

## **Lista de lucrări în domeniul de știință definit de disciplinele din postul scos la concurs**

**NUMELE ȘI PRENUMELE: SZILVESZTER SZABOLCS**

### **I. LISTA PUBLICAȚIILOR RELEVANTE**

1. **Szabolcs Szilveszter**, Botond Raduly, Beata Abraham, Szabolcs Lanyi, In Situ Imaging of Biopolymers and Extracellular Enzymes in Activated Sludge Flocs of a Municipal Wastewater Treatment Plant, J Chem Technol Biot, Vol. 88, Issue 7, pp 1295–1304, 2013.
2. Csaba Zoltán Kibédi-Szabó, Marta Stroescu, Anicuta Stoica-Guzun, Sorin Ion Jinga, **Szabolcs Szilveszter**, Iuliana Jipa, Tanase Dobre Biodegradation Behavior of Composite Films with Poly (Vinyl Alcohol) Matrix, J Polym Environ, 20(2), pp. 422-430, 2012
3. **Szabolcs Szilveszter**, Botond Ráduly, Beáta Ábrahám, Szabolcs Lányi, Dan Robescu Niculae, “Mathematical models for domestic biological wastewater treatment process”, EEMJ, 9(5), pp. 629-635, 2010
4. **Szabolcs Szilveszter**, Botond Raduly, Szilard Bucs, Beata Abraham, Szabolcs Lanyi, Dan Robescu Niculae, Activated Sludge Floc Characterization by Confocal Laser Scanning Microscopy, EEMJ, 11 (3): 669-674 (2012)

### **II. LISTA COMPLETĂ DE PUBLICAȚII, CREAȚII, INVENȚII**

#### **A. Teza de doctorat.**

Theoretical and Experimental Contributions in the Study of Biological Processes in Aqueous Environment, Prof.dr.ing. Dan Robescu Niculae, Calificativ: Foarte Bun

#### **B. Cărți publicate**

**B1. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate la edituri recunoscute în străinătate.**

**B2. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în țară, la edituri recunoscute CNCSIS.**

**B3. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate la alte edituri sau pe plan local.**

**B4. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe web.**

**B5. Capitole de cărți publicate în străinătate**

**B6. Capitole de cărți publicate în țară**

#### **C. Lucrări științifice publicate**

**C1. Lucrări științifice publicate în reviste cotate ISI**

1. **Szilveszter Szabolcs**, Raduly Botond, Miklossy Ildikó, Lányi Szabolcs, Dan Robescu Nicolae, "Enzymatic activity studies of biological wastewater treatment", *Studia Universitatis Babes-Bolyai Seria Chemia*, Vol. 54 Special Issue 2, pp.113-122, 2009
2. Raduly Botond, Corognale Silvia, **Szilveszter Szabolcs**, Meszaros Sándor, "Modeling of the Biochemical Processes of the Activated Sludge Wastewater Treatment Technology", *Studia Universitatis Babes-Bolyai Seria Chemia*, Vol. 54 Special Issue 2, pp 135-146, 2009
3. **Szabolcs Szilveszter**, Ráduly Botond, Miklóssy Ildikó, Ábrahám Beáta, Lányi Szabolcs, Dan Robescu Niculae, "Lab scale sequencing batch reactor (sbr) construction and characterization for dynamic modeling with activated sludge model (ASM)." *Studia Universitatis Babes-Bolyai Seria Chemia*, Vol. 55 Special Issue, pp 119-133, 2010
4. Harai (Molnos) Éva, **Szilveszter Szabolcs**, Ábrahám Beáta, Nagy Iosif, Lányi Szabolcs, Ovidiu Munteanu, "Biohydrogen production with photosynthetic bacteria." *Studia Universitatis Babes-Bolyai Seria Chemia*, Vol. 54, Special Issue 2, pp 61-68, 2010
5. Ildiko Miklóssy, Laszlo Szilágyi, Beata Ábrahám, **Szabolcs Szilveszter**, Szabolcs Lányi, "Obtention of the Ancestral Proteinase Stemzyme-IDP- $\beta$  by Heterologous Expression." , *Studia Universitatis Babes-Bolyai Seria Chemia*, Vol. 54, Special Issue 2, pp 11-20, 2010

