Gao,Y.H.	BS-04	Gomonay,E.	CR-02
Gao,Y.H.	CT-05	Goncharov,A. V.	ED-09
Garcia Vinuesa,L.M.	GW-05	Gong,H.	BC-08
Garcia,C.	AC-08	Gong,J.	BW-03
Garcia,C.	FD-11	Gong,Z-Q.	FS-17
Garcia,K.L.	AC-07	Gonzalez Arias,A.	FV-12
Garcia,L.	CD-07	Gonzalez,J.	AC-08
Garcia-Arribas,A.	BV-09	Gonzalez,J.	BR-07
Garcia-Arribas,A.	BV-10	Gonzalez,J.	CD-09
Garcia-Arribas,A.	FD-06	Gonzalez,J.	FD-11
Garcia-Gancedo Garcia,L.		Gonzalez,J.M.	GW-05
		Gonzalez,J.M.	HA-10

Gonzalez-Calbet, J.M. HA-10
 Goolaup, S. ED-06
 Gooneratne, C.P. EF-07
 Gopalan, R. EE-02
 Gopalan, R. FE-03
 Gorn, N. HR-07
 Gornakov, V.S. GS-07
 Goto, H. AE-04
 Goto, H. CW-05
 Goto, K. FS-14
 Goto, R. CR-03
 Goto, T. BP-11
 Gotoh, Y. BW-07
 Goulon, J. AD-01
 Grabis, J.C. GQ-08
 *Graham, D. CC-02
 Graham, D.L. DC-01
 Granovsky, A. HS-11
 Gravier, I. AA-07
 Greaves, S.J. CB-01
 Greaves, S.J. CQ-14
 Groessinger, R. FE-05
 Groot, C.H. ED-09
 Groot, C.H. FA-04
 Groot, P.A.J. FA-04
 Gross, H.M. AF-11
 Grundy, P.J. AC-05
 Guarisco, D. CQ-01
 Gudenko, S.V. DA-05
 Guedes, M.H. BX-07
 Guedes, M.H. BX-02
 Guglielmi, P. AE-08
 Guilhamat, B. EF-10
 Guillemaud, P. FF-08
 Guo, G.X. AF-08
 Guo, G.X. CS-03
 Guo, H.-J. CW-05
 Guo, X.-C. GR-11
 Guo, Y. BE-02
 Guo, Y. EA-10
 Guo, Y.G. AE-10
 Guo, Y.G. GV-02
 Guo, Y.G. GW-15
 Guo, Y.-F. BX-06
 Guo, Z.B. CU-07
 Guo, Z.B. EA-07
 Guo, Z.B. HQ-04
 Guo, Z.B. HQ-05
 Guschl, P.C. EE-05
 Gusliencko, K. HR-07
 Gutfleisch, O. GE-02
 Gutfleisch, O. GU-14
 Guyot, M. BU-06

H

Ha, Y.K. CA-09
 Ha, Y.K. EA-02
 Habata, Y. BW-13
 Hachisuka, N. FB-06
 Hada, H. EA-05
 Hadjipanayis, G.C. BS-13
 Hadjipanayis, G.C. EB-09
 Hadjipanayis, G.C. EE-10
 Hadjipanayis, G.C. FE-08
 Hadjipanayis, G.C. FF-09
 Hadjipanayis, G.C. GE-08
 Hafezzullah, M. EX-05
 Hafner, J. BU-09
 Haftek, E. CB-12
 Haga, A. EW-01
 Haga, A. FX-06
 Haga, K. EC-04
 Haga, K. GE-11
 Hagino, T. BW-05
 *Haginoya, C. BB-04
 Hahn, M. GF-12
 Ham, C.H. HE-07
 Hamada, N. CS-10
 Hamada, N. EE-06
 *Hamaguchi, H. DE-01
 Hamaguchi, T. AF-03
 Hamanishi, S. FC-08
 Hamaya, K. DA-03
 Hamrle, J. BA-02
 Hamrle, J. BA-06
 Hamrle, J. CR-11
 Hamrle, J. ED-03
 Hamrle, J. FW-09
 Han, G. CR-13
 Han, G. CU-07
 Han, G. HQ-05
 Han, G.C. HQ-04
 Han, H. GD-02
 Han, H. GW-06
 Han, H. HP-05
 Han, H.C. EA-07
 Han, K. FV-07
 Han, K.H. FU-16
 Han, S.H. AC-02
 Han, S.H. CR-05
 Han, S.H. CR-08
 Han, S.H. CR-09
 Han, S.H. CR-18
 Han, S.H. EU-12
 Han, S.H. HP-02
 Han, T.-C. HU-03
 Han, X.F. EQ-08
 Hanamura, R. FV-01

Hanashima, K.	HP-26	Heo, J.H.	EX-10
Handa, H.	BX-09	Heo, J.H.	HP-24
*Handa, H.	CC-06	Heo, N.H.	ER-04
Handa, H.	DC-02	Herget, P.	BP-02
Handa, H.	DC-03	Herget, P.	DE-02
Hannula, S-P.	HD-07	Hernandez, M.A.	AF-05
Haq, E.	FA-06	Hernando, A.	HA-10
Hara, M.	CB-06	Hernandez-Gomez, P.	FV-12
Hara, M.	FQ-05	Herzer, G.	AC-04
Harada, T.	HU-01	Heyderman, L.J.	ED-07
*Harper, B.	BB-02	Higashihara, S.	GS-04
Harrell, J.W.	BC-06	Higgins, A.	HE-10
Harrell, J.W.	CT-06	Higgins, B.E.	CQ-01
Harrell, J.W.	CT-09	Higuchi, T.	BE-06
Harris, V.G.	FV-05	Higuchi, T.	EF-11
*Harward, I.R.	CE-01	Hihara, T.	ES-05
Hase, T.P.	GQ-08	Hikiu, M.	AF-10
Hasegawa, D.	GR-08	Hillebrands, B.	DF-02
Hasegawa, M.	FX-08	Hillebrands, B.	FW-06
Hasegawa, N.	FB-02	*Hillebrands, B.	GD-01
Hasegawa, N.	FB-10	Hillebrands, B.	GD-05
Hasegawa, Y.	GS-06	Hillebrands, B.	HR-07
Hashi, S.	ER-07	Hinch, R.	AF-12
Hashi, S.	EW-09	Hinotani, S.	GT-12
Hashi, S.	FE-02	Hirano, H.	BW-07
Hashi, S.	FV-06	Hirano, T.	AF-09
Hashi, S.	GT-06	Hirano, T.	FV-11
Hashimoto, A.	FP-04	Hirata, K.	CP-05
Hashimoto, M.	FQ-13	Hirayama, R.	ET-11
Hashimoto, S.	EW-02	Hirayama, R.	GT-13
Hassini, A.	DA-04	Hirohata, A.	HA-02
Hatafuku, H.	HT-06	Hirohata, A.	HP-07
Hatatani, M.	CP-07	Hirohata, A.	HP-18
*Hatatani, M.	DB-05	Hirosawa, S.	GE-03
Hatatani, M.	GQ-12	Hirosawa, S.	GE-07
Hatori, T.	EB-03	Hirota, K.	EE-11
Hattori, M.	CW-13	Hisa, Y-T.	CQ-09
Hattori, T.	CD-05	Hisatake, K.	FV-12
*Hatuskade, Y.	CC-04	Hisatomi, S.I.	FT-09
Hayakawa, S.	ET-06	Hison, C.	BR-05
Hayakawa, Y.	FB-02	Holmberg, H.	BQ-13
Hayano, S.	EF-05	Holzapfel, B.	FE-07
Hayashi, H.	BP-12	Homma, T.	GB-09
Hayashi, M.	FE-11	*Homola, A.	BB-02
Hayashi, N.	FQ-07	Homrich, R.P.	FT-07
Hayashi, S.	EE-07	*Honda, H.	CC-03
Hayashi, T.	CU-04	Honda, H.	DC-04
Hayashi, T.	FD-09	Honda, N.	CQ-05
Hayashi, Y.	HE-01	Honda, N.	FQ-08
Hazelton, T.	FD-02	Honda, S.	FF-05
He, H.H.	HS-03	Honda, T.	FT-08
Heczko, O.	HD-07	Honda, Z.	HT-09
Hendriks, F.	AF-12	Hong, D.H.	FP-06
Henk, J.	AD-03	Hong, J.	CR-15

Hong, J.	EU-01	Houbaert, Y.	CD-07
Hong, J.P.	ER-09	Howe, D.	AE-01
Hong, J.P.	HP-30	Howe, D.	AE-07
Hong, J.S.	GW-10	Howe, D.	CV-04
Hong, J.W.	DC-05	Howe, D.	DD-06
Hong, J-H.	AC-06	Hredzak, B.	CS-03
Hong, L.	EA-10	Hrkac, G.	CB-02
Hong, R.C.	HU-08	Hrkac, G.	DF-05
Hong, S.	FP-08	Hrkac, G.	GB-07
Hong, S.H.	EU-13	Hsiao, S-N.	BS-09
Hong, S-K.	BQ-01	Hsieh, L.C.	HP-19
Hong, Y.K.	GD-02	Hsieh, L-C.	FA-09
Hong, Y.K.	GW-06	Hsieh, M-F.	CV-03
Hong, Y-K.	GR-04	Hsu, C.Y.	BV-06
Hong, Y-K.	HP-05	Hsu, J-H.	BS-06
Hongliang, L.	FU-05	Hsu, J-H.	GS-08
Honkura, Y.	BV-11	Hsu, Y-S.	CV-03
Honkura, Y.	BV-12	Hu, A.	HP-11
Honkura, Y.	CS-10	Hu, F-X.	FU-10
Honkura, Y.	EE-06	* Hu, G.	BB-03
Honkura, Y.	FD-09	Hu, G.H.	ED-10
Honkura, Y.	HE-01	Hu, H.	ED-05
Hono, K.	AC-11	Hu, J.	BR-03
Hono, K.	AC-12	Hu, X.	EB-12
Hono, K.	BC-02	* Huai, Y.	BA-01
Hono, K.	BC-03	Huang, C.C.	FV-14
Hono, K.	BC-04	Huang, C.H.	FU-06
Hono, K.	BS-08	Huang, C.Y.	FU-13
* Hono, K.	CD-01	Huang, D.R.	BE-05
Hono, K.	CP-01	Huang, D.R.	FA-09
Hono, K.	EE-02	Huang, D.R.	HP-19
Hono, K.	FE-03	Huang, D-R.	AE-09
Hono, K.	GE-05	Huang, D-R.	FA-08
* Hono, K.	HC-05	Huang, D-R.	GV-04
Honshima, M.	EE-11	Huang, E. W.	EQ-04
Hori, H.	HT-03	Huang, F-Y.	AF-06
Horikawa, O.	BE-07	Huang, H.L.	FA-12
Horikoshi, S.	GT-03	Huang, H-L.	BS-06
Horn, G.	EA-10	Huang, J.C.A.	BV-06
Horn, L.	BT-01	Huang, J.H.	BQ-10
Horvatic, M.	GU-10	Huang, J-H.	FA-08
Hosaka, H.	EV-02	Huang, P.J.	ES-06
* Hoshino, K.	DB-05	Huang, Y.	CT-06
Hoshino, K.	FB-03	Huang, Y.	EB-09
Hoshino, K.	GQ-05	Huang, Y.	FF-09
Hoshino, K.	GQ-06	Huang, Y.	HP-19
Hoshino, T.	CS-08	Huang, Y.Q.	BX-11
Hoshino, T.	HB-01	Huang, Y.Q.	CT-03
* Hoshiya, H.	DB-05	Huang, Y.S.	FW-05
Hoshiya, H.	FB-03	Huang, Y.W.	FA-12
Hoshiya, H.	GQ-05	Huang, Y-W.	FA-08
Hoshiya, H.	GQ-06	Huang, Y-W.	FA-09
Hoshtanar, O.	CU-01	* Huetten, A.	HA-01
Hosoe, Y.	CB-06	* Hug, H.J.	BD-01

Hung, E.W.	FW-01	Indeck, R.S.	EP-05
Huntlova, A.	EC-03	Inkson, J.C.	HP-23
Hussien, A.A.	CS-02	*Innami, K.	AB-03
Hwang, C-C.	CS-14	Inomata, A.	GB-11
Hwang, D.G.	BT-05	Inomata, K.	BA-10
Hwang, D.G.	GD-09	Inomata, K.	BT-03
Hwang, D.G.	HR-03	Inomata, K.	CR-03
Hwang, G-Y.	CS-01	Inomata, K.	EC-04
Hwang, I.	CA-03	Inomata, K.	GE-11
Hwang, I.	HP-29	Inomata, K.	GS-05
Hwang, I.	EA-06	Inomata, K.	HA-02
Hwang, I.	HP-03	Inomata, K.	HP-01
Hwang, J.Y.	HP-27	Inomata, K.	HP-07
Hwang, S.	HP-03	Inomata, K.	HP-09
Hwang, S-M.	CS-01	Inomata, K.	HP-18
Hwang, Y.H.	BQ-02	Inoue, J.	CR-01
Hwang, Y.H.	HS-10	Inoue, M.	ES-07
Hwang, Y.T.	FA-12	Inoue, M.	FE-02
Hyun, S.H.	FV-07	Inoue, M.	FV-06
		Inoue, M.	GF-01
I		Inoue, M.	GF-02
Iakubov, I.T.	HS-04	Inoue, M.	HS-08
Ibach, H.	AD-09	Inoue, M.	HS-09
Ibusuki, T.	FB-01	Inoue, M.	HS-11
Ichihara, S.	BT-04	Inoue, M.	HS-13
Ichimura, M.	CR-10	Inoue, M.	HS-14
Ichinokura, O.	AE-04	Inoue, M.	HS-15
Ichinokura, O.	CW-05	Inoue, M.	HS-16
Ichinokura, O.	ET-06	Inoue, T.	EF-01
Ide, Y.	FB-02	Inoue, T.	EF-01
Igarashi, A.	EW-01	Inoue, T.	GF-09
Igarashi, M.	CB-06	Inoue, T.	GR-03
Igarashi, M.	FQ-05	Inoue, Y.	FC-07
Ihara, K.	FE-11	Ipatov, M.	FD-11
Ihm, Y.E.	BQ-01	Iramina, K.	EV-06
Iimura, Y.	BD-10	Iramina, K.	EV-07
Ikeda, Y.	CQ-11	Iramina, K.	EV-08
Ikeda, Y.	FP-10	Iriguchi, N.	EW-07
Ikeda, Y.	GB-08	Iriyama, T.	ER-03
*Iketani, N.	AB-03	Isai, M.	EX-05
Ikkai, Y.	GT-12	Ishak, D.	AE-07
Ikkink, T.	FD-05	Ishiai, H.	EV-13
Im, D.H.	CT-02	Ishibashi, T.	BD-10
Imaeda, K.	HA-09	Ishibashi, T.	BQ-09
Imakawa, M.	GR-08	Ishida, M.	CV-06
Imakita, K.	GD-07	Ishida, S.	GR-10
Imamura, T.	HB-01	Ishihara, C.	GT-11
Imamura, T.	HB-07	Ishii, O.	GT-03
Inaba, Y.	CQ-06	Ishii, S.	GS-06
Inaba, Y.	CQ-10	Ishio, S.	BS-07
Inaba, Y.	GB-05	Ishio, S.	CU-09
Inagaki, M.	FV-01	Ishio, S.	EB-08
Inage, K.	FB-06	Ishio, S.	FQ-12
Indeck, R.S.	BD-03	Ishio, S.	FW-10

