

LISTĂ DE LUCRĂRI
Şef de lucrări dr. ing. ec. Andrei-Ionuţ SIMION

LISTĂ LUCRĂRI RELEVANTE

1. **Simion, A.I.**, Grigoraş, C.G., Favier, L., Moroi, A.M., Kadmi, Y., Bahrim, G.E., (2017), Successful fodder yeast production from agro-industrial by products through a statistical optimization approach, *Romanian Biotechnological Letters* (ISSN 1224-5984, IF₂₀₁₆ 0,381), **22** (3), p. 12671-12679;
2. **Simion, A.I.**, Manea, L., Grigoraş, C.G., Favier, L., (2016), Improving the Nutritional Quality of Fodder Yeasts by Adding Minerals, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₆ 1,008), **15** (5), p. 1009-1017;
3. Kadmi, Y., Favier, L., **Simion, A.I.**, Matei, E., Wolbert, D., (2016), Improved Determination of Dichloroacetic and Trichloroacetic Acids in Water by Solid Phase Extraction Followed by Ultra-High Performance Liquid Chromatography Tandem Mass Spectrometry, *Analytical Letters*, (ISSN: 0003-2719, IF₂₀₁₅ 1,088), **49** (3), p. 433-443;
4. Favier, L., **Simion, A.I.**, Rusu, L., Păcală, M.L., Grigoraş, C.G., Bouzaza, A., (2015), Removal of an Organic Refractory Compound by Photocatalysis in Batch Reactor – Kinetic Studies, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₄ 1,258), **14** (6), p. 1327-1338;
5. **Simion, A.I.**, Dobrovici, P., Rusu, L., Favier-Teodorescu, L., (2012), Mathematical Modelling of the Process of Sugar Beet Pulp Valorisation by Acid Hydrolysis, *Revue Romaine de Chimie* (ISSN: 0035-3930, IF₂₀₁₂ 0,331), **57** (11), p. 913-918;
6. **Simion, A.I.**, Dobrovici, P., Rusu, L., Gavrilă, L., Ciobanu, D., (2012), New Possibilities for the Valorization of Sugar Industry By-Products, *Revue Roumaine de Chimie* (ISSN: 0035-3930, IF₂₀₁₂ 0,331), **57** (6), p. 577-586;
7. **Simion, A.I.**, Grigoraş, C.G., Rusu, L., Gavrilă, L., (2012), Modelling of the Thermophysical Properties of Liquids Involved in Food Processing, la *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₁ 1,004), **11** (11), p. 2035-2045;
8. **Simion, A.I.**, Grigoraş C.G., Bardaşu, L.E., Dabija, A., (2012), Modelling of the Thermophysical Lactic Acid Aqueous Solutions. Density and Viscosity, *Food and Environment Safety* (ISSN 2068-6609), **XI** (4), p. 49-58;
9. **Simion, A.I.**, Dobrovici, P., Rusu, L., Gavrilă, L., (2011), Modeling of the Thermo-Physical Properties of Grapes Juice III. Viscosity and Heat Capacity, *Scientific Study & Research - Chemistry & Chemical Engineering, Biotechnology, Food Industry* (ISSN 1582-540X), **XII** (4), p. 409-420;
10. **Simion, A.I.**, Grigoraş, C.G., Rusu, L., Dabija, A., (2011), Modeling of the Thermo-Physical Properties of Aqueous Sucrose Solutions II. Boiling Point, Specific Heat Capacity and Thermal Conductivity, *Food and Environment Safety* (ISSN 2068-6609), **X** (4), p. 49-56.

