



Dr. Loredana E Nita

Senior Scientist I

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Research topics

L.E. Nita has experience in materials characterization using methods such as: dimensional analysis and spatial distribution in polymeric structures using Mastersizer, Nanosizer ZS and NIR-Cl equipment. Her activity was performed both from a fundamental as well as applied standpoint, using a multidisciplinary approach, allowing her to develop the following research directions: - obtaining of pH and thermo-sensitive hydrogels by adjusting the chemical functionality of the gel structure by inclusion of a second interpenetrating network and/or specific entrapped structures, - obtaining hydrogels with a multi-membrane organization through a multi-stages gelation process; - obtaining and testing systems that have encapsulated drugs, starting from advanced functional macromolecular structures made by self-assembly process; - testing possibilities for the use of hydrogels as a controlled drug delivery system.

Profile address: <https://publons.com/institution/23809/>

Scientific research

Articles published in international peer-reviewed journals (ISI ranked and included in international data bases): 107 (out of which 43 articles as main author and 20 articles as corresponding author). 37 Articles/Studies published full-text in international conference volumes: 696 citations (without self-citation) of the published papers in international ISI ranked journals, Hirsch index, H= 16 in SCOPUS, H=15 in ISI Web of Science databases, H=18 in Google Scholar). Patents (national): 12 patent application at OSIM Bucharest. Research and development projects based on national grants: 25 projects, of which: 6 as project leader and 19 as member of the project. In 2013 she received "Nicolae Teclu" award of the Romanian Academy. Highlighted publications: *Pharmaceutics* 2021, *J Polym Environ* 2020, *Biomacromolecules* 2020, *Polymers* 2020, *Macromol Biosci* 2019, *Int J Biol Macromol* 2019, *Mater. Chem. Phys* 2018, *Expert Opin Drug Deliv* 2017, *Int J Biol Macromol* 2017, *Materials Sci & Eng C* 2015, *Mater Chem Phys* 2016, etc.

Relevant publications

1. Nita L.E., Chiriac A. P., Ghilan A., Rusu A. G., Tudorachi N., Timpu D.. Alginate enriched with phytic acid for hydrogels preparation, *Int J Biol Macromol*, 181, 561-571 (2021), (Q1 journal: Polymer Science).
2. Nita L. E., Chiriac A. P., Rusu A. G., Ghilan A., Dumitriu R. P., Bercea M., Tudorachi N. Stimuli responsive scaffolds based on carboxymethyl starch and poly(2-dimethyl aminoethyl methacrylate) for antiinflammatory drug delivery, *Macromol Biosci*, Art.1900412/1-12 (2020), (Q1 journal: Polymer Science).
3. Nita L. E., Ghilan A., Rusu A. G., Neamtu I., Chiriac A. P. New trends in biobased aerogels, *Pharmaceutics*, 12, Article 449/1-31 (2020), (Q1 journal: Pharmacology & Pharmacy).
4. Nita L.E; Chiriac, AP; Bercea, M; Ghilan,; Rusu, AG; Dumitriu, RP; Mititelu-Tartau, L Multi-functional hybrid 3D network based on hyaluronic acid and a copolymer containing pendant spiroacetal moieties, *Int J Biol Macromol*, 125, 191-202, (2019), (Q1 journal: Polymer science).
5. Nita, L.E., Chiriac, A. P., Rusu, A.G., Bercea, M., Diaconu, A., Tudorachi, N. Interpenetrating polymer network systems based on poly (dimethylaminoethyl methacrylate) and a copolymer containing pendant spiroacetal moieties, *Materials Sci & Eng C*, 87, 22 – 3, 2018 (Q1 journal: Polymer science).