

LISTA DE LUCRĂRI

A. Lucrări științifice publicate în jurnale ISI cu factor de impact în ordine cronologică

1. **Nicolescu, A. F.**; Jerca, V. V.; Albu, A. M.; Vuluga, D. M.; Draghici, C. Synthesis and Copolymerization Study of New Polyimide Precursors with Potential Application in Optical and Photonic Field. *Molecular Crystals and Liquid Crystals* **2008**, 486, 1080-1091, DOI: 10.1080/15421400801917338.
2. Jerca, V. V.; **Nicolescu, A. F.**; Albu, A. M.; Vuluga, D. M. Polymer Architectures Based on Oxazoline Monomers. *Molecular Crystals and Liquid Crystals* **2008**, 483, 78-88, DOI: 10.1080/15421400801900565.
3. **Nicolescu, F. A.**; Jerca, V. V.; Draghici, C.; Vuluga, D. M.; Vasilescu, D. S. Synthesis and Characterization of Novel Azobenzene Methacrylate Monomers. *Designed Monomers and Polymers* **2009**, 12 (6), 553-563, DOI: 10.1163/138577209x12478294517116.
4. Dancus, I.; Vlad, V. I.; Petris, A.; Frunza, S.; Beica, T.; Zgura, I.; **Nicolescu, F. A.**; Jerca, V. V.; Vuluga, D. M. Low Power Laser Induced Optical Nonlinearities in Organic Molecules. *Romanian Reports in Physics* **2010**, 62 (3), 567-580.
5. Jerca, V. V.; **Nicolescu, F. A.**; Baran, A.; Anghel, D. F.; Vasilescu, D. S.; Vuluga, D. M. Synthesis and Characterization of Side-Chain Oxazoline-Methyl Methacrylate Copolymers Bearing Azo-Dye. *Reactive & Functional Polymers* **2010**, 70 (10), 827-835, DOI: 10.1016/j.reactfunctpolym.2010.07.018.
6. Jerca, V. V.; **Nicolescu, F. A.**; Vuluga, D. M.; Andronescu, C.; Iovu, H.; Vasilescu, D. S. Dispersion Polymerization of Styrene in the Presence of 2-Ethyl-2-Oxazoline Macromonomer. *Materiale Plastice* **2010**, 47 (2), 141-145.
7. **Nicolescu, F. A.**; Jerca, V. V.; Stancu, I. C.; Vasilescu, D. S.; Vuluga, D. M. New Organic-Inorganic Hybrids with Azo-dye Content. *Designed Monomers and Polymers* **2010**, 13 (5), 437-444, DOI: 10.1163/138577210x521332.
8. **Nicolescu, F. A.**; Jerca, V. V.; Vuluga, D. M.; Vasilescu, D. S. Synthesis and Characterization of Side-Chain Poly(methacrylate)s Bearing New Azo-Moieties. *Polymer Bulletin* **2010**, 65 (9), 905-916, DOI: 10.1007/s00289-010-0302-1.
9. Jerca, V. V.; **Nicolescu, F. A.**; Trusca, R.; Vasile, E.; Baran, A.; Anghel, D. F.; Vasilescu, D. S.; Vuluga, D. M. Oxazoline-Functional Polymer Particles Graft with Azo-Dye. *Reactive & Functional Polymers* **2011**, 71 (4), 373-379, DOI: 10.1016/j.reactfunctpolym.2010.12.004.
10. Jerca, V. V.; **Nicolescu, F. A.**; Vasilescu, D. S.; Vuluga, D. M. Synthesis of a New Oxazoline Macromonomer for Dispersion Polymerization. *Polymer Bulletin* **2011**, 66 (6), 785-796, DOI: 10.1007/s00289-010-0312-z.

