

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: **de Inginerie Chimică și Biotehnologii**

Departamentul: **Chimie Organică „C. D. Nenițescu”**

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Gradul didactic: **CONFERENCEȚIAR**

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

Paul Cătălin Balaure. Dimerizări și deschideri de ciclu în sisteme benzociclobutenice. Academia Română, Institutul de Chimie Organică „C. D. Nenițescu” București 1996, Conducător științific: CS I Dr. Habil. Ing. Petru Ivan Filip

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

1. **Balaure, P.C.**, Gudovan, D., Gudovan. I. "Nanopesticides: A new paradigm in crop protection" în "Nanotechnology in the Agri-Food Industry", Volume 10: New pesticides and soil sensors". Editor Alexandru Grumezescu, ISBN: 978-0-12-804299-1, Academic Press, Elsevier, London, United Kingdom, **2017**, pages 129-192.
2. Lupu, S., **Balaure, P.C.**, Lete, C., Mihailciuc, C., Biocomposite nanomaterials for electrochemical biosensors in Handbook of Nanoelectrochemistry: Electrochemical Synthesis Methods, Properties, and Characterization Techniques, Springer International Publishing, **2016**, pages 1161-1194, DOI: 10.1007/978-3-319-15266-0-37.

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

1. Pirusca, IA; **Balaure, PC***, Grumezescu, V; Irniciuc, SA; Oprea, OC; Birca, AC; Vasile, B; Holban, AM; Voinea, IC; Stan, MS; Trusca, R; Grumezescu, AM; Croitoru, GA, New Fe₃O₄-Based Coatings with Enhanced Anti-Biofilm Activity for Medical Devices. Antibiotics-Basel, 13(7), Article Number 631, **2024**, DOI:10.3390/antibiotics13070631, WOS:001278220700001.
2. Scafa Udriște, A.; Burdușel, A.C.; Niculescu, A.-G.; Rădulescu, M.; **Balaure, P.C.***; Grumezescu, A.M, Organic Nanoparticles in Progressing Cardiovascular Disease Treatment and Diagnosis. Polymers, 16, 1421, **2024**, WOS:001231461700001; <https://doi.org/10.3390/polym16101421>
3. **Balaure P.C.** Special Issue: Functionalized Nanomaterials and Structures for Biomedical Applications. Materials, 16(24), Article Number: 7521, DOI: 10.3390/ma16247521, **2023**, WOS: 001132690300001, <https://doi.org/10.3390/ma16247521>
4. Puiu, RA; Birca, AC; Grumezescu, V; Duta, L; Oprea, OC; Holban, AM; Hudita, A; Galateanu, B; **Balaure, PC***; Grumezescu, AM; Andronescu, E., Multifunctional Polymeric Biodegradable and Biocompatible Coatings Based on Silver Nanoparticles: A Comparative In Vitro Study on Their Cytotoxicity towards Cancer and Normal Cell Lines of Cytostatic Drugs versus Essential-Oil-Loaded Nanoparticles and on Their Antimicrobial and Antibiofilm Activities. PHARMACEUTICS, 15(7), Article Number: 1882, DOI: 10.3390/pharmaceutics15071882, **2023**, WOS: 001038852100001, <https://doi.org/10.3390/pharmaceutics15071882>

