

PERSONAL INFORMATION

Luminita Marin



 [Redacted] Iasi, Romania

 [Redacted]

 lmarin@icmpp.ro

Sex F | Date of birth [Redacted] | Nationality Romanian

PROFESSIONAL EXPERIENCE

- | | |
|----------------|--|
| 2021 – present | Head of the Department of Polycondensation and Thermostable Polymers
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Management, research |
| 2020 – present | Senior Researcher I
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Research |
| 2016 – present | Doctoral Supervisor
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Management, research |
| 2015 – present | Group leader in the Polycondensation and Thermostable Polymers Department
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Management, research |
| 2015 – 2020 | Scientific Researcher II
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Research |
| 2010 – 2015 | Scientific Researcher III
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Research |
| 2008 – 2010 | Scientific Researcher
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Research |
| 2001 – 2008 | Research Assistant
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Research |
| 1997 – 2001 | Chemistry teacher
Feredeni-Deleni School, Iasi, Romania
Didactic activity |



EDUCATION AND TRAINING

- April-may 2025 **Visiting Researcher**
Instituto de Investigaciones Científicas y Servicios de Alta Tecnología de Panamá
Chitosan based biosensors
- April-May 2024 **Visiting Researcher**
National Institute for Materials Science, Tskuba, Japan
Chitosan based biosensors
- December 2023 **Visiting Researcher**
Instituto de Física de São Carlos, Universidade de São Paulo, Brazil
Universidade Federal do Rio de Janeiro, Brazil
Chitosan based biosensors
- January 2023 **Visiting Researcher**
Instituto de Física de São Carlos, Universidade de São Paulo, Brazil
Chitosan based biosensors
- July 2019 **Visiting Researcher**
University of Florence, Florence, Italy
Carbon anhydrase inhibitors
- May-July 2013 **Postdoctoral Stage**
Institut Européen des Membranes, Montpellier, France
Covalent dynamic chemistry
- March-May 2011 **Postdoctoral Stage**
Institut Européen des Membranes, Montpellier, France
Covalent dynamic chemistry
- 2010-2013 **Postdoctoral Stage**
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Biomaterials based on chitosan; covalent dynamic chemistry
- 2001-2007 **PhD in Chemistry**
“Petru Poni” Institute of Macromolecular Chemistry, Iasi
Organic chemistry; Macromolecular Chemistry; Liquid crystals
- January- July 2006 **PhD Stage**
Istituto per lo Studio delle Macromolecole, Milan, Italy
Organic chemistry; low molecular weight compounds containing chromophore groups, thin solid films
- 2000-2002 **MSc in Physical Organic Chemistry**
„Al. I. Cuza” University, Iasi
Organic chemistry, physico-chemistry of polymers, organic structural analysis, quantum chemistry, physical chemistry, etc.
- 1996 **Chemistry bachelor**
„Al. I. Cuza” University, Iasi
Organic chemistry, inorganic chemistry, macromolecular chemistry, analytic chemistry, physical chemistry, quantum chemistry, colloidal chemistry, biochemistry, physics mathematics, etc.

PERSONAL SKILLS

Mother tongue	Romanian				
Foreign language	UNDERSTANDING		SEPAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Communication skills	Good communication skills gained during the didactic activity and during the postdoctoral/doctoral stages, and by dissemination of the research as speaker at international and national conferences and at various research institutes and universities				
Organizational/Management Competences	Good skills to coordinate large research teams gained during by implementation of more of 14 projects as project director/ project tutor/team leader/work package leader				