11. **Nicolescu, F. A.**; Jerca, V. V.; Dancus, I.; Petris, A.; Nicolescu, T. V.; Rau, I. B.; Vlad, V. I.; Vasilescu, D. S.; Vuluga, D. M. Synthesis and Characterization of Side-Chain Maleimide-Styrene Copolymers with New Pendant Azobenzene Moieties. *Journal of Polymer Research* **2011**, 18 (5), 1009-1016, DOI: 10.1007/s10965-010-9501-6.
12. **Jerca, F. A.**; Jerca, V. V.; Spiridon, M. C.; Vuluga, D. M.; Vasilescu, D. S.; Stanga, G.; Anghel, D. F. Polymer Architectures Containing Azobenzene Type Molecules in Side-Chains Solvatochromic Behaviour. *Materiale Plastice* **2011**, 48 (4), 273-278.
13. **Jerca, F. A.**; Jerca, V. V.; Kajzar, F.; Manea, A. M.; Rau, I.; Vuluga, D. M. Simultaneous Two and Three Photon Resonant Enhancement of Third-Order NLO Susceptibility in an Azo-Dye Functionalized Polymer Film. *Physical Chemistry Chemical Physics* **2013**, 15 (19), 7060-7063, DOI: 10.1039/c3cp50547b.
14. Spiridon, M. C.; **Jerca, F. A.**; Jerca, V. V.; Vasilescu, D. S.; Vuluga, D. M. 2-Oxazoline Based Photo-Responsive Azo-Polymers. Synthesis, Characterization and Isomerization Kinetics. *European Polymer Journal* **2013**, 49 (2), 452-463, DOI: 10.1016/j.eurpolymj.2012.11.024.
15. Iordache, T.-V.; Sarbu, A.; Donescu, D.; Nicolae, C.-A.; **Jerca, F. A.**; Dima, S.-O. Selecting the Nature of Imprinted Molecular Organosilica Sieves with Gallic Acid via Thermal Analyses. *Journal of Thermal Analysis and Calorimetry* **2014**, 118 (2), 1039-1048, DOI: 10.1007/s10973-014-3851-y.
16. **Jerca, F. A.**; Jerca, V. V.; Anghel, D. F.; Stinga, G.; Marton, G.; Vasilescu, D. S.; Vuluga, D. M. Novel Aspects Regarding the Photochemistry of Azo-Derivatives Substituted with Strong Acceptor Groups. *Journal of Physical Chemistry C* **2015**, 119 (19), 10538-10549, DOI: 10.1021/jp511925n.
17. Jerca, V. V.; **Jerca, F. A.**; Rau, I.; Manea, A. M.; Vuluga, D. M.; Kajzar, F. Advances in Understanding the Photoresponsive Behavior of Azobenzenes Substituted with Strong Electron Withdrawing Groups. *Optical Materials* **2015**, 48, 160-164, DOI: 10.1016/j.optmat.2015.07.042.
18. Spiridon, M. C.; Iliopoulos, K.; **Jerca, F. A.**; Jerca, V. V.; Vuluga, D. M.; Vasilescu, D. S.; Gindre, D.; Sahraoui, B. Novel Pendant Azobenzene/Polymer Systems for Second Harmonic Generation and Optical Data Storage. *Dyes and Pigments* **2015**, 114, 24-32, DOI: 10.1016/j.dyepig.2014.10.010.
19. **Jerca, F. A.**; Jerca, V. V. Photoresponsive Polymers: Quo Vadis. *European Polymer Journal* **2017**, 88, 257-258, DOI: 10.1016/j.eurpolymj.2017.01.030.
20. **Jerca, F. A.**; Jerca, V. V.; Hoogenboom, R. Photoresponsive Polymers on the Move. *Chem* **2017**, 3 (4), 533-536, DOI: 10.1016/j.chempr.2017.09.010.
21. **Jerca, F. A.**; Anghelache, A. M.; Ghibu, E.; Cecoltan, S.; Stancu, I. C.; Trusca, R.; Vasile, E.; Teodorescu, M.; Vuluga, D. M.; Hoogenboom, R.; Jerca, V. V. Poly(2-isopropenyl-2-

