Universitatea Națională de Știință și Tehnologie POLITEHNICA Bucureşti

Facultatea: **Inginerie Chimică și Biotehnologii**

Departamentul: **Știința și Ingineria Materialelor Oxidice și Nanomateriale**

Nume Prenume: **Neacșu Ionela Andreea**

Gradul didactic: **Conferentiar**

L I S T A

lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

1. **I. A. Neacsu,** *Biomateriale pentru regenerare tisulară,* Universitatea Politehnica din București, București, **2019**, coordonator științific Prof. Dr. Ing. Ecaterina Andronescu, **O.M 5644/30.12.2019**.

B. Cărţi si capitole în cărţi

1. Chircov, C., Ioniță, D.A., Sîrmon, A.M., **Neacșu, I.A.**, Ficai, A., 2023. Natural, synthetic, and hybrid and composite biomaterials for neural tissue engineering. In Biomaterials for Neural Tissue Engineering (pp. 21-58). Woodhead Publishing. DOI: 10.1016/B978-0-323-90554-1.00008-2
2. **I. A. Neacsu**, A. I. Nicoară, O. R. Vasile, and B. S. Vasile, "Chapter 9 - Inorganic micro- and nanostructured implants for tissue engineering" in *Nanobiomaterials in Hard Tissue Engineering*: William Andrew Publishing, 2016, pp. 271-295.

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

Ca autor principal

1. Doicin, I.E.; Preda, M.D.; **Neacsu, I.A.***; Ene, V.L.; Birca, A.C.; Vasile, B.S.; Andronescu, E., „Tailoring Zinc Oxide Nanoparticles via Microwave-Assisted Hydrothermal Synthesis for Enhanced Antibacterial Properties”. *Applied Sciences*, 14 (17) 7854, 2024. eISSN 2076-3417, doi:10.3390/app14177854, WOS:001311102200001, FI 2.5 (Q1).
2. Chircov, C, Bîrcă, A.C., Dănciulescu, L.A., **Neacșu, I.A.***, Oprea, O.C., Trușcă, R.D., Andronescu, E. "Usnic Acid-Loaded Magnetite Nanoparticles—A Comparative Study between Synthesis Methods." Molecules 28, no. 13 (2023): 5198. DOI:10.3390/molecules28135198, WOS:001031136000001, **FI 4.6 (Q2)**

3. Dumitrescu, C.R, **Neacsu, I.A.***, Trusca, R., Popescu, R.C., Raut, I., Constantin, M., Andronescu, E. "Piezoelectric Biocomposites for Bone Grafting in Dentistry." Polymers 15, no. 11 (2023): 2446. DOI:10.3390/polym15112446, WOS:001004733100001, **FI 5(Q1)**
4. Burdusel, A.C., **Neacsu, I.A.***, Birca, A.C., Chircov, C., Grumezescu, A.M., Holban, A.M., Curutiu, C., Ditu, L.M., Stan, M., Andronescu, E. "Microwave-Assisted Hydrothermal Treatment of Multifunctional Substituted Hydroxyapatite with Prospective Applications in Bone Regeneration." Journal of Functional Biomaterials 14, no. 7 (2023): 378. DOI:10.3390/jfb14070378, WOS:001038744800001, **FI 4.8 (Q2)**
5. Chircov, C., Ștefan, R.E., Dolete, G., Andrei, A., Holban, A.M., Oprea, O.C., Vasile, B.S., **Neacșu, I.A.***, Tihăuan, B., Dextran-Coated Iron Oxide Nanoparticles Loaded with Curcumin for Antimicrobial Therapies. Pharmaceutics 2022, 14(5), p.1057. DOI:10.3390/pharmaceutics14051057, WOS:000801426900001, **FI 5.4 (Q1)**
6. Dumitru, C.D., **Neacsu, I.A.***, Grumezescu, A.M. and Andronescu, E., Bee-Derived Products: Chemical Composition and Applications in Skin Tissue Engineering. Pharmaceutics 2022, 14(4), 750; DOI:10.3390/pharmaceutics14040750, WOS:000785041900001, **FI 5.4 (Q1)**
7. C.R. Dumitrescu, **I.A. Neacsu***, V.A. Surdu, A.I. Nicoara, C.I. Codrea, C.E. Pop, R. Trusca, E. Andronescu, Maturation of hydroxyapatite from biogenic calcium source – a comparative study, U.P.B. Sci. Bull., Series B, Vol. 84, Iss. 1, p. 19-30, 2022, WOS:000813376200002
8. Radulescu, D.E., **Neacsu, I.A.***, Grumezescu, A.M. and Andronescu, E., Novel Trends into the Development of Natural Hydroxyapatite-Based Polymeric Composites for Bone Tissue Engineering. Polymers 2022, 14(5), 899. DOI:10.3390/polym14050899, WOS:000769346400001, **FI 5 (Q1)**
9. Radulescu, D.-M.; **Neacsu, I.A***.; Grumezescu, A.-M.; Andronescu, E. New Insights of Scaffolds Based on Hydrogels in Tissue Engineering. Polymers 2022, 14, 799. DOI:10.3390/polym14040799, WOS:000765172900001, **FI 5 (Q1)**
10. **I.A. Neacsu**, L. Matei, A.C. Birca, A.I. Nicoara, V.L. Ene, L.D. Dragu, A. Ficai, C. Bleotu, E. Andronescu, Curcumin - hydroxyapatite systems used for bone cancer treatment. Rev. Romana Mater./ Rom. J. Mater. 51(4), 505-513, 2021. WOS:000735439000004 **FI 0.542**
11. C.R. Dumitrescu, **I.A. Neacsu***, V.A. Surdu, A.I. Nicoara, F. Iordache, R. Trusca, L.T. Ciocan, A. Ficai, E. Andronescu, Nano-Hydroxyapatite vs. Xenografts: Synthesis, Characterization, and In Vitro Behavior. Nanomaterials, 11(9), p.2289, 2021, WOS:000701400300001 **FI 5.076 (Q1)**
12. **I.A. Neacsu,** S.-A. Leau, S. Marin, A.M. Holban, B.-S. Vasile, A.-I. Nicoara, V.L. Ene, C. Bleotu, M.G. Albu Kaya, A. Ficai, „Collagen-Carboxymethylcellulose Biocomposite Wound-Dressings

with Antimicrobial Activity" *Materials* 2021, 14, 1153, doi: 10.3390/ma14051153, WOS: 000628385900001, **FI 3.623 (Q1)**

13. **I. A. Neacsu**, A.P. Serban, A.I. Nicoara, R. Trusca, V.L. Ene, F. Iordache, "Biomimetic Composite Scaffold Based on Naturally Derived Biomaterials" *Polymers*, 12(5), p.1161, 2020, doi: 10.3390/polym12051161, WOS:000541431100166, **FI 4.329 (Q1)**
14. **I. A. Neacsu**, L. V. Arsenie, R. Trusca, I. L. Ardelean, N. Mihailescu, I. N. Mihailescu, C. Ristoscu, C. Bleotu, A. Ficai, and E. Andronescu, "Biomimetic Collagen/Zn($^{2+}$)-Substituted Calcium Phosphate Composite Coatings on Titanium Substrates as Prospective Bioactive Layer for Implants: A Comparative Study Spin Coating vs. MAPLE" *Nanomaterials (Basel),* vol. 9, no. 5, 2019, doi: 10.3390/nano9050692, WOS:000526090400170, **FI 5.076(Q1)**
15. **I. A. Neacsu**, A. E. Stoica, B. S. Vasile, and E. Andronescu, "Luminescent Hydroxyapatite Doped with Rare Earth Elements for Biomedical Applications" *Nanomaterials (Basel),* vol. 9, no. 2, 2019, doi: 10.3390/nano9020239, WOS:000460806700108, **FI 5.076(Q1)**
16. **I. A. Neacsu**, A. E. Melente, A. M. Holban, A. Ficai, L. M. Ditu, C. M. Kamerzan, B. M. Tihauan, A. I. Nicoara, M. C. Chifiriuc, and G. Pircalabioru, "Novel hydrogels based on collagen and ZnO nanoparticles with antibacterial activity for improved wound dressings" *Romanian Biotechnological Letters,* vol. 24, no. 2, pp. 317-323, 2019, doi: 10.26327/RBL2018.239, WOS:000466974000015, **FI 0.59 (Q4)**
17. B. S. Vasile, O. R. Vasile, D. C. Ghitulica, F. C. Ilie, I. F. Nicoara, R. Trusca, O. C. Oprea, V. A. Surdu, and **I. A. Neacsu***, "Eu^{3+}-doped ZnO nanostructures: advanced characterizations, photoluminescence and cytotoxic effect", *Rom J Morphol Embryol*, Article vol. 58, no. 3, pp. 941-952, 2017, WOS:000419089600028, **FI 1.5 (Q4)**
18. A. I. Nicoara, **I. A. Neacsu***, V. L. Ene, B. S. Vasile, A. Ficai, and E. Andronescu, "Hydroxyapatite/Carbon Based Biocomposite Scaffolds as Prospective Materials for Bone Tissue Engineering" *UPB Sci. Bull. Ser. B Chem. Mater. Sci,* vol. 81, pp. 107-120, 2019, indexat ISI, WOS:000501994100011.

Co- autor

19. Doicin, I.E.; **Neacsu, I.A**.; Ene, V.L.; Birca, A.C.; Andronescu, E., „Development and characterization of sodium alginate-zno nanoparticle reinforced composites for biomedical applications", *UPB Sci Bull Ser B Chem Mater Sci*. 86(3), pp. 157-168, 2024.
20. Bîrcă, AC, Gherasim, O, Niculescu, A-G, Grumezescu, AM, Vasile, BS, Mihaiescu, DE; Neacsu, IA; Andronescu, E; Trusca, R; Holban, AM; Hudita, A; Croitoru, GA, "Infection-Free and Enhanced Wound Healing Potential of Alginate Gels Incorporating Silver and Tannylated

Calcium Peroxide Nanoparticles", International Journal of Molecular Sciences 2024, 25(10):5196.

21. Bîrca, AC; Grumezescu, AM; Vasile, BS; Surdu, AV; Neacsu, IA; Iordache, F; Holban, AM, "Nano-enhanced wound care: mandarin oil-coated agnps in wound dressings", *UPB Sci Bull Ser B Chem Mater Sci*. 86(3), pp. 185-202, 2024.
22. Poenariu, A.M.B, Postelnicu, R.A., Ciocilteu, M.V., Rau, G., Popescu, M., Simionescu, A., **Neacsu, I.A**., Nicolicescu, C., Amzoiu, D.C., "PLGA-gallic Acid Advanced Drug Delivery System as New Functional Material", Materiale Plastice, 60(4), 2023.
23. Postelnicu, R.A., Ciocilteu, M.V., **Neacşu, I.A**., Nicolicescu, C., Costachi, A., Amzoiu, M., Neamțu, J. et al. "PLGA-Bisphosphonates conjugated nanoparticles: synthesis and morphological characterization." Farmacia 71, no. 1 (2023).
24. Preda, Manuela Daniela, Maria Leila Popa, **Ionela Andreea Neacşu**, Alexandru Mihai Grumezescu, and Octav Ginghină. "Antimicrobial clothing based on Electrospun fibers with ZnO nanoparticles." International Journal of Molecular Sciences 24, no. 2 (2023): 1629.
25. Popa, Maria Leila, Manuela Daniela Preda, **Ionela Andreea Neacşu**, Alexandru Mihai Grumezescu, and Octav Ginghină. "Traditional vs. Microfluidic Synthesis of ZnO Nanoparticles." International Journal of Molecular Sciences 24, no. 3 (2023): 1875.
26. Bîrcă, Alexandra Cătălina, Oana Gherasim, Adelina-Gabriela Niculescu, Alexandru Mihai Grumezescu, **Ionela Andreea Neacşu**, Cristina Chircov, Bogdan Ștefan Vasile et al. "A Microfluidic Approach for Synthesis of Silver Nanoparticles as a Potential Antimicrobial Agent in Alginate–Hyaluronic Acid-Based Wound Dressings." International Journal of Molecular Sciences 24, no. 14 (2023): 11466.
27. Alecu, Andrada Elena, Gabriel-Costin Balaceanu, Adrian Ionut Nicoara, **Ionela Andreea Neacsu**, Cristina Busuioc. "Synthesis and Characterization of Porous Forsterite Ceramics with Prospective Tissue Engineering Applications." Materials 15, no. 19 (2022): 6942.
28. Turcu-Ştiolică, A., Ciocîlteu, M.V., Podgoreanu, P., **Neacşu, I.**, Nicolicescu, C., Neamţu, J., Amzoiu, E. and Manda, C.V., 2022. PLGA-Gentamicin and PLGA-Hydroxyapatite-Gentamicin Microspheres for Medical Applications. Pharmaceutical Chemistry Journal, pp.1-9. **FI 1.063**
29. Movileanu, C., Anghelache, M., Turtoi, M., Voicu, G., **Neacsu, I.A.,** Ficai, D., Trusca, R., Oprea, O., Ficai, A., Andronescu, E. and Calin, M., 2022. Folic acid-decorated PEGylated magnetite nanoparticles as efficient drug carriers to tumor cells overexpressing folic acid receptor. International Journal of Pharmaceutics, p.122064. DOI: 10.1016/j.ijpharm.2022.122064 **FI 6.51 Q1**

30. Dumitrescu, Cristina-Rodica, Vasile-Adrian Surdu, Hermine Stroescu, Adrian-Ionut Nicoara, **Ionela Andreea Neacsu**, Roxana Trusca, Ecaterina Andronescu, Lucian Toma Ciocan. 2022. "Alkali Niobate Powder Synthesis Using an Emerging Microwave-Assisted Hydrothermal Method" Materials 15, no. 15: 5410. https://doi.org/10.3390/ma15155410
31. Vasile, B.S., Nicoara, A.I., Surdu, V.A., Ene, V.L., **Neacsu, I.A.**, Stoica, A.E., Oprea, O., Boierasu, I., Trusca, R., Vrabec, M. and Miklavic, B., Fly-Ash Evaluation as Potential EOL Material Replacement of Cement in Pastes: Morpho-Structural and Physico-Chemical Properties Assessment. Materials 2022, 15(9), p.3092. **FI 3.623**
32. Chircov, C.; Matei, M.-F.; **Neacșu, I.A.**; Vasile, B.S.; Oprea, O.-C.; Croitoru, A.-M.; Trușcă, R.-D.; Andronescu, E.; Sorescu, I.; Bărbuceanu, F. Iron Oxide–Silica Core–Shell Nanoparticles Functionalized with Essential Oils for Antimicrobial Therapies. Antibiotics 2021, 10, 1138, **FI 4.639**.
33. Vasile, B.S., Dobra, G., Iliev, S., Cotet, L., **Neacsu, I.A.**, Nicoara, A.I., Surdu, V.A., Boiangiu, A. and Filipescu, L., Thermally Activated $Al(OH)_3$: Part I—Morphology and Porosity Evaluation. Ceramics, 4(2) (2021): 265-277.
34. Vasile, B.S., Dobra, G., Iliev, S., Cotet, L., **Neacsu, I.A.**, Surdu, V.A., Nicoara, A.I., Boiangiu, A. and Filipescu, L., 2021. Thermally Activated $Al(OH)_3$: Part II—Effect of Different Thermal Treatments." Ceramics 4(4) (2021): 564-575.
35. M. V. Ciocilteu, O. L. Filip, C. Valentin, O. E. Nicolaescu Manda, **I. A. Neacșu**, A. Ficai, I. M. Buzatu, C. Nicolicescu, O. Croitoru, J. Neamţu. "Physico-chemical characterization and antibacterial activity of a controlled collagen-hydroxyapatite-ciprofloxacin release system" *FARMACIA* 68, no. 6 (2020): 1055-1061, **FI 1.607**.
36. B. S. Vasile, A. C. Birca, V. A. Surdu, **I. A. Neacsu**, and A. I. Nicoara, "Ceramic Composite Materials Obtained by Electron-Beam Physical Vapor Deposition Used as Thermal Barriers in the Aerospace Industry" *Nanomaterials (Basel)*, vol. 10, no. 2, 2020, doi: 10.3390/nano10020370, WOS:000522456300189, **FI 4.324 (Q2)**
37. A. I. Nicoara, A.E. Stoica, D.I. Ene, B.S. Vasile, A.M. Holban, **I.A. Neacsu**, "In Situ and Ex Situ Designed Hydroxyapatite: Bacterial Cellulose Materials with Biomedical Applications" *Materials*, 13(21), p.4793, 2020. doi: 10.3390/ma13214793, **FI 3.623 (Q2)**
38. A. I. Nicoara, V. L. Ene, B. B. Voicu, M. A. Bucur, **I. A. Neacsu**, B. S. Vasile, and F. Iordache, "Biocompatible Ag/Fe-Enhanced TiO_2 Nanoparticles as an Effective Compound in Sunscreens" *Nanomaterials*, vol. 10, no. 3, 2020, doi: 10.3390/nano10030570, WOS:000526090400170, **FI 4.324 (Q2)**

39. M. Busila, A. Tabacaru, V. Musat, B. S. Vasile, **I. A. Neacsu**, T. Pinheiro, C. Roma-Rodrigues, P. V. Baptista, A. R. Fernandes, A. P. Matos, and F. Marques, "Size-Dependent Biological Activities of Fluorescent Organosilane-Modified Zinc Oxide Nanoparticles" *J. Biomed. Nanotechnol.*, vol. 16, no. 2, pp. 137-152, 2020, doi: 10.1166/jbn.2020.2882, WOS:000524973800001, **FI 5.068 (Q1)**
40. A. F. Vladu, S. Marin, **I. A. Neacsu**, R. D. Trusca, M. G. A. Kaya, D. A. Kaya, A. M. Popa, C. Poiana, I. Cristescu, C. Orlov, D. Ficai, A. Ficai, D. I. Udeanu, B. S. Velescu, T. K. Nikolouzakis, L. Gurevich, A. N. Kuskov, C. Nitipir, "Spongious Fillers Based on Collagen – Hydroxyapatite – Eugenol Acetate with Therapeutic Potential in Bone Cancer" *Farmacia,* vol. 68, no. 2, pp. 313-321, 2020, doi: 10.31925/farmacia.2020.2.17, WOS:000527105400017, **FI 1.527 (Q4)**
41. A. Paduraru, C. Ghitulica, R. Trusca, V. A. Surdu, **I. A. Neacsu**, A. M. Holban, A. C. Birca, F. Iordache, and B. S. Vasile, "Antimicrobial Wound Dressings as Potential Materials for Skin Tissue Regeneration" *Materials (Basel),* vol. 12, no. 11, 2019, doi: 10.3390/ma12111859, WOS:000472638600133, **FI 3.057 (Q2)**
42. O. Ionescu, M. V. Ciocilteu, C. V. Manda, **I. A. Neacsu**, A. Ficai, E. Amzoiu, A. T. Stiolica, O. Croitoru, and J. Neamtu, "Bone - Graft Delivery Systems of Type PLGA-gentamicin and Collagen - hydroxyapatite - gentamicine" *Mater. Plast.,* vol. 56, no. 3, pp. 534-537, 2019, WOS:000487764000013, **FI 1.393 (Q4)**
43. Croitoru, O. Oprea, A. Nicoara, R. Trusca, M. Radu, **I. A. Neacsu**, D. Ficai, A. Ficai, and E. Andronescu, "Multifunctional Platforms Based on Graphene Oxide and Natural Products" *Medicina (Kaunas),* vol. 55, no. 6, 2019, doi: 10.3390/medicina55060230, WOS:000475303800015, **FI 1.467 (Q3)**
44. Andronescu, D. Predoi, **I. A. Neacsu**, A. V. Paduraru, A. M. Musuc, R. Trusca, O. Oprea, E. Tanasa, O. R. Vasile, A. I. Nicoara, A. V. Surdu, F. Iordache, A. C. Birca, S. L. Iconaru, and B. S. Vasile, "Photoluminescent Hydroxylapatite: Eu^{3+} Doping Effect on Biological Behaviour" *Nanomaterials,* vol. 9, no. 9, 2019, doi: 10.3390/nano9091187, WOS:000489101900004, **FI 5.076(Q1)**
45. Ghitulica, S. Stefan, O. R. Vasile, R. Trusca, **I. A. Neacsu**, and B. S. Vasile, "Porous ceramic support embedded with microorganisms used in water purification" *Romanian Journal of Materials,* vol. 49, no. 1, pp. 33-41, 2019, WOS:000461413500004, **FI 0.628 (Q4)**
46. O. R. Vasile, E. Andronescu, R. Truşcă, E. Vasile, A. M. Holban, M. C. Chifiriuc, F. Iordache, H. Maniu, C. Bleotu, **I. A. Neacşu**, and B. Vasile, "Structure-grain size-synthesis route of silver nanoparticles: a correlation with the cytotoxic effect" *Rom J Morphol Embryol,* vol. 60, no. 2, pp. 617-628, 2019, WOS:000493322700029, **FI 1.5 (Q4)**

47. C. Birca, **I. A. Neacsu**, O. R. Vasile, I. Ciuca, I. M. Vasile, M. A. Fayeq, and B. S. Vasile, "Mg-Zn alloys, most suitable for biomedical applications", *Rom. J. Morphol. Embryol.*, vol. 59, no. 1, pp. 49-54, 2018, WOS:000438117200006, **FI 1.5 (Q4)**
48. S. A. Leau, S. Marin, G. Coara, L. Albu, R. R. Constantinescu, M. A. Kaya, and **I. A. Neacsu**, "Study of Wound-Dressing Materials Based on Collagen, Sodium Carboxymethylcellulose and Silver Nanoparticles Used for Their Antibacterial Activity in Burn Injuries" *Proceedings of the 7th International Conference on Advanced Materials and Systems*, pp. 123-128, 2018, doi: 10.24264/icams-2018.I.18, indexată ISI, WOS:000464905000018.

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

1. O.L. Filip Ionescu, A.G. Mocanu, **I.A. Neacsu**, M.V. Ciocilteu, G. Rau, J. Neamtu, Biocompatibility Studies on a Collagen-Hydroxyapatite Biomaterial, Curr Health Sci J, vol. 48, no. 2, 2022, DOI : 10.12865/CHSJ.48.02.12
2. Dobra, G., Iliev, S., Cotet, L., Boiangiu, A. Vasile, B.S., **Neacsu, I.A.**, Nicoara, A.I., Surdu, V.A., and Filipescu, L., 2022. Technical Properties and Uses of the Aluminum Hydroxide, Dried, Milled and Classified, IOSR Journal of Applied Chemistry, 15(6) (2022): 10-22.
3. V. L. Ene, **I. A. Neacsu***, B.S. Vasile, A. C. Birca, E. Andronescu, A. Ficai, Nanostructured magnetic materials used in cancer treatment, Annals – Series on Physics and Chemistry, Vol 4 no 2/2019, ISSN 2537 – 4761.
4. A. I. Nicoara, A. Croitoru, O. Oprea, **I. A. Neacsu**, E. Andronescu, Synthesis of photocatalysts based on graphene oxide and Fe_3O_4, Annals – Series on Physics and Chemistry, Vol 4 no 2/2019, ISSN 2537 – 4761.
5. V. L. Ene, **I. A. Neacsu***, O. Oprea, V. A. Surdu, R. D. Trusca, A. Ficai, and E. Andronescu, "Single Step Synthesis of Glutamic/tartaric Acid-stabilised Fe_3O_4 Nanoparticles for Targeted Delivery Systems" *Revista de Chimie*, vol. 71, no. 2, pp. 230-238, 2020, doi: 10.37358/rc.20.2.7920, ISSN: 0034-7752.

E. Brevete obţinute în întreaga activitate

1. C. Bleotu, L. D. Dragu, L. Matei, C. C. Diaconu, M. Chivu-Economescu, A. S. Zurac, A. I. Neagu, L. G. Necula, A. M. Holban, L. M. Ditu, M. C. Chifiriuc, V. Lazar, G. Gradisteanu, **I. A. Neacsu**, V.L. Ene, E. Andronescu, A. Ficai, C. Balas, C. Ciobanu, L. C. Irimia, *Procedeu de obținere a unor hidrogeluri compozite pe bază de colagen și nanoparticule de argint pentru prevenirea infecțiilor de plagă* / *Producing collagen and silver nanoparticle based composite hydrogel useful for preventing wound infections, by reducing silver ions in collagen gel in presence of reducing agents e.g. sodium borohydride, and crosslinking hydrogel*, **RO134197-A2, 2020**.