

## LISTA

### lucrărilor științifice în domeniul disciplinelor din postul didactic

#### a) Teza de doctorat

"*Studiul mobilității și specierii metalelor grele în soluri poluate și posibilități de utilizare eco-economică a acestor soluri*", Universitatea Politehnică din București, Facultatea de Chimie Aplicată și Știința Materialelor – conducător doctorat Prof. univ. dr. Elena Diacu, data suținerii 30 Septembrie 2013.

#### b) Lucrări care pun în evidență **activitatea didactică**:

-

1. Vecerdea P.B. Chimia mediului-analiza calității apei - note de curs, Sibiu, 2020
2. Vecerdea P.B. Chimia mediului-analiza calității apei - Îndrumar lucrări practice, Sibiu, 2020
3. Barbu C.H., **Pavel P.B.**, *Hidrochimia și analiza calității apei* - Îndrumar lucrări practice, Sibiu, 2010
4. Barbu C.H., **Pavel P.B.**, *Remedierea solurilor poluate* - Îndrumar lucrări practice, Sibiu, 2010
5. Barbu C.H., **Pavel P.B.**, *Ecotoxicologie* – Îndrumar lucrări practice, Sibiu, 2009
6. Barbu C.H., Moise C, **Pavel P.B.**, *Monitorizarea factorilor de mediu* - Îndrumător pentru lucrările practice, Sibiu, 2008

#### c) Lucrări care pun în evidență **contribuția științifică**:

- cărți (monografii, tratate), cu ISBN, publicate într-o editură din țară;

1. Barbu C.H., **Pavel P.B.**, capitolul "*Miscanthus Sinensis 'Giganteus'* – sursă valoroasă de biomasă combustibilă" în cartea "Agricultura durabilă în zona montă", Editura Universității "Lucian Blaga" din Sibiu, ISBN: 978-606-12-0639-1, 2013, 15 pg.
2. Barbu C.H., **Pavel P.B.**, capitolul "*Avantajele bio-economice ale cultivării Miskanthus-ului*" în cartea "Agricultura durabilă în zona montă", Editura Universității "Lucian Blaga" din Sibiu, ISBN: 978-606-12-0639-1, 2013, 15 pg.

- articole publicate în reviste de circulație internațională, specifice domeniului, cotate I.S.I. sau indexate în baze de date internaționale (BDI);

#### Lucrări științifice publicate în reviste **cotate ISI**

1. **Pavel, Petronela-Bianca**; Puschenreiter, Markus; Walter W Wenzel, Elena Diacu, Constantin Horia Barbu, Aided phytostabilisation using *Miscanthus sinensis* x *giganteus* on trace element-contaminated soils, SCIENCE OF THE TOTAL ENVIRONMENT, Volume: 479, Pages: 125-131 (2014), category (Q1)
2. Karer, Jasmin; Wawra, Anna; Zehetner, Franz; Dunst, Gerald; Wagner, Mario, **Pavel, Petronela-Bianca**; Puschenreiter, Markus; Friesl-Hanl, Soja, Gerhard, Effects of Biochars and Compost Mixtures and Inorganic Additives on

Immobilisation of Heavy Metals in Contaminated Soils, WATER AIR AND SOIL POLLUTION, Volume: 226 Issue: 10 (2015), category (Q3)

3. **Pavel, Petronela-Bianca**; Diacu, Elena; Barbu, Constantin Horia; Long-term Effects on the Fractionation and Mobility of Heavy Metals in a Polluted Soil Treated with Bauxite Residues, REVISTA DE CHIMIE, Volume: 66 Issue: 1 Pages: 13-16 (2015), category (Q3)
4. **Pavel, Petronela-Bianca**; Diacu, Elena; Barbu, Constantin Horia; Microwave-Assisted Digestion Procedures for Total Lead and Cadmium Content Determination in Copsa Mica Soils, REVISTA DE CHIMIE, Volume: 64 Issue: 1 Pages: 22-26, (2013), category (Q3)
5. Barbu, Constantin Horia; **Pavel, Petronela Bianca**; Sand, Camelia; Pop, Mihai Radu; Reduced uptake of Cd and Pb by *Miscanthus sinensis x giganteus* cultivated on polluted soil and its use as biofuel, ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL, Volume: 12 Issue:2 Pages: 233-236 (2013), category (Q3)
5. Barbu, Constantin Horia; **Pavel, Petronela Bianca**; Moise, Cristina Maria; Sand, Camelia; Pop, Mihai Radu; Neutralization of Acid Mine Drainage with Wood Ash, REVISTA DE CHIMIE, Volume: 68 Issue: 12, Pages: 2768-2770 (2017), category (Q3)
6. Antonie, I, Stanciu Caratus, M; Tanase,; **Pavel, PB** ; Gaureanu, M, Study Upon the Invertebrates with Economic Importance for the Vegetables Cultures in the Gusterita Ecological Garden (Sibiu County), Book Series: Conference Proceedings Balkan Region Conference on Engineering Education & MSE, DOI: 10.1515/cplbu-2015-0007, Published: 2015

#### Lucrări științifice publicate în reviste **indexate în BDI**

1. Grama B.G., **Pavel B.P.**, Sand C., Pop M.R., Barbu C.H., *Cultivation of a Miscanthus Giganteus on soils polluted with heavy metals and the use of the resulted biomass*, Studia Universitatis “Vasile Goldiș”, Seria Științele Vieții, Vol. 24, issue 1, 2014, pp. 143-145, Index Scopus, Compendex, ISSN: 1584-2363
  2. Antonie I., **Pavel P.B.**, *The Analysis of the Heavy Metals in the Corn Agricultural Ecosystem in the Axente Sever - Copsa Mică Area (Sibiu County)*, Revista Economică, 65:1, 2013 pp. 9-13, CNCSIS: B+, ISSN: 1582-6260
  3. Antonie I., **Pavel P.B.**, Tanase M., Sand C., *The indicators of the soils and their importance upon the entomologic fauna in the corn culture in Copsa Mica - Axente Sever (Sibiu County)*, Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Agriculture, 69 (2), 2012, pp. 177-182, Index Copernicus, ISSN:1843-5246
  4. Diacu E., **Pavel P.B.**, Ivanov A.A., Bogdan D., *Heavy metal content analysis in Salvia Officinalis plants by graphite furnace atomic absorption spectrometry*, UPB. Sci. Bull., Series B, Vol. 73, Iss. 3, 2011, pp. 155-160, Index Scopus, Compendex ISSN: 1454-2331
  5. Pop M.R., Sand C., Bobiț D., Antofie M.M., Barbu H., **Pavel P.B.**, Muntean L., Savatti, M., *Studies concerning the production of volatile oil, rhizomes and roots, to different genotypes of Valeriana officinalis L.*, Analele Universității din Oradea - Fascicula Biologie, Tom. XVII, Issue: 2, 2010, pp. 64-68, Index Copernicus, ISSN: 1224-5119
- lucrări (studii, creații artistice etc.) publicate în volumele unor **manifestări științifice** (sesiuni de comunicări, conferințe etc.)  **internaționale recunoscute (cu ISSN sau ISBN)**;
1. Grama B.G. **Pavel P.B.**, Sand C., Pop M.-R, Barbu C.H., Liebhard, *Anbau von Miscanthus ,Giganteus’ auf Böden mit Schwermetallbelastung und Nutzung der Biomasse*, Arbeitsgemeinschaft Für Lebensmittelveterinär-Und Agrarwesen-A,

- „Angewandte Forschung – gibt es neue Wege?“, 69. ALVA-Tagung, LFZ Franzisco Josephinum, 19 - 20 Mai 2014, pp. 268-271, ISSN 1606-612X
2. Barbu C.H., **Pavel P.B.**, Ignat G.E., Moise C.M., Sava C., Pop M.R., *Phytoexcluders vs. hyperaccumulators: what is better for polluted soils management?* International Conference Protection of soil functions – challenges for the future, 15th – 18th October 2013, Puławy, Poland, ISBN-978-83-7562-144-0
  3. Soja G, Puschenreiter M., Zehetner F, **Pavel P.B.**, Dunst G., Wagner M, Wawra A., Friesl-Hanl W., *Reduktion der Schwermetallaufnahme Aus Einem Historisch Kontaminierten Boden Mittels Biokohle Und Eisenoxide*, Boden als multifunktionale Ressource, Österreichische Bodenkundliche Gesellschaft, 23 - 24.9.2013, Wien, Austria
  4. **Pavel P.B.**, Diacu E., Barbu C.H., *Cadmium and Lead Distribution in Different Parts of Miscanthus sinensis 'giganteus' Cultivated on Polluted Soils at Copșa Mică*, Plant Growth, Nutrition & Environment Interactions, February 18th – 21th, 2012, Vienna, Austria
  5. Diacu E., Ivanov A.A., Barbu C.H., **Pavel P.B.**, *Analytical procedure for cadmium determination in honey bee- a sensitive environmental pollution bioindicator*, ICOBTE 2011- 11th International Conference on the Biogeochemistry of Trace Elements, Florence, Italy, 2011, pp. 71-72.
  6. Barbu C.H., **Pavel P.B.**, Grama B., Sand C., Pop M.-R., *Sustainable use of phytoexcluders on heavy metal polluted soils*, ICOBTE 2011- 11th International Conference on the Biogeochemistry of Trace Elements, Florence, Italy, 2011, pp. 7-8.
  7. Grama B.G. Pavel P.B., Sand C., Pop M.-R, Barbu C.H., *Cultivation of a Miscanthus Giganteus on soils polluted with heavy metals and the use of the resulted biomass*, „Landwirtschaft, Lebensmittel und Veterinärmedizin – Zukunft der Forschung in Österreich“, 66. ALVA-Tagung pp. 211-214, ISSN 1606-612X
  8. Barbu C.H., **Pavel P.B.**, Grama B., Sand C., Pop M.-R, *Miscanthus sinensis x giganteus Cultivated on Soils Polluted with Heavy Metals – A Valuable Replacement for Coal*, Green Remediation Conference, University of Massachusetts Amherst, June 15-17, 2010, pp. 2-5.
- lucrări (studii, creații artistice etc.) publicate în volumele unor manifestări științifice (sesiuni de comunicări, conferințe etc.) **naționale recunoscute (cu ISSN sau ISBN)**;
1. Barbu C.H., **Pavel P.B.**, Moise C.M, Sand C., Pop M.-R, Florea A., *Mine Drainage with Wood Ash*, ELSEDIMA International Conference Cluj-Napoca, Romania, 18 – 19 September 2014, ISBN:978-973-606-526-183-9
  2. **Pavel P.B.**, Barbu C.H., Puschenreiter M., Diacu E, *Fractionation of heavy metals in soil and the uptake and translocation in Miscanthus sinensis giganteus cultivated on contaminated soils from Copsa Mică – România*, 18th Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, Romania, September 4-7, 2013, ISSN 2247-5389
  3. Popescu L.R., Ungureanu E.M., Iordache M, Buica G.O., Inel G.A, **Pavel P.B.**, Dinu C, *Assesment of mercury pollution on ecosystems water / sediment from Olt river basin and soil near industrial sources of pollution*, 18th Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, Romania, September 4-7, 2013, ISSN 2247-5389
  4. Ignat E., **Pavel P.B.**, Moise C., Barbu C.H., *The incidence of certain toxic metals (Pb, Cd) in products of vegetal origin*, The 12th International Symposium Prospects for 3rd Millennium Agriculture, Cluj-Napoca, Romania, 26 - 28 September, 2013
  5. Barbu C.H., **Pavel P.B.**, Moise C.M, Sand C., Pop M.-R., Ignat E., *The possibility of using wood ash as neutralizing agent for acid mine drainage*, *Advances in Environment, Ecosystems and Sustainable Tourism*, Proceedings of the 11th

- International Conference on Environment, Ecosystems and Development (EED '13) Brasov, Romania, June 1-3, 2013, pp. 187-191. ISBN: 978-1-61804-195-1
6. Barbu C.H., **Pavel P.B.**, Sand C., Pop M.-R., *Reduced uptake of Cd and Pb by Miscanthus Sinensis x Giganteus cultivated on polluted soil and its use as biofuel*, ELSEDIMA International Conference, Cluj-Napoca, Romania, 2012, ISBN: 978-973-606-526-183-9
  7. Barbu C.H., Sand C., **Pavel P.B.**, *Miscanthus sinensis x giganteus cultivated on heavy metal polluted soil-a feasible fuel*, Agri-Food Sciences, Processes and Technologies, Agri-Food 20, Sibiu, Romania, 2012, pp. 33-38, ISSN: 1843-0694
  8. Antonie I, **Pavel P.B.**, Sand C., *Preliminary Consideration on the assessment of agricultural entomologic fauna dynamics in soil*. Agri-Food Sciences, Processes and Technologies, Agri-Food 20, Sibiu, Romania, 2012, pp. 25-33, ISSN: 1843-0694
  9. **Pavel P.B.**, Barbu C.H., Diacu E. *Cadmium and Lead Distribution in Different Parts of Miscanthus sinensis 'giganteus' Cultivated on Polluted Soils at Copșa Mică*, Agri-Food Sciences, Processes and Technologies, Agri-Food 20, Sibiu, Romania, 2012, pp. 165-171, ISSN: 1843-0694
  10. Antonie I, **Pavel P.B.**, *The analysis of the heavy metals in the corn agricultural ecosystem in the Axente Sever-Copșa Mică area (Sibiu County)*, 19th International Economic Conference – IECS, Sibiu, Romania, 2012, pp. 9-14, ISBN: 978-973-739-444-6
  11. **Pavel P.B.**, Diacu E., Barbu C.H., *Vertical distribution and determination of cadmium and copper in Copsa Mica soils using HR-CS AAS*, 17th Romanian International Conference on Chemistry and Chemical Engineering RICCE XVII, Sinaia, Romania, 2011, pp. 17-23, ISSN: 2247 – 5389
  12. Barbu C.H., **Pavel P.B.**, Sand C., Stoica C, Pop M.R, *Miscanthus Sinensis Giganteus- a phytoexcluder with commercial value*, Proceedings of the second international conference - Modern Technologies and Biotechnologies for Environmental Protection, Sibiu, Romania, June 2-5 , 2010, Sibiu, ISSN: 2068-5610
  13. Barbu C.H., **Pavel P.B.**, Grama B., Sand C., Pop M.-R., *Combustion characteristic and low bioaccumulation of heavy metals by Miscanthus sinensis giganteus Cultivated on Polluted Soils*, Acta Universitatis Cibiniensis, Seria F Chemia, 13 (1), 2010, pp 7-12, ISSN 1583-4204
  14. **Pavel P.B.**, Grama B., Barbu C.H., Sand C., Pop M.-R., *Cultivation of a new plant on soils polluted with heavy metals and the use of the resulted biomass*, Acta Universitatis Cibiniensis, Agricultural Sciences Vol. 1, Nr. 1 (10), 2010, pp. 64-68, ISSN 1583-4204
  15. **Pavel P.B.**, Barbu C.H., Șortan S, Iașăru F., *Neutralization of red mud using grape marc*, Acta Universitatis Cibiniensis, Agricultural Sciences Series, Vol.1. No.1, 2010, pp. 69-74, ISSN 1583-4204
  16. **Pavel P.B.**, Barbu C.H, Sand C., Pop M.-R., *Direct determination of heavy metals in plant solid samples using HR-CS AAS*, „Metal Elements in Environment, Medicine and Biology”, Tome IX, pp.49 - 52, Cluj University Press, „Babeș-Bolyai” University, Cluj-Napoca, 2009, pp. 49-52, ISSN 1583-4204
  17. Barbu C.H., **Pavel P.B.**, Sand C., Pop M.-R., *Miscanthus sinensis giganteus' behaviour on soils polluted with heavy metals*, „Metal Elements in Environment, Medicine and Biology”, Tome IX, pp.49 - 52, Cluj University Press, „Babeș-Bolyai” University, Cluj-Napoca, 2009, pp. 21-24, ISSN 1583-4204
  18. Barbu C.H., **Pavel P.B.**, Sand C., Pop M.-R., Moise C., *Promising results of Miscanthus Sinensis Giganteus' cultivation on soils polluted with heavy metals*, Acta Universitatis Cibiniensis, Agricultural Sciences Vol. 1, Nr. 1 (9), 2009, pp. 22-26, ISSN, 2067-8525
  19. Moise C., **Pavel P.B.**, *Survey regarding the noise level from Sibiu county in 2009's fall*, Acta Universitatis Cibiniensis, Agricultural Sciences Vol. 1, Nr. 1 (9), 2009, pp. 33-36, ISSN, 2067-8525

20. **Pavel P.B.**, Barbu C.H, Moise C., *Measurement of biochemical oxygen demand by the manometric method*, Acta Universitatis Cibiniensis, Agricultural Sciences Vol. 1, Nr. 1 (9), 2009, pp. 45-51, ISSN, 2067-8525
  21. Barbu C.H., Sand C., Stoica C, Pop M.R, **Pavel P.B.**, *RUTSOLMEG – the first coherent project for the remediation and sustainable use of soils polluted with heavy metals in Copșa Mică area*, Proceedings of the first conference with international participation - Modern Technologies and Biotechnologies for Environmental Protection, Sibiu, Romania, June 5-7 , 2008, Sibiu, ISBN 978-973-739-6157-0
  22. **Pavel P.B.**, Barbu C.H, Sand C., Pop M.-R., Moise C., *Direct determination of heavy metals in plant solid samples using HR-CS AAS*, Acta Universitatis Cibiniensis, Agricultural Sciences, Vol. 1, nr. 1 (8), 2008, pp. 29-34, ISSN: 2067-8525
  23. Moise C., **Pavel P.B.**, *Survey regarding water quality coming from different sources (fountains, surface) using the GLX device*, Acta Universitatis Cibiniensis, Agricultural Sciences, Vol. 1, nr. 1 (8), 2008, pp. 35-38, ISSN, 2067-8525
- lucrări (studii, creații artistice etc.) publicate în volumele unor manifestări științifice (sesiuni de comunicări, conferințe etc.) **naționale (fără ISSN sau ISBN)**;
    1. Barbu C.H., **Pavel P.B.**, Grama B., Sand C., Pop M.-R., *Produs necontaminat obținut pe soluri poluate cu anumite metale grele*, IPNewsletter Buletin informativ destinat organizațiilor economice și de cercetare-inovare 9, 2013.
  - **brevete de invenție**.
    - Cerere de brevet de invenție OSIM, Nr. 2010 01337 – *Produs necontaminat obținut pe soluri poluate cu anumite metale grele*, Barbu C.H., **Pavel P.B.**, Grama B.G., Sand C., Pop R.M., Universitatea “Lucian Blaga din Sibiu