- oxazoline) Hydrogels for Biomedical Applications. *Chemistry of Materials* **2018**, 30 (21), 7938-7949, DOI: 10.1021/acs.chemmater.8b03545.
22. **Jerca, F. A.**; Jerca, V. V.; Anghelache, A. M.; Vuluga, D. M.; Hoogenboom, R. Poly(2-isopropenyl-2-oxazoline) as a Versatile Platform Towards Thermoresponsive Copolymers. *Polymer Chemistry* **2018**, 9 (25), 3473-3478, DOI: 10.1039/c8py00612a.
23. **Jerca, F. A.**; Jerca, V. V.; Hoogenboom, R. Well-Defined Thermoresponsive Polymethacrylamide Copolymers with Ester Pendent Groups through One-Pot Statistical Postpolymerization Modification of Poly(2-Isopropenyl-2-Oxazoline) with Multiple Carboxylic Acids. *Journal of Polymer Science Part A-Polymer Chemistry* **2019**, 57 (3), 360-366, DOI: 10.1002/pola.29188.
24. Xu, X. W.; **Jerca, F. A.**; Jerca, V. V.; Hoogenboom, R. Covalent Poly(2-Isopropenyl-2-Oxazoline) Hydrogels with Ultrahigh Mechanical Strength and Toughness through Secondary Terpyridine Metal-Coordination Crosslinks. *Advanced Functional Materials* **2019**, 29 (48), 1904886, DOI: 10.1002/adfm.201904886.
25. Ceglowski, M.; Jerca, V. V.; **Jerca, F. A.**; Hoogenboom, R. Reduction-Responsive Molecularly Imprinted Poly(2-isopropenyl-2-oxazoline) for Controlled Release of Anticancer Agents. *Pharmaceutics* **2020**, 12 (6), 1-15, DOI: 10.3390/pharmaceutics12060506.
26. Iordache, T. V.; Banu, N. D.; Giol, E. D.; Vuluga, D. M.; **Jerca, F. A.**; Jerca, V. V. Factorial Design Optimization of Polystyrene Microspheres Obtained by Aqueous Dispersion Polymerization in the Presence of Poly(2-ethyl-2-oxazoline) Reactive Stabilizer. *Polymer International* **2020**, 69 (11), 1122-1129, DOI: 10.1002/pi.5974.
27. Xu, X. W.; **Jerca, F. A.**; Jerca, V. V.; Hoogenboom, R. Self-Healing and Moldable Poly(2-isopropenyl-2-oxazoline) Supramolecular Hydrogels Based on a Transient Metal Coordination Network. *Macromolecules* **2020**, 53 (15), 6566-6575, DOI: 10.1021/acs.macromol.0c01242.
28. Xu, X. W.; **Jerca, F. A.**; Van Hecke, K.; Jerca, V. V.; Hoogenboom, R. High compression strength single network hydrogels with pillar[5]arene junction points. *Materials Horizons* **2020**, 7 (2), 566-573, DOI: 10.1039/c9mh01401b.
29. **Jerca, F. A.**, V. V. Jerca, R. Hoogenboom, In Vitro Assessment of the Hydrolytic Stability of Poly(2-isopropenyl-2-oxazoline), *Biomacromolecules* **2021**, 22 (12) 5020-5032, doi: 10.1021/acs.biomac.1c00994.
30. **Jerca, F. A.**, V. V. Jerca, R. Hoogenboom, Advances and opportunities in the exciting world of azobenzenes, *Nature Reviews Chemistry* **2022**, 6 (1) 51-69, doi:10.1038/s41570-021-00334-w.
31. **Jerca, F. A.**, C. Muntean, K. Remaut, V. V. Jerca, K. Raemdonck, R. Hoogenboom, Cationic amino-acid functionalized polymethacryl-amide vectors for siRNA transfection based on

- modification of poly(2-isopropenyl-2-oxazoline), *Journal of Controlled Release* **2023**, 364 687-699, doi.org/10.1016/j.jconrel.2023.11.001.
32. R. Merckx, J. Becelaere, E. Schoolaert, O. Frateur, M. N. Leiske, D. Peeters, **Jerca, F. A.**, V. V. Jerca, K. De Clerck, R. Hoogenboom, Poly(2-isopropenyl-2-oxazoline)-based reactive hydrophilic cross-linked nanofiber networks as the basis for colorimetric continuous meat freshness monitoring sensors *Chemistry of Materials* **2023**, 35, 7079, doi: 10.1021/acs.chemmater.3c01355.
33. E. Ghibu, V. Vasile, I. Caraș, E. D. Giol, N. D. Banu, D. M. Vuluga, R. Stan, V. V. Jerca, **Jerca, F. A.**, Poly(2-isopropenyl-2-oxazoline) Hydrogels with Biodegradable Junction Points for Drug-Delivery Applications, *Chemistry of Materials* **2024**, 36 (15) 7459-7475, doi: 10.1021/acs.chemmater.4c01457.
34. P. Yu, T. Sedláčik, L. Parmentier, **Jerca, F. A.**, V. V. Jerca, S. Van Vlierberghe, M. N. Leiske, R. Hoogenboom, Degradable Cell-Adhesive Hybrid Hydrogels by Cross-Linking of Gelatin with Poly(2-isopropenyl-2-oxazoline), *Biomacromolecules* **2024**, 25 (8) 5332-5342, doi: 10.1021/acs.biomac.4c00743.
35. E. Ghibu, N. D. Banu, D. M. Vuluga, R. Stan, **Jerca, F. A.**, V. V. Jerca, Thermal properties of poly(2-isopropenyl-2-oxazoline) crosslinked networks, *UPB Sci. Bull. Ser. B Chem. Mater. Sci* **2025**, 87 (3) 73-84.
36. C. Tucureanu, E. Ghibu, V. Tofan, E. D. Giol, R. Mitran, **Jerca, F. A.**, V. V. Jerca, Assessing protein antifouling performance and hemocompatibility of poly(2-isopropenyl-2-oxazoline) based hydrogels, *Applied Materials Today* **2026**, 48 103031, doi: 10.1016/j.apmt.2025.103031.
37. E. Ghibu, D. M. Vuluga, R. Stan, **Jerca, F. A.**, V. V. Jerca, Poly(2-isopropenyl-2-oxazoline) hydrogels as multipurpose drug delivery systems: Tailoring molecular interactions for controlled loading and release, *European Polymer Journal* **2026**, 242 114407, doi: 10.1016/j.eurpolymj.2025.114407.
38. E. Olăreț, E. Ghibu, A. Șelaru, S. Dinescu, B. Ș. Vasile, V. V. Jerca, I.C. Stancu, **Jerca, F. A.**, Electrospinning and Cross-Linking of Gelatin-Poly(2-Isopropenyl-2-Oxazoline) Nanofibers: A Route to Stable Hybrid Biomaterials, *Macromolecular Rapid Communications* **2026**, 47 e00576 doi: 10.1002/marc.202500576.