**C2. Lucrări științifice publicate în reviste indexate în baze de date internaționale (indicați și baza de date).**

**C3. Lucrări științifice publicate în reviste din străinătate (altele decât cele menționate anterior).**

**C4. Lucrări științifice publicate în reviste din țară, recunoscute CNCSIS (altele decât cele din baze de date internaționale).**

1. Szilágyi Laszlo, Ábrahám Beata, Miklóssy Ildiko, **Szilveszter Szabolcs**, Gálicza Judit, Lányi Szabolcs, "Modeling studies on the ancestral proteinase stemzyme IDP-B", *University Politehnica Of Bucharest, Scientific Bulletin Series B: Chemistry And Materials Science*, Vol. 72 Issue 2., 161-168, 2010
2. **Szilveszter Szabolcs**, Miklóssy Ildiko, Mészáros Alexandru, Ábrahám Beata, Ráduly Botond, Robescu Dan Niculae, Lányi Szabolcs, "Enzyme activities and distribution in activated sludge in a lab-scale sequencing batch reactor (SBR)", *University Politehnica Of Bucharest, Scientific Bulletin Series B: Chemistry And Materials Science*, Vol. 72 Issue 2., pp 141-150, 2010
3. Beata Ábrahám ; Ildikó Miklóssy ; Erika Kovács ; Éva Tamás ; Ildikó Mészáros ; **Szabolcs Szilveszter** ; Aurelia Brezeanu ; Szabolcs Lányi, "Genetic Analysis of *Pinus sylvestris* L. and *Pinus sylvestris* forma *turfosa* L. Using RAPD Markers", *Notulae Scientia Biologicae*, Vol 2, No 1, 129-132, 2010.

**C5. Lucrări științifice publicate în reviste, altele decât cele menționate anterior**

**C6. Lucrări științifice publicate în volumele manifestărilor științifice**

1. **Szabolcs Szilveszter**, Botond Raduly, Szilard Bucs, Dan Robescu Niculae, Szabolcs Lanyi, Characterization of activated sludge flocs by CLSM microscopy with different staining methods, 1<sup>st</sup> Danube – Black Sea Regional Young Water Professionals Conference, Innovations in the field of water supply, sanitation and water quality, Palace of parliament Bucharest, 2011, june 14-15.
2. A. Szabó, I. Máthé, **Sz. Szilveszter**, Laura Jurecska, B. Vajna, K. Márialigeti, T. Felföldi, Next generation amplicon sequencing of the microbial community of a crater lake (Lake Saint Ana, Romania), Acta Microbiologica et Immunologica Hungarica, 60, pp: 236, 2013, Proceeding of the 4th Central European Forum for Microbiology.

#### **D. Traduceri de cărți, capitole de cărți, alte lucrări științifice**

#### **E. Editare, coordonare de volume**

#### **F. Brevete de invenții și alte titluri de proprietate**

#### **G. Contracte de cercetare (menționați calitatea de director sau membru)**

1. Programe 4, 31/048 Programe /”Microbial inoculants for sustainable agriculture systems.” MIMOSA – Cercetator;
2. Programe 4 -PNCDI2/”Redesigning enzyme specificity by directed evolution: elaboration of a serine protease with specificity to the C-terminal cleavage of phosphotyrosine containing proteins.” PHOSPHOTYRASE – Cercetator;
3. “BIOPREP Microbial biopreparates for increasing the productivity and crop protection” research funded by Sectorial Operational Programme, Increase of Economic Competitiveness Operation 2.1.1. of the Romanian Ministry of Labour, Family and Social Protection, through financial agreement POSCEE No. 469/11817. – Cercetator;
4. Chemical and microbiological analysis of Saint Anne Lake, 2011-2014, SOIPC (KPI) Hungarian University of Transylvania - Cercetator;
5. Retrieving new bacterial isolates for potential bioremediation and biotechnological applications, Romanian National Authority for Scientific Research, CNCS – UEFISCDI; project number PN-II-RU-TE-2012-3-0319 - Cercetator;
6. Water network sectorization and non-revenue water loss analysis of water supply network in Ibarra city Ecuador / Actualizacion de la sectorizacion hidraulica y programa de reduccion de perdidas de agua en la Ciudad de Ibarra y asesamiento en su implementacion y puesta en marcha, Senescyt – Prometeo Project, Ecuador; Financial Agreement No. 2013-11, 28.8.2013; Bugetul proiectului: 93.267,86 \$ – Director de proiect.

#### **H. Creația artistică**

##### **H1 Participări la manifestații artistice internaționale**

##### **H2. Participări la manifestații artistice naționale**

##### **H3. Expoziții, filme, spectacole, concerte, discuri de autor, opere internaționale**

##### **H4. Expoziții, filme, spectacole, concerte, discuri de autor, opere naționale**

##### **H5. Produse cu drept de proprietate intelectuală în domeniul artistic**

### III. RECUNOAȘTEREA

I. Premii, distincții.

J. Citări

Citări totale: 20;

h-Index:3;

**Szilveszter, Szabolcs**, et al. "Mathematical models for domestic biological wastewater treatment process." *Environmental Engineering and Management Journal* 9.5 (2010): 629-636.

1. Szilveszter, Szabolcs, et al. "Activated sludge floc characterization by confocal laser scanning microscopy." *Environmental Engineering and Management Journal* 11.3 (2012): 669-674.
2. Ostace, George Simion, Vasile Mircea Cristea, and Paul Serban Agachi. "Extension of activated sludge model no 1 with two-step nitrification and denitrification processes for operation improvement." *Environmental Engineering and Management Journal* 10.10 (2011): 1529-1544.
3. Domokos, Endre, et al. "New technique for speeding up the wastewater treatment simulations." *Environmental Engineering and Management Journal* 11.2 (2012): 313-317.
4. Szabolcs, Szilveszter, et al. "Lab scale sequencing batch reactor construction and characterization for dynamic modelling with activated sludge model." *Studia Universitatis Babes-Bolyai, Chimia* (2010).
5. Bârsan, Narcis, et al. "Heat balance components of a small sequencing batch reactor applied for municipal wastewater treatment." *Environmental Engineering and Management Journal* 11.12 (2012): 2133-2140.
6. Katal, Reza, et al. "Removal of dye and chemical oxygen demand (COD) reduction from textile industrial wastewater using hybrid bioreactors." *Environmental Engineering and Management Journal* 13.1 (2014): 43-50.

**Szilveszter, Szabolcs**, et al. "Activated sludge floc characterization by confocal laser scanning microscopy." *Environmental Engineering and Management Journal* 11.3 (2012): 669-674.

1. Szilveszter, Szabolcs, et al. "In situ imaging of biopolymers and extracellular enzymes in activated sludge flocs of a municipal wastewater treatment plant." *Journal of Chemical Technology and Biotechnology* 88.7 (2013): 1295-1304.
2. Ahmad, Anwar, and Waleed M. Zahid. "Exploitation of an anaerobic up-flow column reactor (AUF-CR) using activated sludge biomass for the decolorization of dyes and COD reduction from textile wastewater." *Environmental Engineering and Management Journal* 12.12 (2013): 2479-2488.
3. Panaitescu, Casen, and Ion Onutu. "Monitoring the quality of the sludge resulted from domestic wastewater treatment plants and the identification of risk factors." *Environmental Engineering and Management Journal* 12.2 (2013): 351-358.
4. Han, Xiaomeng, et al. "Effect of ultrasonic power density on extracting loosely bound and tightly bound extracellular polymeric substances." *Desalination* 329 (2013): 35-40.
5. Mesquita, Daniela P., A. Luís Amaral, and Eugénio C. Ferreira. "Activated sludge characterization through microscopy: A review on quantitative image analysis and chemometric techniques." *Analytica chimica acta* 802 (2013): 14-28.

Csaba Zoltán Kibédi-Szabó, Marta Stroescu, Anicuta Stoica-Guzun, Sorin Ion Jinga, **Szabolcs Szilveszter**, Iuliana Jipa, Tanase Dobre, "Biodegradation Behavior of Composite Films with Poly (Vinyl Alcohol) Matrix." *Journal of Polymers and the Environment* 20.2 (2012): 422-430.

1. Trovatti, Eliane. "The Future of Bacterial Cellulose and Other Microbial Polysaccharides." *Journal of Renewable Materials* 1.1 (2013): 28-41.
2. Spiridon, Iuliana, et al. "Influence of Keratin on Polylactic Acid/Chitosan Composite Properties. Behavior upon Accelerated Weathering." *Industrial & Engineering Chemistry Research* 52.29 (2013): 9822-9833.
3. Ruka, Dianne R., George P. Simon, and Katherine Dean. "Harvesting fibrils from bacterial cellulose pellicles and subsequent formation of biodegradable poly-3-hydroxybutyrate nanocomposites." *Cellulose* 21.6 (2014): 4299-4308.
4. Ruka, Dianne R., George P. Simon, and Katherine M. Dean. "Bacterial Cellulose and Its Use in Renewable Composites." *Nanocellulose Polymer Nanocomposites: Fundamentals and Applications* (2014): 89-130.