ADDITIONALS INFORMATION

Publications	More than 140 scientific papers (more than 130 in ISI journals), books, book chapters
Oral communications	More than 100 conferences/oral communications at international and national conferences and as invited lecturer at various research institutes and universities
Projects	Team member of 28 research projects: coordinator/director for: 7 national projects, 2 bilateral projects, 1 European project; tutor for 3 postdoctoral projects; group leader for 1 European project; work-package leader for 1 European project; and team member for 13 national projects
Distinctions	“Costin D. Nenitescu” Romanian Academy Award 2006; <i>Cristofor Simonescu Medal</i> for excellence in macromolecular chemistry of the <i>American Chemical Society</i> in association with <i>Romanian International Chapter</i> , 2019; <i>Distinction „Top 1% Reviewers for Chemistry”</i> , for 2017, 2018 and 2019 and „ <i>Top 1% Reviewers in Cross Fields</i> ” 2019 awarded by „PUBLONS”.
Other academic activities	-Editorial Board Member of the Polymers journal; -Editorial Board Member of the Polysaccharides journal -Editorial Board Member of the Progress on Chemistry and Application of Chitin and its Derivatives journal -Reviewer for more of 700 papers (see https://publons.com/researcher/1279610/luminita-marin/); -Member of the Mat. Sci. Commission of the National Council of Scientific Research (2017-2019) -Member of the Chemistry Commission of the National Council for Titles Diplomas and Certificates (2018-2020) -Board member of the European Chitin Society -Inter-academic Exchange with 3 research institutes (Poland, Italy, Bulgaria) -Lecturer at summer school “Nanomaterials and Nanoarchitectures II: Composite Materials and Their Applications”, Smolenice, Slovakia, 28 June 2024 – 5 July 2024
Scientometric profile	-2780 citations (without self-citations) in Web of Science, Hirsh index 34, ID Researcher: F-7588-2011; orcid.org/0000-0003-3987-4912 -4299 citations in Google Scholar, Hirsh index 39, i10-index 93

Date: 27.10.2025

Dr. Habil. CS I Luminita Marin



LIST OF RELEVANT PAPERS

1. Antioxidant-sealed chitosan nanofibers loaded with erythromycin: Tissue regeneration biomaterials with immune-modulating effects in a rat model, V.M. Platon, B.I. Andreica, A. Anisiei, I. Rosca, I. A. Sandu, L. Mititelu Tartau, L. Marin, *Carbohydrate Polymers* 368, 124247 (2025) <https://doi.org/10.1016/j.carbpol.2025.124247>
2. Antimicrobial chitosan-based hydrogels: A novel approach to obtain sanitizers, D. Ailincăi, M. Bercea, I. Rosca, I.A. Sandu, **L. Marin**, *Carbohydrate Polymers* 354, 123288 (2025) <https://doi.org/10.1016/j.carbpol.2025.123288>