#### B. Lucrări științifice publicate în jurnale ISI fără factor de impact

39. Anghelache, A. M.; Jerca, V. V.; **Jerca, F. A.**; Vuluga, D. M.; Teodorescu, M. Synthesis of a Novel  $\alpha,\omega$ -Diepoxy-Poly(2-ethyl-2-oxazoline) Oligomer. *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science* **2016**, 78 (1), 173-184.

**C. Lucrări științifice in extenso publicate în volumele unor manifestări științifice (proceedings) indexate ISI fără factor de impact**

1. Jerca, V. V.; **Nicolescu, F. A.\***; Vasilescu, D. S.; Vuluga, D. M., Dispersion Polymerization of an Azo-Monomer and Methyl Methacrylate in the Presence of Oxazoline Macromonomer. In *Optics and Photonics for Counterterrorism and Crime Fighting VI and Optical Materials in Defence Systems Technology VII*, Lewis, C., Burgess, D., Zamboni, R., Kajzar, F., Heckman, E. M., Eds. 2010; Vol. 7838.
2. **Nicolescu, F.A.\***; Jerca, V.V.; Dancus, I.; Petris, A.; Vlad, V. I.; Vasilescu, D.S.; Vuluga, D.M., Side-Chain Polymers Bearing Azo-Moieties for Nonlinear Optics. In *Optics and Photonics for Counterterrorism and Crime Fighting VI and Optical Materials in Defence Systems Technology VII*, Lewis, C., Burgess, D., Zamboni, R., Kajzar, F., Heckman, E. M., Eds. 2010; Vol. 7838.
3. Dancus, I.; Vlad, V. I.; Petris, A.; **Nicolescu, F. A.\***; Jerca, V. V.; Vuluga, D. M., *Large Optical Nonlinearities in Copolymers with New Pendant Azobenzene Moieties*. 2011.
4. Spiridon, M. C.; **Jerca, F. A.\***; Jerca, V. V.; Vuluga, D. M.; Vasilescu, D. S., New Side-Chain Azo-Polymers for Optical Applications: Synthesis and Characterization. In *Optical Materials and Biomaterials in Security and Defence Systems Technology IX*, Zamboni, R., Kajzar, F., Szep, A. A., Eds. 2012; Vol. 8545.
5. Jerca, V. V.; **Jerca, F. A.\***; Rau, I.; Kajzar, F.; Vasilescu, D. S.; Vuluga, D. M., Investigations of Molecular Nonlinear Optical Polarizabilities of Azobenzenes Substituted with Strong Acceptor Groups. In *Nanobiosystems: Processing, Characterization, and Applications VII*, Kobayashi, N., Ouchen, F., Rau, I., Eds. 2014; Vol. 9171.
6. Jerca, V. V.; **Jerca, F. A.\***; Rau, I.; Kajzar, F.; Vasilescu, D. S.; Vuluga, D. M., Photoresponsive Behavior of Azobenzene Hybrid Materials. In *Nanobiosystems: Processing, Characterization, and Applications VIII*, Kobayashi, N., Ouchen, F., Rau, I., Eds. 2015; Vol. 9557.

**D. Lucrări științifice publicate în jurnale fără factor de impact**

1. Albu, A.-M.; **Nicolescu, F. A.\***; Jerca, V. V.; Stanciu, D. N.; Vuluga, D. M. Derivates of Aniline with Potential Application in Nonlinear Optics: I. Synthesis and Characterization. *Nonlinear Optics Quantum Optics* **2009**, 39, 57-66.
2. Jerca, V. V.; **Nicolescu, F. A.\***; Vasilescu, D. S.; Albu, A.-M.; Vuluga, D. M. Synthesis and Structure of 2-Ethyl-2-Oxazoline/ 4-Chloromethylstyrene Macromonomers. *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science* **2009**, 71 (2), 29-36.

3. **Nicolescu, F. A.**; Jerca, V. V.; Albu, A.-M.; Vasilescu, D. S.; Vuluga, D. M. Synthesis and Characterization of Organic-Inorganic Polymers from New Methacrylate Monomers and Silane Derivatives. *Proc. SPIE 7487, Optical Materials in Defence Systems Technology VI* **2009**, 7487, 74870N DOI: 10.1117/12.832282.
4. **Nicolescu, F. A.**; Jerca, V. V.; Albu, A.-M.; Vuluga, D. M.; Vasilescu, D. S. Poly(maleic-amic) Structures for Potential Nonlinear Optical Applications. *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science* **2009**, 71 (1), 75-82.
5. Spiridon, M. C.; **Jerca, F. A.**; Jerca, V. V.; Vuluga, D. M.; Vasilescu, D. S. Novel Reactive Monomers Bearing A Push-Pull Azo-Moiety. *University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science* **2014**, 76 (1), 59-70.

#### E. Capitoale de carte publicate la edituri din străinătate în ordine cronologică

1. **Jerca, F. A.**; Jerca, V. V.; Stancu, I.-C., Development and Characterization of Photoresponsive Polymers. In *Polymer and Photonic Materials Towards Biomedical Breakthroughs*, Van Hoorick, J., Ottevaere, H., Thienpont, H., Dubruel, P., Van Vlierberghe, S., Eds. Springer International Publishing: Cham, 2018; pp 3-47.
2. Maji, S.; Jerca, V. V.; **Jerca, F. A.**; Hoogenboom, R., Smart polymeric gels. In *Polymeric Gels: Characterization, Properties and Biomedical Applications*, Pal, K., Banerjee, I., Eds. 2018; pp 179-230.
3. Banu, N. D.; **Jerca, F. A.**; Jerca, V. V., Biosensors. In *Food, Medical, and Environmental Applications of Polysaccharides*, Pal, K., Banerjee, I., Sarkar, P., Bit, A., Kim, D., Anis, A., Maji, S., Eds. Elsevier: 2021; pp 381-400.
4. **Jerca, F.A.**; Stancu, I.C.; Jerca, V.V.; Giol, E.D.; "Hydrogels–Blood Interactions", in *"Injectable Hydrogels for 3D Bioprinting"*, The Royal Society of Chemistry, 2021, Croydon, United Kingdom, ISBN:978-1-78801-883-8

#### F. BREVETE NAȚIONALE ȘI INTERNAȚIONALE

1. **F.A. Jerca**, V.V. Jerca, N.D. Banu, E. Ghibu, *Soluții polimerice pentru decontaminarea chimică și radiochimică și procedeu de obținere al acestora* Polymeric solutions for chemical and radiochemical decontamination and process for their preparation, nr. A2021/00130.
2. **F.A. Jerca**, V.V. Jerca, E. Ghibu, N.D. Banu, *Hidrogeluri polimerice fotosensibile și degradabile pe bază de poli(2-izopropenil-2-oxazolină) și agenți terapeutici și procedeu de obținere al acestora* nr. A2022/ 00386.
3. **F.A. Jerca**, V.V. Jerca, E. Ghibu, N.D. Banu, D.E. Giol, I. Caras, C. Țucureanu, C.V. Tofan, A. Salageanu, V. Vasile, B. Palade, *Conjugate polimerice pe bază de poli(2-izopropenil-2-*

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oxazolină) și doxorubicină pentru imuno-chimio-terapia cancerului și procedeu de obținere al acestora, nr. A2022/00632.

4. **F.A. Jerca**, V.V. Jerca, N.D. Banu, M.A. Molenta, *Procedeu de obținere al unor monomeri funcționali pe bază de 2-izopropenil-2-oxazolină folosiți în dezvoltarea unor materiale polimerice inteligente*, nr. A2022/00774.
5. **F.A. Jerca**, C. Muntean, K. Remaut, V.V. Jerca, K. Raemdonck, R. Hoogenboom, *Amino-acid functionalized polymers for siRNA transfection*, Application No. 23176178.4-1107 EPO filled 28.11.2023.
6. E. Olăreț, V.V. Jerca, I.C. Stancu, **F.A. Jerca**, *Pansamente neșesute din nanofibre biohibride de poli(2-izopropenil-2-oxazolină) funcționalizată și gelatină metacrilamidată obținute prin tehnica de electrofilare cu rol în tratamentul rănilor și procedeu de obținere al acestora*, nr. A2024/00498.

