

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: Facultatea de Inginerie Chimică și Biotehnologii

Departamentul: Bioresurse și Știința Polimerilor

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L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

Nanocompozite cu matrice polimeră termoreactivă, Universitatea POLITEHNICA din Bucuresti, Martie 2007

B. Cărți și capitole în cărți publicate în ultimii 10 ani

- **1. S.A. Gârea, H. Iovu**, capitol carte: **Drug delivery systems: polymer and layered silicate-based**, *Encyclopedia of biomedical polymers and polymeric biomaterials*, TAYLOR & FRANCIS, 2914-2925, **2015**.
- **2. S.A. Gârea**, C. Andronescu, H. Iovu, capitol carte: **Polybenzoxazine-clay nanocomposites**, carte: **Advanced and Emerging Polybenzoxazine Science and Technology**, Editori: Hatsuo Ishida, Pablo Froimowicz, Elsevier, **2017**.
- **3. S.A. Gârea**, A.I. Voicu, H. Iovu, capitol carte: **Clay-polymer nanocomposites for controlled drug release**, carte: **Clay-Polymer Nanocomposites**, Editori: Sabu Thomas, Mohamed Chehimi, Jlassi Khouloud, Elsevier, **2017**.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. Raicopol Matei D., Hanganu Anamaria, Samoilă Iuliana, Dinescu Sorina, Costache Marieta, Balas Mihaela, Chiriță Cornel, Cristina Șeremet Oana, Olaru Octavian Tudorel, Nicolescu Florica, Nicolescu Teodor Octavian, **Gârea Sorina Alexandra**, Ghebaur Adi, PEGylated 5-aminosalicylic acid phospholipid bioconjugate: A novel prodrug designed for colon-targeted delivery, *Journal of Drug Delivery Science and Technology* Volume 101 November **2024** Article number 106188.

2. Stavarache Cristina, Ghebur Adi, Vlăsceanu, George Mihail, Vasile, Eugeniu, **Gârea Sorina Alexandra**, Iovu, Horia, Fabrication of k-Carrageenan/Alginate/Carboxymethyl Cellulose based Scaffolds via 3D Printing for Potential Biomedical Applications, *Polymer*, Volume 16, Issue 11 June **2024**, Article number 1592.
3. Stavarache Cristina, **Gârea Sorina Alexandra**, Serafim Andrada, Olăreț Elena, Vlăsceanu George Mihail, Marin Maria Minodora, Iovu Horia, Three-Dimensional-Printed Sodium Alginate and k-Carrageenan-Based Scaffolds with Potential Biomedical Applications, *Polymers*, Vol.16, Issue 3, Februarie **2024**, Article number 305
4. Stavarache Cristina, **Gârea Sorina Alexandra**, Ghebur Adi, Iovu Horia, K-Carrageenan/Sodium Alginate interpenetrating network beads for the incorporation of ketoprofen as a potential drug delivery system, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, Volum 85, Issue 1, Pages 45 – 622023, **2023**.
5. Dumitru Marinela Victoria, Sandu Teodor, Ciurlica Ana Lorena, Neblea Iulia Elena, Trica Bogdan, Ghebur Adi, **Gârea Sorina Alexandra**, Iovu Horia, Sarbu Andrei, Iordache Tanta Verona, Organically modified montmorillonite as pH versatile carriers for delivery of 5-aminosalicylic acid, *Applied Clay Science*, Volume 218, 1 March **2022** Article number 106415
6. A. I. Voicu, **S. A. Gârea**, A.Ghebur, C. L. Nistor, A. Sârbu, E. Vasile, R. Mitran, H.Iovu, *New nanocarriers based on Porous Clay Heterostructures (PCH) designed for methotrexate delivery*, *Microporous and Mesoporous Materials*, Vol. 328, **2021**, 111434 (Autor de corespondenta)
7. A.I. Voicu, **S.A. Gârea**, E.Vasile, A. Ghebur, H. Iovu, *Hybrid Hosts Based on Sodium Alginate and Porous Clay Heterostructures for Drug Encapsulation*, *Polymers*, Vol. 13, Issue 16, **2021**, Article number 2803 (Autor de corespondenta)
8. C.E. Stavarache, A. Ghebur, S. Dinescu, I. Samoilă, E. Vasile, G.M. Vlasceanu, H. Iovu., **S.A. Gârea**, *5-aminosalicylic acid loaded chitosan-carrageenan hydrogel beads with potential application for the treatment of inflammatory bowel disease*, *Polymers*, Volume 13, Issue 151 August **2021** Article number 2463 (Autor de corespondenta)
9. A.M. Onaș, I.E. Bîru, **S.A. Gârea**, H. Iovu, Novel bovine serum albumin protein backbone reassembly study: Strongly twisted β -sheet structure promotion upon interaction with go-pamam, *Polymers*, 12 (11), Article number 2603, Pages 1-14, **2020**
10. I.E. Biru, **S.A. Gârea**, H. Iovu, Innovative hyperbranched polybenzoxazine-based graphene oxide—poly(Amidoamines) nanomaterials, *Polymers*, 12 (10), Article number 2424, Pages 1-18, **2020**.
11. E.I. Biru, **S.A. Gârea**, H. Iovu, Developing Polybenzoxazine Composites Based on Various Carbon Structures, *Macromolecular Chemistry and Physics*, 220, (3), **2019**, Article Number:1800322
12. Duldner, M.-M. Bartha, E., Capitanu, S. , Nica, S., Coman, A.E., Tincu, R. , Sarbu, A. , Filip, P.I. , Apostol, S., **Gârea, S.A.**, Attempts to Upcycle PET Wastes into Bio-based Long-lasting Insulating Materials, *Revista de Chimie* Volume 70, Issue 7, **2019**, Pages 2301-2307
13. A.M. Pandele, C. Andronescu, A. Ghebur, **S.A. Gârea**, H. Iovu, New Biocompatible Mesoporous Silica/Polysaccharide Hybrid Materials as Possible Drug Delivery Systems, *Materials* **2019**, 12(1), Article number 15, DOI: 10.3390/ma12010015.

14. E.I. Biru, **S.A. Gârea**, A. Nicolescu, E. Vasile, H. Iovu, Advanced polybenzoxazine structures based on modified reduced graphene oxide, *Polymers*, ISSN: 2073-4360, Volume,10, Issue 9, 24 August **2018**, Article number 941.
15. A.I. Voicu, **S.A. Gârea**., E. Vasile, C.L. Nistor,H. Iovu, Functionalization of porous clay heterostructures with silane coupling agents, *Materiale Plastice*, ISSN: 0025-5289, Volume 54, Issue 2, 341-344, **2017 (autor corespondenta)**
16. A.Ghebaur, **S.A. Gârea**, S. Cecoltan, H. Iovu, Development and characterization of novel freeze-thawed polyvinyl alcohol/ halloysite hydrogels: An approach for drug delivery application, *Materiale Plastice*, ISSN: 0025-5289, Volume 54, Issue 1, 8-13, **2017**
17. E.I. Biru, C. Andronescu, **S.A. Garea**, H. Iovu, Polybenzoxazine based nanocomposites reinforced with modified graphene oxide, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 79 (4), 3-10, **2017**.
18. A.I. Voicu, **S.A. Garea**, A.M. Pandeale, H.Iovu, Properties of hybrid films based on poly(vinyl) alcohol and porous clay heterostructures, *U.P.B. Sci. Bull., Series B*, Vol. 79, Iss. 3, 79(3), pp. 57-66, **2017**.
19. **S.A. Gârea**, A.I. Mihai, E. Vasile, C. Nistor, A. Sârbu, R. Mitran, Synthesis of new porous clay heterostructures: The influence of co-surfactant type, *Materials Chemistry and Physics*, 179, 17-26, **2016**.
20. A. Ghebaur, **S.A. Gârea**, H. Iovu, Adsorption and Release Kinetic Studies of Vitamin B1 Onto Halloysite Nanotubes, *Materiale Plastice* Volume: 53 Issue: 4 pages: 573-577, **2016**.
21. A. Ghebaur, B. Balanuca, **S.A. Gârea**, pH-Sensitive Clays as Drug Delivery Carriers for Controlled Release of Hydrocortisone, *Materiale Plastice*, 53, 419-423, **2016**
22. I. Biru, C.M. Damian, **S.A. Gârea**, H. Iovu, Benzoxazine-functionalized graphene oxide for synthesis of new nanocomposites, *European Polymer Journal*, 83, 244-255, **2016**
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24. **S.A. Gârea**, A.I. Mihai, A. Ghebaur, Hybrid Films based on Sodium Alginate and Porous Clay Heterostructures, *Revista Materiale Plastice*, 52 (3), 275-280, **2015**
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26. C. Andronescu, **S.A. Gârea**, A. Nicolescu, C. Deleanu, E. Vasile, H. Iovu, Innovative approach for the synthesis of benzoxazine-modified montmorillonite, *High Performance Polymers*, 27 (5), 599-606, **2015**
27. Florea Ana-Mihaela, Sârbu Andrei, Iordache Tanta-Verona, **Gârea Sorina Alexandra**, Sandu Teodor, Apostol Steluta, Hubca Gheorghe, Operational parameters for the preparation of precursor polymer matrix used in molecular imprinting, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science* Volume 77, Issue 4, Pages 3 – 14201, **2015**
28. Raicopol Matei Bălănuță Brindusa, Sliozberg Kirill;Schlüter Bert; **Gârea Sorina Alexandra**; Chira Nicoleta; Schuhmann Wolfgang; Andronescu Corina, Vegetable oil-based polybenzoxazine derivatives coatings on Zn-Mg-Al alloy coated steel, *Corrosion Science*, 2015, 100, pp. 386–395

29. Bălănuță Brindusa, Raicopol Matei, Maljusch Artjom, **Garea Sorina**, Hanganu Anamaria, Schuhmann, Wolfgang, Andronescu Corina, Phenolated Oleic Acid Based Polybenzoxazine Derivatives as Corrosion Protection Layers, *ChemPlusChem* Volume 80, Issue 7, Pages 1170 - 11771 July 2015
30. C. Andronescu, **S.A. Gărea**, E. Vasile, H. Iovu, Synthesis and characterization of polybenzoxazine/layered double hydroxides nanocomposites, *Composites Science and Technology*, 95, 29-37, **2014**
31. **S.A. Gărea**, A.I. Mihai, E. Vasile, G. Voicu, Synthesis and characterization of porous clay heterostructures, *Revista de Chimie*, 65, 649-656, **2014**
32. **S.A. Gărea**, A. Ghebaur, E. Vasile, Hybrid materials based on dendritic polymer and halloysite, *Materiale Plastice*, 51, 12-16, **2014**
33. **S.A. Gărea**, A. Ghebaur, E. Vasile, Drug delivery systems based on poly(vinyl alcohol)-layered silicates hybrid films, *Materiale Plastice*, 51, 124-129, **2014**
34. M. Prodana, A. Voiculet, **S.A. Gărea**, M. Radu, H. Iovu, I. Demetrescu, A. Dinischiotu, Synthesis, characterization and controlled toxicity of a novel hybrid material based on cisplatin and docetaxel, *Central European Journal of Chemistry*, 12, 1008-1015, **2014**

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste
- Selecție cu maximum 20 lucrări în volume de conferințe

E. Brevete obținute în întreaga activitate

1. Sârbu A., Mara E.L., Abagiu T.A., Moțoc S., Fruth-Oprișan V., Iovu H., **Gărea S.**, Beda M., Sârbu L., Radu A.L., Dima S.O., *Procedeu de obținere a nitrurii de siliciu cu structură dirijată*, **RO 123567 (B1)**, data eliberării: **30.10.2013**
2. Mara E.L., Velea T., Sârbu A., Sârbu L., Beda M., Abagiu T.A., Moțoc S., Fruth-Oprișan V., **Gărea S.A.**, Onisei S., Sîrbu E., *Silice mezoporoasă și procedeu de obținere a acesteia*, **RO 123556 (B1)**, data eliberării: **30.08.2013**
3. Mara E.L., Predica V., Sarbu A., Sarbu L., Enache L., Badilita V., Capota P., Fruth-Oprisan V., **Gărea S.A.**, Soare V., Neagu E., Purcaru V., Stoiciu F., Gherghe S.L., Lupu C., Ghita M., Ispas A., Lungu A., *Procedeu de prelucrare a serpentinitei și produse realizate conform procedului*, **RO 128499 (B1)**, data eliberării: **29.07.2016**

4. Sârbu A., Iancu S., Duldner M.M, Apostol S., Dima S.O., Ionescu E., Avramescu S.M., Udrea I., **Gârea S.A.**, Sandu T., Sârbu L. , Florea A.M., Perle polimerice imprentate molecular pentru extractia selectivă a hipericinei din fitoextracte, RO129825 (B1), data eliberării: **29.11.2018**.
5. **Gârea S.A.**, Voicu A., Pandele M.A., Iovu H., Sârbu A., Nistor C.L., Vasile E., Păduraru C.F., Procedeu de obținere a unor argile poroase heterostructurate, utilizând polieteramine hidrofile, **RO 132571 (B1)**, data eliberării: **28.06.2019**.
6. **Gârea S.A.**, Voicu A., Ghebaur A., Iovu H., Sârbu A., Nistor C.L., Vasile E., Păduraru C.F., Procedeu de obținere a argilelor poroase heterostructurate utilizand haloisitul, **RO 132550 (B1)**, data eliberării: **28.06.2019**.
- 7.Sârbu A., Iordache T.V., Florea A.M., Apostol S., **Gârea S.A.**, Ionescu E., Avramescu S. M., Udrea I., Sandu T., Sarbu L.,Granule polimerice imprentate molecular cu hipericina si procedeul de obtinere, RO 130735 B1, data eliberarii: **29.05.2020**
8. Duldner Monic Mirela, Iancu Stela, Capitanu Stanca, Bartha Emeric, Nica Simona, Sarbu Andrei, Ionescu Marcel, **Garea Sorina Alexandra**, Oligoester-polioli aromatic-alifatici din deseuri de polietilentereftalat si monomeri provenind din resurse regenerabile si procedeul de obtinere a acestora, RO131976 B1, data eliberarii:**30.06.2021**
9. Duldner Monica Mirela, Capitanu Stanca, Cursaru Bogdan, Sarbu Andrei, Apostol Steluta, Bartha Emeric, Ion Simona Filofteia, **Garea Sorina Alexandra**, Ionescu Marcel, Oligoester-polioli din deseuri de polietilentereftalat si materiale regenerabile, procedeul de obtinere a acestora si compozitie pentru spume poliuretanic stropite, incorporand respectivii oligoesteri-polioli, RO 133049 B1, data eliberarii: **30.03.2021**
10. Sandu Teodor, Sârbu Andrei, Dumitru Marinela Victoria, Ghebaur Adi, **Gârea Sorina Alexandra**, Iovu Horia, Iordache Tanța Verona, Chiriac Anita Laura, Gavrilă Ana Mihaela, Zaharia Anamaria, Materiale hibride pe bază de montmorilonit silanizat și mesalamină și procedeul de obținere a acestora, RO 135062 B1, data eliberarii:**30.05.2022**