

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

“Theory and applications of confocal micro-Raman spectroscopy on hybrid polymer coatings and PDMS membranes and spectroscopic studies of doped B_2O_3 - Bi_2O_3 glass systems”, conducător științific: Prof. dr. Juergen Popp, anul susținerii 2003

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

1. C. I. Fort, L. C. Cotet, L. C. Pop, M. Baia, and **L. Baia**, *Advanced Graphene-Based Materials for Electrochemical Biomarkers and Protein Detection, in: Chemistry of Graphene Synthesis, Reactivity, Applications and Toxicities* (Ed. E. W. Wambu) ISBN: 978-1-83769-283-5, IntechOpen, London, pp. 143-175, 2023.
2. **Lucian Baia**, Zsolt Pap, Klara Hernadi, Monica Baia (Book Editors), *Book title: Advanced nanostructures for environmental health: ISBN: 0128158832 Publisher: Elsevier: Amsterdam, Netherlands; Kidlington, Oxford, England; Cambridge, Massachusetts, 2019, 584 pages*
3. M. Baia, Zs. Pap, K. Hernadi, **L. Baia**, *Chapter 1: When the nanostructures meet the environmental health key issues, in: Advanced nanostructures for environmental health* (Eds: L. Baia, Zs. Pap, K. Hernadi, M. Baia) ISBN: 0128158832, Elsevier, pp. 1-33, 2019.
4. G. Veréb, K. Hernadi, **L. Baia**, G. Rákhely, Zs. Pap, *Chapter 12. Pilot-plant scaled water treatment technologies, standards for the removal of contaminants of emerging concern based on photocatalytic materials, in: Advanced nanostructures for environmental health* (Eds: L. Baia, Zs. Pap, K. Hernadi, M. Baia) ISBN: 0128158832, Elsevier, pp. 495-523, 2019.
5. **L. Baia**, M. Baia, Zs. Pap, K. Hernadi, J. Popp, *Chapter 13. Perspectives of environmental health issues addressed by advanced nanostructures, in: Advanced nanostructures for environmental health* (Eds: L. Baia, Zs. Pap, K. Hernadi, M. Baia), ISBN: 0128158832, Elsevier, pp. 525-547, 2019.
6. L. C. Cotet, C. I. Fort, L. C. Pop, M. Baia, **L. Baia**, *Chapter 10 Insights into graphene-based materials as counter electrodes for dye-sensitized solar cells, in: Dye-Sensitized Solar Cells: Mathematical Modelling, and Materials Design and Optimization*, ISBN: 0128158832, Elsevier, pp. 341-396, 2019.
7. Zs. Kása, T. Gyulavári, G. Veréb, G. Kovács, **L. Baia**, Zs. Pap and K. Hernádi, *Chapter 11 Novel Applications and Future Perspectives of Nanocomposites, in: Nanocomposites for Visible*

Light-induced Photocatalysis (Eds. M. M. Khan, D. Pradhan, Y. Sohn), ISBN: 978-3-319-62445-7, Springer, pp 333-399 2017.

8. Klára Magyari, Adriana Vulpoi and **Lucian Baia**, *Chapter 13: Insights into the Structure of Proteins Adsorbed onto Bioactive Glasses, in: Handbook of Composites from Renewable Materials Volume 1: Structure and Chemistry*, (Eds. V. Kumar Thakur, M. Kumari Thakur, M. R. Kessler), ISBN: 978-1-119-22362-7, WILEY-Scrivener Publishing, pp. 309-336, 2017
9. Adriana Vulpoi, Klára Magyari, Răzvan Ștefan and **Lucian Baia**, *Chapter 1: Overview of Properties of Bioactive Glasses and Glass Ceramics Induced by Preparation Route, in: Bioglass: Properties, Functions and Applications*, ISBN: 978-1-63485-887-8, Series: Materials Science and Technologies, Nova Science Publishers, pp. 1-37, 2016.

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

1. A. Feraru, Z. R. Tóth, K. Magyari, M. Baia, T. Gyulavári, E. Páll, E. Licarete, C. Costinas, O. Cadar, I. Papuc, **L. Baia**, *The effect of nanoceria on the alginate-gum arabic crosslinking mechanism and in vitro behavior as a wound dressing, (2025) International Journal of Biological Macromolecules*, 288, 138569 <https://doi.org/10.1016/j.ijbiomac.2024.138569>.
2. A. Peter, L. Pop, L. M. Cozmuta, C. Nicula, A. M. Cozmuta, G. Drazic, K. Magyari, M. Muresan-Pop, M. Todea, **L. Baia**, *Beeswax-poly (vinyl alcohol) composite films for bread packaging, (2024) Food Chemistry: X*, 24, 2024, 102053, <https://doi.org/10.1016/j.fochx.2024.102053>.
3. E. Bobu, K. Saszet, Z. R. Tóth, E. Páll, T. Gyulavári, **L. Baia**, K. Magyari, M. Baia, *TiO₂–Alginate–Chitosan–Based Composites for Skin Tissue Engineering Applications, (2024) Gels* 10 (6), 358.
4. Ion Anghel, Catălin Lisa, Silvia Curteanu, Dana Maria Preda, Ioana-Emilia Șofran, Monica Baia, Malvina Stroe, Mirela Paraschiv, Mihaela Baibarac, Virginia Danciu, Liviu Cosmin Cotet, **Lucian Baia**, *The influence of the functionalization of polystyrene and graphene oxide composites on the flammability characteristics: modeling with artificial intelligence tools, (2024) Journal of Thermal Analysis and Calorimetry*, 149(7) 2805-2824.
5. CI Fort, MM Rusu, LC Cotet, A Vulpoi, M Todea, M Baia, **L Baia**, *The Impact of Ar or N₂ Atmosphere on the Structure of Bi-Fe-Carbon Xerogel Based Composites as Electrode Material for Detection of Pb²⁺ and H₂O₂, (2024) Gels*, 10(4), <https://doi.org/10.3390/gels10040230>.
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7. Z. R. Tóth, K. Hernadi, **L. Baia**, G. Kovács, Z. Pap, *Controlled formation of Ag-AgxO nanoparticles on the surface of commercial TiO₂ based composites for enhanced photocatalytic degradation of oxalic acid and phenol, (2023) Catalysis Today* 424, 112969.
8. A. Dreanca, S. Bogdan, A. Popescu, D. Sand, E. Pall, A. N. Astilean, C. Pestean, C. Toma, S. Marza, M. Taulescu, M. Cenariu, B. Sevastre, L. Oana, M. Todea, **L. Baia**, K. Magyari, *The evaluation of the osteopromoting capabilities of composites based on biopolymers and gold/silver nanoparticles doped bioactive glasses on an experimental rat bone defect, (2023) Biomedical Materials* 18 (5), 055014.
9. Endre-Zsolt Kedves, Claudiu Fodor, Ákos Fazekas, István Székely, Ákos Szamosvölgyi, András Sági, Zoltán Kónya, Lucian Cristian Pop, **Lucian Baia**, Zsolt Pap, *α -MoO₃ with inhibitive properties in Fenton reactions and insights on its general impact on OH radical based advanced oxidation processes, (2023) Applied Surface Science* 624, 156914.