3. LDH-chitosan bionanocomposites for oncologic applications: A refreshing perspective on the mutual influence through intermolecular forces toward controlled morphology and dispersion, D.I. Olariu, V.M. Platon, A. Ibanescu, M.D. Vlad, C.M. Zara-Danceanu, D. Lutić, L. Marin, B. Dragoi, *International Journal of Biological Macromolecules* 329, 147495 (2025) DOI10.1016/j.ijbiomac.2025.147495 <https://doi.org/10.1016/j.ijbiomac.2025.147495>
4. Multifunctional erythromycin-loaded liposomes: a methodological optimization for enhanced mucoadhesion, antioxidant activity, and biocompatibility, V.M. Platon, A.M. Craciun, I. Rosca, N. Simionescu, L. Marin, *Biomaterials Science*, DOI10.1039/d5bm00629e, Early Access SEP 2025 DOI: [10.1039/D5BM00629E](https://doi.org/10.1039/D5BM00629E)
5. Cold plasma irradiation of chitosan: A straight pathway to selective antitumor therapy, C. Miron, B.I. Andreica, M. Iftime, A. Fîfere, T. Yamakawa, S. Toyokuni, M. Mizuno, L. Mititelu Tartau, A. Bejan, Y. Motooka, T. Kondo, I. Sava, V. Harabagiu, J. Kumagai, A. Tanaka, H. Tanaka, **L. Marin***, M. Hori, *International Journal of Biological Macromolecules* 281, 136513 (2024) <https://doi.org/10.1016/j.ijbiomac.2024.136513>
6. Chitosan-strigolactone mimics with synergistic effect: A new concept for plant biostimulants, M.M. Iftime, A. Nicolescu, F. Oancea, F. Georgescu, **L. Marin**, *Carbohydrate Polymers* 344, 122524 (2024) <https://doi.org/10.1016/j.carbpol.2024.122524>
7. Chitosan nanofibers encapsulating copper oxide nanoparticles: A new approach towards multifunctional ecological membranes with high antimicrobial and antioxidant efficiency, A. Bejan, A. Anisiei, B.I. Andreica, I. Rosca, **L. Marin***, *International Journal of Biological Macromolecules* 260, 129377 (2024) <https://doi.org/10.1016/j.ijbiomac.2024.129377>
8. Biocompatible hydrogels based on quaternary ammonium salts of chitosan with high antimicrobial activity as biocidal agents for disinfection, B.I. Andreica, L. Mititelu-Tartau, I. Rosca, I. Pelin, E. Nicol, **L. Marin**, *Carbohydrate Polymers* 342, 122389 (2024) <https://doi.org/10.1016/j.carbpol.2024.122389>
9. Quaternized chitosan/chitosan nanofibrous mats: An approach toward bioactive materials for tissue engineering and regenerative medicine; B.-I. Andreica, A. Anisiei, I. Rosca, A.-I. Sandu, A.-S. Pasca, L. Mititelu-Tartau, **L. Marin***; *Carbohydrate Polymers* 302, 120431 (2023) <https://doi.org/10.1016/j.carbpol.2022.120431>
10. Electrospinning of chitosan-based nanofibers: from design to perspective applications; A. Anisiei, F. Oancea, **L. Marin***; *Reviews in Chemical Engineering* 39, 31-70 (2023) <https://doi.org/10.1515/revce-2021-0003>
11. Mesoporous chitosan nanofibers loaded with norfloxacin and coated with phenylboronic acid perform as bioabsorbable active dressings to accelerate the healing of burn wounds; D. Ailincăi, S. Cibotaru, A. Anisiei, C. G. Coman, A. S. Pasca, I. Rosca, A.-I. Sandu, L. Mititelu-Tartau, **L. Marin***; *Carbohydrate Polymers* 318, 121135 (2023) <https://doi.org/10.1016/j.carbpol.2023.121135>

