

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: Inginerie Chimică și Biotehnologii

Departamentul: Chimie Anorganică, Chimie-Fizică și Electrochimie

Nume Prenume: Oprea Ovidiu-Cristian

Gradul didactic: Profesor

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

1. Combinatii complexe cu activitate biologică – (2006) – conducator doctorat Prof. Dr. Ioana JITARU

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

1. “Introduction to Biomaterials and Tissue Engineering” and “DrugDeliverySystemsforTissueEngineering” in Biomaterials and Tissue Engineering – Springer 2023, Ed. Oguzhan Gunduz, Christophe Egles, Roman Perez, Denisa Ficai, Cem Bulent Ustundag in Stem Cell Biology and Regenerative Medicine vol 74 Series Ed Kursad Turksen, Ottawa Hospital Research Institute, Ottawa, ON, Canada, doi: 10.1007/978-3-031-35832-6; ISSN 2196-8985

2. Daniela Berger, Cezar Comanescu, Daniela Istrati, Cristian Matei, Ovidiu Oprea, Alina Simion, Cristian Simion, Stefan Tomas - Teste de chimie – 257p, Ed. POLITEHNICA Press (2021) ISBN 978-606-515-950-1

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

1. Maxim V. Maximov, Oana Cristina Maximov, Ludmila Motelica, Denisa Ficai, Ovidiu Cristian Oprea, Roxana Doina Trușcă, Liliana-Roxana Balahura (Stămat), Radu Pericleanu, Andreea Ștefania Dumbravă, Viorica Maria Corbu, Vasile-Adrian Surdu, Gabriel Vasilevici, Anton Ficai, Sorina Dinescu, Irina Gheorghe-Barbu – “Comprehensive Evaluation of 45S5 Bioactive Glass Doped with Samarium: from synthesis and physical properties to biocompatibility and antimicrobial activity” - Coatings, 15(4), 404, 2025, doi: 10.3390/coatings15040404; ISSN 2079-6412, (IF 2.9)

2. Alina Florentina Vladu, Madalina Georgiana Albu Kaya, Roxana Doina Trusca, Ludmila Motelica, Vasile-Adrian Surdu, Ovidiu Cristian Oprea, Rodica Roxana Constantinescu, Bogdan Cazan, Denisa Ficai, Ecaterina Andronescu, Anton Ficai – “The Role of Crosslinking Agents in the Development of Collagen–Hydroxyapatite Composite Materials for Bone Tissue Engineering” – Materials, 18(05), 998, 2025, doi: 10.3390/ma18050998, ISSN 1996-1944, (IF 3.4)

3. Marwa Hattab, Ovidiu Cristian Oprea, Marin Cernea – “Experimental study on thermal evolution from precursor gel to crystallized MgO for biomedical applications” - Journal of Thermal Analysis and Calorimetry, 2025, doi: 10.1007/s10973-024-13951-6, ISSN 1388-6150, (IF 3.0)

4. Elisabeta-Irina Geana, Crina Teodora Ciucure, Violeta-Carolina Niculescu, Ioana Cristina Marinas, Gratiela Gradisteanu Pircalaboriu, Daniela Dutu, Roxana Trusca, Ovidiu-Cristian Oprea, Anton Ficai, Ecaterina Andronescu – “Valorization of apple pomace by obtaining some bioactive ingredients with antioxidant, antimicrobial and prebiotic activities” - Food and Bioproducts Processing, 150, 182-197, 2025, doi: 10.1016/j.fbp.2025.01.006, ISSN 0960-3085, (IF 3.5)

5. Ludmila Motelica, Geanina Voicu, Cristina Chircov, Adrian Vasile Surdu, Roxana Doina Trusca, Bogdan Stefan Vasile, Denisa Ficai, Ovidiu Cristian Oprea, Daciana Silvia Marta, Victor Eduard Peteu, Maria Anghelache, Anton Ficai, Manuela Calin – “Aspartic Acid Functionalized Magnetic Nanoparticles for Enhanced Internalization in Tumoral Cell” - Journal of the Australian Ceramic Society, 61, pp.265-283, 2025, doi: 10.1007/s41779-024-01102-x; ISSN 2510-1579 (IF 1.8)

6. Andreea Mihaela Grămadă (Pintilie), Alexandra-Elena Stoica (Oprea), Adelina-Gabriela Niculescu, Alexandra Cătălina Bîrcă, Bogdan Ștefan Vasile, Alina Maria Holban, Teodora Mihaiescu, Andreea Iren Șerban, Alina Ciceu, Cornel Balta, Simona Dumitra, Monica Puticiu, Florin Iordache, Anca Hermenean, Adina Alberts, Alexandru Mihai Grumezescu, Ovidiu Cristian Oprea, Simona Ardelean – “Zinc Oxide-Loaded Recycled PET Nanofibers for Applications in Healthcare and Biomedical Devices” - Polymers, 17(1), 45, 2025, <https://doi.org/10.3390/polym17010045>, ISSN 2073-4360, (IF 4.7)

7. Bogdan-Stefan Negreanu-Pirjol, Ticuta Negreanu-Pirjol, Florica Busuricu, Sanda Jurja, Oana Craciunescu, Ovidiu Oprea, Ludmila Motelica, Elena Iulia Oprita, Florentina Nicoleta Roncea – “The Role of Antioxidant Plant Extracts’ Composition and Encapsulation in Dietary Supplements and Gemmo-Derivatives, as Safe Adjuvants in Metabolic and Age-Related Conditions: A Review” - Pharmaceuticals, 17(12), 1738, 2024, doi: 10.3390/ph17121738; ISSN 1424-8247 (IF 4.3)

