



Alexandru-Mihail Șerban

PhD student and research assistant

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Research topics

Șerban Alexandru's main research activities have focused on the development and characterization of micro- and nanostructures based on synthetic and natural polymers with biomedical and wastewater treatment applications. He also has experience in materials characterization using various methods, including thermal analysis (TG-FTIR-MS), FTIR spectroscopy, UV/VIS spectroscopy, electron microscopy, particle size distribution and zeta potential analysis (DLS) and in evaluating the physicochemical characteristics of polymeric biomaterials, such as the assessment of the degree of swelling, the incorporation and release of bioactive principles or *in vitro* biocompatibility.

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Scientific research

13 articles published in international peer-reviewed journals (ISI ranked and included in international data bases) (out of which **2** articles as main author); **3** Articles/Studies published full-text in international conference volumes; **66** citations (without self-citation) of the published papers in international ISI ranked journals, Hirsch index, **H= 7** in SCOPUS, **H=6** in ISI Web of Science databases, conference presentations (**8 talks & 3 posters**) at international conferences. Member of **4 national projects**.

Relevant 5 publications

1. Șerban A.M., Nacu I., Rosca I., Ghilan A., Rusu A.G., Nita L.E., Darie-Nita R.N., Chiriac A.P. Preparation and Characterization of Polymeric Microparticles Based on Poly(ethylene brassylate-co-squaric Acid) Loaded with Norfloxacin, *Pharmaceutics*, 16, 550, (2024) (Q1 journal: Pharmacology & Pharmacy).
2. Ghilan A., Bercea M., Rusu A.G., Simionescu N., Șerban A.M., Bargan A., Nita L.E., Chiriac A.P. Self-healing injectable hydrogels incorporating hyaluronic acid and phytic acid: Rheological insights and implications for regenerative medicine, *Int J Biol Macromol*, 279, 135056 (2024), (Q1 journal: Polymer Science)
3. Nita L.E., Nacu I., Ghilan A., Rusu A.G., Șerban A.M., Bercea M., Verestiuc L., Chiriac A.P. Evaluation of hyaluronic acid-polymacrolactone hydrogels with 3D printing capacity, *Int J Biol Macromol*, 256, 128279 (2024), (Q1 journal: Polymer Science).
4. Chiriac A.P., Ghilan A., Croitoriu A., Șerban A.M., Bercea M., Stoleru E., Nita L.E., Doroftei F., Stoica I., Bargan A., Rusu A.G., Chiriac V.M., Study on cellulose nanofibrils/copolymacrolactone based nano-composites with hydrophobic behaviour, self-healing ability and antioxidant activity, *Int J Biol Macromol*, 262, 130034, (Q1 journal: Polymer Science).
5. Soroceanu A., Șerban A.M., Nita T., A. Mihaela, The thermal behavior of silicone-based composite materials and the assessment of the gases that result from the thermal degradation process, *Materials Science and Engineering: B*, 312, 117855, (2025) (Q2 journal: Physics, Condensed Matter)