12. Quaternized chitosan-based nanofibers with strong antibacterial and antioxidant activity designed as ecological active food packaging; B.-I. Andreica, A. Anisie, I. Rosca, **L. Marin***; *Food Packaging and Shelf Life* 39, 101157 (2023) <https://doi.org/10.1016/j.fpsl.2023.101157>
13. Biodegradable trimethyl chitosan nanofiber mats by electrospinning as bioabsorbable dressings for wound closure and healing; A. Anisie, B.-I. Andreica, L. Mititelu-Tartau, C.-G Coman, R. Bilyy, G. Bila, I. Rosca, A.-I Sandu, E. Amler, **L. Marin***; *International Journal of Biological Macromolecules* 249, 126056 (2023) <https://doi.org/10.1016/j.ijbiomac.2023.126056>
14. Drug delivery based on a supramolecular chemistry approach by using chitosan hydrogels; D. Ailincăi, S. Morariu, I. Rosca, I. Sandu, **L. Marin**; *International Journal of Biological Macromolecules* 248, 125800 (2023) <https://doi.org/10.1016/j.ijbiomac.2023.125800>
15. Quaternized chitosan (nano)fibers: A journey from preparation to high performance applications; **L. Marin***, B.-I. Andreica, A. Anisie, S. Cibotaru, M. Bardosova, E.M. Materon, O.N. Oliveira; *International Journal of Biological Macromolecules* 242, 125136 (2023) <https://doi.org/10.1016/j.ijbiomac.2023.125136>
16. TEGylated Phenothiazine-Imine-Chitosan Materials as a Promising Framework for Mercury Recovery; S. Cibotaru, D. Ailincăi, B.I. Andreica, X. Cheng, **L. Marin***; *Gels* 8(11), 692 (2022) <https://doi.org/10.3390/gels8110692>
17. Biocompatible drug delivery systems able to co-deliver antifungal and antiviral agents; D. Ailincăi, M. Bercea, L. Mititelu-Tartau, **L. Marin**; *Carbohydrate Polymers* 298, 120071 (2022) <https://doi.org/10.1016/j.carbpol.2022.120071>
18. Self-Healing Chitosan Hydrogels: Preparation and Rheological Characterization; A. M. Craciun, S. Morariu, **L. Marin***; *Polymers* 14 (13), 2570 (2022) <https://doi.org/10.3390/polym14132570>
19. Pegylation of phenothiazine-A synthetic route towards potent anticancer drugs; S. Cibotaru, V. Nastasa, A.I. Sandu, A. C. Bostanaru, M. Mares, **L. Marin***; *Journal of Advanced Research* 37, 279-290 (2022) <https://doi.org/10.1016/j.jare.2021.07.003>
20. Chitosan crosslinking with a vanillin isomer toward self-healing hydrogels with antifungal activity; M.-M. Iftime, I. Rosca, A.-I. Sandu, **L. Marin**; *International Journal of Biological Macromolecules* 205, 574–586 (2022) <https://doi.org/10.1016/j.ijbiomac.2022.02.077>
21. Biocompatible Chitosan-Based Hydrogels for Bioabsorbable Wound Dressings; R. Lungu, M.A. Paun, D. Peptanariu, D. Ailincăi, **L. Marin**, M.V. Nichita, V.A. Paun, V.P. Paun; *Gels* 8, 107 (2022) <https://doi.org/10.3390/gels8020107>
22. Fluorescent chitosan-BODIPY macromolecular chemosensors for detection and removal of Hg²⁺ and Fe³⁺ ions; D. Wang, **L. Marin**, X.J. Cheng; *International Journal of Biological Macromolecules* 198, 194-203 (2022) <https://doi.org/10.1016/j.ijbiomac.2021.12.075>
23. Iminoboronate-chitoooligosaccharides hydrogels with strong antimicrobial activity for biomedical applications; D. Ailincăi, I. Rosca, S. Morariu, L. Mititelu-Tartau, **L. Marin**; *Carbohydrate Polymers* 276, 118727 (2022)
24. Chitosan crosslinking with pyridoxal 5-phosphate vitamer towards biocompatible hydrogels for *in vivo* applications, A.M. Craciun, L. Mititelu-Tartau, G. Pricope, **L. Marin***, *International Journal of Biological Macromolecules* 193, 1734-1743 (2021) <https://doi.org/10.1016/j.ijbiomac.2021.10.228>
25. Amphiphilic chitosan-g-poly(trimethylene carbonate) – a new approach for biomaterials design; B.I. Andreica, D. Ailincăi, A.I. Sandu, **L. Marin***; *International Journal of Biological Macromolecules*, 193, 414-424 (2021) <https://doi.org/10.1016/j.ijbiomac.2021.10.174>
26. Chitosan based macromolecular probes for the selective detection and removal of Fe³⁺ ion; C.W. Li, **L. Marin**, X.J. Cheng; *International Journal of Biological Macromolecules* 186, 303-313 (2021) <https://doi.org/10.1016/j.ijbiomac.2021.07.044>
27. Phenothiazine-chitosan based eco-adsorbents: A special design for mercury removal and fast naked eye detection; A. Bejan, F. Doroftei, X. Cheng, **L. Marin***; *International Journal of*

