Laboratorul 3: Laboratorul de Cinetica Chimica
Chemical Kinetics Department

2025

Lucrari publicate in reviste clasificate ISI/Papers in ISI ranked journals

A. Autorul de corespondenta este din Laboratorul 3

1. Ozon, E.A.†; Burloiu, A.M.†; **Musuc, A.M.*;** Manda, G.*; Anuta, V.; Dinu-Pîrvu, C.E.; Lupuliasa, D.; Neagoe, I.V.; Anastasescu, M.; Socoteanu, R.P.; Atkinson, I.; Mitran, R.A.; Culita, D.C.; Boscencu, R. Cellulose-Derived Gels for Topical Delivery: HPMC as a Functional Matrix for Porphyrinic Photosensitizers. *Gels* **2025**, 11, 824. https://doi.org/10.3390/gels11100824. (IF_{2024} = 5.3, Q1)

2. Pârvănescu, R.; Trandafirescu, C.; **Musuc, A.M.*;** Ozon, E.A.; Culita, D.C.; Mitran, R.-A.; Stănciulescu, C. I.; Soica, C. Comparative Physicochemical and Pharmacotechnical Evaluation of Three Topical Gel-Cream Formulations. *Gels* **2025**, 11, 532. https://doi.org/10.3390/gels11070532. (IF_{2024} = 5.3, Q1)

3. Ungureanu, A.R.; **Musuc, A.M.*;** Ozon, E.A.; Anastasescu, M.; Atkinson, I.; Mitran, R.-A.; Rusu, A.; Luță, E.-A.; Chițescu, C.L.; Gîrd, C.E. Physicochemical Investigations on Samples Composed of a Mixture of Plant 1 Extracts and Biopolymers in the Broad Context of Further Pharmaceutical Development. *Polymers* **2025**, 17, 1499. https://doi.org/10.3390/polym17111499. (IF_{2024} = 4.9, Q1)

4. Ozon, E. A.; Anastasescu, M.; **Musuc, A. M.*;** Burloiu, A. M.; Socoteanu, R. P.; Atkinson, I.; Mitran, R.-A.; Culita, D. C.; Lupuliasa, D.; Mihai, D. P.; Gird, C. E.; Boscencu, R. Formulation and Characterization of Carbopol-Based Porphyrin Gels for Targeted Dermato-Oncological Therapy: Physicochemical and Pharmacotechnical Insights. *Int. J. Mol. Sci*. **2025**, 26, 3641. https://doi.org/10.3390/ijms26083641. (IF_{2024} = 4.9, Q1)

5. Solomon, C.; Anuța, V.; Sarbu, I.; Ozon, E. A.; **Musuc, A. M.*; Bratan, V**.; Rusu, A.; Surdu, V.-A.; Croitoru, C.; Chandak, A.; Gavriloaia, R. M.; Balaci, T. D.; Niță, D. T.; Mitu, M. A. Enhancing the Drug Release and Physicochemical Properties of Rivaroxaban via Cyclodextrin Complexation: A Comprehensive Analytical Approach. *Pharmaceuticals*, **2025**, 18(6), 761. https://doi.org/10.3390/ph18060761. (IF_{2024} = 4.8, Q1)

6. **Vasile, A.*;** Dobrescu, G.; Papa, F.* Effect of the Modification of Catalysts on the Catalytic Performance: Overview of the Second Edition. *Catalysts* **2025**, 15(12), 1101. https://doi.org/10.3390/catal15121101 (Editorial, IF_{2024} = 4.0, Q2).

7. **Negoescu**, **D.;** Atkinson, I.; Gherendi, M.; Culita, D. C.; Baran, A.; Petrescu, S.; **Bratan*, V.;** Parvulescu V.* Active Ag-, Fe-, and AC-Modified TiO2 Mesoporous Photocatalysts for Anionic and Cationic Dye Degradation, *Catalysts*, **2025**, 15(5), 479 https://doi.org/10.3390/catal15050479 (IF_{2024} = 4.0, Q2).

8. **Movileanu, C.**; **Giurcan, V.**; **Mitu, M.***; Razus D. Computational study of NO formation in hydrogen enriched propane-air flames under different initial pressures, temperatures and hydrogen concentrations, *Ind. Eng. Chem. Res.* **2025**, 64, 30, 14850–14858, https://doi.org/10.1021/acs.iecr.5c01812 (IF_{2024} = 3.9, Q2)

B. Colaborare interna, autorul de corespondenta nu este din Laboratorul 3

1. Pavel, M.; Cretu, L.; Negrila, C.; Culita, D.C.; **Vasile, A.;** State, R.; Balint, I.*; Papa, F.* Mono-(Ni, Au) and Bimetallic (Ni-Au) Nanoparticles- Loaded ZnAlO Mixed Oxides as Sunlight-Driven Photocatalysts for Environmental Remediation. *Molecules* **2025**, 30(15), 3249. https://doi.org/10.3390/molecules30153249. (IF_{2024} = 4.6, Q2).

2. State, R.-N.; Morosan, M.-A.; Cretu, L.; Straca, A.-I.; **Vasile, A.; Bratan, V**.; Culita, D.; Atkinson, I.; Balint, I.; Papa, F.* The Effect of the Metal Oxide as the Support for Silver Nanoparticles on the Catalytic Activity for Ammonia Ozonation. *Catalysts* **2025**, 15(2), 104. https://doi.org/ 10.3390/catal15020104. (IF_{2024} = 4.0, Q2).

3. Anastasescu, M.†; Socoteanu, R.†; **Bratan, V.;** Preda, S.; Anastasescu, C.*; Gîfu, I.C.*; Nistor, C.L.; Boscencu, R.; Chifor, E.*; Negrila, C.; Bordeianu, I.; Zaharescu, M.; Balint, I. Assessment of SiO_2 nanotube activity to modify DL α-Tocopherol via $^1O2$ generation under visible light irradiation, *Micromachines* **2025**, 16(7), 784 https://doi.org/10.3390/mi16070784. (IF_{2024} = 3.0, Q2)

4. Ilie, A.; Predoană, L.*; Anastasescu, C.; Preda, S.*; Hosu, I.S.; Costescu, R.M.; Culiță, D.C.; **Brătan, V.;** Balint, I.; Zaharescu, M. Layered Perovskite $La_2Ti_2O_7$ Obtained by Sol–Gel Method with Photocatalytic Activity. *Appl. Sci.* **2025**, *15*, 7665. https://doi.org/10.3390/app15147665 (IF_{2024} = 2.5, Q2)

5. Ilie, A.*; Predoana, L.; Anastasescu, C.; Pandele-Cusu, J.; Preda, S.; Rusu, A.; Culita, D.C.; **Bratan, V.;** Maraloiu, V. A.; Teodorescu, V.S.; Balint, I.; Zaharescu, M. Photocatalytic degradation of ethanol driven by pristine and metal-modified TiO2 obtained by sol-gel method, *Rev. Roum. Chim*. **2025,** 70(7–8), 385. 10.33224/rrch.2025.70.7-8.02 (IF_{2024} = 0.6, Q4)

C. Colaborare externa, autorul de corespondenta nu este din Laboratorul 3

1. Damiri, F.*, Fatimi, A., Liu, Y., **Musuc, A. M.,** Fajardo, A. R., Gowda, B. H. J., Vora*, L.K., Shavandi, A., Okoro, O. V. Recent advances in 3D bioprinted polysaccharide hydrogels for biomedical applications: A comprehensive review. *Carbohydr. Polym*., **2025,** 348, 122845. https://doi.org/10.1016/j.carbpol.2024.122845. (IF_{2024} = 12.5, Q1)

2. He, S.; Barón, A.; Munteanu, C. R.; de Bilbao, B.; Casañola-Martin, G. M.; Chelu, M.; **Musuc**, **A. M.;** Bediaga, H.; Ascencio, E.; Castellanos Rubio, I.;* Arrasate, S.; Pazos, A.; Insausti, M.; Rasulev, B.; González-Díaz, H.* Drug Release Nanoparticle System Design: Data Set Compilation and Machine Learning Modeling, *ACS Appl. Mater. Interfaces* **2025**, 17(3), 5290–5306, https://doi.org/10.1021/acsami.4c16800. (IF_{2024} = 8.2, Q1)

3. Fatimi, A.*; Damiri, F.; El Arrach, N.; Hemdani, H.; **Musuc, A.M.;** Berrada, M. Hydrogel-Based Biomaterials: A Patent Landscape on Innovation Trends and Patterns. *Gels* **2025**, 11, 216. https://doi.org/10.3390/gels11030216. (IF_{2024} = 5.3, Q1)

4. Stancu, A.I.; Dițu, L.M.; Oprea, E.*; Ficai, A.*; Badea, I.A.; Buleandră, M.; Brîncoveanu, O.; Mirea, A.G.; Voicu, S.N.; **Musuc, A.M**.; Aricov, L.; Culita, D.C; Mititelu, M. New Antimicrobial Gels Based on Clove Essential Oil–Cyclodextrin Complex and Plant Extracts for Topical Use. *Gels* **2025**, 11, 653. https://doi.org/10.3390/gels11080653. (IF_{2024} = 5.3, Q1)

5. Solomon, C.; Nita, D.T.; Ozon, E.A.*; Fita, A.C.; Viziteu, H.M.; **Musuc**, **A.M.;** Sarbu, I.; Mitu, M.A. An overview of the pharmaceutical profile of rivaroxaban, *Farmacia*, **2025,** 73(1), https://doi.org/10.31925/farmacia.2025.1.1. (IF_{2024} = 1.3, Q4)

6. Solomon, C.; Sârbu, I.; Anuța, V.; Ozon, E.A.; **Musuc, A.M.;** Fița, A.C.*; Nita, D.T.; Mitu, M.A. Preformulation studies of tablets containing rivaroxaban – niacinamide cocrystallization compounds. *Farmacia*, **2025**; 73 (3): 706-712, https://doi.org/10.31925/farmacia.2025.3.17. (IF_{2024} = 1.3, Q4)

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† - autor cu contributie egala cu primul autor.