

Nume Prenume: NECOLAU Mădălina-Ioana

Gradul didactic: Asistent Universitar

Instituția unde este titular: Universitatea Nationala de Stiinta si Tehnologie Politehnica București

Facultatea: Facultatea de Chimie Aplicată și Știința Materialelor

Departamentul: Departamentul de Bioresurse și Știința Polimerilor

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

În curs de elaborare – titlu: "Bio-based polymeric composites", coordonator științific Prof.univ.dr.ing Horia IOVU

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

1. **Necolau M.I.**, Pandele A.M, Voicu S.I.; *Plant polysaccharides for nasal drug delivery*. (2023), *Plant Polysaccharides as Pharmaceutical Excipients*, 275-295

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

1. Damian C.M., **Necolau M.I.**, Neblea I., Vasile E., Iovu H.; *Synergistic effect of graphene oxide functionalized with SiO₂ nanostructures in the epoxy nanocomposites (2020)*, *Applied Surface Science* 507 (30) 145046, FI=7.392
2. **Necolau M.I.**, Pandele A.M.; *Recent advances in graphene oxide-based anticorrosive coatings: an overview (2020)*, *Coatings* 10 (12) 1149, FI=3.12
3. Biru E.I., **Necolau M.I.**, Zainea A., Iovu H.; *Graphene Oxide–Protein-Based Scaffolds for Tissue Engineering: Recent Advances and Applications (2022)*, *Polymers* 14 (5) 1032, FI=5
4. Komartin R.S., Balanuca B., **Necolau M.I.**, Cojocaru A., Stan R.; *Composite Materials from Renewable Resources as Sustainable Corrosion Protection Coatings (2021)*, *Polymers* 13 (21) 1642, FI=5
5. Vintila I.S., Draghici S., Petrescu H.A., Paraschiv A., Condruz M.R., Maier L.R., Bara A., **Necolau M.I.**; *Evaluation of dispersion methods and mechanical behaviour of glass fibre composites with embedded self-healing systems (2021)*, *Polymers* 13 (10) 1624, FI=5

6. Bontas M.G., Diacon A., Calinescu I., **Necolau M.I.**, Dinescu A., Toader G., Ginghina R., Vizitiu A.M., Velicu V., Palade P., Istrate M., Rusen E.; *Epoxy Coatings Containing Modified Graphene for Electromagnetic Shielding (2022)*, *Polymers* 14 (12) 2508, FI=4.329
7. **Necolau M.I.**, Biru E.I., Ghitman J., Stavarache C., Iovu H.; *Insightful characterization of sesamol-based polybenzoxazines: Effect of phenol and amine chain type on physical and nanomechanical properties (2022)*, *Polymer Testing* 110 107578, IF=4.931
8. Vlasceanu G.M., Ionita M., Popescu C.C., Giol D.E., Ionescu I., Dumitrascu A.M., Florea M., Boerasu I., **Necolau M.I.**, Olaret E., Ghitman J., Iovu H.; *Chitosan-Based Materials Featuring Multiscale Anisotropy for Wider Tissue Engineering Applications (2022)*, *International Journal of Molecular Sciences* FI=6.208
9. **Necolau M.I.**, Damian C.M., Fierascu R.C., Chiriac A.L., Vlasceanu G.M., Vasile E., Iovu H.; *Layered Clay–Graphene Oxide Nanohybrids for the Reinforcement and Fire-Retardant Properties of Polyurea Matrix (2021)*, *Polymers* 14 (1) 4212 FI=5
10. **Necolau M.I.**, Damian C.M., Olaret E., Balanuca B.; *Comparative Thermo-Mechanical Properties of Sustainable Epoxy Polymer Networks Derived from Linseed Oil (2022)*, *Polymers* 14 (19) 4212 FI=5
11. Balanuca B., Komartin R.S., **Necolau M.I.**, Damian C.M., Stan R., *Investigating the Synthesis and Characteristics of UV-Cured Bio-Based Epoxy Vegetable Oil-Lignin Composites Mediated by Structure-Directing Agents, (2023)*, *Polymers* 15(2):439, FI=5
12. **Necolau M.I.**, Grigore. D., Biru E.I., Ghitman J., Stavarache C., Iovu H., *Synthesis and thermo-mechanical characterization of vanillin-based polybenzoxazines with complex architecture, (2023)*, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science* 85(1):3-16, FI=0.164
13. **Necolau M.I.**, Damian C.M., Balanuca B., Frone A.N., *Tailoring an Effective Interface between Nanocellulose and the Epoxidized Linseed Oil Network through Functionalization, (2023)*, *ACS Omega*, 8(18), FI=4.1
14. Bolat F., Ghitman J., **Necolau M.I.**, Vasile E., Iovu H., *A Comparative Study of the Impact of the Bleaching Method on the Production and Characterization of Cotton-Origin Nanocrystalline Cellulose by Acid and Enzymatic Hydrolysis (2023)*, *Polymers* 15(16):3446, FI= 5
15. Toader, G.; Diacon, A.; Rusen, E.; Mangalagiu, I.I.; Alexandru, M.; Zorilă, F.L.; Mocanu, A.; Boldeiu, A.; Gavrilă, A.M.; Trică, B., Pulpea D., **Necolau M.I.**, Istrate M.; *Peelable Alginate Films Reinforced by Carbon Nanofibers Decorated with Antimicrobial Nanoparticles for Immediate Biological Decontamination of Surfaces, (2023)*, *Nanomaterials* 13, 2775. IF= 5.3