Ishiyama,K.	EW-09	Izaki,M.	ES-07
Ishiyama,K.	FC-10	Izumi,M.	FB-10
Ishiyama,K.	FT-09	Izumi,M.	GQ-02
Ishiyama,K.	FT-10	Izumida,F.	EU-08
Ishiyama,K.	FT-11	Izumida,F.	GT-04
Ishizone,M.	FB-02		
Isogami,S.	FW-08	J	
Isowaki,Y.	EA-11	Jabal,J.F.	HP-05
Itagaki,N.	GB-10	Jabbar,M.A.	AE-05
Itakura,M.	BS-19	Jacquet,E.	HA-07
*Ito,A.	CC-03	Jalil,M.B.A.	CR-06
Ito,H.	BC-02	Jalil,M.B.A.	FA-10
Ito,H.	DC-04	Jalil,M.B.A.	GW-01
Ito,K.	EQ-09	Jalil,M.B.A.	GW-02
Ito,M.	GT-11	James,R.	HS-01
Ito,S.	EB-03	Jang,G.H.	AE-06
Ito,S.	FP-02	Jang,G.H.	CV-14
Ito,T.	EX-05	Jang,H-J.	HR-06
Ito,Y.	CS-04	Jang,I.B.	FX-07
Itoh,A.	BP-03	Jang,K-B.	CW-09
Itoh,A.	ED-08	Jang,K-B.	CW-10
Itoh,H.	CR-01	Jang,K-B.	FT-03
Itoh,K.	BS-18	Jang,S.M.	FT-01
Itoh,K.	FR-02	Jang,S.M.	CS-05
Itoh,M.	EU-10	Jang,S.M.	CS-07
Itoh,M.	FU-07	Jang,S.M.	CV-07
Itoh,S.	HB-10	Jang,S.M.	FT-04
Itoh,S.	HB-11	Jang,W.B.	FT-01
Itoh,T.	BR-10	Jang,W.B.	FT-04
Itoh,T.	FR-07	Jang,Y.M.	EA-06
Itoh,Y.	ED-08	Jang,Y.M.	HP-03
Itozaki,H.	CU-04	Jang,Y-J.	CV-11
Ivanov,T.	HD-11	Jang,Y-J.	CW-08
Ivanov,V.A.	DA-05	Jang,Y-R.	GW-12
Iwahara,M.	BW-05	Janke-Gilman,N.	AD-03
Iwahara,M.	BW-06	Jansen,R.	FA-05
Iwahara,M.	BW-08	Jansen,R.	FA-06
Iwahara,M.	BW-10	Janssen,Y.	GF-08
Iwahara,M.	CS-02	Jaouen,N.	AD-01
Iwahara,M.	CU-11	Je,H-J.	EC-08
Iwahara,M.	EW-02	Jeen,G.S.	HS-10
*Iwaki,S.	FC-01	Jeffers,F.J.	GR-04
Iwano,T.	FS-06	Jei,C.P.	HS-01
Iwasa,T.	CE-02	Jeon,K.A.	BQ-06
Iwasaki,H.	FB-10	Jeon,K.S.	CT-02
Iwasaki,H.	GQ-01	Jeong,W.	HP-03
Iwasaki,H.	GQ-03	Jeong,W.C.	EA-06
Iwasaki,H.	GQ-04	Jeong,W-C.	HP-29
Iwasaki,K.	GF-02	Jewell,G.W.	AE-01
Iwase,T.	HB-01	Jeyadevan,B.	ES-03
Iwata,S.	EA-12	Jeyadevan,B.	FX-10
Iwata,S.	ED-02	Jézéquel,G.	AD-05
Iwata,S.	FR-07	Jhon,M.S.	BP-10
Iwata,S.	GD-10	Jhon,M.S.	EX-08

Jhon,M.S.	FS-15	Jung,M.H.	CR-08
Ji,C.W.	BR-11	Jung,T.A.	GF-11
Ji,S-H.	BQ-14	Jung,Y-K.	ES-01
Jia,L.J.	EC-02	Jurgen,K.	HA-05
Jia,Q.W.	AF-07		
Jia,Q-W.	GP-04	K	
Jia,Z.Y.	BC-06	Kabos,P.	AA-03
Jia,Z.Y.	CT-06	Kadowaki,A.	GU-04
Jia,Z.Y.	CT-09	*Kaemmerer,S.	HA-01
Jiang,C.	HD-08	Kagami,T.	FB-06
Jiang,H.	CP-03	Kageyama,Y.	BC-05
Jiang,J.H.	BT-03	Kagotani,T.	EC-04
Jiang,M.H.	BR-03	Kagotani,T.	GE-11
*Jiang,W.	BB-02	Kaido,C.	GT-08
Jiang,Y.	BA-10	Kaidou,C.	GT-13
Jiko,N.	BU-07	Kaiser,C.	CA-08
Jiles,D.	CD-11	Kaizu,A.	FR-04
Jiles,D.C.	EF-04	Kakibe,S.	CT-04
Jiles,D.C.	EW-11	Kakikawa,M.	EW-02
Jiles,D.C.	GF-04	Kako,E.	BV-12
Jiles,D.C.	GF-08	Kakubari,Y.	ET-03
Jin,D.H.	GD-09	Kalinikos,B.	CE-07
Jin,L.	BT-07	Kalinnikov,V.T.	DA-05
Jin,Q.Y.	BW-02	Kamabe,H.	EP-09
Jin,Y.J.	HU-09	Kamada,O.	BW-11
Jing,Y.L.	EC-07	Kamada,Y.	EF-06
Jo,C.	ES-08	Kamada,Y.	GV-06
Jo,C.	ES-09	Kamagata,Y.	BS-02
Jo,C.	GW-12	Kamata,K.	FX-06
Jo,S.	AA-10	Kamatani,Y.	FS-11
Jo,S.	FD-04	Kambe,S.	GT-03
Jogo,A.	FB-01	Kamiki,T.	EB-07
Jogo,J.	BQ-09	Kamino,T.	HP-10
Joh,Y.G.	BQ-12	Kamino,T.	HP-26
Johnstone,S.	BD-08	Kamiya,Y.	AF-10
Joisten,H.	EF-10	Kamondetdacha,R.	EW-05
Jolly,L.	AE-05	Kamondetdacha,R.	FC-06
Joo,H.W.	GD-09	Kan,S.	BC-07
Joo,H.W.	HR-03	Kanai,H.	CP-01
Joo,K.	FV-09	Kanai,H.	DB-01
Joo,S.J.	BA-07	Kanai,H.	HP-12
Joo,S.J.	CR-15	Kanai,Y.	CB-01
Jorzick,J.	HR-07	Kandori,A.	FC-04
Jou,F.C.	FU-09	Kanekiyo,H.	GE-03
Ju,J-J.	AE-09	Kaneko,A.	EV-05
Ju,J-J.	BE-05	Kaneko,D.	CP-01
Juang,J-Y.	HB-04	Kaneko,K.	FW-04
Jubert,P-O.	BA-04	Kang,B-W.	DF-03
Jubert,P-O.	EQ-02	Kang,J.H.	FU-14
Julien,M.H.	GU-10	Kang,K-Y.	HR-04
Jun,J-H.	ES-01	Kang,S.	BC-06
Jung,H-M.	GT-05	Kang,S.	CT-09
Jung,J-S.	ES-01	Kang,Y-M.	BR-08
Jung,M.H.	BQ-06	Kanomata,T.	HU-01

Kapat,J.	HE-07	Kedous-Lebouc,A.	DE-03
Karapetrov,G.	ED-09	Kedous-Lebouc,A.	EX-06
Karasawa,K.	BW-12	Kehl,T.	FU-03
Karis,T.E.	GR-11	Keirn,Z.	GC-06
Kartik,V.	GP-03	Kek,E-L.	FS-08
Kasahara,T.	CA-02	Keller,N.	BU-06
Kasamatsu,Y.	HB-09	Kelly,B.L.	EE-04
Kashiwaya,S.	HP-17	* Kent,A.	GA-03
* Katada,H.	DB-05	* Kerekes,M.	AB-06
Katada,H.	FB-03	Kerekes,M.	HS-05
Katada,H.	GQ-06	Khan,M.U.	CB-05
Katada,H.	GQ-12	* Khan,N.M.	GB-01
Kataoka,T.	EW-04	Khanikaev,A.	HS-11
Kataoka,Y.	GT-04	Khiem,N.V.	FU-18
Katayama,N.	EB-01	Khiem,N.V.	FU-19
* Katayama,T.	GA-01	Khlopkov,K.	GE-02
Katayama,T.	HP-10	Kikko,T.	CD-05
Katayama,T.	HP-26	Kikoin,K.	DA-05
Katine,J.	AA-09	Kikuchi,H.	EF-06
Katine,J.	BA-09	Kikuchi,H.	FR-02
Katine,J.A.	BA-03	Kikuchi,H.	GV-06
* Katine,J.A.	FB-04	Kikuchi,K.	FT-10
Katine,J.A.	GQ-05	Kikuchi,N.	FW-03
Kato,H.	BS-14	Kikuchi,N.	GW-07
Kato,H.	FU-01	Kikuchi,Y.	FC-02
Kato,J.	FV-01	Kikuhara,K.	FV-10
Kato,K.	EW-12	Kildishev,A.	EW-05
Kato,K.	FX-06	Kim,B.	HU-05
Kato,R.	DC-04	Kim,B.Y.	BQ-12
Kato,S.	GE-09	Kim,B-K.	EC-08
Kato,T.	EA-12	Kim,B-S.	FC-03
Kato,T.	ED-02	Kim,C.G.	BT-07
Kato,T.	FR-07	Kim,C.G.	BV-08
Kato,T.	GD-10	Kim,C.G.	HR-05
Kato,T.	HP-13	Kim,C.K.	CT-02
Katou,H.	EP-09	Kim,C.O.	BV-08
* Katsura,S.	CC-04	Kim,C.O.	BX-11
Katter,M.	EE-08	Kim,C.O.	CT-03
Kawachi,T.	GT-13	Kim,C.O.	ER-09
Kawaguchi,K.	HP-17	Kim,C.O.	FV-12
Kawai,M.	BE-04	Kim,C.O.	HP-30
Kawai,Y.	HB-10	Kim,C.O.	HR-05
Kawaji,J.	FP-05	Kim,C.S.	BQ-05
Kawaji,J.	GB-09	Kim,C.S.	BQ-11
Kawakami,K.	FS-11	Kim,C.S.	BX-10
Kawakami,K.	GR-01	Kim,C.S.	FV-09
Kawamichi,H.	FC-02	Kim,C.S.	FV-13
Kawamichi,H.	FC-02	Kim,C.S.	HS-06
Kawamura,K.	FE-11	Kim,C.S.	HT-04
Kawamura,Y.	BQ-08	Kim,C-G.	AC-06
Kawasaki,S.	GQ-02	Kim,C-O.	BT-07
Kawasaki,T.	EE-09	Kim,C-O.	BX-12
Kawato,S.	EW-06	Kim,C-Y.	EU-05
Kaya,A.	DB-02	Kim,D.	BQ-01

Kim,D.	BQ-14	Kim,K.	HU-05
Kim,D.C.	ES-09	Kim,K.H.	AC-02
Kim,D.H.	BQ-12	Kim,K.H.	AC-03
Kim,D.J.	FV-12	Kim,K.H.	CE-05
Kim,D.Y.	HR-05	Kim,K.H.	DD-04
Kim,D-H.	EV-09	Kim,K.H.	EU-03
Kim,E.C.	BQ-12	Kim,K.H.	FP-03
Kim,E-M.	ES-01	Kim,K.H.	GT-01
Kim,G-D.	AC-06	Kim,K.H.	GT-02
Kim,G-T.	CS-06	Kim,K.S.	FU-17
Kim,H.	BQ-01	Kim,K.W.	EA-06
Kim,H.	BQ-04	Kim,K.Y.	ER-01
Kim,H.	BQ-14	Kim,K-C.	CS-13
Kim,H.D.	BQ-12	Kim,K-C.	CS-15
Kim,H.H.	HQ-08	Kim,K-C.	CV-02
Kim,H.H.	HQ-08	Kim,K-C.	GT-10
Kim,H.J.	AC-02	Kim,K-M.	EV-09
Kim,H.J.	BQ-01	Kim,K-N.	EV-09
Kim,H.J.	EU-13	Kim,K-S.	ER-02
Kim,H.J.	HS-06	Kim,K-S.	HP-21
Kim,H.K.	BQ-02	Kim,K-T.	DE-05
Kim,H.K.	HS-10	Kim,K-T.	EW-08
Kim,H.S.	BQ-14	Kim,M.C.	FT-02
Kim,H.S.	CA-09	Kim,M.S.	BT-05
Kim,H.S.	EA-02	Kim,M-S.	DE-05
Kim,H.S.	EA-06	Kim,M-S.	EW-08
Kim,H-D.	GU-16	Kim,R.	HU-05
Kim,H-J.	CA-09	Kim,S.B.	ER-04
Kim,H-J.	EA-02	Kim,S.J.	BQ-05
Kim,H-J.	EU-05	Kim,S.J.	BX-10
Kim,I.	AC-02	Kim,S.J.	HS-06
Kim,I.	BR-11	Kim,S.S.	HP-27
Kim,I.	EU-03	Kim,S.W.	BT-05
Kim,J.	CR-15	Kim,S.W.	GD-09
Kim,J.	EU-03	Kim,S.W.	HR-03
Kim,J.	EU-13	Kim,S-J.	CW-06
Kim,J.E.	GW-16	Kim,S-K.	DF-03
Kim,J.H.	BE-03	Kim,S-P.	BT-09
Kim,J.S.	GS-02	Kim,S-S.	EU-09
Kim,J.W.	CT-02	Kim,S-T.	EU-09
Kim,J.Y.	FU-14	Kim,T.	HP-03
Kim,J-C.	CV-11	Kim,T.	HP-27
Kim,J-C.	CW-07	Kim,T.H.	CW-09
Kim,J-H.	BX-12	Kim,T.H.	CW-10
Kim,J-M.	HQ-07	Kim,T.H.	CW-11
Kim,J-R.	AC-02	Kim,T.H.	CW-12
Kim,J-R.	BR-11	Kim,T.H.	FT-03
Kim,J-R.	EU-01	Kim,T.W.	CA-03
Kim,J-R.	EU-05	Kim,T.W.	EA-06
Kim,J-S.	FV-02	Kim,T.W.	EX-10
Kim,J-V.	EA-03	Kim,T.W.	HP-24
Kim,J-Y.	GU-16	Kim,T.W.	HP-28
Kim,K.	BQ-11	Kim,T.W.	HP-29
Kim,K.	FU-02	Kim,T-H.	FT-02