**Szilveszter, Szabolcs**, et al. "In situ imaging of biopolymers and extracellular enzymes in activated sludge flocs of a municipal wastewater treatment plant." *Journal of Chemical Technology and Biotechnology* 88.7 (2013): 1295-1304.

1. Mesquita, Daniela P., A. Luís Amaral, and Eugénio C. Ferreira. "Activated sludge characterization through microscopy: A review on quantitative image analysis and chemometric techniques." *Analytica chimica acta* 802 (2013): 14-28.
2. Pathak, Mihirjyoti, et al. "Application of bioflocculating property of *Pseudomonas aeruginosa* strain IASST201 in treatment of oil-field formation water." *Journal of basic microbiology* (2014).

**Szilveszter, Szabolcs**, et al. "Enzyme activities and distribution in activated sludge in a lab-scale sequencing batch reactor(SBR)." *UPB Buletin Stiintific, Series B: Chemistry and Materials Science* 72.2 (2010): 141-150.

1. Szilveszter, Szabolcs, et al. "Activated sludge floc characterization by confocal laser scanning microscopy." *Environmental Engineering and Management Journal* 11.3 (2012): 669-674.
2. Szilveszter, Szabolcs, et al. "In situ imaging of biopolymers and extracellular enzymes in activated sludge flocs of a municipal wastewater treatment plant." *Journal of Chemical Technology and Biotechnology* 88.7 (2013): 1295-1304.

Beáta Ábrahám, Ildikó Miklóssy, Erika Kovács, Éva Tamás, Ildikó Mészáros, **Szabolcs Szilveszter**, Aurelia Brezeanu, Szabolcs Lányi. "Genetic Analysis of *Pinus sylvestris* L. and *Pinus sylvestris* forma *turfosa* L. Using RAPD Markers." *Notulae Scientia Biologicae* 2.1 (2010): 129-132.

1. Marciniuk, Paweł, et al. "Taxonomic individuality of *Leonurus cardiaca* and *Leonurus quinquelobatus* in view of morphological and molecular studies." *Plant Systematics and Evolution* 300.2 (2014): 255-261.

#### **K. Alte realizări semnificative.**

##### **Participari la conferințe internaționale:**

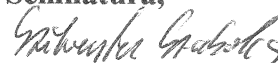
1. **Szabolcs Szilveszter**, Gabriel Mogos, Raul Beltran, Intrinsic error and economic analysis in domestic water meter park, The International Exhibition & Conference on Water Technology and Environmental Control (WATEC-Peru), Lima, Peru, 17-19 September, 2014;