8. Spoială Angela, Motelica Ludmila, Ilie Cornelia-Ioana, Ficai Denisa, Chircov Cristina, Pieńkowska Natalia, Galiniak Sabina, Mołoń Mateusz, Kisala Joanna, Surdu Adrian-Vasile, Truşcă Doina Roxana, Oprea Ovidiu Cristian, Ficai Anton – “Aminoacid functionalised magnetite nanoparticles Fe₃O₄@AA (AA = Ser, Cys, Pro, Trp) as biocompatible magnetite nanoparticles with potential therapeutic applications” - *Scientific Reports*, 14, 26228, 2024, doi: 10.1038/s41598-024-76552-1; ISSN 2045-2322 (IF 3.8)
9. Maria Daniela Stelescu, Ovidiu-Cristian Oprea, Doina Constantinescu, Ludmila Motelica, Anton Ficai, Roxana Trusca, Maria Sonmez, Dana Florentina Gurau, Mihai Georgescu, Rodica Roxana Constantinescu, Bogdan Ştefan Vasile, Denisa Ficai- “Characterization of mixtures based on high density polyethylene and plasticized starch” – *Polymers*, 16(21), 3051, 2024, <https://doi.org/10.3390/polym16213051>, ISSN 2073-4360, (IF 4.7)
10. Iuliana Mihaela Deleanu, Elena Grosu, Anton Ficai, Lia Mara Ditu, Ludmila Motelica, Ovidiu-Cristian Oprea, Gratiela Gradisteanu Pircalaboru, Maria Sonmez, Cristina Busuioc, Robert Ciocoiu, Vasile Iulian Antoniac- “New Antimicrobial Materials Based on Plasticized Polyvinyl Chloride for Urinary Catheters: Preparation and Testing” – *Polymers*, 16(21), 3028, 2024, <https://doi.org/10.3390/polym16213028>, ISSN 2073-4360, (IF 4.7)
11. Maria Daniela Stelescu, Doina Constantinescu, Ovidiu-Cristian Oprea, Dana Florentina Gurau, Mihai Georgescu - “Studies on the Development of New Sustainable Materials Based on Recycled Low-density Polyethylene” *Materiale Plastice* 61 (3), 2024, pp. 70-82, doi: 10.37358/MP.24.3.5734, ISSN 0025-5289, (IF 0.6)
12. Maria Daniela Stelescu, Ovidiu-Cristian Oprea, Maria Sonmez, Anton Ficai, Ludmila Motelica, Denisa Ficai, Mihai Georgescu, Dana Gurau - “Structural and Thermal Characterization of Some Thermoplastic Starch Mixtures” – *Polysaccharides* 5 (04), 32, 2024, pp. 504-522, doi: 10.3390/polysaccharides5040032, ISSN 2673-4176, (IF 4.7)
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14. Maria Sonmez, Cristina Elisabeta Pelin *, George Pelin, Bogdan Rusu, Adriana Stefan, Maria Daniela Stelescu, Madalina Ignat, Dana Gurau, Mihai Georgescu, Mihaela Nituica, Ovidiu Cristian Oprea, Ludmila Motelica, Bartłomiej Wasniewski, Pawel Ortyl, Roxana Doina Trusca- “Development, Testing, and Thermoforming of Thermoplastics Reinforced with Surface-Modified Aramid Fibers for Cover of Electronic Parts in Small Unmanned Aerial Vehicles Using 3D-Printed Molds” – *Polymers*, 16(15), 2136, 2024, <https://doi.org/10.3390/polym16152136>, ISSN 2073-4360, (IF 4.7)
15. Cornelia-Ioana Ilie, Angela Spoială, Cristina Chircov, Georgiana Dolete, Ovidiu-Cristian Oprea, Bogdan Ştefan Vasile, Simona Adriana Crainiceanu, Adrian-Ionut Nicoara, Ioana Cristina Marinas, Miruna S. Stan, Lia Mara Ditu, Anton Ficai, Eliza Oprea – “Antioxidant, Antitumoral, Antimicrobial and Prebiotic Activity of Magnetite Nanoparticles Loaded with Bee Pollen/ Bee Bread Extracts and 5-Fluorouracil” - *Antioxidants*, 13(8), 895, 2024, <https://doi.org/10.3390/antiox13080895>, ISSN 2076-3921, (IF 6.0)