TEZĂ DOCTORAT

Titlu: *Cercetări privind metode şi tehnologii de valorificare a subproduselor din industria zahărului – Impact tehnic şi ecologic.*

Domeniul: Inginerie Chimică

BREVETE DE INVENȚIE

1. *Procedeu de biodegradare anaerob pentru amestecul format din subprodusele organice industriale și produsele tip biofort organic ecologic realizate*, Nedeff, V., Ciobanu, D., Macoveanu, M., Chiriac, A., Rusu, L., **Simion, A. I.**, RO129161-B1, **C05F 5/00**^(2006.01);
2. *Procedeu ecologic aerob de biodegradare a amestecului format din valorificarea subproduselor excedentare din industria lemnului și industria berii, cu produsele realizate; biofertilizatori organici ecologici*, Nedeff, V., Ciobanu, D., Macoveanu, M., Chiriac, A., Rusu, L., **Simion, A. I.**, RO129229-B1, **C05F 5/00**^(2006.01).

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1. **Simion, A.I.**, Grigoraș, C.G., Gavrilă, L., (2015), *Fenomene de transfer și operații unitare: îndrumar de laborator*, Editura Alma Mater, Bacău, ISBN 978-606-527-45897-7;
2. Grigoraș, C.G., **Simion, A.I.**, Gavrilă, L., (2015), *Depoluarea efluenților din industria alimentară și biotehnologii: îndrumar de laborator*, Editura Alma Mater, Bacău, ISBN 978-606-527-457-0;
3. **Simion, A.I.**, Grigoraș, C.G., (2014), *Tehnici de fabricare a produselor ecologice. Îndrumar de laborator*, Editura Alma Mater, Bacău, ISBN 978-606-527-339-9;
4. Azzouz, A., Zvolinschi A., **Simion, A.I.**, Grig I., (2001), *Utilaj și Tehnologie în Industria Laptelui. Îndrumar de laborator*, Casa Editorială Demiurg, Iași, ISBN 974-8076-13-7.

LUCRĂRI PUBLICATE ÎN REVISTE DE SPECIALITATE

1. LUCRĂRI PUBLICATE ÎN REVISTE INDEXATE ISI

1. **Simion, A.I.**, Grigoraș, C.G., Favier L., (2025), Batch Adsorption of Orange II Dye on a New Green Hydrogel – Study on Working Parameters and Process Enhancement, *Gels*, (ISSN: 2310-2861, IF₂₀₂₃ 5,0), **11** (1), 79;
2. Grigoraș, C.G., **Simion, A.I.**, (2024), Synthesis of a New Composite Material Derived from Cherry Stones and Sodium Alginate and its Application to the Adsorption of Methylene Blue from Aqueous Solution: Process Parameter Optimization, Kinetic Study, Equilibrium Isotherms, and Reusability, *Journal of Composites Science*, (ISSN: 2504-477X, IF₂₀₂₃ 3,0), **8**, 402;
3. Grigoraș, C.G., **Simion, A.I.**, Drob, C. (2024), Hydrogels based on Chitosan and Nanoparticles and their suitability for dyes adsorption from aqueous media. Assessment of the last decade progresses, *Gels*, (ISSN: 2310-2861, IF₂₀₂₂ 4,6), **10** (3), 211;
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6. Grigoraș, C.G., **Simion, A.I.**, Favier L., Drob, C., Gavrilă, L. (2022), Performance of Dye Removal from Single and Binary Component Systems by Adsorption on Composite

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 8. Rusu, L., Grigoraş, C.G., **Simion, A.I.**, Suceveanu E.M., Istrate, B., Harja M. (2022), Biosorption Potential of Microbial and Residual Biomass of *Saccharomyces pastorianus* Immobilized in Calcium Alginate Matrix for Pharmaceuticals Removal from Aqueous Solutions, *Polymers*, (ISSN: 2073-4360, IF₂₀₂₁ 4,967), **14** (1), 2855;
 9. Rusu, L., Grigoraş, C.G., **Simion, A.I.**, Suceveanu E.M., Dediu Botezatu, A.V., Harja M. (2022), Biosorptive Removal of Ethacridine Lactate from Aqueous Solutions by *Saccharomyces Pastorianus* Residual Biomass/Calcium Alginate Composite Beads: Fixed-bed Column Study, *Materials*, (ISSN: 1996-1944, IF₂₀₂₁ 3,748), **15** (13), 4657;
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 11. Rusu, L., Grigoraş, C.G., Suceveanu E.M., **Simion, A.I.**, Dediu Botezatu A.V., Istrate B., Doroftei I. (2021), Eco-friendly biosorbents based on microbial biomass and natural polymers: synthesis, characterization and application for the removal of drugs and dyes from aqueous solutions, *Materials*, (ISSN: 1996-1944, IF₂₀₂₁ 3,748), **14** (17), 4810;
 12. Rusu, L., Grigoraş, C.G., **Simion, A.I.**, Suceveanu E.M., Şuteu D., Harja M. (2021), Application of *Saccharomyces cerevisiae*/calcium alginate composite beads for cephalixin antibiotic biosorption from aqueous solutions, *Materials*, (ISSN: 1996-1944, IF₂₀₂₁ 3,748), **14** (16), 4728;
 13. Muntianu, G., **Simion, A.I.**, Grigoraş, C.G., Nistor, I.D., Jinescu, G., (2021), Aluminum Pillared Bentonite – Characterization and Synthesis Optimization by Response Surface Methodology, *Studia UBB Chemia*, (ISSN: 1224-7154, IF₂₀₂₁ 0,558), **66** (1), p. 73-88;
 14. Favier, L., Ungureanu, C.V., **Simion, A.I.**, Bahrim, G., Vial, C., (2021), Enhancing the biodegradation efficiency of a emergent refractory water pollutant by a bacterial isolate through a statistical process optimization approach, *Process Safety and Environmental Protection* (ISSN: 0957-5820, IF₂₀₂₁ 7,926), **148**, p. 1133-1145;
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 17. **Simion, A.I.**, Grigoraş, C.G., Favier, L., Muntianu, G., Gavrilă, L., (2019), Application of Response Surface Methodology to Optimize Some Fermentation and Formulation Conditions of Wheat Dough Fortified with Malt Culms Flour, *Annals of the University “Dunarea de Jos” of Galati Fascicle VI – Food Technology* (ISSN: 1843–5157, IF₂₀₁₉ 0,000), **43** (2), p. 84-99;