**G. Granturi/burse de cercetare**

**a. Director de proiect**

1. Proiect **PN-III-P2-2.1-PED-2021-1776** cu titlul „Platformă personalizată pe bază de materiale inteligente pentru pansamente destinate managementului rănilor” DRESMATER, 24 luni – 598795 lei.
2. Proiect **PN-III-P1-1.1-TE-2019-0538** cu titlul “Materiale cu răspuns în infraroșu apropiat în eliberarea de medicamente pentru implanturi oculare” OCUMATER, 24 luni – 431900 lei
3. Proiect de mobilitate **PN-III-P1-1.1-MC-2019-1272**
4. Proiect de mobilitate **PN-III-P1-1.1-MC-2018-1263**
5. Proiect de mobilitate **PN-III-P1-1.1-MC-2017-1944**
6. Proiect **PN-III-P1-1.2-PCCDI-2017-0395** cu titlul “Contingența Hazardurilor CBRN și Îmbunătățirea Mijloacelor de Securitate Națională”, SECURE-NET, 41 luni – 654800 lei (*Responsabil partener*)
7. Proiect **PN-II-RU-PD-2011-3-0063** cu titlul “Polimeri ce conțin azobenzeni. Proprietăți optice nelineare și comportament fotochimic”, 24 luni – 300000 lei
8. Bursă de cercetare științifică, nr. **BD-8**, 33 luni – 56000 lei

**b. Membru în echipă**

9. Proiect **PN-IV-PRO-CoEx-2024 no.9CoEx/2026** cu titlul „Platformă multidisciplinară integrată pentru descoperirea accelerată și inovativă de medicamente”, TheraFast, 55 luni – 6442500 lei

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10. Proiect **PN-III-P2-2.1-PED-2021-2544** cu titlul "Hidrogeluri polioxazolinice-purtători pluripotenți de antimicrobieni pentru tratamentul local al osteomielitei", POLYAMOS, 24 luni – 598795 lei.
11. Proiect **PN-III-P1-1\_1-TE-2019-1696** cu titlul "Dezvoltarea de micle fotosensibile pe baza de poli(2-oxazoline) ca platforma teranostica pentru imbunatatirea eliberarii de medicament in terapia cancerului" RESPOXA, 24 luni – 431900 lei
12. Proiect **PN-III-P2-2.1-PED-2019-0745** cu titlul "Noi conjugate pe baza de polioxazolina pentru terapia imuno-chimica a cancerului" POXADOX, 24 luni – 600000 lei
13. Proiect **PN-II-PT-PCCA-2013-4-1090** cu titlul "Ingineria metabolică la Escherichia coli pentru obținerea 1,4-butandiolului din glucoză și glicerină și conversia catalitică a acestuia la compuși cu valoare adăugată", 24 luni - 250000 lei
14. Proiect **PN-II-ID-2008-2, ID\_86** cu titlul "Materiale cu structură macromoleculară, care conțin cromofori legați chimic" CROMOPOL, 36 luni, - 1000000 lei
15. Proiect **PN 2 CNMP/2007: 71-029** Nabieco, "Nanocompozite bioactive pentru ambalaje alimentare ecologice", 36 luni
16. Proiect **PN 2 CNMP/2007: 31-056** Biopolact, "Materiale termoplastice biodegradabile din resurse regenerabile pentru ambalaje ecologice în scopul reducerii poluării și a impactului negativ asupra mediului", 36 luni
17. Proiect **CEEX-MENER 703 HYPROD** "Dezvoltarea unui sistem de producere a hidrogenului, la costuri scăzute, prin metoda electrolizei cu membrana schimbatoare de protoni", 36 luni
18. Proiect **CEEX 56 ECOTEXIZ**-"Sistem tehnologic integrat de producere a șnurului de etanșare 3D ecologic textil pentru aplicații industriale", 36 luni
19. Proiect **CEEX 05 ORGFOTON** Nr. D11-63/03.10.2005, cu titlul "Electronically and Optical Phenomena in Organic materials with Conjugated Bonds for Photonics", 36 luni

**H. Prezentări orale susținute la manifestări științifice internaționale și naționale**

1. **Nicolescu, F. A.**; Jerca, V. V.; Stanciu, D. N.; Albu, A.-M.; Vuluga, D. M., Derivates of Aniline with Potential Application in Nonlinear Optics. In *The 5-th International Edition of Romanian Conference on Advanced Materials (ROCAM)*, Bucharest, Romania, 2006.
2. Jerca, V. V.; **Nicolescu, F. A.**; Stanciu, D. N.; Albu, A.-M.; Vuluga, D. M., Polymer Architectures Based on Oxazoline Monomers. In *IX International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM)*, Cracow, Poland, 2007.
3. **Nicolescu, F. A.**; Jerca, V. V.; Stanciu, D. N.; Albu, A.-M.; Vuluga, D. M., Synthesis and Copolymerization Study of New Monomers with Potential Application in Optical and Photonic

- Field. In *IX International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM)*, Cracow, Poland, 2007.
4. Stanciu, D. N.; **Nicolescu, F. A.**; Jerca, V. V.; Albu, A.-M.; Vuluga, D. M.; Hamaide, T., Modification des Celluloses par Polymerisation „In Situ”. In *8ème Colloque Franco-Roumain sur Les Polymeres (CFR)*, Grenoble, France, 2007; pp 26-30 August.
  5. **Nicolescu, F. A.**; Jerca, V. V.; Dancus, I.; Petris, A.; Vlad, V. I.; Vasilescu, D. S.; Vuluga, D. M., Side-Chain Polymers Bearing Azo-moieties for Nonlinear Optics. In *SPIE EUROPE Security+Defence*, Toulouse, France, 2010.
  6. Dancus, I.; Vlad, V.I.; Petris, A.; **Nicolescu, F.A.**; Jerca, V.V.; Vuluga, D.M., Large Optical Nonlinearities in Copolymers with New Pendant Azobenzene Moieties. In *13th International Conference on Transparent Optical Networks*, Stockholm, Sweden, 2011.
  7. Vuluga, D. M.; **Jerca, F. A.**; Jerca, V. V.; Spiridon, M. C.; Vasilescu, D. S.; Anghel, D. F.; Rau, I.; Dancus, I.; Vlad, V. I.; Kajzar, F., New Optical Materials Incorporating Azo-Dyes. In *Third International Workshop on Advanced, Nano- and Biomaterials and Their Applications (NABM)*, Timișoara, Romania, 2012.
  8. Vuluga, D.M.; **Jerca, F. A.**; Jerca, V.V.; Spiridon, M.C.; Vasilescu, D.S.; Anghel, D.F.; Rau, I.; Dancus, I.; Vlad, V.I.; Kajzar, F., New Optical Materials Incorporating Azo-Dyes. In *XXXII-nd Romanian Chemistry Conference*, Călimănești-Căciulata, Romania, 2012.
  9. **Jerca, F. A.**; Jerca, V. V.; Kajzar, F.; Manea, A. M.; Rau, I.; Vuluga, D. M., Simultaneous Two and Three Photon Resonant Enhancement of Third-Order NLO Susceptibility in Azo-Dye Polymer Film. In *18th Romanian International Conference on Chemistry and Chemical Engineering*, Sinaia, Romania, 2013.
  10. Spiridon, M.C.; **Jerca, F.A.**; Jerca, V.V.; Vuluga, D.M.; Vasilescu, D.S., Novel Poly (methyl methacrylate)s Bearing a Push-Pull Azo-Moiety. In *18th Romanian International Conference on Chemistry and Chemical Engineering*, Sinaia, Romania, 2013.
  11. Spiridon, M. C.; Iliopoulos, K.; **Jerca, F. A.**; Jerca, V. V.; Vuluga, D. M.; Andraud, C.; Baldeck, P. L.; Vasilescu, D. S.; Gindre, D.; B., S., Novel Side-Chain Copolymers Bearing a Push-Pull Azo-Moiety for NLO Applications. In *XII International Workshop: Nonlinear Optics Applications (NOA)*, Gdansk, Poland, 2013.
  12. Anghelache, A. M.; Jerca, V. V.; **Jerca, F. A.**; Vuluga, D. M.; Teodorescu, M., Synthesis of a Novel  $\alpha, \omega$  Diepoxy-Poly(2-ethyl-2-oxazoline) Oligomer. In *3rd International Conference on Analytical Chemistry*, Iasi, Romania, 2016.
  13. Jerca, V. V.; **Jerca, F. A.**; Spiridon, M. C.; Banu, N. D.; Rau, I.; Kajzar, F.; Vuluga, D. M., Unveiling Some New NLO Capabilities of Azo-Dye Graft-Materials. In *5th International Workshop on Advanced Nano- and Biomaterials and Their Applications (NABM5)*, Constanta, Romania, 2016.

14. **Jerca, F. A.**; Jerca, V. V.; Spiridon, M. C.; Banu, N. D.; Vuluga, D. M., New Features of Azo-Dye Containing Materials for Nonlinear Optics. In *XXXIV-nd Romanian Chemistry Conference*, Călimănești-Căciulata, Romania, 2016.
15. Jerca, V. V.; **Jerca, F. A.**; Hoogenboom, R., Thermoresponsive Poly(2-Isopropenyl-2-Oxazoline) Polymers: Modulation of the Cloud Point Through Post-Modification Reactions. In *Hengstberger Symposium, New Horizons in Smart Materials 2017*, Heidelberg, Germany, 2017.
16. Jerca, V. V.; **Jerca, F. A.**; Spiridon, C. M.; Stanciu, N. D.; Ghibu, E.; Vuluga, D. M., Poly-2-oxazolines – Versatile Matrix for Non-linear Optics or Bio-Medical Applications In *XXXV-th Romanian Chemistry Conference*, Călimănești-Căciulata, Romania, 2018.
17. Ghibu, E.; Banu, N.D.; Iordache, T.V.; Vuluga, D.M.; Stan, R.; Jerca, V.V.; **Jerca, F.A.**, Poly(2-Isopropenyl-2-Oxazoline) Hydrogels as Drug Delivery Systems In *21<sup>st</sup> Romanian International Conference on Chemistry and Chemical Engineering* Constanța, Romania, 2019.
18. **Jerca, F. A.**; Jerca, V. V.; Vuluga, D. M.; Hoogenboom, R., Poly(2-Isopropenyl-2-Oxazoline) as Versatile Platform for Multi-Functional Materials. In *15<sup>th</sup> International Symposium "Priorities of Chemistry for a Sustainable Development" (PRIOCHEM XV)*, Bucharest, Romania, 2019.
19. Jerca, V. V.; **Jerca, F. A.**; Hoogenboom, R., Poly(2-Isopropenyl 2-Oxazoline) Hydrogels: Promising Materials in the Biomedical Field. In *Frontiers in Polymer Science*, Budapest, Hungary, 2019.
20. Jerca, V. V.; **Jerca, F. A.**; Hoogenboom, R., Design of Multi-Stimuli Responsive Polymers Using Poly(2-Isopropenyl-2-Oxazoline) Platform. In *European Polymer Congress*, Heraklion, Greece, 2019.
21. Jerca, V. V.; **Jerca, F. A.**; Spiridon, M. C.; Banu, N. D.; Ghibu, E.; Vuluga, D. M., Non-Linear Optical Applications or Drug Controlled Release from Poly-2-Oxazoline Matrix. In *21<sup>st</sup> Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 21)*, Cluj, Romania, 2019.
22. E. Ghibu, N.D. Banu, D.M. Vuluga, R. Stan, **Jerca, F. A.**, V.V. Jerca, "Degradable hydrogels for drug delivery applications based on poly(2-isopropenyl-2-oxazoline)", *2nd Bucharest Polymer Conference, București, România*, 10 –11 iunie 2021.
23. **Jerca, F. A.**, V.V. Jerca, "Poly(2-isopropenyl-2-oxazoline)-A versatile platform for advanced multifunctional materials", *Progress in Organic and Macromolecular Compounds*, 28th Edition, Iași, România, 7 –9 octombrie 2021.
24. E. Ghibu, N.D. Banu, D. Giol, V.V. Jerca, **Jerca, F. A.**, "Degradable Hydrogels for Drug Delivery Applications Based on Poly(2-Isopropenyl-2-Oxazoline)", 32nd Edition of the

- international congress “*PREPARING THE FUTURE BY PROMOTING EXCELLENCE*”, 28 februarie-2 martie 2022, Iași, România.
25. V.V. Jerca, **Jerca, F. A.**, “Designing Degradable Poly(2-Isopropenyl-2-Oxazoline)-Materials for Drug Delivery Applications” *14th International Symposium on Ionic Polymerization, Ionic Polymerizations to Develop Advanced Functional Materials*, 11-16 Septembrie, Ghent, Belgia.
26. E. Ghibu, N.D. Banu, D.M. Vuluga, V.V. Jerca, **Jerca, F. A.**, “Degradable Hydrogels Based on Poly(2-Isopropenyl-2-Oxazoline) for Drug Delivery Applications”, *a XXXVI-a Conferință Națională de Chimie*, 4-8 octombrie 2022, Călimănești-Căciulata, România.
27. M.A. Molența, **Jerca, F. A.**, V.V. Jerca, „2-Isopropenyl-2-Oxazoline a Versatile Building Block for the Synthesis of Functional Monomers”, *a XXXVI-a Conferință Națională de Chimie*, 4-8 octombrie 2022, Călimănești-Căciulata, România.
28. V.V. Jerca, **Jerca, F. A.** Emerging applications of poly(2-isopropenyl-2-oxazoline) materials”, *Advanced Polymers via Macromolecular Engineering 2023*, 23-27 aprilie 2023, Paris, Franța.
29. E. Ghibu, D. M. Vuluga, V.V. Jerca, **Jerca, F. A.**, “Hydrogels with tunable degradability based on poly(2-isopropenyl-2-oxazoline) for drug delivery applications”, *15th Edition of the Conference "New Trends in Chemistry Research"*, 21-22 Septembrie 2023, Timișoara, România.
30. M.-A. Molența, V.V. Jerca, **Jerca, F. A.**, “Diversity oriented synthesis of functional monomers starting from 2-isopropenyl-2-oxazoline”, *15th Edition of the Conference "New Trends in Chemistry Research"*, 21-22 Septembrie 2023, Timișoara, România.

București  
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Semnătura