16. Cristina Chircov, Mihai-Catalin Petcu, Bogdan-Stefan Vasile, Bogdan Purcareanu, Adrian Ionut Nicoara, Ovidiu-Cristian Oprea, Roxana Cristina Popescu - "Irinotecan-loaded magnetite-silica core-shell systems for colorectal cancer treatment" - *International Journal of Pharmaceutics*, 661, 2024, 124420, <https://doi.org/10.1016/j.ijpharm.2024.124420>, ISSN 0378 – 5173, (IF 5.3)
17. Andreea-Luiza Mîrţ, Denisa Ficai, Ovidiu-Cristian Oprea, Gabriel Vasilievici, Anton Ficai – “Current and future perspectives of bioactive glasses as injectable material” - *Nanomaterials*, 14(14), 1196, 2024, doi:10.3390/nano14141196, ISSN 2079-4991, (IF 4.4)
18. Ioana Adelina Pirusca, Paul Cătălin Balaure, Valentina Grumezescu, Stefan-Andrei Irimiciuc, Ovidiu-Cristian Oprea, Alexandra Catalina Birca, Bogdan Vasile, Alina Maria Holban, Ionela C. Voinea, Miruna S. Stan, Roxana Trusca, Alexandru Mihai Grumezescu, George Alexandru Croitoru - “New Fe₃O₄-Based Coatings with Enhanced Anti-Biofilm Activity for Medical Devices” – *Antibiotics*, 13(7), 631, 2024, doi: 10.3390/antibiotics13070631, ISSN 2079-6382, (IF 4.3)
19. Claudia Maria Simonescu, Florina Dumitru, Bianca Zarnescu, Daniela Culita, Anca Razvan, Ovidiu Oprea, Roxana Trusca, Eugeniu Vasile – “Competitive adsorption of aqueous Cd(II) and Pb(II) solutions onto silicas synthesized with saponin as template agent” – *Journal of Composites Science*, 8(06), 227, 2024, doi: 10.3390/jcs8060227, ISSN 2504-477X, (IF 3.3)
20. Ludmila Motelica, Denisa Ficai, Ovidiu-Cristian Oprea, Roxana Doina Truşcă, Anton Ficai, Maria Daniela Stelescu, Maria Sonmez, Mihaela Nituica, Gabriel Mustatea, Alina Maria Holban – “Antimicrobial Packaging for Plum Tomatoes Based on ZnO Modified Low-Density Polyethylene” - *International Journal of Molecular Sciences* 25(11), 6073, 2024, doi: 10.3390/ijms25116073 ISSN 1422-0067, (IF 4.9)
21. Anca Razvan, Geani Teodor Man, Florina Dumitru, Madalina Pandele, Roxana Trusca, Ludmila Motelica, Ovidiu Oprea, Gheorghe Nechifor – “Nanocomposite membranes prepared from cellulose acetate or polysulfone with Ag₀ nanoparticles and nitron reagent for nitrate ion removal” - *Desalination and Water Treatment*, 318, 100400, 2024, doi: 10.1016/j.dwt.2024.100400, ISSN 1944-3986, (IF 1.1)
22. Andreea Pîrţac, Aurelia Cristina Nechifor, Szidonia-Katalin Tanczos, Ovidiu Cristian Oprea, Alexandra Raluca Grosu, Cristian Matei, Vlad-Alexandru Grosu, Bogdan Stefan Vasile, Paul Constantin Albu, Gheorghe Nechifor – “Emulsion Liquid Membranes on Based Os–NP/n–decanol or n–dodecanol Nanodispersions for p–Nitrophenol Reduction” - *Molecules*, 29(8), 1842, 2024, doi: 10.3390/molecules29081842, ISSN 1420-3049, (IF 4.6)