10. Bíborka Boga, Vasile-Mircea Cristea, István Székely, Felix Lorenz, Tamás Gyulavári, Lucian Cristian Pop, **Lucian Baia**, Zsolt Pap, Norbert Steinfeldt, Jennifer Strunk, *Experimental data-driven and phenomenological modeling approaches targeting the enhancement of CaTiO₃ photocatalytic efficiency*, (2023) *Sustainable Chemistry and Pharmacy* 33, 101045.
11. Endre-Zsolt Kedves, Enikő Bárdos, Alpár Ravasz, Zsejke-Réka Tóth, Szilvia Mihálydeákpál, Zoltán Kovács, Zsolt Pap, **Lucian Baia**, *Photoinhibitive Properties of α -MoO₃ on Its Composites with TiO₂, ZnO, BiOI, AgBr, and Cu₂O*, (2023) *Materials* 16 (10), 3621.
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15. Zsejke-Réka Tóth, Diána Debreczeni, Tamás Gyulavári, István Székely, Milica Todea, Gábor Kovács, Monica Focşan, Klára Magyari, **Lucian Baia**, Zsolt Pap, Klára Hernadi, *Rapid Synthesis Method of Ag₃PO₄ as Reusable Photocatalytically Active Semiconductor*, (2022) *Nanomaterials* 13 (1), 89.
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18. Z. Kása, E. Bárdos, E. Kása, T. Gyulavári, **L. Baia**, Z. Pap, K. Hernadi, *Myth or reality? A disquisition concerning the photostability of bismuth-based photocatalysts*, (2022) *Journal of Environmental Chemical Engineering* 10 (3), 107624.
19. Z. Kovács, V. Márta, T. Gyulavári, Á. Ágoston, **L. Baia**, Z. Pap, K. Hernadi, *Noble metal modified (002)-oriented ZnO hollow spheres for the degradation of a broad range of pollutants*, (2022) *Journal of Environmental Chemical Engineering* 10 (3), 107655.
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22. Lucian Cristian Pop, Gabriel Barta, Liviu Cosmin Cotet, Klára Magyari, Monica Baia, Lucian Barbu Tudoran, Rodica Ungur, Dan Vodnar, **Lucian Baia**, Virginia Danciu, *Antimicrobial activity of graphene oxide-coated polypropylene surfaces*, (2022) *STUDIA UBB CHEMIA*, LXVII, 57(1), 281-296, DOI:10.24193/subbchem.2022.1.18.

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30. B. Hampel, K. Hernádi, **L. Baia**, Z. Pap, *The impact of Au nanoparticles and lanthanide-doped NaYF₄ on the photocatalytic activity of titania photocatalyst*, (2021) *Applied Surface Science* 547, 149123.
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32. Alexandra Dreanca, Marieta Muresan-Pop, Marian Taulescu, Zsejke-Réka Tóth, Sidonia Bogdan, Cosmin Pestean, Stephanie Oren, Corina Toma, Andra Popescu, Emőke Páll, Bogdan Sevastre, **Lucian Baia**, Klara Magyari, *Bioactive glass-biopolymers-gold nanoparticle based composites for tissue engineering applications*, (2021) *Materials Science and Engineering: C* 123, 112006.
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D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste NU ESTE CAZUL
- Selecție cu maximum 20 lucrări în volume de conferințe NU ESTE CAZUL

E. Brevete obținute în întreaga activitate

Brevet European

- Processes for obtaining nanocomposite food packages (*EP3078275/25.12.2025*)

Brevete naționale:

- Procedura de obținere a unor material pe baza de grafenă prin exfoliere, ***Brevet RO 131216 B1, 2017;***
- Procedura de obținere a unor compozitelor pe baza de aerogel cu metale nobile cu dubla funcționalitate, ***Brevet RO 129023 B1, 2017;***
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- Procedeu de obținere de materiale compozite „cărbune nanoporos/nanoparticule de bismut și fier/oxid de titan” cu proprietăți analitice și de fotodegradare, ***Brevet RO 133255 B1, 2020)***

Data:

Semnătura: