

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: **Inginerie Chimică și Biotehnologii**

Departamentul: **Inginerie Chimică și Biochimică**

Nume Prenume: **Banu Ionuț**

Gradul didactic: **Conferențiar**

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

1. Modelarea și optimizarea reactoarelor de polimerizare de tip tubular, Universitatea Politehnica din Bucuresti, Romania/ Universitatea Claude Bernard, Lyon 1, Franta, 2009

B. Cărți și capitole în cărți publicate în ultimii 10 ani

- 1.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

2. **I. Banu**, G. Guta, C.S. Bildea, G. Bozga, *Design and performance evaluation of a plant for glycerol conversion to acrolein*, Environmental Engineering and Management Journal 14(3) (2015) 509-517, WOS: 000352652700002, IF = 1.182.
3. **I. Banu**, C.M. Manta, G. Bercaru, G. Bozga, *Combustion kinetics of cyclooctane and its binary mixture with o-xylene over a Pt/ γ -alumina catalyst*, Chemical Engineering Research and Design 102 (2015) 399-406, WOS: 000362615700036, IF = 3.073.
4. **I. Banu**, I. Popescu, I.-C. Marcu, G. Bozga, *A Kinetic Study of Methyl-Isobutyl Ketone Catalytic Combustion on LDH-Derived Cobalt Containing Mixed Oxides*, Chemical Engineering Transactions 43 (2015) 997-1002, WOS:000365994200167.
5. I. Stoica, **I. Banu**, I. Bobarnac, G. Bozga, *Optimization of a methanol synthesis reactor*, U.P.B. Sci. Bull., Series B 77(4) (2015) 133-146, WOS: 000417047800012.
6. I. Stoica, **I. Banu**, G. Bozga, *Modelling and Simulation of a Catalytic Fixed Beds Network Operated in Forced Unsteady State Conditions*, Revista de Chimie 66(5) (2015) 691-697, WOS: 000355126000019, IF = 1.605.
7. J. Whelan, **I. Banu**, G.E. Luckachan, N.D. Banu, S. Stephen, A. Tharalekshmy, S.A. Hashimi, R.V. Vladea, M.S. Katsiotis, S.M. Alhassan, *Influence of decomposition time and H₂ pressure on properties of unsupported ammonium tetrathiomolybdate-derived MoS₂ catalysts*, Journal of Analytical Science and Technology 6(1) (2015) 1-8, indexat Scopus.
8. A.-E. Anastasiu, N.-A. Chira, **I. Banu**, N. Ionescu, R. Stan, S.-I. Rosca, *Oil productivity of seven Romanian linseed varieties as affected by weather conditions*, Industrial Crops and Products 86 (2016) 219-230, WOS: 000376799900026, IF = 4.191.
9. **I. Banu**, G. Bercaru, G. Bozga, T. Danciu, *Kinetic Study of Methyl Isobutyl Ketone Combustion over a Commercial Pt/Alumina Catalyst*, Chemical Engineering & Technology 39(4) (2016) 758-766, WOS: 000372958300020, IF = 2.418

10. N.D. Banu, **I. Banu**, M.S. Katsiotis, A. Tharalekshmy, S.T. Stephen, J. Whelan, G.E. Luckachan, R. Vladea, S.M. Alhassan, *Identification of selective oxidation of TiC/SiC composite with X-ray diffraction and Raman spectroscopy*, Chemical Papers, 2016, 1503, WOS: 000384594200009, IF = 1.246.
11. C.-M. Manta, **I. Banu**, G. Bercaru, G. Bozga, *An experimental study of m-Xylene combustion over a commercial Pt/alumina catalyst*, U.P.B. Sci. Bull., Series B 78(1) (2016) 111-120, WOS: 000417051900011.
12. **I. Banu**, I. Stoica, G. Bumbac, G. Bozga, *Modeling of the Unsteady State Methanol Synthesis at the Level of Catalyst Pellet*, Revista de Chimie 68(6) (2017) 1153-1158, WOS: 000408702900002, IF = 1.605.
13. **I. Banu**, E.F. Tuta, G. Bozga, *Modeling and Simulation of a Three Phase Fixed Bed Catalytic Reactor for the Hydrogenation of 2-ethyl-hexenal*, Revista de Chimie (Bucharest) 68(10) (2017) 2276-2283, WOS: 000416750000015, IF = 1.605.
14. A.-V. Brosteanu, **I. Banu**, G. Bozga, *Recent progresses in ethanol conversion to 1,3-butadiene*, Bulletin of Romanian Chemical Engineering Society 3(2) (2017).
15. R. Doukeh, M. Bombos, A. Trifoi, M. Pasare, **I. Banu**, I. Bolocan, *Dimethyldisulphide Hydrodesulphurization on NiCoMo/Al₂O₃ Catalyst*, Revista de Chimie (Bucharest) 68(7) (2017) 1496-1500, WOS: 000409234600018, IF = 1.605.
16. **I. Banu**, R. Ganea, G. Vasilievici, A. Anghel, V. Gogulancea, G. Isopencu, G. Bozga, *An Evaluation of Published Kinetic Models for Vapor Phase Methanol Conversion to Dimethyl Ether over the H-ZSM-5 Catalyst*, Energy & Fuels 32(8) (2018) 8689-8699, WOS: 000442448300070, IF = 3.021.
17. **I. Banu**, C.M. Manta, I. Stoica, G. Bercaru, G. Bozga, *Kinetics of methyl methacrylate combustion over a Pt/Alumina catalyst*, Journal of the Serbian Chemical Society 83(6) (2018) 759-772, WOS: 000437822100008, IF = 0.828.
18. A.A. Enache, L. David, J.-P. Puaux, **I. Banu**, G. Bozga, *Kinetics of chitosan coagulation from aqueous solutions*, Journal of Applied Polymer Science 135(16) (2018) 46062, WOS: 000425826800003, IF = 2.188.
19. A.A. Enache, L. David, J.-P. Puaux, **I. Banu**, G. Bozga, *An experimental study of chitosan wet spinning process*, U.P.B. Sci. Bull., Series B 80(2) (2018) 13-26, WOS: 000434271500002.
20. R. Doukeh, A. Trifoi, M. Bombos, **I. Banu**, M. Pasare, I. Bolocan, *Hydrodesulphurization of Thiophene over Co, Mo and CoMo / γ -Al₂O₃ Catalysts*, Revista de Chimie (Bucharest) 69(2) (2018) 396-399, WOS: 000427327700023, IF = 1.605.
21. J. Whelan, M.S. Katsiotis, S. Stephen, G.E. Luckachan, A. Tharalekshmy, N.-D. Banu, J.-C. Idrobo, S.T. Pantelides, R.V. Vladea, **I. Banu**, S.M. Alhassan, *Cobalt-molybdenum single-layered nanocatalysts decorated on carbon nanotubes and the influence of preparation conditions on their hydrodesulfurization catalytic activity*, Energy & Fuels 32 (2018) 7820-7826, WOS: 000439661300054, IF = 3.021.
22. **I. Banu**, G. Bozga, G. Bumbac, A. Vintila, S. Velea, A.-M. Galan, M. Bombos, O. Blajan, A.C. Crucean, *A Kinetic Study of Glycerol Esterification with Acetic Acid Over a Commercial Amberlyst-35 Ion Exchange Resin*, Revista de Chimie (Bucharest) 70(7) (2019), WOS: 000485843500005, IF = 1.605.
23. A.M. Dumitrescu, **I. Banu**, G. Bumbac, *Process modeling and simulation for butanol removing from fermentation broth by extraction with biodiesel*, Renewable Energy 131 (2019) 137-143, WOS: 000449892600013, IF = 5.439.

24. **Banu, I.**, G. Bumbac, D. Bombos, S. Velea, A.-M. Gălan and G. Bozga, *Glycerol acetylation with acetic acid over Purolite CT-275. Product yields and process kinetics*. *Renewable Energy* 148 (2020) 548-557, WOS: 000510524900046, IF = 5.439.
25. R. Doukeh, D. Popovici, A. Trifoi, M. Bombos, **I. Banu**, *A study on the alkylation of m-cresol with 1-decene over mesoporous silica supported tungstophosphoric acid (HPW)*, *Reaction Kinetics, Mechanisms and Catalysis*, 131, (2020), 793-804, WOS:000583446600001, IF = 1.52.
26. **Banu, I.**, A.-V. Brosteanu, G. Bumbac, G. Bozga, *Ethanol Conversion to Butadiene: A Thermodynamic Analysis*, *Industrial & Engineering Chemistry Research*, 60, 35, (2021), 13071-13083, WOS:000695954600025.
27. Calin, C., C. Leostean, A. R. Trifoi, E.-E. Oprescu, E. Wiita, **I. Banu**, R. Doukeh, *Mutual inhibition effect of sulfur compounds in the hydrodesulfurization of thiophene, 2-ethylthiophene and benzothiophene ternary mixture*, *Scientific Reports*, 11, 1, (2021), 19053, WOS:000698985300019.
28. Doukeh, R., C. Leostean, I. Bolocan, A. R. Trifoi, **I. Banu**, *Rhenium Effect on the Performance of CoMoNi/γ-Al₂O₃ Catalyst in Thiophene Hydrodesulphurization. Performance Evaluation and Process Kinetics*, *ChemistrySelect*, 6, 16, (2021), 3858-3868, WOS:000656842600006.
29. Paulenco, A., A. C. N. Vintila, A. M. Galan, A. Vlaicu, **I. Banu**, *Effects of stress factors in the growth medium on bio-compounds production by porphyridium purpureum*, *International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM*, 2021.
30. Brosteanu, A.-V., G. Bozga, **I. Banu**, *A kinetic model for the direct conversion of ethanol to 1,3-butadiene*, *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science*, 84, 4, (2022), 112-122, WOS:000897670000009.
31. Bumbac, G., **I. Banu**, *Modeling and simulation process for solketal synthesis from glycerol and acetone by catalytic distillation in a modified structure of a divided wall column*, *Renewable Energy*, 183, 1, (2022), 662-675, WOS: 000722580200013.
32. Oprescu, E.-E., E. C. Enascuta, G. Vasilievici, N. D. Banu, **I. Banu**, *Preparation of magnetic biochar for nitrate removal from aqueous solutions*, *Reaction Kinetics, Mechanisms and Catalysis*, 135, 5, (2022), 2629-2642, WOS:000826145400002.
33. Vintila, A. C. N., A. Vlaicu, E. Radu, M. Ciltea-Udrescu, E. C. Enascuta, **I. Banu**, E.-E. Oprescu, *Evaluation of ultrasound assisted extraction of bioactive compounds from microalgae*, *Journal of Food Measurement and Characterization*, 16, 4, (2022), 2518-2526, WOS:000770744200001.
34. Doukeh, R., M. Râpă, E. Matei, D. Prodan, R. György, A. Trifoi, **I. Banu**, *An Evaluation of Glycerol Acetalization with Benzaldehyde over a Ferromagnetic Heteropolyacid Catalyst*, *Catalysts*, 13, 4, (2023), 782, WOS:000979276100001.
35. Slabu, A. I., **I. Banu**, O. D. Pavel, F. Teodorescu, R. Stan, *Sustainable Ring-Opening Reactions of Epoxidized Linseed Oil in Heterogeneous Catalysis*, *Sustainability*, 15, 5, (2023), 4197, WOS:000947571700001.
36. Trifoi, A. R., E. Matei, M. Râpă, A.-C. Berbecaru, C. Panaitescu, **I. Banu**, R. Doukeh, *Coprecipitation nanoarchitectonics for the synthesis of magnetite: a review of mechanism and characterization*, *Reaction Kinetics, Mechanisms and Catalysis*, 136, 6, (2023), 2835-2874, WOS:001080570000001.
37. Bozga, G., A. V. Brosteanu, **I. Banu**, A. C. Dimian, *One-stage ethanol to butadiene process: analysis and design of a multi-tubular fixed bed reactor*, *Chemical Engineering Research and Design*, 203, (2024), 608-618.
38. Brosteanu, A. V., **I. Banu**, G. Bozga, *An Analysis of Fixed-Bed Catalytic Reactors Performances for One-Stage Butadiene Synthesis from Ethanol*, *Catalysts*, 14, 1, (2024), 83, WOS:001149063800001.

39. C. Călin, E.-E. Sîrbu, M. Tănase, R. György, D.R. Popovici, **I. Banu**, *A Thermogravimetric Analysis of Biomass Conversion to Biochar: Experimental and Kinetic Modeling*, Applied Sciences 14(21) (2024) 9856.
40. A.-M. Galan, C. Neamtu, G. Psenovschi, **I. Banu**, A. Paulenco, S. Velea, A. Vlaicu, *Insights into liquid digestate treatment through batch electrocoagulation-flocculation system*, Environ. Eng. Manag. J. 23(8) (2024) 1597-1606.
41. A. Manolache, A.-M. Brezoiu, **I. Banu**, *Glycerol conversion to lactic acid: process analysis* Bulletin of Romanian Chemical Engineering Society, 11(1) (2024) 37-58.
42. A. Mares, R. György, A. Gavrilă, **I. Banu**, *Modeling and optimization of a propylene glycol production plant*, Bulletin of Romanian Chemical Engineering Society, 11(1) (2024) 60-77.
43. I.-M. Mircea, G. Bumbac, R. György, **I. Banu**, *1,4-Butanediol synthesis from maleic anhydride – process analysis*, Bulletin of Romanian Chemical Engineering Society, 11(2) (2024) 1-22.

D. Lucrări publicate în ultimii 10 ani în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

- Selecție cu maximum 20 lucrări în volume de conferințe

44. Stoica I., **Banu I.**, Bozga G., *A Comparison between Unsteady State Reverse Flow Reactor and Steady State Series of Fixed Bed Reactors for Methanol Synthesis*, 19th Romanian International Conference on Chemistry and Chemical Engineering, 2-5 Septembrie 2015, Sibiu, Romania.
45. Popescu I., **Banu I.**, Marcu I.-C., Bozga G., *A study of Co content influence on the activity of LDH-derived CoMgAlO catalysts in methyl-isobutyl ketone combustion in lean air mixtures*, 19th Romanian International Conference on Chemistry and Chemical Engineering, 2-5 Septembrie 2015, Sibiu, Romania.
46. **Banu I.**, Stoica I., Bozga G., *A study of the methanol synthesis process at the level of catalyst pellet*, Symposium of the Young Chemical Engineers, SICHEM 2016, 8-9 September 2016, Bucuresti, Romania.
47. **Banu I.**, Costea A.E., Bumbac G., Bozga G., Gălan A.M., Velea S., Stepan E., Radu E., Blajan O., Crucean A.C., *A kinetic study of glycerol acetylation process*, 20th Romanian International Conference on Chemistry and Chemical Engineering, RICCCE,6 – 9 September 2017, Poiana Brasov, Romania
48. **Banu I.**, Costea A.E., Bumbac G., Bozga G., Gălan A.M., Velea S., Stepan E., Radu E., Blajan O., Crucean A.C., *A thermodynamic study of the glycerol acetylation process*, World Chemistry Conference and Exhibition, 4-6 September 2017, Rome, Italy.
49. Anghel A., **Banu I.**, Gogulancea V., Isopencu G., Bozga G., *Optimization of bifunctional catalyst distribution in a direct DME synthesis reactor*, SSCHE17 — 44th International Conference of Slovak Society of Chemical Engineering, Hotel SOREA SNP, Jasná resort, Demänovská dolina, Low Tatras, Slovakia, 22-26 Mai 2017.
50. **Banu I.**, Bumbac G., Bozga G., Vintila A., Gălan A.M., Radu E., Velea S., Stepan E., Blajan O., Crucean A.C., *Glycerol acetylation over Purolite CT275 ion exchange resin: a kinetic study*, International Scientific Events - 20th International Conference on Materials, Methods & Technologies, 26-30 Iunie 2018, Elenite Village, Bulgaria.

51. Bumbac G., **Banu I.**, Bozga G., Gălan A.M., Velea S., *Modeling and simulation of a glycerol acetylation process*, International Symposium of Chemical Engineering and Materials, SICHEM 2018 - 6 – 7 September 2018, Bucharest, Romania.
52. **Banu I.**, Bozga G., *Valorization of methane by conversion to dimethyl ether*, The Romanian-Egyptian Bilateral Forum “Intelligent Valorisation of Methane” (FIVM), 22 Octombrie 2019, Bucuresti, Romania.
53. I. Cuibaru, R. Gyorgy, **I. Banu**, *Modeling and simulation of a glycerol hydrogenolysis process*, International Chemical Engineering and Materials Symposium, SICHEM 2022, 17-18 Noiembrie 2022, Bucuresti, Romania
54. A. Maisler, R. György, **I. Banu**, *Modeling and simulation of a continuous glycerol acetylation process*, 6th International Conference on Chemical Engineering, Romania, Iași, October 05 – 07, 2022
55. A. Manolache, **I. Banu**, Ana-Maria Brezoiu, *Glycerol conversion to lactic acid: process analysis*, International Chemical Engineering and Materials Symposium, SICHEM 2024, 11-12 Aprilie 2024, Bucuresti, Romania
56. A. Mareș, R. György, A. Gavrilă, **I. Banu**, *Modeling and optimization of a propylene glycol production plant*, International Chemical Engineering and Materials Symposium, SICHEM 2024, 11-12 Aprilie 2024, Bucuresti, Romania
57. I.M. Mircea, G. Bumbac, R. György, **I. Banu**, *1,4-Butanediol synthesis from maleic anhydride – process analysis*, International Chemical Engineering and Materials Symposium, SICHEM 2024, 11-12 Aprilie 2024, Bucuresti, Romania
58. **I. Banu**, R. György, G. Bumbac, *Modeling and simulation of glycerol esterification with acetic acid in a catalytic divided wall distillation column*, 23rd Romanian International Conference on Chemistry and Chemical Engineering Constanța - Mamaia, ROMANIA – September 4-7, 2024

E. Brevete obținute în întreaga activitate