16. **Necolau M.I.**, , Balanuca B., Frone A.N., Radu I.N., Grădișteanu-Pîrcălăbioru G., Damian C.M., *Combined Thermomechanical Effect of Graphene Oxide and Montmorillonite on Biobased Epoxy Network Formation for Coatings*, (2024), ACS Omega 9, FI=4.1
17. F. Bolat, **M.I. Necolau**, E.I. Bîru, A. Zaharia, H. Iovu, *Comparative Analysis of Solvent Casting and Pickering Emulsion Techniques for Improving the Mechanical Properties of Surface-Modified Cellulose Nanomaterial-Reinforced Polylactic Acid Composites*, (2024), Polymers, FI=5.0
18. **MI Necolau**, IN Radu, B Bălănuță, AN Frone, CM Damian, *Broadening the coating applications of sustainable materials by reinforcing epoxidized corn oil with single-walled carbon nanotubes*, (2024), Environmental Science and Pollution Research, IF=5.8
19. Ionut-Cristian Radu, Derniza Cozorici, **Madalina-Ioana Necolau**, Roxana Cristina Popescu, Eugenia Tanasa, Laurentia Alexandrescu, Catalin Zaharia, Rafael Luque, *Engineered 3D-printed poly (vinyl alcohol) vascular grafts: Impact of thermal treatment and functionalization*, (2024), International Journal of Bioprinting, IF=6.8
20. AI Slabu, R Stan, L Miu, **MI Necolau**, B Balanuca, F Teodorescu, *Sustainable strategy for the synthesis of novel vegetable oil derived polymeric materials*, (2024), Polymer for advanced technology, IF=3.1
21. F. Bolat, **M.I. Necolau**, E.I. Biru, A, Zaharia, H. Iovu, *Nanocrystalline cellulose modification with acrylic acid and furfuryl amine through Diels-Alder and Michael addition reactions*, (2024), UPB Scientific Bulletin, Series B: Chemistry and Materials Science 85(1):3-16, FI=0.3
22. K. Duman, **M.I. Necolau**, A, Zaharia, H. Iovu, *Enhancing mechanical properties of polyurea through cellulose nano crystals (cnf) reinforcement*, (2025), , UPB Scientific Bulletin, Series B: Chemistry and Materials Science 85(1):3-16, FI=0.3
23. **MI Necolau**, M Ionita, AM Pandele, *Poly (propylene fumarate) Composite Scaffolds for Bone Tissue Engineering: Innovation in Fabrication Techniques and Artificial Intelligence Integration*, (2025), Polymer, IF=4.7

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

- Reviste

1.