5. **Balaure, P.C.** Special Issue: Advances in Engineered Nanostructured Antibacterial Surfaces and Coatings. COATINGS, 12(8), Article Number: 1041, DOI: 10.3390/coatings12081041, **2022**, WOS: 000846159300001, <https://doi.org/10.3390/coatings12081041>
6. Spirescu, V.A., Suhan, R., Niculescu, A.G., Grumezescu, V., Negut, I., Holban, A.M., Oprea, O.C., Birca, A.C., Vasile, B.S., Grumezescu, A.M., Bejenaru, L.E., Mogosanu, G.D., Bejenaru, C., **Balaure, P.C.***, Andronesu, E., Mogoanta, L., Biofilm-Resistant Nanocoatings Based on ZnO Nanoparticles and Linalool. NANOMATERIALS, 11(10), Article Number: 2564, DOI: 10.3390/nano11102564, **2021**, WOS:000713418000001, <https://doi.org/10.3390/nano11102564>
7. Puiu, RA; **Balaure, P.C.***; Constantinescu, E; Grumezescu, AM; Andronesu, E; Oprea, OC; Vasile, BS; Grumezescu, V; Negut, I; Nica, IC; Stan, M.S., Anti-Cancer Nanopowders and MAPLE-Fabricated Thin Films Based on SPIONs Surface Modified with Paclitaxel Loaded β -Cyclodextrin, Pharmaceutics, **2021**, 13(9), Article Number: 1356, DOI: 10.3390/pharmaceutics13091356, WOS:000701408500001, <https://doi.org/10.3390/pharmaceutics13091356>
8. **Balaure, P.C.**, Grumezescu A.M., Recent Advances in Surface Nanoengineering for Biofilm Prevention and Control. Part II: Active, Combined Active and Passive, and Smart Bacteria-Responsive Antibiofilm Nanocoatings. NANOMATERIALS, 10(8), Article Number: 1527, DOI: 10.3390/nano10081527, **2020**, WOS:000564757600001, <https://www.mdpi.com/2079-4991/10/8/1527>
9. **Balaure, P.C.**, Grumezescu A.M., Recent Advances in Surface Nanoengineering for Biofilm Prevention and Control. Part I: Molecular Basis of Biofilm Recalcitrance. Passive Anti-Biofouling Nanocoatings. NANOMATERIALS, 10(6), Article Number: 1230, DOI: 10.3390/nano10061230, **2020**, WOS:000552438700001, <https://www.mdpi.com/2079-4991/10/6/1230>
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11. **Balaure, P.C.**, Gudovan, D., Gudovan, I.A., Smart Triggered Release in Controlled Drug Delivery. CURRENT DRUG TARGETS, 19(4), 318-327, DOI: 10.2174/1389450117666160401125034, **2018**, WOS:000426208400003, <https://www.eurekaselect.com/article/74722>
12. **Balaure, P.C.**, Boarca, B., Popescu, R.C., Savu, D., Trusca, R., Vasile, B.S., Grumezescu, A.M., Holban, A.M., Bolocan, A., Andronesu, E., Bioactive mesoporous silica nanostructures with anti-microbial and anti-biofilm properties. International Journal of Pharmaceutics, 531(1), 35-46 DOI: 10.1016/j.ijpharm.2017.08.062, **2017**, WOS:000410648200004, <http://dx.doi.org/10.1016/j.ijpharm.2017.08.062>
13. **Balaure, P.C.**, Gudovan, D., Gudovan, I., Organic Polymeric Nanomaterials as Advanced Tools in the Fight Against Antibiotic-Resistant Infections, FUNCTIONALIZED NANOMATERIALS FOR THE MANAGEMENT OF MICROBIAL INFECTION: A STRATEGY TO ADDRESS MICROBIAL DRUG RESISTANCE Edited by: Boukherroub, R; Szunerits, S; Drider, D Book Series: Micro & Nano Technologies, Pages: 153-265, Published: **2017**, DOI: 10.1016/B978-0-323-41625-2.00006-5, WOS:000426404600007, <https://doi.org/10.1016/B978-0-323-41625-2.00006-5>
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Nanotechnology in the Agri-Food Industry, Volume: 9 Pages: 551-586, DOI: 10.1016/B978-0-12-804300-4.00016-2, Published: 2017, WOS: 000422862100019, <https://doi.org/10.1016/B978-0-12-804300-4.00016-2>

15. **Balaure, P.C.**, Popa R.A., Grumezescu, A.M., Voicu, G., Rădulescu, M., Mogoantă, L., Balseanu, T.A., Mogoșanu, G.D., Chifiriuc, M.C., Bleotu C., Holban A.M., Bolocan, A., Biocompatible hybrid silica nanobiocomposites for the efficient delivery of anti-staphylococcal drugs. *International Journal of Pharmaceutics*, 510(2), 532-542, DOI: 10.1016/j.ijpharm.2016.03.037, 2016, WOS:000380754500016, <http://dx.doi.org/10.1016/j.ijpharm.2016.03.037>
16. Rădulescu, D., Voicu, G., Oprea, A.E., Andronescu, E., Grumezescu, V., Holban, A.M., Vasile, B.S., Surdu, A.V., Grumezescu, A.M., Socol, G., Mogoantă, L., Mogoșanu, G.D., **Balaure, P.C.**, Rădulescu, R., Chifiriuc, M.C., Mesoporous silica coatings for cephalosporin active release at the bone-implant interface. *Applied Surface Science*, 374, 165-171, DOI: 10.1016/j.apsusc.2015.10.183, 2016, WOS:000375937300027, <http://dx.doi.org/10.1016/j.apsusc.2015.10.183>
17. Gudovan, D., **Balaure, P.C.*.**, Mihaiescu, D.E., Fudulu, A., Purcareanu, B., Radu, M., Functionalized magnetic nanoparticles for biomedical applications. *Current Pharmaceutical Design*, 21 (42), 6038-6054, DOI: 10.2174/1381612821666151027151702, 2015, WOS:000366196700002, <https://www.eurekaselect.com/article/71335>
18. **Balaure, P.C.**, Grumezescu, A.M., Smart synthetic polymer nanocarriers for controlled and site-specific drug delivery. *Current Topics in Medicinal Chemistry*, 15 (15), 1424-1490, 2015, WOS:000355196100002, <https://www.eurekaselect.com/article/66500>

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

1. **Balaure, PC**; Grumezescu, V; Bîrcă, AC; Niculescu, AG; Vasile, BȘ; Holban, AM; Voinea, IC; Stan, MS; Grumezescu, AM, Thin Coatings Based on Magnetic Nanoparticles for Protection of Medical Devices Against Microbial Infection. 23rd Romanian International Conference on Chemistry and Chemical Engineering, Constanța-Mamaia, Romania, September 4-7, 2024, ID 119.
2. Bratu, A.; Tociu, M; **Balaure, PC**, Compositional Composition of The Fruits of *Hippophae Rhamnoides* and Their Use. 23rd Romanian International Conference on Chemistry and Chemical Engineering, Constanța-Mamaia, Romania, September 4-7, 2024, ID 135.
3. **P.C. Balaure**, V. Grumezescu, A.C. Bîrcă, A. Niculescu, B.Ș. Vasile, A.M. Holban, I.C. Voinea, M. Stan, A.M. Grumezescu Anti-biofilm MAPLE-deposited thin coatings based on core@double-shell magnetite nanoparticles. 34th European Congress on Clinical Microbiology and Infectious Diseases ECCMID, Barcelona, Spain, 27-30 April 2024.
4. **P.C. Balaure**, A.M. Grumezescu, Innovative and effective alternatives to the classical antimicrobial and anti-biofilm therapies. Energy Materials Nanotechnology EMN Barcelona – ICAS 2019, A51, 105, August 19-23, 2019, Barcelona, Spain.
5. Dragos Gudovan, Denisa Ficai, Iulia Alexandra Gudovan, **Paul Balaure**, Roxana Doina Trusca, Madalina Georgiana Albu-Kaya, Valentina Mitran, Anisoara Cimpean, Anton Ficai, Ecaterina Andronescu, 3D-printed collagen-hydroxyapatite scaffolds modified with essential oils with anti-inflammatory/antibiotic properties, S6 – 191, 20th Romanian International Conference on Chemistry and Chemical Engineering, Poiana Brasov, ROMANIA, September 6-9, 2017.

6. C. Lete, S. Lupu, **P. C. Balaure**, D. I. Caval, Y. Coffinier, R. Boukherroub, F.J. del Campo, Electrochemical biosensors based on microelectrode arrays for phenol electroanalysis, The 16th International Conference of Physical Chemistry ROMPHYSICHEM-2016, 21-23 septembrie, **2016**, Galați, România.
7. C. Lete*, **P. C. Balaure**, D. I. Caval, S. Lupu, Biosensors for biologically active compounds electroanalysis, RO-ICAC 2016 International Conference on Analytical Chemistry, NOMARES atelier cu participare internațională, 28 - 31 august, **2016**, Iași, România.
8. **P.C. Balaure**, Enhancing the efficacy of antimicrobial drugs by the use of nano drug delivery systems, Energy Materials Nanotechnology (EMN) Meeting, May 4-7, **2016**, Dubrovnik, Croatia, C11, pages 53-54.
9. S. Lupu, C. Lete, **P.C. Balaure**, D. I. Caval, F. J. Del campo, B. Lakard, J.-Y. Hihn. Novel biosensors for multi-analyte detection prepared by sinusoidal voltages, 19th Romanian International Conference on Chemistry and Chemical Engineering, 2 – 5 Septembrie, **2015**, Sibiu, Romania.
10. **Balaure, P.C.***, Nita, M.I., Popa, R.A., Grumezescu, A.M., Voicu, G., Bleotu, C., Mogoanta, L., Mogosanu, G.D., Holban, A.M, Hussien, M.D, Chifiriuc, M.C., Silica nanobiostructures for anti-staphylococcal drugs delivery, Romanian Conference Series on Advanced Materials, ROCAM, Eighth International Edition, 7-10 July **2015**, Bucharest, Romania, pg. 82
11. Lupu Stelian, Lete Cecilia, **Balaure Paul Cătălin**, Caval Dan Ion, Multi-Analyte Detection Of Dopamine And Catechol At Electrochemical Microbiosensors Based On Microelectrode Arrays, PRIOCHEM-XI, October, 29-30, **2015**, Bucharest, Romania, pg. 69.