18. Vrînceanu, N., Hlihor, R.M., **Simion, A.I.**, Rusu, L., Fekete, I., Barka, N., Favier, L., (2019), New Evidence on the Enhanced Elimination of a Persistent Drug Used as Lipid Absorption Inhibitor by Advanced Oxidation with UV-A and Nanosized Catalysts, *Catalysts* (ISSN: 2073-4344, IF₂₀₁₈ 3,444), **9** (9), doi:10.3390/catal9090761;
19. Favier, L., Rusu, L., **Simion, A.I.**, Hlihor, R.M., Păcală, M.L., Augustyniak, A., (2019), Efficient Degradation of Clofibric Acid through a Heterogeneous Photocatalytic Oxidation Process, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₉ 1,186), **18** (8), p. 1683-1692;
20. **Simion, A.I.**, Grigoraș, C.G., Favier, L., Gavrilă, L., (2019), Mathematical Modelling and Prediction of Congo Red Adsorption on Cherry Stones Activated Carbon, *Studia UBB Chemia*, (ISSN: 1224-7154, IF₂₀₁₉ 0,275), **64** (2), p. 139-157;
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22. **Simion, A.I.**, Grigoraș, C.G., Favier, L., Moroi, A.M., Kadmi, Y., Bahrim, G.E., (2017), Successful Fodder Yeast Production from Agro-industrial by Products Through a Statistical Optimization Approach, *Romanian Biotechnological Letters* (ISSN 1224-5984, IF₂₀₁₆ 0,381), **22** (3), p. 12671-12679;
23. Kadmi, Y., Favier, L., **Simion, A.I.**, Păcală, M.L., Rusu, L., Wolbert, D., (2017), Measurement of Pollution Levels of N-Nitroso Compounds of Health Concern in Water Using Ultra-Performance Liquid Chromatography-Tandem Mass Spectrometry, *Process Safety and Environmental Protection* (ISSN 0957-5820, IF₂₀₁₆ 2,078), **108**, p. 7–17;
24. Favier, L., Harja, M., **Simion, A.I.**, Rusu, L., Kadmi, Y., Păcală, M.L., Bouzaza, A., (2016), Advanced Oxidation Process for the Removal of Chlorinated Phenols in Aqueous Suspensions, *Journal of Environmental Protection and Ecology* (ISSN: 1311-5065, IF₂₀₁₅ 0,734), **17** (3), p. 1132–1141;
25. **Simion, A.I.**, Manea, L., Grigoraș, C.G., Favier, L., (2016), Improving the Nutritional Quality of Fodder Yeasts by Adding Minerals, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₆ 1,008), **15** (5), p. 1009-1017;
26. Favier, L., **Simion, A.I.**, Matei, E., Grigoraș, C.G., Kadmi, Y., Bouzaza, A., (2016), Photocatalytic Oxidation of a Hazardous Phenolic Compound Over TiO₂ in a Batch System, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₆ 1,008), **15** (5), p. 1059-1067;
27. Moroi, A.M., Vartolomei, N., **Simion, A.I.**, Grigoraș, C.G., Cărbune, R.E., Alexe P., (2016), Improvement of Flour and Dough Rheological Properties by Maturation Process, *Romanian Biotechnological Letters* (ISSN 1224-5984, IF₂₀₁₆ 0,381), **21** (2), p. 11381-11392;
28. Kadmi, Y., Favier, L., **Simion, A.I.**, Matei, E., Wolbert, D., (2016), Improved Determination of Dichloroacetic and Trichloroacetic Acids in Water by Solid Phase Extraction Followed by Ultra-High Performance Liquid Chromatography Tandem Mass Spectrometry, *Analytical Letters*, (ISSN: 0003-2719, IF₂₀₁₅ 1,088), **49** (3), p. 433-443;
29. **Simion, A.I.**, Grigoraș, C.G., Moroi, A.M., Vartolomei, N., (2015), Mathematical Modelling of Pasta Dough Dynamic Viscosity, Thermal Conductivity and Diffusivity, *The Annals of the University "Dunărea de Jos" of Galati Fascicle VI – Food Technology* (ISSN 1843–5157, IF₂₀₁₆ 0,000), **39** (1), p. 81-92;
30. Favier, L., **Simion, A.I.**, Rusu, L., Păcală, M.L., Grigoraș, C.G., Bouzaza, A., (2015), Removal of an Organic Refractory Compound by Photocatalysis in Batch Reactor – Kinetic

