



Dr. Stefania RACOVITA

Scientific researcher

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Research topics

Synthesis and characterization of linear polybetaines based on poly(N-vinylimidazole) and poly(4-vinylpyridine), as well as the synthesis and characterization of crosslinked zwitterionic polymer materials with high selectivity for heavy metals and organic pollutants. Synthesis and characterization of microparticles by simple and complex coacervation as controlled drug delivery systems for various administration routes. Porous microparticles obtained by grafting polysaccharides (xanthan, gellan, chitosan, sodium hyaluronan) onto crosslinked networks based on acrylic monomers using suspension polymerization technique. These microparticles were used in various applications, more precisely in the retention, delivery and sustained release of various drug as well as in biotechnological field as polymeric supports for enzyme immobilization. Microparticles with complex architectures based on the polyelectrolyte complexes between an acrylic ion exchange resin and polysaccharides.

Scientific research

Author and co-author of 33 ISI articles (13 in Q1 zone and 4 in Q2 zone), three books, eight book chapters, 3 articles in proceedings, 32 posters, 26 oral communications, member in 6 research national/international grants, 405 citations. (HI = 10).

Visibility

<https://www.webofscience.com/wos/author/record/29367161>;

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<https://www.scopus.com/authid/detail.uri?authorId=22951652200>

Relevant publications

1. M.-A. Lungan, M. Popa, **S. Racovita**, G. Hitruc, F. Doroftei, J. Desbries, S. Vasiliu, **Surface characterization and drug release from porous microparticles based on methacrylic monomers**, *Carbohydr. Polym.* 125 (2015) 323-333, **Q1** (IF₂₀₂₁ = **10.723**). DOI: 10.1016/j.carbpol.2015.02.058
2. **S. Racovita**, M.-A. Lungan, I. Bunia, M. Popa, S. Vasiliu, **Adsorption and release studies of cefuroxime sodium from acrylic ion exchange resin microparticles coated with gellan**, *React. Funct. Polym.* 105 (2016) 103-113, **Q1** (IF₂₀₂₁ = **4.966**). DOI: 10.1016/j.reactfunctpolym.2016.06.003
3. S. Vasiliu, M.-A. Lungan, **S. Racovita**, M. Popa, **Porous microparticles based on methacrylic copolymers and gellan as drug delivery systems**, *Polym. Internat.* 69 (2020) 1066-1080, **Q2** (IF₂₀₂₁ = **3.213**). DOI: 10.1002/pi.5917
4. **S. Racovita**, N. Baranov, A.-M. Macsim, C. Lionte, C. Cheptea, V. Sunel, M. Popa, S. Vasiliu, J. Desbries, **New grafted copolymers carrying betaine units based on gellan and N-vinylimidazole as precursors for design of drug delivery systems**, *Molecules*, 25 (2020) 5451, **Q2** (IF₂₀₂₁ = **4.927**). DOI:10.3390/molecules25225451
5. **S. Racovita**, M.A. Trofin, D. F. Loghin, M.M. Zaharia, F. Bucatariu, M. Mihai, S. Vasiliu, **Polybetaines in biomedical applications**, *Internat. J. Mol. Sci.*, 22 (2021) 9321, **Q1** (IF₂₀₂₁ = **6.208**). DOI: 10.3390/ijms22179321