Kim, T-W.	FU-02	Kitakami, O.	BC-04
Kim, T-Y.	FV-11	Kitakami, O.	BR-10
Kim, W.C.	GW-16	Kitakami, O.	CQ-06
Kim, W.T.	BP-10	Kitakami, O.	EB-04
Kim, W.T.	FS-15	Kitakami, O.	GB-05
Kim, W.Y.	CR-08	Kitamori, T.	EE-09
Kim, W.Y.	CR-09	Kitamoto, Y.	BC-09
Kim, W.Y.	CR-18	Kitamoto, Y.	CD-02
Kim, Y.	BV-02	Kitamoto, Y.	DA-03
Kim, Y.	GU-06	Kitamoto, Y.	GE-09
Kim, Y.G.	EW-08	Kitamoto, Y.	GR-10
Kim, Y.H.	CT-02	Kitanovski, A.	DD-05
Kim, Y.K.	CA-03	* Kitazawa, K.	FZ-01
Kim, Y.K.	ER-06	* Kitazawa, T.	AB-03
Kim, Y.K.	HP-27	Kiwa, T.	FC-04
Kim, Y.K.	HP-29	Kiya, T.	FQ-08
Kim, Y.S.	HP-04	Kiyomiya, K.	GW-14
Kim, Y.Y.	GW-16	Kiyomiya, T.	HD-10
Kim, Y-A.	GT-02	Kiyono, H.	FB-06
Kim, Y-S.	BQ-04	Kiyota, G.	CD-02
Kim, Y-S.	HQ-07	Kiziroglou, M.E.	ED-09
Kimata, H.	GT-06	Kiziroglou, M.E.	FA-04
Kimata, M.	FX-08	Klaassen, K.B.	FQ-10
Kimel, A.	BP-03	Klaeui, M.	BA-04
Kimishima, Y.	FU-08	Klaeui, M.	ED-07
Kimura, H.	CP-07	Klaeui, M.	EQ-02
Kimura, K.	GB-09	Klein, O.	BD-02
Kimura, O.	FV-10	Klemmer, T.J.	CQ-09
Kimura, T.	BA-02	* Klemmer, T.J.	HC-06
Kimura, T.	BA-06	Knappmann, S.	BP-07
Kimura, T.	CR-11	Knigge, B.	FS-12
Kimura, T.	ED-03	Knight, B.	DE-02
Kimura, T.	FW-09	Ko, I.Y.	CT-03
Kimura, T.	FX-03	Ko, S.P.	ER-06
Kinser, E.	CD-11	Ko, T.	FV-07
Kirchhoff, J.	BC-07	Kobayashi, D.	HS-14
Kirilyuk, A.	BP-03	Kobayashi, H.	BW-04
Kirkman, I.W.	AD-06	Kobayashi, H.	GC-05
Kirschner, J.	AD-03	Kobayashi, K.	BP-06
Kirschner, J.	AD-04	Kobayashi, K.	BS-18
Kirschner, J.	AD-09	Kobayashi, K.	EV-01
Kirschner, M.	CB-02	Kobayashi, K.	EW-01
Kirschner, M.	DF-05	Kobayashi, K.	EW-12
Kirschner, M.	ED-01	Kobayashi, K.	FC-05
Kirschner, M.	GB-07	Kobayashi, K.	FS-06
Kiselev, S.I.	AA-01	Kobayashi, K.	FX-06
Kishi, T.	EA-05	Kobayashi, K.	HP-10
Kishimoto, H.	CD-05	Kobayashi, K.	HT-05
Kishimoto, M.	GR-02	Kobayashi, T.	AA-11
Kishimoto, M.	GR-03	Kobayashi, T.	BP-12
Kitagawa, E.	EA-05	Kobayashi, T.	CR-17
Kitagawa, T.	EB-03	Kobayashi, T.	FC-08
Kitagawa, T.	EB-07	Kobayashi, T.	GU-15
Kitakami, O.	BC-03	Kochneva, M.Y.	HS-09

Koda,T.	FR-08	Kraemer,M.	GD-04
Kodaira,Y.	FW-11	Krah,J.	CD-10
Kodama,T.	GF-01	Krah,J.	CU-10
Kodama,T.	HS-16	Kraus,L.	FD-10
Koduka,N.	HA-09	Krishnamoorthy,C.	FF-12
Koharagi,H.	GT-11	Krishnan,K.	CT-05
Kohira,H.	HB-05	Krivorotov,I.N.	AA-01
Kohmoto,O.	GR-05	Ku,H.C.	BQ-10
Kohmoto,O.	HT-08	Kuang,Z.	BD-10
Kohno,H.	CR-12	Kuanr,A.V.	AD-08
Kohno,S.	FD-09	Kuanr,A.V.	GD-08
Koi,K.	GQ-01	Kuanr,B.K.	AD-08
Koide,T.	HP-10	*Kuanr,B.K.	CE-01
Koide,T.	HP-26	Kuanr,B.K.	GD-08
Koike,K.	BP-11	Kubo,K.	GQ-01
Koike,T.	DA-03	Kubota,H.	AA-05
Koike,T.	FC-08	Kubota,H.	CA-04
Koike,T.	HD-05	Kubota,H.	EQ-05
*Kojima,K.	AB-03	Kubota,H.	FU-01
Komagaki,K.	HP-12	Kubota,H.	FW-11
Komine,T.	GS-06	*Kubota,H.	GA-01
Komiyama,K.	HU-01	Kubota,H.	HP-06
Kondo,K.	EC-10	Kubota,H.	HP-13
Kondo,M.	FS-11	Kubota,T.	GT-13
Kondo,M.	GC-07	Kudryavtsev,Y.V.	HU-05
Kondoh,M.	CD-05	Kuendig,A.A.	FE-03
Kondou,K.	EP-10	Kuepferling,M.	FE-05
Kong,S.H.	FP-03	Kuga,K.	HP-25
Konno,M.	BP-11	Kuivalainen,P.	BQ-13
Konrad,A.	ER-10	Kulakowski,K.	BR-07
Konrad,A.	ET-01	Kum,B.Y.	FV-13
Konrad,A.	ET-02	Kumar,B.	FA-10
Konrad,A.	EU-15	Kumar,B.V.K.	GP-05
Koo,B-H.	GS-07	Kume,M.	FE-11
Koo,H.C.	CR-05	Kume,T.	GD-10
Koo,H.C.	CR-08	Kuo,P.C.	BT-02
Koo,H.C.	CR-09	Kuo,P.C.	FU-06
Koo,J.H.	HP-30	Kuo,P-C.	BS-06
Korn,T.	HS-05	Kuo,S.Y.	BT-02
Korolev,K.A.	EC-06	Kurebayashi,H.	HA-02
Koroleva,L.I.	DA-05	Kuribara,T.	DD-04
Koroleva,L.I.	HD-06	Kuribara,T.	EU-03
Koshizaki,N.	HP-17	Kurihara,Y.	EP-02
Kostamo,P.	BQ-13	Kurinobu,S.	FX-08
*Kostylev,M.P.	GD-01	Kurita,M.	FS-09
Kostylev,M.P.	HR-07	Kurita,M.	HB-02
Kosugi,M.	BE-04	Kurkoski,B.M.	GC-04
Kotera,H.	GT-12	Kuroda,C.S.	BX-09
Kou,X.M.	BQ-03	Kuroishi,K.	BC-09
Kou,X.M.	ER-01	Kuroiwa,T.	BW-04
Kovintavewat,P.	GC-10	Kurokawa,Y.	EV-10
Kowase,I.	BE-09	Kurosaki,Y.	HP-10
Koyama,K.	BS-14	Kurtas,E.	EP-04
Koyama,S.	BP-11	Kurtas,E.M.	GC-10

Lee, K.J.	CS-13	Leistner, K.	FE-01
Lee, K-E.	BT-07	Lengsfield, B.	CQ-11
Lee, K-J.	CS-15	Lengsfield, B.	GB-08
Lee, K-J.	CV-02	Lengsfield, B.H.	CQ-12
Lee, K-J.	EQ-07	Leong, T.K.	FA-10
Lee, K-J.	GT-10	Leong, T.K.	FU-05
Lee, K-R.	BT-09	Lepadatu, S.G.	BA-11
Lee, K-R.	HT-07	Lépine, B.	AD-05
Lee, K-S.	DF-03	Leung, C.W.	HQ-08
Lee, M.S.	GD-09	Li, B.	BR-03
Lee, M.S.	HR-03	Li, B.	ER-01
Lee, N.	HU-05	Li, C.	HE-06
Lee, R-W.	CW-08	Li, C.X.	BQ-03
Lee, S.	HS-12	Li, F.	BU-03
Lee, S.F.	EQ-04	Li, F-F.	HP-11
Lee, S.F.	FW-01	Li, G.P.	EU-16
Lee, S.H.	BQ-12	Li, G.Q.	FW-10
Lee, S.H.	CS-05	Li, H.	FS-04
Lee, S.H.	EV-09	Li, H.	HB-06
Lee, S.S.	BT-05	Li, J.	GV-08
Lee, S.S.	GD-09	Li, J.T.	CP-08
Lee, S.S.	HR-03	Li, J.T.	DF-04
Lee, S.W.	BX-10	Li, K.	CU-07
Lee, S.W.	HS-06	Li, K.	HQ-05
Lee, S.Y.	BQ-06	Li, K.B.	EA-07
Lee, S-C.	BT-09	Li, K.B.	HQ-04
Lee, S-F.	EQ-03	Li, K.S.	CA-10
Lee, S-G.	HT-07	Li, L.	FQ-04
Lee, S-H.	HD-12	Li, S.C.	HP-22
Lee, S-J.	EW-11	Li, T.	GR-08
Lee, S-R.	GQ-07	Li, W.D.	CD-03
Lee, S-R.	GS-02	Li, W-H.	ES-06
Lee, S-R.	HP-16	Li, X.	ED-09
Lee, S-W.	FU-17	Li, X.L.	FA-04
Lee, T.D.	BT-08	Li, X.P.	CD-08
Lee, T.D.	FP-06	Li, X.P.	FX-01
Lee, T.D.	HP-28	Li, X.P.	GV-05
Lee, T-H.	GP-04	Li, Z.W.	GC-09
Lee, W.N.	BQ-10	Li, Z-Z.	HP-11
Lee, W.Y.	BQ-06	Liao, M.T.	ES-06
Lee, W.Y.	CR-09	Liedke, M.O.	BC-11
Lee, W.Y.	CR-18	Liedke, M.O.	FW-06
Lee, W.Y.	HP-02	Liedke, M.O.	FW-07
Lee, W.Y.	HS-12	Lien, Y.H.	FU-13
Lee, W-J.	BR-01	Liew, T.	FA-10
Lee, Y.	HU-05	Lim, B.C.	EB-05
Lee, Y.K.	HP-29	Lim, C.K.	HP-04
Lee, Y.M.	HP-06	Lim, J-H.	BX-12
Lee, Y.P.	FU-14	Lim, J-J.	BT-07
Lee, Y.P.	FU-16	Lim, S.H.	EU-12
Lee, Y.S.	FU-14	Lim, S.H.	GU-06
Lee, Y-K.	EV-09	Lim, S.T.	EX-08
Legendre, B.	CD-07	Lim, S.U.	CT-02
Leger, J-M.	EF-10	Lim, S-B.	CW-09

Lim,S-B.	CW-10	Liu,S.	HE-10
Lim,S-B.	FT-03	Liu,T.	EF-06
Lim,S-H.	BV-02	Liu,X.	CQ-07
Lim,S-H.	HD-01	Liu,X.X.	AA-08
Lim,W.C.	HP-28	Liu,X.X.	BS-15
Lima,E.C.D.	BX-13	Liu,X.X.	CP-04
Lima,E.C.D.	CT-08	Liu,X.X.	EB-01
Lin,C-R.	BR-01	Liu,Y.W.	BW-02
Lin,C-R.	EC-09	Liu,Y.Y.	EC-07
Lin,H.G.	AF-01	Liu,Z.J.	CP-08
Lin,H.J.	HU-04	Liu,Z.J.	DF-04
Lin,J.G.	FU-13	Liu,Z.Y.	CU-07
Lin,J.G.	HA-11	Livet,F.	BD-11
Lin,J.G.	HU-03	Lo,C.	CD-11
Lin,J.G.	HU-08	Lo,C.C.H.	EF-04
Lin,K-W.	EQ-03	Lo,C.K.	FA-12
Lin,M.C.	FA-12	Lo,C.K.	HP-19
Lin,M-T.	CA-10	Lo,C.Y.	FT-13
Lin,S-K.	AE-09	Lo,C-K.	BT-06
Lin,T-Y.	BX-06	Lo,C-K.	FA-08
Lin,Z.W.	AE-10	Lo,C-K.	FA-09
Lin,Z.W.	GV-02	LoBue,M.	GU-01
Lin,Z-H.	CB-10	Lodder,C.	FA-05
Liou,Y.	BS-01	Lodder,C.	FW-03
Liou,Y.	BU-04	Lodder,J.C.	FA-06
Liou,Y.	EQ-03	Lodder,J.C.	GW-07
Liou,Y.	EQ-04	Loehndorf,M.	HD-11
Liou,Y.	EX-03	Lograsso,T.A.	GF-08
Liou,Y.	FR-03	Long,H.H.	DF-04
Liou,Y.	FW-01	Lopes,R.R.	GC-03
Lisjak,D.	EC-11	Lopez,R.	EW-11
Lisjak,D.	HD-02	Lopez-Urias,F.	FF-04
Liu,B.	CR-13	Losby,J.	BR-09
Liu,B.	FQ-04	Losby,J.	FU-03
Liu,B.	FS-04	Lou,X.H.	FA-03
Liu,B.	FS-07	Louis,E.	FQ-01
Liu,B.	FS-08	Lu,H.W.	BE-02
Liu,B.	FS-16	Lu,J.	EP-08
Liu,B.	HB-06	Lu,Y.X.	AD-07
Liu,B.D.	BS-04	Lu,Y.X.	HA-06
Liu,B.H.	AD-12	Luders,U.	HA-07
Liu,B.H.	FE-06	Luk,P.C.K.	ET-12
Liu,B.Y.	EC-07	Luo,J.L.	HT-09
Liu,J.F.	HE-10	Luo,P.	AF-01
Liu,J.J.	FS-17	Luo,P.	CU-07
Liu,J.J.	HB-12	Luo,P.	EA-07
Liu,J.R.	EU-10	Luo,P.	HQ-04
Liu,K.X.	AF-07	Lupu,N.	CD-04
Liu,K-X.	GP-04	Lweis,R.A.	FU-12
Liu,L.P.	FD-12	Lyle,A.	HP-05
Liu,Q.H.	AE-05		
Liu,R.S.	FU-13	M	
Liu,R-S.	BQ-15	Ma,B-M.	GE-04
Liu,S.	BV-03	Ma,Y.S.	FS-08

Ma, Y.S.	FS-16	Marchon, B.	HB-08
Ma, Y-R.	EX-03	Marenkin, S.F.	DA-05
Maat, S.	AA-09	Margulies, D.T.	GR-07
Maat, S.	GQ-05	Marinero, E.	FQ-10
Macaroff, P.P.	BX-13	Marinero, E.	GR-11
Machida, K.	EE-09	Marinero, E.E.	GR-09
Machida, K.	EU-10	Marinescu, M.	BS-13
Machida, K.	HP-25	Marinescu, M.	FE-08
* MacLaren, J.M.	HC-01	Marinova, I.	EF-05
Maeda, M.	AF-03	Markandeyulu, G.	GU-03
Maeda, M.	BX-09	Markovich, G.	HT-01
Maeda, T.	AD-11	Marrows, C.H.	GQ-08
* Maehara, H.	CA-01	Marti, L.	ET-01
Maehara, H.	EQ-05	* Martins, V.	CC-02
* Maehara, H.	FB-05	Marty, A.	BD-11
Maehara, H.	FW-11	Marukame, T.	CA-02
Maehara, H.	HP-08	Maruta, K.	EU-11
Maekawa, S.	CR-10	Maruyama, K.	GV-09
Maekawa, T.	EB-01	Maruyama, Y.	FS-09
Maeno, T.	EV-06	Masaki, R.	FD-09
Maeno, T.	EV-07	Masaki, R.	GT-11
Magni, A.	AA-04	Masubuchi, T.	EA-12
Mah, C.S.	GB-03	Masuda, H.	CU-08
Maiwa, H.	FV-10	Masuda, H.	FR-02
Majetich, S.A.	BC-07	Masuda, S.	GU-04
Majetich, S.A.	GE-01	Masumoto, T.	AC-12
Makeeva, G.S.	EU-17	Masumoto, T.	CE-02
Makhnovskiy, D.P.	CE-03	Mate, M.	AF-09
Makimura, M.	HD-10	Mateev, V.	EF-05
Maklakov, S.A.	HS-04	Mathew, G.	AF-04
Malatek, M.	FD-10	Matsubara, M.	FU-07
Malfait, M.	BQ-13	Matsuda, K.	CA-02
Malhotra, S.	GB-04	Matsuda, T.	BD-04
Malik, S.K.	FF-12	Matsui, H.	BX-04
Malik, S.K.	GF-06	Matsui, H.	GC-07
Malik, S.K.	GU-16	Matsui, M.	BX-01
Malkinski, L.	ES-01	Matsui, M.	HA-09
Mallary, M.	FQ-02	Matsui, M.	HD-09
Maloberti, O.	DE-03	Matsui, T.	GF-09
Mamiya, H.	CT-01	Matsuki, H.	BE-12
Mamiya, H.	FF-07	Matsuki, H.	BW-14
Mamiya, K.	HP-26	Matsuki, H.	ET-03
Manfredonia, M.M.	BP-04	Matsuki, H.	EV-10
Manikam, M.	FQ-01	Matsuki, H.	EV-11
Mano, Y.	GT-05	Matsuki, H.	EV-12
Mantegna, R.N.	GW-08	Matsuki, H.	EV-13
Manzin, A.	DD-02	Matsuki, H.	EW-01
Manzoor, S.	HQ-02	Matsuki, H.	FC-08
Mao, X.K.	ET-07	* Matsukura, F.	GA-04
Mapps, D.J.	BV-05	Matsumoto, K.	FR-02
Marasinghe, K.	BR-09	Matsumoto, M.	AA-08
Marcelli, R.	HD-05	Matsumoto, M.	BE-11
Marchetti, J.M.	CT-08	Matsumoto, M.	BS-15
Marchon, B.	GR-11	Matsumoto, M.	CP-04

Matsumoto,M.	CQ-07	Meunier,G.M.	DE-03
Matsumoto,M.	EB-01	Mibu,K.	BU-07
Matsumoto,T.	HP-17	Micotti,E.	GU-10
Matsumura,Y.	GU-04	Middleton,B.K.	EP-06
Matsumura,Y.	GU-05	Middleton,B.K.	FR-05
Matsunaga,T.	BX-04	Mikami,H.	CE-08
Matsunuma,S.	FR-08	Mikami,T.	GV-06
Matsuo,K.	GR-02	Miller,C.T.	BD-03
Matsuo,T.	GW-09	Miller,C.T.	EP-05
Matsuo,Y.	FV-01	Miltat,J.	FA-01
Matsuo,Y.	HD-10	Min,B-C.	FA-05
Matsuoka,H.	CS-10	Min,S.G.	FU-17
Matsuoka,H.	HE-01	Min,S-G.	ER-02
Matsuoka,M.	DB-01	Min,S-G.	HR-04
Matsuoka,N.	GU-05	Min,S-H.	ES-01
Matsushita,N.	BX-09	Min,T.	EA-10
Matsushita,N.	CD-06	Minami,K.	BQ-09
Matsushita,N.	DC-02	Minami,R.	GE-09
Matsushita,N.	DC-03	Minazawa,K.	ET-06
Matsushita,N.	EC-01	Minowa,T.	EE-11
Matsushita,N.	EC-10	Mishima,C.	EE-06
Matsuura,M.	CE-08	Mishra,S.	FU-03
Matsuura,M.	CE-09	Mishra,S.R.	BR-09
Matsuyama,K.	EA-11	Misra,A.	FP-01
Matsuyama,K.	GS-01	Mita,M.	GT-11
Matsuzuka,T.	HE-08	Mita,S.	GC-07
Mattheis,R.	GD-03	Mita,Y.	HT-02
Maufront,C.	EA-03	Mitani,S.	BD-06
Mauri,D.	EA-09	Mitani,S.	CA-07
Mauri,D.	GV-08	Mitani,S.	GS-03
Mayergoyz,I.	DF-06	Mitani,S.	GS-04
Mayergoyz,I.D.	AA-04	Mitarai,H.	CS-10
Mazauric,V.	DE-03	Mitarai,H.	HE-01
McCallum,R.W.	GF-08	Mitsuhashi,H.	GR-03
McCartney,M.R.	ED-05	Mitsumata,C.	HQ-01
McCord,J.	AC-04	Mitsuya,Y.	FS-10
McCord,J.	FD-08	Mitsuya,Y.	FS-14
McCord,J.	FW-06	Mitsuya,Y.	HB-10
McCord,J.	FW-07	Mitsuya,Y.	HB-11
McCord,J.	GD-03	Mitsuzuka,K.	FW-03
McGrouther,D.R.	ED-04	Mitsuzuka,K.	GB-05
McLaughlin,S.W.	EP-12	Miura,H.	BE-12
McLaughlin,S.W.	GC-11	Miura,H.	EV-12
McMahon,W.J.	CR-13	Miura,K.	FQ-13
McMichael,R.D.	FW-02	Miura,S.	FB-06
McVitie,S.	BD-05	Miura,Y.	BE-09
McVitie,S.	ED-04	Miura,Y.	EU-06
Md Nor,A.F.	HP-14	Miura,Y.	EU-07
Meguro,K.	GQ-05	Miura,Y.	EU-14
Melikhov,Y.	EW-11	Miura,Y.	HD-03
Menendez,J.L.	GD-11	Miyagi,D.	ET-05
Meng,H.	BA-05	Miyagi,D.	GT-07
Merenkov,D.N.	AC-08	Miyaji,T.	CW-13
Mermer,O.	FD-03	Miyajima,H.	AA-06

Miyajima,H.	CU-06	Moon,J.	GC-02
Miyajima,H.	CU-08	Moon,J.	GC-08
Miyajima,H.	EQ-01	Moon,J.T.	CA-09
Miyajima,H.	FW-04	Moon,J.T.	EA-02
Miyake,K.	GQ-02	Moon,J-S.	GT-05
Miyake,Y.	CP-01	Moon,K.W.	EU-13
Miyake,Y.	EU-06	Moon,S.H.	BQ-12
Miyake,Y.	EU-07	Morais,P.	BX-02
Miyakoshi,T.	CA-04	Morais,P.C.	BX-07
Miyamoto,Y.	BW-10	Morais,P.C.	BX-08
Miyamoto,Y.	CU-11	Morais,P.C.	BX-13
Miyamoto,Y.	HP-25	Morais,P.C.	CT-08
*Miyanishi,S.	AB-03	Mori,K.	BS-17
Miyao,T.	CP-04	Mori,K.	ER-07
Miyasaka,J.	EC-01	Mori,K.	GV-09
Miyashita,T.	FC-04	Mori,M.	BQ-09
Miyata,K.	BS-16	Mori,M.	BV-11
*Miyachi,A.	BB-04	Mori,M.	BV-12
Miyachi,S.	FC-05	Morii,K.	GF-09
Miyazaki,A.	HP-09	Morikawa,T.	FR-02
Miyazaki,T.	BC-04	Morimoto,K.	BS-17
Miyazaki,T.	BS-14	Morimoto,K.	BS-19
Miyazaki,T.	CA-04	Morisaki,K.	ED-08
Miyazaki,T.	EB-04	Morisako,A.	AA-08
Miyazaki,T.	EQ-08	Morisako,A.	BS-15
Miyazaki,T.	FU-01	Morisako,A.	CP-04
Miyazaki,T.	HA-03	Morisako,A.	CQ-07
Miyazaki,T.	HP-06	Morisako,A.	EB-01
Miyazaki,T.	HP-13	Morita,M.	EF-01
Miyazaki,T.	HP-14	Morita,M.	GU-05
Miyokawa,K.	HP-10	Moritz,J.	GD-06
Miyokawa,K.	HP-26	Moriwaki,K.	GR-12
Miyoshi,J.	GR-05	Moriya,M.	FR-04
Miyoshi,T.	GE-03	Moriyama,T.	HP-11
Mizoguchi,M.	HS-08	Morozkin,A.V.	GU-16
Mizoguchi,M.	HS-13	Morozkin,A.V.	HT-03
Mizoguchi,T.	AD-02	Moschalkov,V.	BQ-13
Mizoguchi,T.	BD-04	Moser,A.	CQ-11
Mizoguchi,M.	CA-05	Moser,A.	GR-07
Mizumoto,T.	HS-12	Moses,A.	CU-01
Mizuno,N.	BD-04	Moses,A.F.	HP-24
Mizuno,T.	BE-04	Moura,J.	EP-08
Mizuno,T.	BE-11	Mryasov,O.	DF-01
Mizutani,K.	CQ-08	*Mryasov,O.	HC-03
Mneimneh,M.	BE-01	Mueller,K-H.	GE-02
Mochizuki,M.	CP-07	Mueller,K-H.	GU-14
Mochizuki,M.	FQ-05	Mukai,N.	FP-04
Mochizuki,N.	HP-14	Mukai,R.	GB-02
Mogi,H.	GT-08	Mukhopadhyay,S.C.	EF-07
Mogi,I.	EX-05	Mukovskii,Y.M.	HD-06
Mohri,K.	EW-04	Muller,M.W.	BD-03
Moneck,M.T.	EA-08	Munakata,M.	AC-01
Monma,R.	BS-11	Munakata,M.	DD-04
Montgomery,J.H.	EE-04	Munekata,H.	DA-03

Munoz-Sandoval,E.	FF-04	Nakamoto,K.	GQ-05
Murakami,D.	HD-09	Nakamoto,K.	GQ-06
Murakami,H.	HT-08	Nakamoto,K.	GQ-12
*Murakami,Y.	AB-03	Nakamura,A.	CB-06
Murakami,Y.	BC-04	Nakamura,A.	FP-09
Muramatsu,K.	FC-05	Nakamura,A.	FQ-05
Muramatsu,K.	FX-06	Nakamura,H.	EE-11
Muramatsu,K.	GU-05	Nakamura,K.	AE-04
Muranoi,T.	GS-06	Nakamura,K.	EE-09
Muraoka,H.	CB-01	Nakamura,K.	ET-06
Muraoka,H.	CB-08	Nakamura,M.	GT-03
Muraoka,H.	CQ-06	Nakamura,S.	HA-08
Muraoka,H.	CQ-10	Nakamura,S.	HP-18
Muraoka,H.	CQ-14	Nakamura,T.	FF-01
Muraoka,H.	EP-13	Nakamura,T.	GD-10
Muraoka,H.	FQ-13	Nakamura,Y.	CB-08
Muraoka,H.	GB-05	Nakamura,Y.	CQ-06
Murillo,R.	FW-03	Nakamura,Y.	EP-13
Muro,T.	FF-01	Nakamura,Y.	EP-13
Musashi,T.	HB-09	Nakamura,Y.	FQ-13
Mysore,N.	EP-01	Nakamura,Y.	GB-05
Mysore,N.	GC-05	Nakanaishi,M.	FU-04
		Nakano,M.	AC-11
N		Nakano,M.	BW-07
Nagahama,T.	CA-04	Nakano,M.	EE-03
Nagahama,T.	CA-05	Nakao,H.	FR-02
Nagahama,T.	FA-07	Nakata,J.	FU-01
*Nagahama,T.	GA-01	Nakata,M.	EC-04
*Nagai,M.	CA-01	Nakatani,I.	CT-01
*Nagai,M.	FB-05	Nakatani,M.	BP-06
Nagai,M.	HP-08	Nakatani,Y.	FA-01
Nagano,M.	FX-03	Nakatani,Y.	FQ-07
Nagao,M.	GR-12	Nakaya,M.	CT-07
Nagasaka,K.	FB-01	Nakayama,A.	EX-09
Nagata,Y.	BU-02	Nakayama,N.	BS-10
Nagaya,D.	CS-10	Nakayama,R.	BS-17
Nagayama,J.	HA-08	Nakayama,R.	BS-19
*Nahid,M.A.I.	HC-02	Nakiri,K.	GR-03
Nakagawa,K.	BP-03	Nam,C.H.	GQ-09
Nakagawa,S.	AA-11	Nam,K.T.	CA-09
Nakagawa,S.	CR-17	Nam,K.T.	EA-02
Nakagawa,S.	EB-03	Namikawa,M.	AC-01
Nakagawa,S.	EB-07	Namizaki,Y.	EU-08
Nakagawa,S.	FP-02	Nanba,K.	ED-08
Nakagawa,S.	FP-03	Nangare,N.	EP-04
Nakai,E.	FS-14	Narayanan,K.R.	EP-04
Nakai,K.	EV-01	Narimatsu,H.	DC-02
Nakajima,A.	CS-08	Narisawa,Y.	CA-11
Nakajima,K.	CA-06	Nasi,L.	FR-09
Nakakura,T.	HD-09	Nasi,L.	GE-10
Nakamoto,K.	CP-07	Nasu,S.	FF-03
*Nakamoto,K.	DB-05	Natsume,S.	ED-02
Nakamoto,K.	FB-03	Nawate,M.	FF-05
Nakamoto,K.	FS-09	Nayak,A.R.	GC-11

Nayak,B.B.	ER-08	Nishio,H.	GR-06
Nayak,S.K.	FF-03	Nishio,K.	FR-02
Neagu,M.	BR-05	Nishioka,K.	GQ-10
Nembach,H.	GD-05	Nishiyama,N.	GT-12
Nerg,J.	FT-05	Nishiyama,Y.	FB-02
Neu,V.	FE-07	Niu,D.	AD-06
Neumeister,C.	BP-07	Niwa,T.	EF-01
Ng,V.	ED-11	Niznansky,D.	EC-03
Ng,V.	EX-02	Noda,K.	HA-08
Ng,W.B.	FE-04	Noda,M.	EP-10
Ng,W.C.	FX-01	Nogawa,S.	GT-07
Nguyen,C.	EX-04	Nogi,H.	BT-10
Nguyen,D.T.	EX-04	Noguchi,K.	CP-05
Nguyen,H.H.	DA-04	Noguchi,K.	CS-10
Nguyen,N.P.	HR-01	Noguchi,K.	EE-06
Nguyen,T.H.Y.	BA-07	Noguchi,K.	HE-01
Niagam,A.K.	ER-08	Nolting,F.	ED-07
Niarchos,D.	BC-10	Noma,K.	DB-01
Niarchos,D.	FE-10	Noma,K.	HP-12
Niarchos,D.	FV-08	Nonaka,T.	BW-14
Nie, Y.	HS-03	Nong,V.	GF-07
Nieminen,R.M.	DA-02	Nonoyama,H.	EX-05
Nigam,A.K.	FE-09	Norina,S.B.	BX-03
Nigam,A.K.	GF-06	Noro, Y.	BU-02
Nihei, Y.	EV-10	Novikov,S.	BQ-13
Nikitov,S.A.	EU-16	Novosad,V.	ED-09
Nikles,D.E.	BC-06	Novotortsev,V.M.	DA-05
Nikles,D.E.	CT-06	*Nowak,U.	BC-01
Nikles,D.E.	CT-09	*Nowak,U.	HC-03
Nirmala,R.	FF-12	Nozaki,T.	HP-07
Nirmala,R.	GF-06	Nozaki,Y.	EA-11
Nirmala,R.	GU-16	Nozaki,Y.	GS-01
Nirmala,R.	HT-03	Nozawa,N.	ES-05
Nishi, Y.	GU-04	Nozawa,T.	CA-11
Nishibe, Y.	BV-04	Nozieres,J.P.	BP-09
Nishibiraki,H.	BX-09	*Nozieres,J-P.	AB-06
Nishida, Y.	FP-09	Nozue,M.	EQ-01
Nishigaitsu,H.	GV-09	Ntokas,I.	FR-05
Nishihara,H.	HU-01	Ntokas,I.	EP-06
*Nishihira,H.	BB-02	Nunokawa,I.	CP-07
Nishimura,K.	FB-02	*Nunokawa,I.	DB-05
Nishimura,K.	FE-02	Nutter,P.W.	BP-04
Nishimura,K.	FV-06	Nutter,P.W.	EP-06
Nishimura,K.	GF-01	Nutter,P.W.	FR-05
Nishimura,K.	HS-08	Nyenhuis,J.	EW-05
Nishimura,K.	HS-13	Nyenhuis,J.A.	FC-06
Nishimura,K.	HS-14	Nyvtl,M.	AD-04
Nishimura,K.	HS-15		
Nishimura,K.	HS-16		
Nishimura,N.	FF-05	O	
Nishimura,N.	GU-11	Ochiai, T.	BA-10
Nishimura,T.	BW-10	O' Connor,C.J.	DC-06
Nishimura,T.	CU-11	Oda,M.	BD-10
Nishimura,Y.	BQ-07	Odagaki,M.	EV-02
		Ofuchi,H.	BU-01

Ogata,H.	BP-11	Okada,T.	CP-07
Ogata,K.	FC-04	Okada,T.	CS-02
Ogata,S.	FS-10	*Okada,T.	DB-05
Ogawa,Y.	BR-04	Okamoto,I.	GR-10
*Ogimoto,Y.	AB-03	Okamoto,S.	BC-03
Ogita,M.	EX-05	Okamoto,S.	BC-04
Ogiue-Ikeda,M.	EW-03	Okamoto,S.	BR-10
Ogiue-Ikeda,M.	EW-06	Okamoto,S.	EB-04
O'Grady,K.	AC-05	Okamoto,S.	EC-10
O'Grady,K.	CQ-10	Okamoto,S.	GB-05
O'Grady,K.	HQ-02	*Okamoto,S.	HC-04
Oguro,I.	HU-01	Okamoto,Y.	EP-02
Oh,B.S.	HP-27	Okamoto,Y.	EP-13
Oh,H.Y.	BE-03	Okamura,S.	HA-02
Oh,J.H.	EA-06	Okamura,S.	HP-09
Oh,J-H.	FV-07	Okazaki,Y.	ER-07
Oh,S. M	GQ-10	Okazaki,Y.	EW-09
Oh,S.C.	CA-09	Okazaki,Y.	FS-19
Oh,S.C.	EA-02	Okazaki,Y.	FV-06
Oh,S-J.	GU-16	Okazaki,Y.	GT-06
Ohashi,K.	BS-16	Okubo,K.	BW-11
Ohashi,S.	HE-08	Okubo,K.	EU-04
Ohinata,T.	ET-06	Okuda,M.	CR-17
Ohiwa,S.	GT-11	Okumoto,T.	CQ-07
Ohji,T.	CS-02	Okuyama,D.	BD-04
Ohmori,K.	EE-07	Oliveira,A.C.	CT-08
Ohmori,K.	HD-09	Oliveira,D.M.	BX-13
*Ohno,H.	GA-04	Ono,H.	CE-02
*Ohno,T.	AB-04	Ono,H.	EU-11
Ohnuma,M.	AC-11	Ono,H.	FQ-03
Ohnuma,M.	AC-12	Ono,T.	AE-04
*Ohnuma,M.	CD-01	Onodera,S.	FS-11
Ohnuma,M.	CT-01	Onodera,S.	GR-01
Ohnuma,M.	FE-03	Onoue,T.	BP-08
Ohnuma,S.	AC-12	Oogane,M.	CA-04
Ohnuma,S.	CE-02	Oogane,M.	FU-01
Ohsawa,Y.	AA-12	Oogane,M.	HA-03
Ohta,I.	CT-04	Oomi,G.	GS-04
Ohta,N.	BV-04	Oomori,T.	BW-04
Ohtake,M.	CP-06	Ootani,Y.	EQ-05
*Ohtsuka,H.	CD-01	Or,S.W.	FT-13
Ohtsuki,J.	ED-08	Or,S.W.	GU-08
Ohtsuki,M.	CP-05	Oral,A.	BD-07
Ohyama,H.	GR-08	Ortega,L.	CD-07
Oikawa,T.	CQ-06	Orue,I.	FD-06
Oikawa,T.	GB-05	Osada,H.	EU-08
Oka,H.	BU-08	Osada,T.	FW-11
Oka,H.	EU-08	Osaka,T.	CQ-08
Oka,H.	GT-04	Osaka,T.	FP-05
Oka,K.	GW-14	Osaka,T.	GB-09
Oka,M.	BW-09	Osawa,H.	EP-02
Okabe,M.	HD-04	Osawa,H.	EP-13
Okada,K.	FE-04	Oshima,H.	FB-01
Okada,N.	CQ-05	Oshiro,K.	CE-08

Oshiro, K.CE-09
 Osipov, A. V.HS-04
 O' Sullivan, J. A.BD-03
 O' Sullivan, J. A.EP-05
 Otani, Y.BA-02
 Otani, Y.BA-06
 Otani, Y.CR-11
 Otani, Y.CR-12
 Otani, Y.ED-03
 Otani, Y.FW-09
 Otsuki, E.FV-02
 Ouchi, K.FQ-08
 Ozaki, K.ET-05
 Ozawa, T.BU-02
 Ozawa, T.BV-01
 Ozu, Y.EV-10
 Ozue, T.FS-11
 Ozue, T.GR-01

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Paek, M.-C.HR-04
 Pagounis, E.GF-12
 *Pakala, M.BA-01
 Palmer, D.CB-12
 Palmstrom, C. J.FA-03
 Palomares, F. J.HA-10
 Panda, D.BX-05
 Pandey, K.CW-04
 Panina, L. V.BV-05
 Panina, L. V.CE-03
 Panina, L. V.FD-06
 Paoluzi, A.GU-02
 Pardavi-Horvath, M.EU-17
 Pardavi-Horvath, M.FW-02
 Pareti, L.FR-09
 Pareti, L.GE-10
 Pareti, L.GU-02
 Park, B. G.FA-05
 Park, B.-G.GU-16
 Park, C.HP-20
 Park, D. G.AC-06
 Park, H. K.CW-06
 Park, H. S.BD-06
 Park, H. Y.HS-10
 Park, I. O.BE-03
 Park, J.GC-08
 Park, J. H.FT-04
 Park, J. H.HP-03
 Park, J. H.HS-13
 Park, J. S.FU-14
 Park, J. S.FU-16
 Park, J. Y.BQ-11
 Park, J. Y.FV-09
 Park, J.-H.HS-15

Park, J.-M.CV-12
 Park, K. M.ER-04
 Park, M. H.GD-02
 Park, M. H.GW-06
 Park, M.-H.HP-05
 Park, N. Y.HP-04
 Park, P. G.DE-05
 Park, P. G.EW-08
 Park, S. B.EX-10
 Park, S. B.HP-24
 Park, S. H.BX-03
 Park, S. H.FP-06
 Park, S. J.CV-14
 Park, S. O.CA-09
 Park, S. O.EA-02
 Park, S. Y.FU-16
 Park, S.-I.BX-12
 Park, S.-I.BQ-05
 Park, S.-M.EW-05
 Park, S.-M.FC-06
 Park, S.-Y.FD-04
 Park, W.CA-03
 Park, W.EA-06
 Park, W.HP-03
 Park, W.HP-27
 Park, W.HP-29
 Park, W.-H.BA-07
 Park, Y. R.BQ-11
 Park, Y. R.FV-09
 Park, Y.-P.BP-05
 Park, Y.-W.HD-12
 Parkin, S.CA-08
 *Parkin, S. S. P.GA-05
 Pasquale, M.HD-01
 Patton, C. E.CE-07
 Patton, C. E.GD-04
 Payne, R.AF-09
 Pei, W. L.CT-04
 Peleckis, G.BQ-15
 Peleckis, G.DA-06
 Pelegrini, F.BX-02
 Pellegrino, G.AE-08
 Peng, D. L.ES-05
 Peng, P. H.FU-09
 Peng, T.-Y.BT-06
 Peng, W.CQ-09
 Peng, Y. G.HP-20
 Pepin, J. G.FE-10
 Perdue, K.HQ-03
 Perero, S.HD-01
 Persoons, A.FC-09
 Petford-Long, A. K.FA-03
 Petit, D.BD-08
 Petrova, R. V.EB-02

Phan, K.L.	FD-05	Quang, H.D.	FU-15
Phan, M.H.	EX-04		
Phan, T.L.	FU-18	R	
Phan, T.L.	FU-19	Raebiger, H.	DA-02
Phirouznia, A.	CR-07	Rafiee Rad, F.	GC-02
Phuc, N.X.	FU-18	Rahman, M.	AA-08
Phuc, N.X.	FU-19	Rajagopal, K.R.	AE-03
Pich, A.	FX-07	Rajagopal, K.R.	CS-09
Pieper, M.	FE-05	Rajagopal, K.R.	CV-08
Pigazo, F.	HA-10	Rajagopal, K.R.	CV-09
Ping, D.H.	GE-05	Rajagopal, K.R.	CV-10
Piramanayagam, S.N.	FS-05	Rajagopal, K.R.	CW-03
Piramanayagam, S.N.	GB-03	Rajagopal, K.R.	CW-04
Piraux, L.	FF-08	Rajagopal, K.R.	GT-09
Pismenova, N.E.	FU-15	Rajagopal, K.R.	HE-03
Plocek, J.	EC-03	Raju, S.B.	EC-12
Pogoryelov, Y.	CR-02	Ralph, D.C.	AA-01
Pogoryelov, Y.	FA-11	Ram, S.	FF-11
Pogoryelov, Y.	HR-01	Ramsvik, T.	GF-11
Polajzer, M.	ET-08	Rao, A.D.P.	EC-12
Pollanen, R.	FT-05	Rao, V.V.	BR-02
Popa, A.	FF-08	* Rasing, T.	AB-05
Popa, G.	BR-05	Rasing, T.	BP-03
Popova, E.	BU-06	Ravelosona, D.	BA-03
Potzger, K.	FW-06	Ravelosona, D.	GD-11
Pourarian, F.	BS-05	Rebiere, Y.	DE-03
Powell, D.J.	AE-01	* Redon, O.	AB-06
Prabhakar, A.	FQ-01	Redon, O.	EQ-07
Prabhakaran, V.	HB-03	Rehspringer, J.-L.	EC-03
Prada, G.	HB-08	Reiss, G.	GW-11
Prasad, N.K.	BX-05	* Reiss, G.	HA-01
* Prejbeanu, I.L.	AB-06	Reissner, M.	FE-05
Prellier, W.	DA-04	Rellinghaus, B.	BC-11
Prieto, A.G.	FF-01	Ren, X.B.	HA-05
Przybylski, M.	AD-04	Rettner, C.	HB-08
Przybylski, M.	HA-05	* Rettner, C.T.	BB-03
Psuj, G.	GV-03	Rhee, J.R.	BT-05
Pugaczowa-Michalska, M.	HU-02	Rhee, J.R.	HP-27
Pujada, B.R.	GW-06	Rheem, Y.W.	BS-07
Pyrhonen, O.	FT-05	Rheem, Y.W.	CU-09
		Rhen, F.M.F.	BS-22
Q		Rhie, K.	CR-15
Qian, J.	EB-12	Ribbenfjard, D.	BE-10
Qian, X.B.	GV-05	Ribeiro, K.F.	BX-13
Qin, H.W.	BR-03	Richardson, D.	EB-02
Qiu, G.	EU-16	Richter, H.J.	CB-12
Qiu, J.J.	EA-07	Rickart, M.	FW-06
Qiu, J.J.	HQ-04	Righi, L.	GU-02
Qiu, J.J.	HQ-05	Rika, P.	FD-10
Quandt, E.	EF-08	Ring, A.P.	EF-04
Quandt, E.	FD-08	Ring, A.P.	GF-04
Quandt, E.	FW-07	Ritter, R.C.	FC-11
Quandt, E.	HD-11	Robert, M.D.	HS-01
		Robertson, N.	HB-02

Robertson,W.	HE-05	Saito,S.	HP-10
*Roddick,E.	BB-02	Saito,S.	HP-26
Roddick,E.	FR-06	Saito,T.	BS-02
Rogalev,A.	AD-01	Saito,T.	BS-10
Roh,J.W.	HS-12	Saito,T.	ER-03
Romero,J.J.	HA-10	Saito,T.	HP-10
Roppongi,T.	CP-05	Saito,T.	HP-26
Rosen,H.	FP-10	Saito,Y.	EF-05
Rosen,H.	GR-09	Saitoh,A.	ET-05
Ross,C.A.	FW-02	Saitoh,E.	AA-06
Ros-Yanez,T.	CD-07	Saitoh,E.	CU-06
Roth,S.	AC-04	Saitoh,E.	CU-08
Roth,S.	AC-09	Saitoh,E.	EQ-01
Roy,A.	FF-11	Saitoh,E.	FW-04
Royet,A.S.	EU-02	Saitoh,H.	CU-08
*Royet,A-S.	CE-04	Sakagami,M.	FP-05
Rozanov,K.N.	HS-04	Sakai,J.	DA-04
Ruan,J.Z.	BV-07	Sakai,M.	DB-03
Ruangsinchaiwanich,S.	AE-07	Sakamoto,Y.	CW-13
Ruediger,U.	BA-04	Sakuma,A.	FU-01
Ruediger,U.	ED-07	Sakuma,A.	HQ-01
Ruediger,U.	EQ-02	Sakuraba,Y.	FU-01
Ruiz,D.	CD-07	Sakurada,K.	HP-01
Rutsch,G.	GV-08	Sakurada,O.	FV-06
Ruyter,A.	DA-04	Sakurai,M.	FQ-03
Rylkov,V.V.	DA-05	Sakurai,S.	HT-05
Ryzhikov,I.A.	HS-04	Salazar,A.O.	AE-11
		Salhi,E-A.	DB-03
S		Samata,H.	BU-02
Sachan,M.	BC-07	Sanbonsugi,H.	DC-02
Sachan,M.	GE-01	Sanbonsugi,H.	EF-02
Sadatoshi,A.	CP-06	Sandacci,S.	BV-09
Sadeghiani,N.	BX-02	Sandacci,S.I.	CE-03
Sadeh,B.	BW-04	Sanderink,J.G.M.	FA-05
Saegusa,S.	FS-09	*Sandhu,A.	CC-06
Saegusa,S.	HB-02	Sandhu,A.	DC-02
Saegusa,S.	HB-05	Sandhu,A.	EF-02
Sagawa,M.	BS-18	Sankaranarayanan, V.	FF-12
Sa-Gong,G.	BV-02	Sankaranarayanan, V.	HT-03
Sahashi,M.	FB-10	Sankey,J.C.	AA-01
Sahashi,M.	GQ-02	Sano,N.	GT-12
Sahu,D.	GS-08	Santana,J.F.B.	BX-07
Saida,D.R.	EF-03	Santos,J.	BX-02
Saito,A.	HD-04	Santos,J.G.	CT-08
Saito,A.T.	GU-15	Santos,R.L.	CT-08
Saito,H.	BS-07	Saotome,T.	EV-03
Saito,H.	CU-09	Sari,O.	DD-05
Saito,H.	DA-01	Saruki,S.	FB-06
Saito,H.	FQ-12	Sasada,I.	FX-02
Saito,K.	GS-04	Sasada,I.	FX-03
Saito,M.	FB-02	Sasada,I.	FX-04
Saito,S.	FP-04	Sasada,I.	GV-01
Saito,S.	GB-10	Sasada,I.	BW-13
Saito,S.	GR-08	Sasada,I.	EF-09