2. István Máthé, Erika Kovács, Róbert Dezső Fikó, György Tankó, Zsuzsanna Nagymáté, Attila Szabó, **Szabolcs Szilveszter**, Tamás Felföldi, Enhancing the cultivability of bacteria with the combination of simple but unconventional methods, 15<sup>th</sup> International Symposium on Microbial Ecology (ISME), Seoul, South Korea, 24-29 August, 2014;
3. A. Szabó, I. Máthé, **Sz. Szilveszter**, Laura Jurecska, B. Vajna, K. Márialigeti, T. Felföldi, Next generation amplicon sequencing of the microbial community of a crater lake (Lake Saint Ana, Romania), 4<sup>th</sup> Central European Forum for Microbiology, Keszthely, Hungary, 16-18 October, 2013;
4. **Szilveszter Szabolcs**, Miklóssy Ildiko, Mészáros Alexandru, Ábrahám Beata, Ráduly Botond, Robescu Dan Niculae, Lányi Szabolcs, Enzyme activities and distribution in activated sludge in a lab-scale sequencing batch reactor (SBR), 16th Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, 9-12 sept. 2009;
5. **Szilveszter Szabolcs**, Ráduly Botond, Miklóssy Ildiko, Lányi Szabolcs, Dan Robescu Niculae, Enzymatic activity studies of biological wastewater treatment (Enzimek tanulmányozása biológiai szennyvíztisztításkor) 15<sup>th</sup> International Conference of Chemistry, Tg-Mureş, Romania, 12-15 november, 2009;
6. Ráduly Botond, Crogonale Silvia, **Szilveszter Szabolcs**, Mészáros Sandor, Modeling of the biochemical processes of the activated sludge wastewater treatment technology (Az eleveniszapos szennyvíztisztítás biokémiai folyamatainak modellezése) 15<sup>th</sup> International Conference of Chemistry, Tg-Mureş, 2009, noiembrie 12-15.
7. **Szilveszter Szabolcs**, Ráduly Botond, Miklóssy Ildiko, Lányi Szabolcs, Dan Robescu Niculae, Enzim aktivitás vizsgálat eleveniszap pelyhekben, Műszaki Kémiai Napok/Conference of Chemical Engineering 2010, Veszprém apr. 27-29 – Hungary
8. **Szilveszter Szabolcs**, Miklóssy Ildikó, Orbán Csongor, Bodor Zsolt, Lányi Szabolcs, Dan Robescu Nicolae: Az alfa-glükózidáz és alkáli foszfataz extrakciója és aktivitásvizsgálata eleveniszap pelyhekben. . Magyar Tudomány Napja Erdélyben, Őszi természettudományi konferencia, 2009 nov. 21, Kolozsvár
9. **Szilveszter Szabolcs**, Ráduly Botond, Miklóssy Ildiko, Abraham Beata, Lányi Szabolcs, Dan Robescu Niculae, Lab Scale Sequencing Batch Reactor Characterization For Dynamic Modelling with Activated Sludge Models (ASM) 16th International Conference of Chemistry, Cluj Napoca, 2010, nov. 11-14.
10. Bucs Szilard, **Szilveszter Szabolcs**, Lavric Vasile, Experimental study of free and partialy flock's entrapped enzymes in activates sludge wastewater treatment system, 16<sup>th</sup> International Conference of Chemistry, Cluj Napoca, 2010, nov. 11-14.
11. **Szabolcs Szilveszter**, Botond Ráduly, Szilard Bucs, Dan Robescu Niculae, Szabolcs Lanyi, Characterization of activated sludge flocs by CLSM microscopy with different staining methods, 1<sup>st</sup> Danube – Black Sea Regional Young Water Professionals Conference, Innovations in the field of water supply, sanitation and water quality, Palace of parliament Bucharest, 2011, june 14-15.
12. **Szabolcs Szilveszter**, Szilard Bucs, Botond Ráduly, Beata Abraham, Szabolcs Lanyi, Dan Robescu Niculae, Activated sludge floc characterization by Confocal Laser Scanning Microscopy, 6<sup>th</sup> International Conference on Environmental Engineering and Management – Green Future, Balatonalmadi, Hungary, 2011, september 1-4

13. Szilágyi, Laszlo, Ábrahám Beata, Miklóssy Ildiko, **Szilveszter Szabolcs**, Gálicza Judit, Lányi Szabolcs, "Modeling studies on the ancestral proteinase stemzyme IDP-B", 16th Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, 9-12 sept. 2009
14. Bodor Zsolt, Kovács Erika, Miklóssy Ildikó, Ábrahám Beáta, Bálint Emese-Éva, Orbán Kálmán Csongor, Tamás Éva, **Szilveszter Szabolcs**, Lányi Szabolcs: Termostabil enzimek extracelluláris heterológ expressziója keményítő tartalmú hulladékok kezelésére. Magyar Tudomány Napja Erdélyben, Őszi természettudományi konferencia, 2009 nov. 21, Kolozsvár
15. Bodor Zsolt, Kovács Erika, Miklóssy Ildiko, Ábrahám Beata, Bálint Emese, Orbán Csongor, Tamás Éva., **Szilveszter Szabolcs**, Lányi Sz., Heterologous expression of alpha-amylase in E. Coli (Alfa-amiláz heterológ expressziója E. Coli-ban) 15<sup>th</sup> International Conference of Chemistry, Tg-Mureș, 2009, noiembrie 12-15.
16. **Szilveszter Szabolcs**, Raduly Botond, Abraham Beata, Activated sludge floc characterization by Confocal Laser Microscopy, 18<sup>th</sup> International Conference on Chemistry, Baile Felix, Romania, 22-25 November, 2012.

**Data, 07.01.2015**

**Semnătura,**



**NOTĂ:**

1. *Lista se prezintă în ordine cronologică, între ani se lasă un rând liber la fiecare categorie.*
2. *Informațiile explicative nu vor figura în documentele depuse de candidat*