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Research topics

• Ionic polysaccharides, synthesis characterization and their application; • Micro-/nano-particles obtained by chemical cross-linking of polysaccharides; • Micro-/nano-capsules obtained by self-assembly using layer-by-layers deposition technique from ionic polysaccharides; • Polyelectrolytes: synthesis, characterization, interaction in solution with ions, molecules, macromolecules, particles and surfaces; • Biomaterials (matrix, membranes, hydrogels) with medical applications.

Profile address:

Researcher ID: <http://www.researcherid.com/rid/B-5681-2011>

Scopus Author ID: <https://www.scopus.com/authid/detail.uri?authorId=8134084000>

Scientific research

Author and co-author of **40 articles (from which 34 ISI)**, **5 book chapters**, **2 national patent**, **12 articles in proceedings**, over **100 participations at national and international scientific meetings**, and **35 research grants** (4 - leader, 2 - project manager, and 28 - member)

Author output:

Hirsch index - 12; citations - **542 (web of science)**; without self-citations - 479

Relevant publications

1. Suflet D.M., Chitanu G.C., Popa V.I. **Phosphorylation of polysaccharides: New results on synthesis and characterisation of phosphorylated cellulose.** *React. Funct. Polym.* **2006**, 66(11), 1240-1249; DOI: 10.1016/j.reactfunctpolym.2006.03.006
2. Suflet D.M., Chitanu G.C., Desbrières J. **Phosphorylated polysaccharides. 2. Synthesis and properties of phosphorylated dextran.** *Carbohydr. Polym.* **2010**, 82, 1271-1277; DOI: 10.1016/j.carbpol.2010.07.007
3. Suflet D.M., Nicolescu A., Popescu I., Chitanu G.C. **Phosphorylated polysaccharides. 3. Synthesis of phosphorylated curdlan and its polyelectrolyte behaviour compared with other phosphorylated polysaccharides.** *Carbohydr. Polym.* **2011**, 84 (3), 1176-1181; DOI: 10.1016/j.carbpol.2011.01.010.
4. Popescu I., Pelin I.M., Butnaru M., Fundueanu G., Suflet D.M. **Phosphorylated curdlan microgels. Preparation, characterization, and *in vitro* drug release studies.** *Carbohydr. Polym.* **2013**, 94(2), 889-898; DOI: 10.1016/j.carbpol.2013.02.014
5. Suflet D.M., Popescu I., Pelin I.M., Nicolescu A., Hitruc G.; **Cationic curdlan: Synthesis, characterization and application of quaternary ammonium salts of curdlan.** *Carbohydr. Polym.* **2015**, 123, 396-405; DOI: 10.1016/j.carbpol.2015.01.050
6. Popescu I., Pelin I.M., Ailiesei G.L., Ichim D.L., Suflet D.M.; **Amphiphilic polysaccharide based on curdlan: synthesis and behaviour in aqueous solution.** *Carbohydr. Polym.* **2019**, 224 Article Number: UNSP 115157. DOI: 10.1016/j.carbpol.2019.115157; DOI: 10.1016/j.seppur.2014.11.031
7. Suflet D.M., Popescu I., Pelin I.M.; **Preparation and adsorption studies of phosphorylated cellulose microspheres;** *Cell. Chem. Technol.* **2017**, 51(1-2), 23-34
8. Suflet D.M., Pelin I.M., Dinu V.M., Lupu M., Popescu I.; **Hydrogels based on monobasic curdlan phosphate for biomedical applications;** *Cell. Chem. Technol.* **2019**, 53(9-10) 897-906
9. Suflet D.M., Popescu I., Pelin I.M., Ichim D.L., Daraba O.M., Constantin M., Fundueanu G.; **Dual cross-linked chitosan/PVA hydrogels containing silver nanoparticles with antimicrobial properties;** *Pharmaceutics*. Special Issue: *Pharmaceutical Formulations with Antimicrobial Properties*, **2021** (open access), 13(9), 1461
10. Suflet D.M., Popescu I., Pelin I.M., David G., Serbezeanu D., Rimbu C.M., Daraba O., Enache A.A., Bercea M.; **Phosphorylated Curdlan Gel/Polyvinyl Alcohol Electrospun Nanofibres Loaded with Clove Oil with Antibacterial Activity,** *Gels*. Special Issue: *Biopolymer Gel-Assisted Synthesis of Particles for Biomedical Applications II*, **2022**, 8(7), 439