Sasaki,S.	GQ-10	Schaefer,R.	AC-04
Sasaki,T.	EV-02	Schaefer,R.	EX-01
Sasaki,Y.	GR-02	Schaefer,R.	FW-07
Sasaki,Y.	GR-03	Schaefer,R.	GE-02
Sasso,C.P.	GU-01	Schepper,W.	GW-11
Satake,H.	GT-03	Scherbak,P.N.	HS-09
Satiramatekul,T.	EX-07	Scheybal,A.	GF-11
Sato,F.	BE-12	Schieffer,P.	AD-05
Sato,F.	BW-14	Schinnerling,S.	EX-01
Sato,F.	ET-03	Schlagel,D.	GF-04
Sato,F.	EV-10	*Schlesinger,T.E.	AB-01
Sato,F.	EV-11	*Schlesinger,T.E.	AB-04
Sato,F.	EV-12	Schlesinger,T.E.	BP-02
Sato,F.	EV-13	Schlesinger,T.E.	DE-02
Sato,H.	CQ-06	Schlickum,U.	AD-03
Sato,H.	ED-08	Schlorb,H.	FE-01
Sato,H.	GB-05	*Schmalhorst,J.	HA-01
Sato,I.	EB-08	Schmool,D.S.	BU-06
Sato,K.	BD-10	Schmutz,C.	FD-08
Sato,K.	BQ-09	*Scholten,G.	BC-01
Sato,K.	DC-04	*Scholz,W.Y.	BB-05
Sato,K.	GR-10	Schotter,J.	GW-11
Sato,M.	DE-04	Schrefl,T.	CB-02
Sato,M.	EF-06	Schrefl,T.	CB-03
Sato,S.	EE-03	Schrefl,T.	DF-05
Sato,S.	FX-11	Schrefl,T.	ED-01
Sato,T.	BE-09	Schrefl,T.	GB-07
Sato,T.	BE-12	Schultheiss,H.	DF-02
Sato,T.	BQ-08	*Schulthess,T.C.	GA-02
Sato,T.	BW-14	Schultz,L.	AC-04
Sato,T.	CW-13	Schultz,L.	AC-09
Sato,T.	EE-07	Schultz,L.	FE-01
Sato,T.	ES-03	Schultz,L.	FE-07
Sato,T.	ET-03	Schultz,L.	GE-02
Sato,T.	EU-06	Schumacher,H.W.	EA-04
Sato,T.	EU-07	Seagle,D.	CB-09
Sato,T.	EU-14	Sechovsky,V.	EC-03
Sato,T.	EV-10	Seet,H.L.	CD-08
Sato,T.	EV-11	Seki,H.	AF-10
Sato,T.	EV-12	Seki,T.	BS-08
Sato,T.	EV-13	Seki,T.	CA-07
Sato,T.	HD-03	Seki,T.	FW-10
Sato,Y.	FX-10	Seki,T.	GQ-10
Satoh,M.	CU-08	Seki,T.	GS-03
Satoh,S.	GT-13	Sekiguchi,K.	AA-06
Satoh,Y.	FU-07	Sekiguchi,N.	GR-01
Savas,O.	AF-11	Sekino,M.	EV-03
Sawada,A.	FU-07	Sekino,M.	EV-05
Sawaya,Y.	EV-11	Sekino,M.	EW-03
Sayama,J.	CQ-08	Sekino,M.	EW-07
Schabes,M.	GR-09	Sekino,M.	FC-07
Schabes,M.E.	CB-02	Senda,K.	CV-06
Schabes,M.E.	CB-03	Sendoh,M.	FC-10
Schabes,M.E.	CQ-12	Sendoh,M.	FT-09

Sendoh,M.	FT-10	Shimada,Y.	BW-01
Sendoh,M.	FT-11	Shimada,Y.	EB-04
Seo,J-C.	CS-07	Shimada,Y.	EC-10
Seo,J-H.	BT-07	Shimasaki,M.	GW-09
*Serga,A.	GD-01	Shimatsu,T.	CQ-06
Serikitkankul,P.	AF-10	Shimatsu,T.	CQ-10
Serpico,C.	AA-04	Shimatsu,T.	FW-03
Serpico,C.	DF-06	Shimatsu,T.	GB-05
Sethupathi,K.	FF-12	Shimazu,R.	DC-03
Sethupathi,K.	HT-03	Shimizu,M.	CU-08
Shabunina,G.G.	DA-05	Shimizu,T.	BX-01
Shakhayeva,Y.A.	AC-08	Shimizu,Y.	EE-09
Shams,N.N.	BS-15	Shimizu,Y.	FB-01
Shang,J.	AE-12	Shimoji,H.	BW-15
Shang,J.	EF-12	Shimoji,H.	ET-09
Shao,H.P.	BX-11	Shimomura,N.K.	EA-05
Shao,H.P.	CT-03	Shin,H-J.	GQ-07
Shao,K.R.	GW-15	Shin,K.	GS-07
Shao,L.	DC-06	Shin,K.H.	BA-07
Shehu,E.	ET-01	Shin,K.H.	HP-02
Shen,C-T.	HQ-06	Shin,K-H.	BV-02
*Shen,W.	GB-01	Shin,K-H.	CR-15
*Shen,X.	BB-01	Shin,K-H.	GU-06
Sheth,N.K.	AE-03	Shindo,D.	BC-04
Sheth,N.K.	CW-03	Shindo,D.	BD-06
Sheth,N.K.	GT-09	Shindo,D.	CT-05
Shi,J.R.	FS-05	Shintaku,K.	CP-02
Shi,J.Z.	GB-03	Shiomi,S.	BP-12
Shi,J-B.	FU-09	Shirakawabe,Y.	CU-06
Shi,X.Z.	EA-10	Shishida,K.	AF-03
Shi, Y.	AD-04	Shiwa,M.	EW-10
Shi, Y.	BV-03	Shoji,H.	EV-10
Shibamoto,M.	CQ-02	Shoji,K.	FV-10
Shibata,J.	CR-12	Shoji,S.	BW-06
Shibata,M.	HR-05	Shu,M.F.	HP-22
Shieh,H-P.D.	GV-04	Shundo,T.	GU-11
Shifrin,V.Y.	EW-08	Shyu,J-H.	HP-15
Shigemoto,Y.	GE-07	Si,P.Z.	FF-02
Shijie,W.	FU-05	Si,P.Z.	GU-12
Shikida,M.	DC-04	Siegel,P.H.	EP-03
Shim,I-B.	BX-10	Siegel,P.H.	GC-04
Shim,I-B.	HS-06	Siekman,M.H.	FA-06
Shim,I-B.	EV-09	Sievers,A.J.	DE-04
Shim,J.	AC-02	Sikora,R.	GV-03
Shim,W.Y.	BQ-06	Silva,I.D.	BE-07
Shima,M.	BX-04	Silva,O.	BX-02
Shima,M.	FF-03	Silva,S.W.	BX-07
Shima,T.	BC-02	Silveira,L.B.	CT-08
Shima,T.	CA-07	Silveira,M.A.	FT-07
Shima,T.	FW-10	Sim,J.H.	BQ-01
Shima,T.	GS-03	Simizu,T.	EV-01
Shimada,Y.	BC-03	Simopoulos,T.	EB-09
Shimada,Y.	BC-04	Sin,K.	CP-03
Shimada,Y.	BR-10	Sinclair,R.	GB-04

Singh,A.	EB-10	Srinivas,V.	ER-02
Singh,A.	EB-11	Srivastava,V.K.	HU-07
Singh,A.	FE-07	Stahl,B.	BU-06
Singh,N.	ED-06	Stamps,R.	GD-11
Singh,N.	FW-05	Stamps,R.L.	DF-02
Singh,N.K.	GF-06	Stancil,D.D.	BP-02
Singh,S.	BX-05	Stanciu,D.	BP-03
Singla,N.	EP-05	Stancu,A.	BU-03
Singurel,G.	BR-05	Stancu,A.	GW-04
Sinha,S.K.	FS-08	Stancu,A.	HR-08
Siritaratiwat,A.	GQ-11	Stanescu,D.	HS-05
Skorvanek,I.	AC-10	Stanescu,S.	BD-11
Skrotzki,W.	FE-07	Staroselsky,I.	FS-15
Sladek,E.	HB-03	Starostenko,S.N.	HS-04
Slavin,A.N.	AA-03	*Staub,N.	BB-02
*Slavin,A.N.	GD-01	Stein,S.	EF-08
Slavin,A.N.	HR-07	Stoica,M.	AC-09
Smith,D.J.	ED-05	Stone,D.	HR-06
Smith,N.	BA-09	Straka,L.	HD-07
*Smith,N.	FB-04	Strand,J.	FA-03
Snyder,J.E.	EF-04	Stumberger,B.	ET-08
Snyder,J.E.	GF-04	Stumberger,G.	ET-08
Snyder,J.E.	GF-08	Su,H.	FV-04
So,J.S.	AA-10	Su,J.P.	HP-22
Soda,N.	HT-05	Su,L.Z.	FS-01
Soeno,Y.	FR-04	Su,L.Z.	FS-02
Soh,J-Y.	ER-06	Subagyo,A.	CU-05
Soh,K.S.	BX-03	Subramanian,L.	EC-06
Sohn,J.	AC-03	Sudo,Y.	EU-07
Sohn,J.C.	EU-12	Suenaga,K.	GS-04
Soler,M.A.G.	BX-07	Sueoka,K.	BU-08
Solzi,M.	GU-02	Sueoka,K.	CU-05
Sonehara,M.	HD-03	Sueoka,K.	CU-12
Song,H.	GC-06	Sues,D.	CB-03
Song,J.D.	CR-05	Suess,D.	CB-02
Song,J-O.	GQ-07	Suess,D.	DF-05
Song,J-O.	HP-16	Suess,D.	ED-01
Song,M.K.	AA-10	Suess,D.	GB-07
Song,S.	HB-03	Suga,K.	EV-02
Song,S-H.	GF-08	Sugahara,K.	HS-07
Song,T.	BC-08	*Sugahara,S.	GA-06
Sonoda,T.	ET-04	Sugano,K.	AE-04
Sonoda,T.	FX-05	Sugimoto,S.	BA-10
*Sousa,R.C.	AB-06	Sugimoto,S.	CR-03
Sousa,R.C.	EA-04	Sugimoto,S.	EC-04
Spagnolo,B.	GW-08	Sugimoto,S.	GE-11
Sparks,P.D.	HQ-03	Sugimoto,S.	HP-07
Spaulding,D.	HB-12	Sugimoto,S.	HP-09
Speliotis,T.K.	FE-10	Sugimoto,S.	HP-18
Spinu,L.	BU-03	Sugita,R.	GS-06
Spinu,L.	ES-01	Sugita,Y.	CB-06
Spinu,L.	GW-04	Sugitani,N.	BV-04
Spisak,D.	BU-09	Sugiyama,A.	FP-05
Spizzo,F.	FF-10	Sugiyama,M.	CD-05

Sugiyama,M.	HA-09	*Suzuki, Y.	GA-01
Sugiyama,N.	EU-06	Suzuki, Y.	GQ-12
Sugiyama,N.	EW-04	Suzuki, Y.	HP-10
Sugiyama,T.	HD-03	Suzuki, Y.	HP-26
Suh,H-S.	FU-17		
Suharyadi,E.	ED-02		
Sui,X.Y.	CB-10	T	
Suk,M.	HB-02	Tachi,S.	EW-02
Sukegawa,H.	HP-18	Tada,M.	DC-03
Sullivan,C.R.	CD-03	Tada,M.	EC-01
Sumi,S.	BP-06	Tagawa,I.	FP-09
Sumiyama,K.	ES-05	Tahara,S.	EA-05
Sun,A.C.	BT-02	Tajabor,N.	BS-03
Sun,A.C.	GS-08	Tajabor,N.	BS-05
Sun,A-C.	BS-06	Tajima,K.	CW-13
Sun,L.Y.	GC-06	Tajima,S.	CD-05
Sun,L.Z.	AE-12	Takada,A.	FE-04
Sun,L.Z.	EF-12	Takada,J.	FU-04
Sun,X.C.	CT-06	Takada,N.	FV-06
Sun, Y.	CD-03	Takada, Y.	FU-04
Sunaga,K.	AD-10	Takagi,H.	HS-13
Sunahara,R.	CU-09	Takagi,T.	EW-10
Sundaram,K.B.	HE-07	Takagishi,M.	GQ-01
Sung, T-W.	EC-09	Takagishi,M.	GQ-04
Supper,N.	GR-07	*Takahashi,A.	AB-03
Suresh,K.G.	FE-09	Takahashi,A.	FB-02
Suresh,K.G.	GF-06	Takahashi,K.	GF-02
Suzuki,H.	EU-06	Takahashi,K.	GU-04
*Suzuki,I.	AB-03	Takahashi,M.	AD-10
Suzuki,K.	CR-16	Takahashi,M.	CA-11
Suzuki,K.	FU-07	Takahashi,M.	CT-04
Suzuki,K.	GQ-06	Takahashi,M.	ES-03
Suzuki,K.	HB-10	Takahashi,M.	FP-04
Suzuki,N.	EV-11	Takahashi,M.	FW-08
*Suzuki,S.	BB-02	Takahashi,M.	GB-10
Suzuki,S.	EE-09	Takahashi,M.	GD-07
Suzuki,S.	HE-09	Takahashi,M.	GR-08
Suzuki,T.	BC-05	Takahashi,M.	HR-05
Suzuki,T.	CW-01	Takahashi,N.	BW-07
Suzuki,T.	EB-10	Takahashi,N.	CP-06
Suzuki,T.	EB-11	Takahashi,N.	ET-05
Suzuki,T.	FA-11	Takahashi,N.	GT-07
Suzuki,T.	FQ-13	Takahashi,S.	CR-10
Suzuki,T.	HR-01	Takahashi,S.	EF-06
Suzuki, Y.	AA-02	Takahashi,S.	GV-06
Suzuki, Y.	AA-05	Takahashi,T.	EF-03
Suzuki, Y.	BA-08	Takahashi,T.	GS-06
Suzuki, Y.	BP-06	Takahashi, Y.	BC-02
Suzuki, Y.	CA-05	Takahashi, Y.	BS-08
Suzuki, Y.	CB-08	Takahashi, Y.	CQ-03
Suzuki, Y.	EQ-05	Takahashi, Y.K.	BC-03
Suzuki, Y.	EQ-06	Takahashi, Y.K.	BC-04
Suzuki, Y.	FA-07	Takahashi, Y.K.	CP-01
*Suzuki, Y.	FB-05	Takahashi, Y.K.	EE-02
		*Takahashi, Y.K.	HC-05

Takai,M.	FR-04	Tanaka,M.	FW-04
Takanashi,K.	BC-02	Tanaka,M.	GB-09
Takanashi,K.	BD-06	*Tanaka,M.	GA-06
Takanashi,K.	CA-07	*Tanaka,S.	CC-04
Takanashi,K.	FW-10	Tanaka,T.	CE-08
Takanashi,K.	GS-03	Tanaka,T.	CE-09
Takanashi,K.	GS-04	*Tanaka,T.	EE-01
Takano,F.	BU-01	*Tanaka,Y.	BB-06
Takano,K.	DB-03	Tanaka,Y.	GQ-01
Takano,K.	FP-10	Tanaka,Y.	GQ-03
Takasaki,T.	ET-04	Tanaka,Y.	GQ-04
Takata,Y.	BE-11	Tanakamaru,T.	GU-05
*Takayama,K.	AB-03	Tanemura,S.	BP-06
Takayanagi,K.	DC-04	*Tang,C.	BB-02
Takeda,K.	GT-07	Tang,C.C.	BS-04
Takei,H.	BV-12	Tang,F-Y.	HP-15
Takeishi,H.	BS-10	Tang,P-H.	CS-14
Takemoto,M.	CW-01	Tang,W.	AD-09
Takemoto,S.	ER-03	Tang,X.L.	BV-03
Takemura,Y.	DA-03	Tang,X.L.	FV-04
Takemura,Y.	EF-01	Tang,Y.H.	CB-04
Takenaga,T.	BW-04	Tani,K.	HP-17
Takeo,A.	FQ-11	Tani,T.	BD-10
Takeo,A.	FS-01	Taniguchi,T.	BU-02
Takeuchi,M.	EW-07	Tanner,B.K.	GQ-08
Takeuchi,M.	GU-05	Taratorin,A.	FQ-10
Takeyama,H.	BX-04	Taratorin,A.	GR-09
Takezaki,T.	CU-12	Tashiro,K.	FX-03
Takiguchi,A.	FT-08	Tashiro,K.	FX-04
Takita,A.	BQ-08	Tatara,G.	CR-12
Takita,K.	BU-01	Tedesco,A.C.	BX-13
Takura,T.	EV-13	Tedesco,A.C.	CT-08
Talke,F.E.	FS-01	Tegus,O.	EX-11
Talke,F.E.	FS-02	Tegus,O.	FF-02
Talke,F.E.	FS-12	Tegus,O.	GU-12
Talke,F.E.	FS-19	Tehranchi,M.M.	CR-07
Talnagi,J.	HE-10	*Tehrani,S.	BZ-01
Tamm,R.	FE-07	Telem-Shafir,T.	HT-01
Tamura,K.	FX-10	Telling,N.D.	AD-06
Tan,K.	CE-05	Teodor,V.	FU-05
Tan,K.	FD-07	Terada,M.	CW-01
*Tan,W.	GC-01	Teranishi,T.	CT-07
Tan,W.J.	EP-11	Terao,T.	BQ-07
Tanabe,S.	EU-15	Terris,B.D.	BA-03
Tanabe,S.	HS-07	Terris,B.D.	ED-10
Tanahashi,K.	FP-09	*Terris,B.D.	BB-03
Tanaka,A.	FB-01	Terrones,M.	FF-04
Tanaka,A.	GB-02	Terui,M.	EU-08
Tanaka,H.	FF-05	Tessier,M.	BU-06
Tanaka,H.	GQ-10	Testa,L.	GW-08
Tanaka,H.	HB-02	Tezuka,N.	BA-10
Tanaka,H.	HB-05	Tezuka,N.	BT-03
Tanaka,K.	FX-05	Tezuka,N.	CR-03
Tanaka,M.	CU-06	Tezuka,N.	GS-05

Tezuka,N.	HA-02	Tsai,J-L.	BT-01
Tezuka,N.	HP-01	Tsai,J-L.	EQ-03
Tezuka,N.	HP-07	Tsao,F.C.	ES-06
Tezuka,N.	HP-09	Tsoukleris,D.	FE-10
Tezuka,N.	HP-18	Tsuchida,H.	AF-06
Thangaraj,A.	FQ-01	Tsuchida,K.	FD-09
Thiaville,A.	FA-01	Tsuchida,Y.	BW-09
*Thiele,J-U.	AB-02	Tsuchida,Y.	BW-15
Thomas,J.	FE-01	Tsuchiya,F.	BE-04
Thompson,S.M.	AD-07	Tsuji,H.	GU-15
Thompson,S.M.	GQ-08	Tsukada,A.	BV-04
Thompson,S.M.	HA-06	Tsukada,K.	FC-04
*Thomson,T.	BB-03	Tsukamoto,A.	BP-03
Thomson,T.	ED-10	Tsukamoto,A.	ED-08
Thwaites,M.J.	AC-05	Tsukamoto,K.	CA-07
Tian,F.	FR-01	Tsukayama,Y.	GU-04
Tian,H.	BW-05	Tsumori,T.	FP-05
Tian,H.	BW-08	Tsumori,T.	GB-09
Tiberto,P.	FF-10	Tsunashima,S.	EA-12
Tien,T-C.	BT-06	Tsunashima,S.	ED-02
Tilley,B.	AF-12	Tsunashima,S.	FR-07
Tjhai,C.J.	EP-06	Tsunashima,S.	GD-10
Tjhia,I.	AF-04	*Tsunekawa,K.	CA-01
Tkachov,I.I.	EC-06	Tsunekawa,K.	EQ-05
Toda,H.	CV-06	*Tsunekawa,K.	FB-05
Todaka,T.	BW-15	Tsunekawa,K.	HP-08
Todaka,T.	ET-09	Tsunoda,M.	AD-10
Todaka,T.	GV-03	Tsunoda,M.	CA-11
Togawa,K.	EF-02	Tsunoda,M.	ES-03
Tohji,K.	FX-10	Tsunoda,M.	FW-08
Tokunaga,Y.	EW-09	Tsunoda,M.	GD-07
Tokuyama,M.	FS-09	Tsunoda,M.	HR-05
Tollens,S.P.L.	GU-09	Tsunoda,T.	EA-09
Toman,M.	ET-08	Tsurusaki,T.	FX-08
Tomida,T.	GT-12	Tsutsui,K.	EF-03
Tomie,M.	FT-08	*Tsutsumi,M.	CE-06
Tomizawa,Y.	FX-12	Tsutsumi,M.	EU-04
Tomokiyo,Y.	BS-19	Tulapurkar,A.	BA-08
Tong,S.Y.	CA-10	Tulapurkar,A.	EQ-06
Tongsomporn,D.	GQ-11	Tulapurkar,A.A.	AA-02
Tonomura,A.	BD-04	Tung,M.J.	CA-10
Tooyama,H.	BW-08	Turumella,C.	FF-11
Torabi,A.F.	FQ-02	Turumoto,K.	FT-12
Torii,Y.	HD-10	Tutelea,L.	FT-02
*Toriyabe,C.	CC-04	Tyndall,G.W.	FS-03
Torres,C.	FV-12	Tyndall,G.W.	FS-18
Torres-Bruna,J.M.	GW-05		
Tournerie,N.	AD-05	U	
Toyoda,M.	EW-09	Uchida,H.	GF-01
Trapanese,M.	GW-08	Uchida,H.	HS-08
Travlos,A.	BC-10	Uchida,H.	HS-13
*Treves,D.	BB-02	Uchida,H.	HS-14
Tronconi,A.L.	CT-08	Uchida,H.	HS-15
Tsai,C.S.	EU-16	Uchida,H.	HS-16

Uchida,N.	ET-05	van der Laan,G.	BD-11
Uchikawa,Y.	EV-01	Van Dijken,S.	CR-14
Uchikawa,Y.	FC-03	Van Dijken,S.	GD-06
Uchimoto,T.	EW-10	Van Dijken,S.	HR-02
Ueda,M.	BT-04	Van Drent,W.	GV-08
* Ueda,T.	CE-06	van Kempen,H.	AD-02
* Uehara,M.	EE-01	van Kempen,H.	BD-04
Uehara,Y.	DB-01	Vandenbergher,R.E.	CD-07
Uehara,Y.	EU-06	Vandenbossche,L.	CD-07
Uehara,Y.	EU-07	Vanfleet,R.R.	EB-02
Uehara,Y.	HP-12	Vanhaverbeke,A.	BD-02
Uemura,T.	CA-02	Vanhelmont,F.	FD-05
Ueno,S.	EV-03	Varga,R.	AC-07
Ueno,S.	EV-04	Varga,R.	CD-09
Ueno,S.	EV-05	Vasundara,M.	BR-02
Ueno,S.	EV-06	Vaz,C.	EQ-02
Ueno,S.	EV-07	Vaz,C.A.	ED-07
Ueno,S.	EV-08	Vaz,C.A.F.	BA-04
Ueno,S.	EW-03	Vazquez de Parga,A.L.	AD-02
Ueno,S.	EW-06	Vazquez de Parga,A.L.	BD-04
Ueno,S.	EW-07	Vazquez,M.	AC-07
Ueno,S.	FC-02	Veeraraghavan,G.	FD-03
Ueno,S.	FC-07	Veeturi,S.	BR-02
* Ueno,S.	TZ-03	Veeturi,S.	FF-11
Ueno,T.	BE-06	Veeturi,S.	HU-06
Ueno,T.	EF-11	Vejpravova,J.	EC-03
Uesaka,Y.	FQ-07	Velu,E.M.T.	GB-04
Uesugi,T.	FB-06	Verbiest,T.	FC-09
Ulfig,R.M.	GQ-03	Verma,L.K.	ED-11
Ulyanov,A.N.	BR-08	* Viala,B.	CE-04
Ulyanov,A.N.	FU-15	Viala,B.	ER-05
Um,Y.H.	BQ-02	Viala,B.	EU-02
Um,Y.H.	HS-10	Viala,B.	HS-02
Umezaki,H.	GQ-10	Viano,A.	FU-03
Umezawa,H.	GF-02	* Victora,R.H.	BB-01
Unruh,K.K.	EB-09	Victora,R.H.	CB-05
Upadhyay,P.R.	CV-08	* Victora,R.H.	TZ-01
Upadhyay,P.R.	CV-09	Vijaya Kumar,B.V.K.	GC-06
Upadhyay,P.R.	HE-03	Vijaya Kumar,B.V.K.	GC-09
Urkmen,K.	BD-07	Vila,L.	EQ-02
* Usadel,K.D.	BC-01	Villa,E.	GU-02
Usui,T.	EF-09	Vinai,F.	FF-10
Usui,U.	AF-03	Viret,M.	BD-02
Usuki,K.	GR-12	Vitta,S.	ER-08
Usuki,N.	GR-02	Vittoria,C.	FV-05
Uzumaki,T.	GB-02	Voegeli,O.	EA-10
		Vojtanik,P.	CD-09
		Vollmer,R.	AD-09
V		von Boehm,J.	DA-02
Vagati,A.	AE-08	Vopsaroiu,M.	AC-05
Vaidya,J.	HE-07	Vopsaroiu,M.	HQ-02
Valavanis,A.	CR-04	Vora,P.	HE-10
* Valet,T.V.	BA-01	Vuaroqueaux,M.	GF-11
Vallet-Regi,M.	HA-10	* Vutukuri,S.	GA-02
van der Laan,G.	AD-06		

Vvedensky, V.	FX-01	Watanabe, K.	GQ-05
		Watanabe, K.	GQ-06
W		Watanabe, K.	GQ-12
* Wachenschwanz, D.	BB-02	Watanabe, K.	HB-09
Wachenschwanz, D.	FR-06	Watanabe, K.	HT-06
Wada, H.	FC-08	* Watanabe, N.	CA-01
Wada, Y.	EF-03	Watanabe, N.	CQ-02
Wadhwa, P.	GW-02	Watanabe, N.	EQ-05
Wakiwaka, H.	BW-06	Watanabe, N.	EX-09
Wakiwaka, H.	HD-10	* Watanabe, N.	FB-05
Walker, J.A.	CV-01	Watanabe, N.	FW-11
Walmer, M.H.	HE-10	Watanabe, N.	HP-08
Waltman, R.J.	FS-03	Watanabe, S.	CP-02
Waltman, R.J.	FS-18	Watanabe, T.	AE-04
Wang, D.	FD-02	Watanabe, T.	AF-11
Wang, D-S.	GW-10	Watts, S.M.	CR-14
Wang, H.	EB-09	Watts, S.M.	GD-06
Wang, H.	ED-05	Weber, M.C.	GD-05
Wang, H.T.	CP-08	Wei, D.	FR-01
Wang, J.B.	DD-06	Wei, D.H.	BS-01
Wang, J.M.	HD-08	Wei, Z-H.	CU-02
Wang, J.P.	AD-12	Weisheit, M.	FE-01
Wang, J.P.	CP-08	Weisheit, M.	GD-03
Wang, J.P.	DF-04	Weller, D.	EB-09
Wang, J-P.	BA-05	Weller, D.	FF-09
Wang, J-P.	FF-06	Werp, P.	FC-11
* Wang, J-P.	GB-01	White, R.M.	HP-20
Wang, J-T.	GW-10	Wiesinger, G.	FE-05
Wang, L.	CR-13	Wiley, J.B.	BU-03
Wang, P-K.	EA-10	Wilhelm, F.	AD-01
Wang, S.Y.	EA-01	Wilkinson, C.D.W.	BD-05
Wang, S-J.	AE-09	Williams, P.	CU-01
Wang, S-J.	BE-05	Wilson, B.	CQ-11
Wang, W.G.	HP-11	Wilson, B.	EP-07
Wang, W.H.	HA-05	Wilson, B.A.	EP-14
Wang, W.Q.	BS-02	Wilson, B.A.	FP-10
Wang, X.	ER-01	Wilson, K.	HA-06
Wang, X.L.	BQ-15	Wilton, D.T.	FR-05
Wang, X.L.	DA-06	* Wirix-Speetjens, R.	CC-05
Wang, X.L.	FU-12	Wohlgenannt, M.	FD-03
Wang, X.L.	GF-10	Wolf, J.K.	EP-03
Wang, X.W.	BQ-03	Wolf, J.K.	GC-04
Wang, Y.	EC-05	Won, S.H.	BE-03
Wang, Y.	EC-11	Won, S.H.	CV-13
Wang, Y.	ED-04	Won, S.H.	CW-11
Wang, Y.	HE-02	Won, S.H.	FT-06
Wang, Y.C.	FE-06	Wong, B.	HP-05
Wang, Y-F.	BX-06	Wong, L.C.	CD-08
Wang, Z-H.	FU-10	Woo, D.H.	HS-12
Watanabe, H.	BW-08	Woo, K.	DC-05
Watanabe, K.	CU-06	Woo, S.I.	BQ-12
* Watanabe, K.	DB-05	Wood, D.	BD-08
Watanabe, K.	EU-07	Wright, C.D.	BP-04
Watanabe, K.	FB-03	Wu, D.M.	GF-08

Wu,G.BS-04
 Wu,G.H.HA-05
 Wu,H-I.EX-03
 Wu,H-M.HU-08
 Wu,J-C.CU-02
 Wu,J-C.CU-03
 Wu,M.Z.CE-07
 Wu,P.EB-12
 Wu,R.Q.GW-10
 Wu,S.BV-07
 Wu,S.Y.ES-06
 Wu,T.X.HE-07
 Wu,T-F.ES-02
 Wu,T-H.BP-01
 Wu,T-H.GV-07
 Wu,T-H.HP-22
 Wu,Y.AF-01
 Wu,Y.HQ-05
 Wu,Y.H.CR-13
 Wu,Y.H.CU-07
 Wu,Y.H.EA-07
 Wu,Y.H.HQ-04
 Wu,Y-C.EB-06
 Wu,Z.M.FD-12
 Wulfhekel,W.AD-03
 Wurmehl,S.HA-04
 Wuttig,M.EF-08

X

Xavier,P.HS-05
 Xi,L.BQ-03
 Xi,L.ER-01
 * Xia,H.GC-01
 Xiang,X.H.HP-11
 Xiao,J.Q.HP-11
 Xiao,M.FP-10
 Xiao,M-W.HP-11
 Xie,J.GC-09
 Xie,J.GP-05
 Xu,H.B.HD-08
 Xu,J.F.FS-19
 Xu,J.G.FS-09
 Xu,J.G.HB-05
 * Xu,K.D.CC-05
 Xu,Q.Y.BC-05
 Xu,Y.B.AD-06
 Xu,Y.B.AD-07
 Xu,Y.B.BA-11
 Xu,Y.B.CR-04
 Xu,Y.B.HA-06
 Xu,Y.P.GV-05
 Xu,Y-H.GB-08
 Xue,Z-L.GS-08

Y

Yabukami,S.BV-01
 Yabukami,S.EW-09
 Yabumoto,M.GT-13
 Yagami,K.AA-02
 Yagami,K.BA-08
 Yagami,K.EQ-06
 Yagi,M.AC-01
 Yagi,M.DD-04
 Yagisawa,D.CU-12
 Yaguchi,H.FT-12
 Yakata,S.HA-03
 Yakushiji,K.FW-10
 Yakushiji,K.GS-03
 Yakushiji,T.BW-09
 Yamada,H.BE-04
 Yamada,K.HP-12
 Yamada,K.HP-17
 Yamada,K.HT-09
 Yamada,S.BW-05
 Yamada,S.BW-06
 Yamada,S.BW-08
 Yamada,S.BW-10
 Yamada,S.CS-02
 Yamada,S.CU-11
 Yamada,S.EF-07
 Yamada,S.EW-02
 Yamada,T.AD-02
 Yamada,T.BD-04
 Yamada,T.EF-01
 Yamada,Y.CD-06
 Yamada,Y.HD-10
 Yamadera,H.BV-04
 Yamadera,H.DD-01
 Yamaga,M.GR-01
 * Yamagata,S.CA-01
 * Yamagata,S.FB-05
 Yamagata,S.HP-08
 Yamagishi,W.GB-11
 Yamaguchi,A.CP-05
 Yamaguchi,H.BW-14
 Yamaguchi,K.HP-17
 Yamaguchi,M.AC-02
 Yamaguchi,M.AC-03
 Yamaguchi,M.CE-02
 Yamaguchi,M.CE-05
 Yamaguchi,M.DD-04
 Yamaguchi,M.EU-03
 Yamaguchi,M.EU-11
 Yamaguchi,M.EU-12
 Yamaguchi,M.FD-07
 Yamaguchi,M.GT-01
 Yamaguchi,M.GT-02
 Yamaguchi,M.HS-07

Yamaguchi, S.	EW-03	Yanase, S.	ER-07
Yamaguchi, T.	FX-06	Yanase, S.	FV-06
Yamakawa, K.	CE-05	Yanase, S.	GT-06
Yamakawa, K.	FD-07	Yang, C.C.	ES-06
Yamamoto, A.	AA-05	Yang, C.H.	AF-05
Yamamoto, H.	BS-11	Yang, F.	BS-04
Yamamoto, H.	GE-06	Yang, H.S.	CA-08
Yamamoto, H.	GR-06	Yang, H.S.	CV-07
Yamamoto, K.	HB-07	Yang, J.	GV-08
Yamamoto, M.	BQ-08	Yang, J.S.	HS-12
Yamamoto, M.	BV-11	Yang, J.X.	FD-12
Yamamoto, M.	BV-12	Yang, J.Y.	ER-09
Yamamoto, M.	CA-02	Yang, J.Y.	HP-30
Yamamoto, M.	FE-11	Yang, J.S.	HT-04
Yamamoto, S.	CE-08	Yang, L.W.	EU-16
Yamamoto, S.	CE-09	Yang, S.H.	CA-08
Yamamoto, S.	EB-01	Yang, S.H.	EP-07
Yamamoto, T.	FX-05	Yang, T.	BA-02
Yamamoto, Y.	HT-03	Yang, T.	BA-06
Yamamura, T.	DC-02	Yang, X.L.	BQ-03
Yamanaka, K.	CQ-02	Yang, X.L.	BV-07
Yamanaka, T.	GF-02	Yang, X.L.	ER-01
Yamane, H.	BW-15	Yang, X.L.	FD-12
Yamane, T.	GR-05	Yang, X.S.	EP-04
*Yamanouchi, M.	GA-04	Yang, Y.-C.	CS-01
Yamaoka, T.	CU-06	Yang, Z.	HB-12
Yamaoka, T.	EQ-01	Yano, A.	FR-08
Yamaoka, T.	FW-04	Yao, B.	EB-02
Yamasaki, J.	FT-08	Yao, D.	ER-01
Yamasawa, K.	BE-09	Yao, Y.	HP-19
Yamasawa, K.	CQ-07	Yao, Y.D.	BS-01
Yamasawa, K.	EU-06	Yao, Y.D.	BT-06
Yamasawa, K.	EU-07	Yao, Y.D.	EQ-04
Yamasawa, K.	EU-14	Yao, Y.D.	ES-04
Yamasawa, K.	HD-03	Yao, Y.D.	FA-12
Yamashita, F.	BS-21	Yao, Y.D.	FU-06
Yamashita, F.	EE-03	Yao, Y.D.	FW-01
Yamashita, T.	FB-02	Yao, Y.-D.	BU-04
Yamashita, Y.	CQ-08	Yao, Y.-D.	EQ-03
Yamato, T.	GD-10	Yao, Y.-D.	EX-03
Yamazaki, A.	FT-09	Yao, Y.-D.	FA-08
Yamazaki, A.	FT-10	Yao, Y.-D.	FA-09
Yamazaki, A.	FT-11	Yao, Y.-D.	FR-03
Yamazaki, K.	EW-12	Yao, Y.-D.	HP-15
Yamazaki, K.	FC-05	Yasui, K.	FR-02
Yamazaki, K.	FX-06	Ye, H.Y.	HB-06
Yamazaki, Y.	FV-11	Ye, L.-X.	BP-01
Yan, A.	GE-02	Ye, L.-X.	GV-07
Yan, A.	GU-14	Ye, S.	CV-05
Yan, L.	AD-04	Yen, B.	GR-11
Yan, S.L.	FV-05	Yen, B.	HB-08
Yanagi, S.	FB-02	Yen, J.-Y.	FT-14
Yanagisawa, K.	EU-14	Yi, H.J.	BA-07
Yanai, T.	AC-11	Yi, H.J.	CR-05

Yi,H.J.	CR-08	Yu,C.	EQ-04
Yi,H.J.	CR-09	Yu,C.	FW-01
Yi,J.B.	AD-12	Yu,C.C.	BS-01
Yi,J.B.	FE-06	Yu,C-C.	BU-04
Yihong,W.	FU-05	Yu,C-C.	FR-03
Yilgin,R.	HA-03	Yu,H-C.	BE-05
Yin,J.	EB-10	Yu,K.K.	FU-14
Yin,J.H.	EB-11	Yu,K.K.	FU-16
Yin,J.H.	FE-06	Yu,L.T.	BX-04
* Yoda,H.	BZ-04	Yu,M.H.	DC-06
Yoda,H.	EA-05	Yu,M.J.	CQ-04
Yokoo,K.	EX-05	Yu,S.C.	ER-02
Yokota,C.	BV-01	Yu,S.C.	FU-15
Yonezawa,K.	BA-10	Yu,S.C.	FU-18
Yonnet,J.P.	EX-06	Yu,S.C.	FU-19
Yoo,S-I.	BR-08	Yu,S-C.	BR-08
Yoo,Y-G.	HR-04	Yu,S-C.	EX-04
Yoon,C.S.	CT-02	Yu,S-C.	FU-17
Yoon,H.	FV-07	Yu,S-C.	HR-04
Yoon,K.S.	ER-09	Yuan,C.	BR-06
Yoon,K.S.	HP-30	Yuan,F-T.	BS-09
Yoon,S.H.	HT-04	Yuan,F-T.	BT-01
Yoon,S.K.	BQ-14	Yuan,J.	EB-12
Yoon,S-J.	BP-05	Yuan,W.	BV-07
Yoon,S-S.	BV-08	Yuan,Z-M.	FS-07
Yoseph,S.G.	CB-05	Yuasa,H.	GQ-01
Yoshida,K.	FQ-03	Yuasa,H.	GQ-04
* Yoshida,N.	DB-05	Yuasa,S.	AA-05
Yoshida,N.	FB-03	* Yuasa,S.	CA-01
Yoshida,N.	GQ-06	Yuasa,S.	CA-04
Yoshida,N.	GQ-12	Yuasa,S.	CA-05
Yoshida,S.	BR-10	Yuasa,S.	DA-01
Yoshida,S.	CD-06	Yuasa,S.	EQ-05
Yoshida,S.	EC-10	Yuasa,S.	EQ-06
Yoshida,T.	HT-06	Yuasa,S.	FA-07
Yoshihara,T.	CS-04	* Yuasa,S.	FB-05
Yoshikawa,M.	EA-05	Yuasa,S.	FW-11
Yoshimizu,Y.	BQ-07	* Yuasa,S.	GA-01
Yoshimura,S.	CA-11	Yuasa,S.	HP-10
Yoshino,M.	FP-05	Yuasa,S.	HP-26
Yoshino,T.	BX-04	Yue,M.	FE-12
Yoshitomi,Y.	HT-08	Yufune,S.	BD-10
Yoshizawa,M.	EV-01	Yun,D.K.	GD-09
Yoshizawa,N.	BW-01	Yung,C.S.	FT-13
Yoshizawa,Y.	AC-11		
Yoshizawa,Y.	BR-04	Z	
Yoshizawa,Y.	GT-03	Zabel,H.	GQ-08
You,C-Y.	GE-05	Zaibing,G.	FU-05
You,D.J.	CV-07	Zander,A.	HE-05
You,D.J.	FT-01	Zangari,G.	BW-03
You,I.S.	HP-27	Zayets,V.	GF-03
You,K-L.	FR-03	Zeng,Q.	BU-05
You,L.	HS-03	Zeng,Q.H.	AF-06
Young,S-L.	FU-11	Zeng,Z.M.	EQ-08

Zhang,D.	FV-03	Zhong,H.	EC-07
Zhang,F.	EU-14	Zhong,J.J.	AE-10
Zhang,H.	FS-10	Zhong,J.J.	GV-02
Zhang,H.	FS-14	Zhong,Z.Y.	BV-03
Zhang,H.	HB-10	Zhou,H.	FQ-06
Zhang,H.	HB-11	Zhou,H.T.	EC-02
Zhang,H.W.	BV-03	Zhou,J.	FS-16
Zhang,H.W.	EC-02	Zhou,J.N.	CQ-13
Zhang,H.W.	EC-07	Zhou,J.N.	FP-07
Zhang,H.W.	FV-04	Zhou,M.	FF-09
Zhang,J.	EB-05	Zhou,T.	BC-08
Zhang,J.	EE-02	Zhou,W.L.	DC-06
Zhang,J.	GB-03	Zhou,X.Y.	BQ-03
Zhang,J.D.	FS-02	Zhou,Y.	CB-07
Zhang,J.L.	AF-08	Zhou,Y.	DB-04
Zhang,L.	BP-08	Zhou,Y.	FQ-04
Zhang,L.	GU-12	Zhou,Y.	FS-15
Zhang,M.	GS-01	Zhou,Y.Z.	EB-05
Zhang,M.	GU-12	Zhu,J.	FB-08
Zhang,Q.W.	ES-03	Zhu,J.	FQ-09
Zhang,W.S.	FF-02	Zhu,J.	FR-01
Zhang,W.S.	GU-12	Zhu,J.G.	AE-10
*Zhang,X-G.	GA-02	Zhu,J.G.	BE-02
Zhang,Y.	AD-09	Zhu,J.G.	GV-02
Zhang,Y.	BS-13	Zhu,J-G.	BP-08
Zhang,Y.	EB-09	Zhu,J-G.	CB-04
Zhang,Y.	FE-08	Zhu,J-G.	CB-07
Zhang,Y.	FF-09	Zhu,J-G.	DB-04
Zhang,Y.	GE-08	Zhu,J-G.	EA-08
Zhang,Y.	GW-15	Zhu,J-G.	HP-20
Zhang,Z.	EB-10	Zhu,L-Y.	AF-05
Zhang,Z.D.	FF-02	Zhu,T.	HP-11
Zhang,Z.Z.	BW-02	Zhu,X.C.	FB-08
Zhao,F.Q.	EX-11	Zhu,Z.Q.	AE-07
Zhao,H.B.	GB-03	Zhu,Z.Q.	CV-04
Zhao,J.	EQ-08	Zhukov,A.	BR-07
Zhao,L.M.	HE-07	Zhukov,A.	CD-09
Zhao,S.	EQ-08	Zhukov,A.	FD-11
Zhao,Z. L.	AD-12	Zhukov,A.A.	ED-09
Zhao,Z.J.	BV-07	Zhukov,A.A.	FA-04
Zhao,Z.J.	CD-08	Zhukova,V.	CD-09
Zhao,Z.J.	FD-12	Zhukova,V.	FD-11
Zheng,H.M.	CD-08	Zidanic,J.	FU-18
Zheng,L.	HE-07	Ziegler,H.L.	GF-04
Zheng,M.	CQ-04	Zou,J.B.	AE-12
Zheng,M.	CQ-13	Zou,J.B.	EF-12
Zheng,M.	FP-07	Zucca,M.	AE-11
Zheng,M.	GB-06	Zukrowski,J.	AD-04
Zheng,P.	HE-02	Zuo,X.	FV-05
Zheng,Y.	CU-07	Zuo,Y.	BQ-03
Zheng,Y.	HQ-05		
Zheng,Y.K.	EA-07		
Zheng,Y.K.	HQ-04		
Zhong,H.	EC-02		