- Selecție cu maximum 20 lucrări în volume de conferințe

1. „21th Romanian International Conference on Chemistry and Chemical Engineering” 2019, Constanta, Romania. “*Synthesis of hybrid nanostructures based on graphene oxide and the evaluation of their influence in epoxy nanocomposites*” -prezentare orala
2. „21th Romanian International Conference on Chemistry and Chemical Engineering” 2019, Constanta, Romania. “ *Advanced Studies on Biobased Epoxy Network Curing Reactions and Thermal Properties*” -poster
3. „11th International Conference on Materials Science and Engineering” 2019, Poiana Brasov, Romania, „*Synergistic effect of graphene oxide and SiO₂ nanostructures in the epoxy nanocomposite coatings*” - prezentare orala
4. 7th Young Polymer Scientists Conference and Short Course - 7YPSCSC 2021- online. "*Sustainable approach to fabricate epoxy/nanocellulose composites and their properties*" – prezentare orala
5. 5th virtual edition of polymers, plastics and composites - PPC 2021 -online. "*Novel composite materials based on epoxidized vegetable oil and nanocellulose*" - prezentare orala
6. 2nd Bucharest Polymer Conference - 2nd BPC 2021, Bucuresti, Romania."*Bio-based epoxy networks. Comparative study of different curing systems*" - Flash presentation
7. 4th International Symposium on Polybenzoxazines - ISPBZ 2021 - online " *Synthesis and characterization of novel polyethyleneimine bio-based benzoxazine resins*" - poster
8. 29th Annual GP2A Medicinal Chemistry Conference 2021 "*Drug-loaded polymeric systems as a promising tool for cancer management*" - poster
9. Polymers 2022-New Trends in Polymer Science: Health of the Planet, Health of the People. 2022, Torino, Italia "*Epoxy sustainable nanocomposites reinforced with functionalized nanocellulose for electronic coatings*" – prezentare orala
10. „22nd Romanian International Conference on Chemistry and Chemical Engineering”-2022 Sinaia Romania „*Advanced Bio-sourced Polybenzoxazines with Tunable Properties*”-Oral presentation
11. „22nd Romanian International Conference on Chemistry and Chemical Engineering”-2022 Sinaia Romania „*Sustainable Epoxy Nanocomposites Reinforced with Functional Nanocellulose Structures*” - poster
12. 33rd International Conference on Diamond and Carbon Materials-2023. “*Graphene oxide-montmorillonite nanohybrids as active fillers for bio-based epoxy thermosets*” – Poster presentation
13. 33rd International Conference on Diamond and Carbon Materials-2023. „*Composite materials derived from epoxidized corn oil and clay-carbon nanotubes hybrid structure*”- Poster presentation
14. 3rd International Conference on Bioengineering and Polymer Science – 2023, Bucuresti, Romania. „*Designing novel high-performance asymmetrical benzoxazine monomer through green chemistry*” – oral presentation

15. 3rd International Conference on Bioengineering and Polymer Science – 2023, Bucuresti, Romania. „*Hyaluronic Acid-Based Hydrogels as Potential Scaffolds for Tissue Engineering Applications*” – poster presentation
16. „23rd Romanian International Conference on Chemistry and Chemical Engineering”-2024 Constanta-Mamaia, Romania „*Advancing sustainability: bio-based thermoset nanocomposites for a greener future*” -Oral presentation
17. „23rd Romanian International Conference on Chemistry and Chemical Engineering”-2024 Constanta-Mamaia, Romania „*Expressing the potential of epoxidized corn oil into an efficient anticorrosion nanocomposite material*” – Poster presentation
18. „23rd Romanian International Conference on Chemistry and Chemical Engineering”-2024 Constanta-Mamaia, Romania „*Bicomponent macromolecular architectures based on methacrylated linseed oil and alginate*” -Poster presentation
19. 8th International Conference on Multifunctional, Hybrid and Nanomaterials , Montpellier Franta – 2025, „*Bio-derived polybenzoxazines for advanced applications. Insightful thermal and mechanical characterization*” - Oral presentation
20. 8th International Conference on Multifunctional, Hybrid and Nanomaterials , Montpellier Franta – 2025, „*Ternary multiscale nanocomposite systems based on functionalized graphene oxide, carbon fibers and bio-based polybenzoxazine*” - Poster presentation

E. Brevete obținute în întreaga activitate

Data:

Semnătura: