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# Step 1 : Visit Library Websites (<http://taylorslibrary.taylors.edu.my/>)

The screenshot shows the Taylor's University Library website. At the top left, there are logos for Taylor's University and Taylor's College, both with the motto "Wisdom · Integrity · Excellence". The word "Library" is prominently displayed in the center. Below the logos is a red navigation bar with the following menu items: ABOUT, SERVICES, FACILITIES, RESOURCES (highlighted with a yellow box), USER SKILLS, NEWS & EVENTS, ALUMNI, and MY ACCOUNT (with a play button icon). A dropdown menu is open under "RESOURCES", listing: Print & Media Resources, Online Databases (highlighted with a yellow box), e-Books Collections, e-Journals, and Online Newspapers. Below the navigation bar is a large image of a library interior with people working at computers. A white box with the text "SILENT ZONES LEVEL 4&5" is overlaid on the bottom left of the image. Navigation arrows are visible on the left and right sides of the image area.

**Mouse over to Resources and click Online Database**

# Step 2 : Choose Science Direct Freedom Collection

## Resources - Online Databases

Library databases provide access to resources across a wide spectrum of topics and subject areas. Accessing from the library website will ensure that you have full access to the subscribed databases.

These databases provide access to published information sources. Examples: academic journal articles, conference proceedings, government publications, reports, scholarly magazines, newspapers, encyclopedias, journals and other resources.



Online Databases	Descriptions
1. <a href="#">SAGE Premier</a> upgrade from Communication Studies: A SAGE Full-Text Collection	This database includes the full text of 19 peer-reviewed journals published by SAGE and participating societies, encompassing over 12,800 articles and up to 53 years of backfiles.
2. <a href="#">SAGE Research Methods</a> Trial Period: 21st May- 31st July 2015	SAGE Research Methods has links to over 175, 000 pages of SAGE's renowned book, journal and reference content with a cutting edge advanced search and discovery tools. This is a great tool to help researchers in designing research projects, understanding particular methods or identifying a new method, conducting their research, and writing up their findings.  SAGE Research Methods focuses on methodology rather than disciplines; it can be used across social sciences, health sciences and many others.
3. <a href="#">ScienceDirect Freedom Collection</a>	ScienceDirect Freedom Collection is a leading full-text scientific database offering journal articles and book chapters from more than 2,500 peer-reviewed journals and more than 11,000 books.



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# Step 3 : Basic Search

ScienceDirect

Journals Books

**Biosorption of Chromium**

Journal or book title

Volume

Issue

Page



Advanced search

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articles on ScienceDirect

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**Life Sciences**

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Environmental Science

Immunology and Microbiology

Neuroscience

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*Mayo Clinic Proceedings*
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# Step 4 : Refine Filters

Biosorption of Chromium | Author name | Journal | Year

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**Refine filters**

- Year**
  - 2015 (99)
  - 2014 (142)
  - 2013 (133)
  - 2012 (108)
  - 2011 (130)
  - View more >>
- Publication title**
  - Journal of Hazardous Materials (243)
  - Bioresource Technology (158)
  - Chemical Engineering Journal (116)
  - Process Biochemistry (74)
  - Water Research (59)
  - View more >>
- Topic**
  - adsorption (251)
  - langmuir (185)
  - metal (185)
  - biosorption (150)
  - metal ion (116)
  - View more >>
- Content type**
  - Journal (1,000)
  - Book (151)
  - Reference Work (14)

**Apply filters**

Advanced search

Relevance | All access types

*assum filipendula*: Investigation of adsorption mechanisms

Carlos da Silva, Eric Guibal, Jacques Desbrieres

Open Access

September 2013

*Lannochloris oculata* after lipid extraction for biodiesel

1160

bagasse waste biomass Original Research Article

Use refine filters to narrow down the search results



# Step 4 : Refine Filters

ScienceDirect

Journals Books

Sign in Help

Biosorption of Chromium

Author name

Journal or book title

Volume

Issue

Page



Advanced search

Search results: 9 results found.

Did you mean: ALL(*absorption of chromatin*) AND LIMIT-TO(yearnav, "2015") AND LIMIT-TO(topics, "*absorption*") AND LIMIT-TO(contenttype, "1,2","Journal")

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## Refine filters

### Year

2015 (9)

### Publication title

Journal of Environmental Chemical Engineering (2)

Journal of the Taiwan Institute of Chemical Eng... (2)

Chemical Engineering Journal (1)

Ecological Engineering (1)

HBRC Journal (1)

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### Topic

biosorption (9)

biosorption capacity (2)

langmuir (2)

cell wall (1)

cerevisiae (1)

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### Content type

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Evaluation of the biosorption potential of a novel *Caryota urens* inflorescence waste biomass for the removal of hexavalent chromium from aqueous solutions Original Research Article

*Journal of the Taiwan Institute of Chemical Engineers, Volume 47, February 2015, Pages 59-70*

S. Rangabhashiyam, N. Selvaraju

Abstract Research highlights PDF (1779 K)

Biosorption and desorption studies on chromium(VI) by novel biosorbents of raw rutin and rutin resin Original Research Article

*Journal of Environmental Chemical Engineering, Volume 3, Issue 2, June 2015, Pages 1137-1145*

Nady A. Fathy, Shaimaa T. El-Wakeel, Rasha R. Abd El-Latif

Abstract PDF (1040 K)

Hexavalent chromium biosorption studies using *Penicillium griseofulvum* MSR1 a novel isolate from tannery effluent site: Box-Behnken optimization, equilibrium, kinetics and thermodynamic studies Original Research Article

*Journal of the Taiwan Institute of Chemical Engineers, Volume 49, April 2015, Pages 156-164*

Evy Alice Abigail. M, Melvin S. Samuel, Ramalingam Chidambaram

Abstract Research highlights PDF (1559 K)



Biosorption potential of *Diplotaxis harra* and *Glebionis coronaria* L. biomasses for the removal of Cd(II) and Co(II) from aqueous solutions Original Research Article

*Journal of Environmental Chemical Engineering, Volume 3, Issue 2, June 2015, Pages 822-830*

Hanane Tounsadi, Abderrahim Khalidi, Mohamed Abdennouri, Nouredine Barka

Now your search result has been narrowed down to 9

# Step 5 : Full text and abstract

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↓ Relevance ▾

⌵ All access types ▾

- [Chapter 7.2 - Modification of Cereal Straws as Natural Sorbents for Removing Metal Ions from Industrial Waste Water](#)

*Cereal Straw as a Resource for Sustainable Biomaterials and Biofuels, 2010, Pages 219-237*

Feng Peng, Run-Cang Sun

▶ Abstract |  PDF (449 K)



- [Metal tolerance and sequestration of Ni\(II\), Zn\(II\) and Cr\(VI\) ions from simulated and electroplating wastewater in batch process: Kinetics and equilibrium study](#) Original Research Article

*International Biodeterioration & Biodegradation, Volume 66, Issue 1, January 2012, Pages 82-90*

Rajender Kumar, Divya Bhatia, Rajesh Singh, Narsi R. Bishnoi


▶ Abstract | ▶ Graphical abstract |  PDF (1256 K)



- [Sorption of heavy metals from electroplating effluent using immobilized biomass \*Trichoderma viride\* in a continuous packed-bed column](#) Original Research Article

*International Biodeterioration & Biodegradation, Volume 65, Issue 8, December 2011, Pages 1133-1139*

Rajender Kumar, Divya Bhatia, Rajesh Singh, Suman Rani, Narsi R. Bishnoi

▶ Abstract | ▶ Graphical abstract |  PDF (391 K)



- [A staged purification process to remove heavy metal ions from wastewater using \*Rhizopus arrhizus\*](#) Original Research Article

*Process Biochemistry, Volume 32, Issue 4, May 1997, Pages 319-326*

Ayla Özer, H. Ibrahim Ekiz, Dursun Özer, Tülin Kutsal, Arif Çağlar

▶ Abstract |  PDF (595 K)



- [Implicat](#)

*Physics a*

E. Fosso



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# Step 6 : Original Research Article

- Biosorption** of nickel onto treated alga (*Oedogonium hatei*): Application of isotherm and kinetic models **Original Research Article**  
*Journal of Colloid and Interface Science*, Volume 342, Issue 2, 15 February 2010, Pages 533-539  
Vinod K. Gupta, Arshi Rastogi, Arunima Nayak  
▶ Abstract | ▶ Graphical abstract | ▶ PDF (309 K)
- Biosorption** of Cd(II) and Cr(III) from aqueous solution by moss (*Hylocomium splendens*) biomass: Equilibrium, kinetic and thermodynamic studies **Original Research Article**  
*Chemical Engineering Journal*, Volume 144, Issue 1, 1 October 2008, Pages 1-9  
Ahmet Sari, Durali Mendil, Mustafa Tuzen, Mustafa Soylak  
▶ Abstract | ▶ PDF (355 K)
- Response surface methodology approach for optimization of **biosorption** process for removal of Cr (VI), Ni (II) and Zn (II) ions by immobilized bacterial biomass sp. *Bacillus brevis* **Original Research Article**  
*Chemical Engineering Journal*, Volume 146, Issue 2, 15 February 2009, Pages 401-407  
Rajender Kumar, Rajesh Singh, Naresh Kumar, Kiran Bishnoi, Narsi R. Bishnoi  
▶ Abstract | ▶ PDF (745 K)
- Effect of Cu(II), Cd(II) and Zn(II) on Pb(II) **biosorption** by algae *Gelidium*-derived materials **Original Research Article**  
*Journal of Hazardous Materials*, Volume 154, Issues 1-3, 15 June 2008, Pages 711-720  
Vitor J.P. Vilar, Cidália M.S. Botelho, Rui A.R. Boaventura  
▶ Abstract | ▶ PDF (2089 K)
- Studies on the applicability of alginate-entrapped *Chryseomonas luteola* TEM 05 for heavy metal **biosorption**  
*Journal of Hazardous Materials*, Volume 146, Issues 1-2, 19 July 2007, Pages 417-420  
Seçil Önal, Şenay Hamarat Baysal, Guven Ozdemir  
▶ Abstract | ▶ PDF (315 K)
- Biosorption** of precious metals **Review Article**  
*Biotechnology*  
C. Mac  
▶ Abstract
- A com

**Original Research Article is considered a primary source. The report of a study written by researchers who actually did the study!**

## Step 7 : Read abstract from search result

- Removal of toxic heavy metals from synthetic wastewater using a novel biocarbon technology Original Research Article  
*Journal of Environmental Chemical Engineering, Volume 1, Issue 4, December 2013, Pages 884-890*  
Malairajan Singanan, Edward Peters  
▶ Abstract |  PDF (708 K)
- Removal of Ni(II) and Cu(II) ions using native and acid treated Ni-hyperaccumulator plant *Alyssum discolor* from Turkish serpentine soil Original Research Article  
*Chemosphere, Volume 89, Issue 3, September 2012, Pages 302-309*  
Gülşay Bayraktaroglu, Mustafa Kemal Arica, Nezaket Adiguzel  
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### Abstract

Citing articles (8)

*Alyssum discolor* biomass was collected from serpentine soil and was used for removal of metal ions. The plant species grown on serpentine soils are known to be rich with metals ions and thus have more capability for accumulating heavy metals. Native and acid-treated biomass of *A. discolor* (*A. discolor*) were utilized for the removal of Ni(II) and Cu(II) ions from aqueous solutions. The effects of contact time, initial concentration, and pH on the biosorption of Ni(II) and Cu(II) ions were investigated. Biosorption equilibrium was established in about 60 min. The surface properties of the biomass preparations were varied with pH, and the maximum amounts of Ni(II) and Cu(II) ions on both *A. discolor* biomass preparations were adsorbed at pH 5.0. The maximum biosorption capacities of the native, and acid-treated biomass preparations for Ni(II) were 13.1 and 34.7 mg g<sup>-1</sup> and for Cu(II) 6.15 and 17.8 mg g<sup>-1</sup> dry biomass, respectively. The biosorption of Ni(II) and Cu(II) ions from single and binary component systems can be successfully described by Langmuir and Freundlich isotherms. When the heavy metal ions were in competition, the amounts of biosorbed metal ions on the acid treated plant biomass were found to be 0.542 mmol g<sup>-1</sup> for Ni(II) and 0.162 mmol g<sup>-1</sup> for Cu(II), the *A. discolor* biomass was significantly selective for Ni(II) ions. The information gained from these studies was expected to indicate whether the native, and acid-treated forms can have the potential to be used for the removal and recovery of Ni(II) ions from wastewaters.

- Application of ligno-cellulosic waste material for heavy metal ions removal from aqueous solution Original Research Article  
*Journal of Environmental Chemical Engineering, Volume 1, Issue 4, December 2013, Pages 1020-1027*  
Garima Mahajan, Dhiraj Sud  
▶ Abstract |  PDF (770 K)
- Adsorption of chromate and cupric ions onto chitosan-coated cotton gauze Original Research Article  
*Carbohydrate Polymers, Volume 110, 22 September 2014, Pages 367-373*  
Franco Ferrero, Cinzia Tonetti, Monica Periolatto  
▶ Abstract | ▶ Research highlights |  PDF (1303 K)

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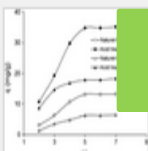
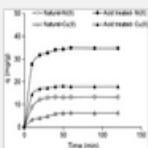
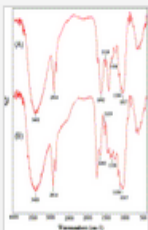
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### Abstract

### Keywords

- 1. Introduction
- 2. Materials and methods
- 3. Results and discussion
- 4. Conclusion
- Appendix A. Supplementary material
- References

## Figures and tables



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## Chemosphere

Volume 89, Issue 3, September 2012, Pages 302–309



### Removal of Ni(II) and Cu(II) ions using native and acid treated Ni-hyperaccumulator plant *Alyssum discolor* from Turkish serpentine soil

Gulay Bayramoglu<sup>a</sup>, M. Yakup Arica<sup>a</sup>, Nezaket Adiguzel<sup>b</sup>

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### Abstract

*Alyssum discolor* biomass was collected from serpentine soil and was used for removal of metal ions. The plant species grown on serpentine soils are known to be rich with metals ions and thus have more capability for accumulating heavy metals. Native and

*Alyssum discolor* biomass was collected from serpentine soil and was used for removal of metal ions. The plant species grown on serpentine soils are known to be rich with metals ions and thus have more capability for accumulating heavy metals. Native and

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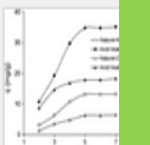
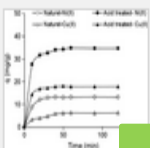
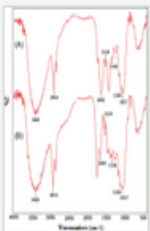
### Keywords

- 1. Introduction
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Appendix A. Supplementary material

References

## Figures and tables



## Removal of Ni-hyperactive serpentine

Gulay Bayram

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doi:10.1016/j.chem

### Abstract

*Alyssum discolor* biomass was collected from serpentine soil and was used for removal

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