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31. Kadmi, Y., Favier, L., Harja, M., **Simion, A.I.**, Rusu, L., Wolbert, D., (2015), A New Strategy for Pentachlorophenol Monitoring in Water Samples Using Ultra-High Performance Liquid Chromatography-Tandem Mass Spectrometry, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₄ 1,258), **14** (3), p. 567-574;
 32. Kadmi, Y., Favier, L., **Simion, A.I.**, Wolbert, D., (2015), A Rapid and Sensitive Method for the Monitoring of N-Nitrosodiphenylamine and N-Nitrosodimethylamine in Multiple Water Matrices, *Carpathian Journal of Earth and Environmental Sciences* (ISSN: 1842-4090, IF₂₀₁₃ 0,727), **10** (1), p. 53-61;
 33. **Simion, A.I.**, Ioniță, I., Grigoraș, C.G., Favier-Teodorescu, L., Gavrilă, L., (2015), Development and Optimization of Water Based Paint Formula in Order to Reduce VOCs Emissions, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₄ 1,258), **14** (2), p. 277-288;
 34. Manea L., **Simion, A.I.**, Grigoraș, C.G., Favier-Teodorescu, L., (2014), New Viable Industrial Wastes Mix for Fodder Yeasts Production, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₄ 1,258), **13** (7), p. 1611-1621;
 35. Rusu, L., Harja, M., **Simion, A.I.**, Șuteu, D., Ciobanu, G., Favier-Teodorescu, L., (2014), Removal of Astrazone Blue from Aqueous Solutions onto Brawn Peat. Equilibrium and Kinetics Studies, *Korean Journal of Chemical Engineering*, (ISSN: 0256-1115, IF₂₀₁₃ 1,241), **31** (6), p. 1008-1015;
 36. Dobrovici, P., **Simion, A.I.**, Grigoraș, C.G., Ciobanu, D., (2014), Fodder Yeast Development Optimisation Using as Main Carbon Source Barley Husks Hydrolysed, *Romanian Biotechnological Letters* (ISSN 1224-5984, IF₂₀₁₃ 0,351), **19** (1), p. 9085-9095;
 37. Dobrovici, P., **Simion, A.I.**, Grigoraș, C.G., Favier-Teodorescu, L., (2013), Optimization of Barley Husks Acid Hydrolysis Process Using the Response Surface Methodology, *Revue Roumaine de Chimie* (ISSN: 0035-3930, IF₂₀₁₃ 0,393), **58** (6), p. 517-525;
 38. **Simion, A.I.**, Dobrovici, P., Rusu, L., Favier-Teodorescu, L., (2012), Mathematical Modelling of the Process of Sugar Beet Pulp Valorisation by Acid Hydrolysis, *Revue Roumaine de Chimie* (ISSN: 0035-3930, IF₂₀₁₂ 0,331), **57** (11), p. 913-918;
 39. **Simion, A.I.**, Dobrovici, P., Rusu, L., Gavrilă, L., Ciobanu, D., (2012), New Possibilities for the Valorization of Sugar Industry By-Products, *Revue Roumaine de Chimie* (ISSN: 0035-3930, IF₂₀₁₂ 0,331), **57** (6), p. 577-586;
 40. **Simion, A.I.**, Grigoraș, C.G., Rusu, L., Gavrilă, L., (2012), Modelling of the Thermophysical Properties of Liquids Involved in Food Processing, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₂ 1,117), **11** (11), p. 2035-2045;
 41. Harja, M., Ciocîntă, R.C., Barbuta, M., Rusu, L., **Simion, A.I.**, Bistriceanu, I.B., (2010), CaCO₃ Controllable Synthesis by Double Exchange Method Using CaCl₂ Residual Solutions, *Environmental Engineering and Management Journal* (ISSN: 1582-9596, IF₂₀₁₀ 1,418), **9**, (11), p. 1571-1577.

2. LUCRĂRI PUBLICATE ÎN PROCEEDINGS INDEXATE ISI

1. Grigoraș, C.G., **Simion, A.I.**, Favier, L., Gavrilă, L., (2021), Effective Removal of Biebrich Scarlet Dye from Aqueous Solutions by Adsorption on Cherry Stones Powder Coated with Chitosan, *The 9th IEEE International Conference on E-Health and Bioengineering - EHB*