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- 24.** Maria Daniela Stelescu, Ovidiu-Cristian Oprea, Ludmila Motelica, Anton Ficai, Roxana-Doina Trusca, Maria Sonmez, Mihaela Nituica, Mihai Georgescu – “Obtaining and Characterizing New Types of Materials Based on Low-Density Polyethylene and Thermoplastic Starch” – *Journal of Composites Science*, 8(04), 134, 2024, doi: 10.3390/jcs8040134, ISSN 2504-477X, (IF 3.3)
- 25.** Anca Hirtopeanu, Michaela Dina Stanescu, Petru Filip, Aura Tintaru, Cristina Stavarache, Maria Maganu, Ovidiu Oprea - “Coordination of Palladium with Polydentate Non-planar Ligands with Competitive Donors (Oxygen and Double Bonds). Role of Stereochemistry” - *Chemistry Select*, 9(4), e202301768, doi: 10.1002/slct.202301768, ISSN:2365-6549, (IF 2.1)
- 26.** Cornelia-Ioana Ilie, Angela Spoială, Ludmila Motelica, Liliana, Marinescu, Georgiana Dolete, Roxana Doina Trusca, Ovidiu Cristian Oprea, Denisa Ficai, Anton Ficai – “Decoration of the glass surface with Ag NPs using Thio-derivates for environmental applications” - *Coatings*, 14(01), 96, 2024, <https://doi.org/10.3390/coatings14010096>, ISSN 2079-6412, (IF 3.4)
- 27.** Liliana Marinescu, Ludmila Motelica, Denisa Ficai, Ficai Anton, Ovidiu Cristian Oprea, Ecaterina Andronescu, Alina Maria Holban – “A Two-Step Surface Modification Methodology for the Advanced Protection of a Stone Surface” - *Nanomaterials*, 14(01), 68, 2024, <https://doi.org/10.3390/nano14010068>, ISSN 2079-4991, (IF 5.3)
- 28.** Sorin Constantinescu, Adelina-Gabriela Niculescu, Ariana Hudita, Valentina Grumezescu, Dragos Radulescu, Alexandra Catalina Birca, Stefan Andrei Irimiciuc, Oana Gherasim, Alina Maria Holban, Bianca Galateanu, Ovidiu Cristian Oprea, Anton Ficai, Bogdan Stefan Vasile, Alexandru Mihai Grumezescu, Alexandra Bolocan, Radu Radulescu – “Silver/graphene oxide nanostructured coatings for modulating the microbial susceptibility of fixation devices used in knee surgery” - *International Journal of Molecular Sciences* 25(01), 246, 2024, doi: 10.3390/ijms25010246 ISSN 1422-0067, (IF 5.6)
- 29.** Roxana Lavric, Cornelia Vreme, Cristina Busuioc, Gabriela Isopencu, Adrian Ionut Nicoara, Ovidiu-Cristian Oprea, Daniel-Dumitru Banciu, Izabela Constantinoiu, Ana-Maria-Raluca Musat – “The Effect of Silver and Samarium on the Properties of Bioglass Coatings Produced by Pulsed Laser Deposition and Spin Coating” - *Journal of Functional Biomaterials*, 14(12), 560, 2023, <https://doi.org/10.3390/jfb14120560>, WOS:001130583900001 ISSN 2079-4983, (IF 4.8)
- 30.** Vasile-Adrian Surdu, Mariana-Andreea Mariniță, Roxana-Elena Pătru, Ovidiu-Cristian Oprea, Adrian Ionut Nicoara, Bogdan Ștefan Vasile, Roxana Trușca, Adelina-Carmen Ianculescu – “High entropy lead-free perovskite Bi_{0.2}K_{0.2}Ba_{0.2}Sr_{0.2}Ca_{0.2}TiO₃ powders and related ceramics: synthesis, processing and electrical properties” - *Nanomaterials*, 13(22), 2974, 2023, <https://doi.org/10.3390/nano13222974>, ISSN 2079-4991, (IF 5.3)
- 31.** Daniela Gheorghiiță, Iulian V Antoniac, Horațiu Moldovan, Aurora Antoniac, Elena Grosu, Ludmila Motelica, Anton Ficai, Ovidiu Oprea, Eugeniu Vasile, Lia Mara Ditu, Anca-Daniela Raiciu – “Influence of lavender essential oil on the physical and antibacterial properties of chitosan sponge for hemostatic applications” - *International Journal of Molecular Sciences* 24(22), 16312, 2023, doi: 10.3390/ijms242216312 ISSN 1422-0067, (IF 5.6)
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- 33.** Ludmila Motelica, Bogdan-Ștefan Vasile, Anton Ficai, Vasile-Adrian Surdu, Denisa Ficai, Ovidiu-Cristian Oprea, Ecaterina Andronescu, Gabriel Mustăța, Elena Loredana Ungureanu, Alina Alexandra Dobre- “Antibacterial activity of zinc oxide nanoparticles loaded with essential oils” – *Pharmaceutics* 15(10), 2470, 2023, doi: 10.3390/pharmaceutics15102470, ISSN 1999-4923, (IF 5.4)
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- 35.** Cristiana Plocon, Alexandru Evangelidis, Monica Enculescu, Gabriela Isopencu, Ovidiu Oprea, Mihaela Bacalum, Mina Raileanu, Sorin Jinga, Cristina Busuioc – “Development and Characterization of Electrospun Composites Built on Polycaprolactone and Cerium-Containing Phases” - *International Journal of Molecular Sciences* 24(18), 14201, 2023, doi: 10.3390/ijms241814201 ISSN 1422-0067, (IF 5.6)
- 36.** Dana Gingasu, Ovidiu Oprea, Gabriela Marinescu, Jose Maria Calderon Moreno, Daniela C. Culita, Silviu Preda - “Structural, Morphological and Optical Properties of Single and Mixed Ni-Co Aluminates Nanoparticles” – *Inorganics*, 11(09), 371, 2023, <https://doi.org/10.3390/inorganics11090371>, ISSN 2304-6740, (IF 2.9)
- 37.** Georgiana-Mădălina Lemnar (Popa), Ludmila Motelica, Roxana Doina Trusca, Cornelia-Ioana Ilie, Alexa Maria Croitoru, Denisa Ficai, Ovidiu Oprea, Anicuța Stoica-Guzun, Anton Ficai, Lia Mara Dițu, Bianca Tihăuan - “Antimicrobial Wound Dressings based on Bacterial Cellulose and Independently Loaded with Nutmeg and Fir Needle Essential Oils” – *Polymers*, 15(17), 3629, 2023, <https://doi.org/10.3390/polym15173629>, ISSN 2073-4360, (IF 5.0)

- 38.** Cristina Chircov, Iulia Alexandra Dumitru, Bogdan Stefan Vasile, Ovidiu-Cristian Oprea, Alina Maria Holban, Roxana Cristina Popescu- “Microfluidic Synthesis of Magnetite Nanoparticles for the Controlled Release of Antibiotics” – *Pharmaceutics* 15(9), 2215, 2023, doi: 10.3390/pharmaceutics15092215, ISSN 1999-4923, (IF 5.4)
- 39.** Mihaela Nituica, Ovidiu Oprea, Maria Daniela Stelescu, Maria Sonmez, Mihai Georgescu, Laurentia Alexandrescu, Ludmila Motelica – “Polymeric Biocomposite Based on Thermoplastic Polyurethane (TPU) and Protein and Elastomeric Waste Mixture” – *Materials*, 16(15), 5279, 2023, doi: 10.3390/ma16155279, ISSN 1996-1944, (IF 3.4)
- 40.** Dana Gingasu, Daniela C. Culita, Jose Maria Calderon Moreno, Gabriela Marinescu, Cristina Bartha, Ovidiu Oprea, Silviu Preda, Mariana Carmen Chifiriuc, Marcela Popa – “Synthesis of CoFe₂O₄ through Wet Ferritization Method Using an Aqueous Extract of Eucalyptus Leaves” - *Coatings*, 13(7), 1250, 2023, doi: 10.3390/coatings13071250; ISSN 2079-6412, (IF 3.4)
- 41.** Alexandra Cătălina Bîrcă, Oana Gherasim, Adelina-Gabriela Niculescu, Alexandru Mihai Grumezescu, Ionela Andreea Neacșu, Cristina Chircov, Bogdan Stefan Vasile, Ovidiu Cristian Oprea, Ecaterina Andronescu, Miruna Stan, Carmen Curutiu, Lia Mara Ditu, Alina Maria Holban – “A Microfluidic Approach for Synthesis of Silver Nanoparticles as a Potential Antimicrobial Agent in Alginate–Hyaluronic Acid-Based Wound Dressings” - *International Journal of Molecular Sciences* 24(14), 11466, 2023, doi: 10.3390/ijms241411466 ISSN 1422-0067, (IF 5.6)
- 42.** Cristina Chircov, Alexandra Cătălina Bîrcă, Lorena Alexandra Dănculescu, Ionela Andreea Neacșu, Ovidiu-Cristian Oprea, Roxana-Doina Trușcă, Ecaterina Andronescu– “Usnic Acid-Loaded Magnetite Nanoparticles - A Comparative Study Between Synthesis Methods” - *Molecules*, 28(13), 5198, 2023, doi: 10.3390/molecules28135198, ISSN 1420-3049, (IF 4.6)
- 43.** Rebecca Alexandra Puiu, Alexandra Catalina Birca, Valentina Grumezescu, Liviu Duta, Ovidiu Cristian Oprea, Alina Maria Holban, Ariana Hudita, Bianca Galateanu, Paul Cătălin Balaure, Alexandru Mihai Grumezescu, Ecaterina Andronescu- “Multifunctional polymeric biodegradable and biocompatible coatings based on silver nanoparticles: A comparative in vitro study on cytotoxicity towards cancer and normal cell lines of cytostatic drugs versus essential oils-loaded nanoparticles and on their antimicrobial and antibiofilm activities” – *Pharmaceutics* 15(7), 1882, 2023, doi: 10.3390/pharmaceutics15071882, ISSN 1999-4923, (IF 5.4)
- 44.** Alexandra Elena Stoica (Oprea), Alexandra Catalina Birca, Oana Gherasim, Anton Ficai, Alexandru Mihai Grumezescu, Ovidiu Cristian Oprea, Bogdan Stefan Vasile, Cornel Balta, Ecaterina Andronescu, Anca Oana Hermenean - “Electrospun fibrous silica for bone tissue engineering applications” – *Pharmaceutics* 15(6), 1728, 2023, doi: 10.3390/pharmaceutics15061728, ISSN 1999-4923, (IF 6.525)
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