



Dr. Aurica P. Chiriac

Senior Scientist I

E-mail: achiriac@icmpp.ro

Researcher ID: B-9627-2012

ORCID: [0000-0002-8452-1780](https://orcid.org/0000-0002-8452-1780)

UEFISCDI ID: U-1700-037M-4070

Research topics

The research experience focuses on the synthesis and characterization of materials based on natural and synthetic polymers for biomedical and pharmaceutical applications. She has knowledge and skills in: ▪ classic and non-conventional synthesis in the presence of magnetic field of macromolecular compounds; ▪ polymer structure – properties – application relationships; ▪ magnetic nanocomposites preparation and characterization; ▪ macromolecular complexes: synthesis and characterization, biomedical applications (controlled release of bioactive principles), biodegradability and biocompatibility; ▪ (hydro)gels synthesis and characterization; ▪ pH and thermo-sensitive hydrogels by adjusting the chemical functionality in the gel structure; ▪ bioactive substance inclusion; ▪ innovatory contributions as patents with respect to polymer/(hydro)gels synthesis and characterization.

Scientific record: Articles published in international peer-reviewed journals (ISI ranked and included in international data bases): **165** (out of which 43 articles as main author). Articles/Studies published full-text in international conference volumes: **37**; **1047 citations** (without self-citation) of the published papers in international ISI ranked journals, Hirsch index: **H = 18** in SCOPUS, **H = 19** in ISI Web of Science databases, **H = 21** in Google Scholar. Patents (national): **45 OSIM patents**. Research and development projects based on national grants: **26 projects**, of which: **20 as project leader** and **6 as member** of the project.

SELECTED SCIENTIFIC ARTICLES

A. P. Chiriac, A.G. Rusu, L.E. Nita, A.M. Macsim, N.Tudorachi, I. Rosca, I.Stoica, D. Timpu, M. Aflori, F. Doroftei. *Synthesis of poly(ethylene brassylate-co-squaric acid) as potential essential oil carrier*. *Pharmaceutics*, 13, Article 477/1-24 (2021)

A. P. Chiriac, A. Ghilan, I. Neamtu, L. E. Nita, A. G. Rusu, V. M. Chiriac. *Advancement in the biomedical applications of the (nano)gel structures based on particular polysaccharides*. *Macromolecular Bioscience*, 18, Article 1900187/1-20 (2019)

A. P. Chiriac, A.G. Rusu, A. Diaconu, N. Tudorachi, L.E. Nita, I. Neamtu, D. Rusu. *Functional and structural analysis of a network containing a polymer structure with spiroacetal moieties and riboflavin as low molecular mass gelator*. *Materials Chemistry and Physics*, 217, 242-253 (2018)

A. P. Chiriac, L. E. Nita, A. Diaconu, M. Bercea, N.Tudorachi, D. Pamfil, L. Mititelu-Tartau. *Hybrid gels by conjugation of hyaluronic acid with poly(itaconic-anhydride-co-3,9-divinyl-2,4,8,10-tetraoxaspiro (5.5)undecane) copolymers*. *International Journal of Biological Macromolecules*, 98, 407-418 (2017)

A. P. Chiriac, A. Diaconu, L. E. Nita, N. Tudorachi, L. Mititelu-Tartau, A. Creteanu, O. Dragostin, D. Rusu, G. Popa. *The influence of excipients on physical and pharmaceutical properties of oral lyophilisates containing a pregabalin acetaminophen combination*, *Expert Opinion on Drug Delivery*, 14, 589-599 (2017)

A. P. Chiriac, V. Balan, M. Asandulesa, E. Butnaru, N. Tudorachi, E. Stoleru, L. E. Nita, I. Neamtu, A. Diaconu. *Investigation of thermal, rheological, dielectric and spectroscopic properties of a polymer containing pendant spiroacetal moieties*, *Materials Chemistry and Physics*, 180, 291-300 (2016)