- Biological Macromolecules* 162, 1839-1848 (2020) <https://doi.org/10.1016/j.ijbiomac.2020.07.232>
28. Citryl-imine-PEG-ylated chitosan hydrogels – Promising materials for drug delivery applications; D. Ailincăi, L. Mititelu-Tartau, **L. Marin**; *International Journal of Biological Macromolecules* 162, 1323-1337 (2020) <https://doi.org/10.1016/j.ijbiomac.2020.06.218>
 29. Quaternary ammonium salts of chitosan. A critical overview on the synthesis and properties generated by quaternization; B.I. Andreica, X. Cheng, **L. Marin***; *European Polymer Journal* 139, 110016 (2020) <https://doi.org/10.1016/j.eurpolymj.2020.110016>
 30. New formulations based on salicyl-imine-chitosan hydrogels for prolonged drug release; M.M. Iftime, L. Mititelu-Tartau, **L. Marin**; *International Journal of Biological Macromolecules* 160, 398-408 (2020) <https://doi.org/10.1016/j.ijbiomac.2020.05.207>
 31. Fluorescent chitosan hydrogel for highly and selectively sensing of p-nitrophenol and 2, 4, 6-trinitrophenol; S. Xiong, **L. Marin***, L. Duan, X. Cheng; *Carbohydrate Polymers* 225, 115253 (2019) <https://doi.org/10.1016/j.carbpol.2019.115253>
 32. Nanoporous furfuryl-imine-chitosan fibers as a new pathway towards eco-materials for CO₂ adsorption; **L. Marin***, B. Dragoi, N. Olaru, E. Perju, A. Coroaba, F. Doroftei, G. Scavia, S. Destri, S. Zappia, W. Porzio; *European Polymer Journal* 120, 109214 (2019) <https://doi.org/10.1016/j.eurpolymj.2019.109214>
 33. Designing chitosan based eco-friendly multifunctional soil conditioner systems with urea controlled release and water retention; M-M. Iftime, G.L. Ailiesei, E. Ungureanu, **L. Marin***; *Carbohydrate Polymers* 223, 115040 (2019) <https://doi.org/10.1016/j.carbpol.2019.115040>
 34. Chiral betulinal-imino-chitosan hydrogels by dynamic covalent sonochemistry; M.-M. Iftime, **L. Marin***; *Ultrasonics&Sonochemistry*, 45, 238–247 (2018) <https://doi.org/10.1016/j.ultsonch.2018.03.022>
 35. Chitosan hydrogelation with phenothiazine-based aldehyde: a synthetic approach toward highly luminescent biomaterials; A. Bejan, D. Ailincăi, B. C. Simionescu, **L. Marin***, *Polymer Chemistry*, 18, 2359-2369 (2018)
 36. Biocompatible chitosan-based hydrogels for potential application in local tumour therapy; A. M. Olaru, **L. Marin***, S. Morariu, G. Pricope, M. Pinteala, L. Tartau-Mititelu; *Carbohydrate Polymers* 179, 59–70 (2018) <https://doi.org/10.1016/j.carbpol.2017.09.066>
 37. Salicyl-imine-chitosan hydrogels: Supramolecular architecturing as a crosslinking method toward multifunctional hydrogels; M.-M. Iftime, S. Morariu, **L. Marin***; *Carbohydrate Polymers*, 165, 39–50 (2017), <https://doi.org/10.1016/j.carbpol.2017.02.027>
 38. Development of biocompatible glycodynameric hydrogels joining two natural motifs by dynamic constitutional chemistry; **L. Marin***, D. Ailincăi, S. Morariu, L. Tartau-Mititelu; *Carbohydrate Polymers*, 170, 60–71 (2017) <https://doi.org/10.1016/j.carbpol.2017.04.055>
 39. Dual crosslinked iminoboronate-chitosan hydrogels with strong antifungal activity against Candida planktonic yeasts and biofilms; D. Ailincăi, **L. Marin***, S. Morariu, M. Mares, A. C. Bostanaru, M. Pinteala, B. C. Simionescu, M. Barboiu; *Carbohydrate Polymers* 152, 306–316 (2016) <https://doi.org/10.1016/j.carbpol.2016.07.007>
 40. Imino-chitosan biopolymeric films. Obtaining, self-assembling, surface, and antimicrobial properties; **L. Marin***, D. Ailincăi, M. Mares, E. Paslaru, M. Cristea, V. Nica, B. C. Simionescu; *Carbohydrate Polymers* 117, 762–770 (2015) <https://doi.org/10.1016/j.carbpol.2014.10.050>
 41. **L. Marin**, S. Morariu, M.C. Popescu, A. Nicolescu, C. Zgardan, B.C. Simionescu, M. Barboiu, Out-of-Water Constitutional Self-Organization of Chitosan–Cinnamaldehyde Dynagels, *Chemistry – A European Journal* 20, 4814–4821 (2014) <https://doi.org/10.1002/chem.201304714>

42. Chitosan as matrix for bio-polymer dispersed liquid crystal systems; **L Marin***, M. C. Popescu, A. Zabulica, H. Uji-I, E. Fron; *Carbohydrate Polymers* 95, 16–24 (2013) <https://doi.org/10.1016/j.carbpol.2013.02.028>
43. **Luminita Marin**, Iuliana Stoica, Mihai Mares, Valentina Dinu, Bogdan C. Simionescu, Mihai Barboiu, Antifungal vanillin–imino-chitosan biodynameric films, *Journal of Materials Chemistry B* 27, 3353–3358, (2013) <https://doi.org/10.1039/C3TB20558D>
44. **Luminita Marin**, Bogdan C. Simionescu, Mihai Barboiu, Imino-chitosan biodynamers, *Chemical Communications*, 48, 8778–8780, (2012) <https://doi.org/10.1039/C2CC34337A>