- 2021, 18-19 November 2021, Iasi, Romania, (ISSN 2575-5137), doi:10.1109/EHB52898.2021.9657610;
2. **Simion, A.I.**, Grigoraş, C.G., Favier, L., Gavrilă, L., (2019), Investigation of Kinetics Models and Equilibrium Isotherms for Congo Red Dye Adsorption on Activated Carbon Prepared from Fruits Industry Wastes, *The 7th IEEE International Conference on E-Health and Bioengineering - EHB 2019*, 21-23 November 2019, Iasi, Romania, (ISBN 978-153860358-1), doi: 10.1109/EHB47216.2019.8969962;
 3. Favier, L., Laslău, A., Simion, A.I., Sescu, A.M., Harja, M., Rusu, L., (2019), New evidence of accelerated elimination of an emergent water pollutant by TiO₂ assisted photo-oxidation, *16th International Conference on Environmental Science and Technology*, 4-7 September 2019, Rhodes, Greece;
 4. Hemidouche, S., Assoumani, A., Favier, L., **Simion, A.I.**, Grigoraş, C.G., Wolbert, D., Gavrilă, L., (2017), Removal of some Endocrine Disruptors via Adsorption on Activated Carbon, *The 6th IEEE International Conference on E-Health and Bioengineering - EHB 2017*, 22-24 June 2017, Sinaia, Romania, (ISBN 978-153860358-1), p. 410-413;
 5. **Simion, A.I.**, Grigoraş, C.G., Gavrilă, L., (2015), Modeling Thermodynamic Properties of Glycerol Involved in Cosmetic and Pharmaceutical Industries Boiling Point, Heat Capacity and Thermal Conductivity, *The 5th IEEE International Conference on E-Health and Bioengineering - EHB 2015*, 19-21 November 2015, Iaşi, Romania, (ISBN 978-1-4673-7545-0), p. 12-13;
 6. Gavrilă, L., Fînar, A.L., **Simion, A.I.**, Apetrii, I., (2003), Modelling of the Thermophysical Properties of Apple Juice. I Density and Viscosity, *Proceedings of the 14th DAAAM International Symposium „Intelligent Manufacture & Automation: Focus on Reconstruction and Development*, 22 - 25 October 2003, Sarajevo, Bosnia-Herzegovina (ISSN 1726-9679, ISBN 3-901509-34-8), p. 115-116;
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 8. Apetrei, I., Ciocan, M.E., **Simion, A.I.**, Gavrilă, L., (2002), Modelling of the Thermophysical Properties of Milk. II. Thermal Capacity and Thermal Conductivity, *Proceedings of the 13th DAAAM International Symposium “Intelligent Manufacturing & Automation: Learning from Nature”*, 23-26 October 2002, Vienna, Austria (ISBN 3-901509-29-1), p. 179-180.

3. LUCRĂRI PUBLICATE ÎN REVISTE INDEXATE BDI

1. Grigoraş, C.G., **Simion, A.I.**, Gavrilă, L., (2022), Synthetic Dyes Adsorption from Aqueous Solutions. Overview on Process Improvement by Ultrasound Assistance, *Bulletin of Romanian Chemical Engineering Society* (ISSN 2360-4697), **9** (1), p. 76-93;
2. Gavrilă, L., **Simion, A.I.**, Grigoraş, C.G., Favier, L., (2020), An Eco-Friendly Solution for the Efficient Elimination of Pentoxifylline from Water: An Operational Performance Investigation, *Revista de Chimie* (ISSN: 0034-7752), **71** (7), p. 59-69;
3. **Simion, A.I.**, Grigoraş, C.G., Gavrilă, L., (2015), Mathematical Modeling of Glycerol Aqueous Solutions Thermophysical Properties. Case Study of Density and Viscosity, *Journal of Agroalimentary Processes and Technologies* (ISSN 2069-0053), **21** (2), p. 125-135;

4. **Simion, A.I.**, Grigoraş, C.G., Roşu, A.M., Gavrilă, L., (2015), Mathematical Modelling of Density and Viscosity of NaCl Aqueous Solutions, *Journal of Agroalimentary Processes and Technologies* (ISSN 2069-0053), **21** (1), p. 41-52;
5. **Simion, A.I.**, Grigoraş, C.G., Gavrilă, L., (2014), Mathematical Modelling of Ten Vegetable Oils Thermophysical Properties. Study of Density and Viscosity, *Annals. Food Science and Technology* (ISSN 2065-2828), **15** (2), p. 371-386;
6. **Simion, A.I.**, Grigoraş, C.G., (2014), New Possibilities of Fodder Yeast Production, *Scientific Studies and Research. Series Biology* (ISSN 1224-919X), **23** (1) Vegetal Biology, p. 69-76;
7. **Simion, A.I.**, Grigoraş, C.G., Gavrilă, L., (2014), Modelling of the Thermophysical Properties of Citric Acid Aqueous Solutions. Density and Viscosity, *Annals. Food Science and Technology* (ISSN 2065-2828), **15** (1), p. 193-202;
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