

PERSONAL INFORMATION


Ion Cosmin CĂLINA

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Gender M | Date of birth 18/02/1991 | Nationality Romanian

WORK EXPERIENCE

Dec. 2023 – Present
Scientific Researcher (3rd rank)

National Research-Development Institute for Laser, Plasma and Radiation Physics, Romania
<http://www.inflpr.ro>

(Scientific Research – Development - Innovation)

Aug. 2022 – Nov. 2023
Scientific Researcher

National Research-Development Institute for Laser, Plasma and Radiation Physics, Romania
<http://www.inflpr.ro>

(Scientific Research – Development - Innovation)

Jan. 2014 – July 2021
Scientific Researcher Assistant

National Research-Development Institute for Laser, Plasma and Radiation Physics, Romania
<http://www.inflpr.ro>

(Scientific Research – Development - Innovation)

EDUCATION

Oct. 2015 - Mar. 2020
Ph.D. in Physics

Faculty of Physics/Department of Biophysics - University of Bucharest, Romania.
<http://www.fizica.unibuc.ro>

Thesis title: *Biomedical hybrid hydrogels obtained by processing with e-beam irradiation*

Oct. 2013 - July 2015
Master in Physics

Faculty of Physics/Department of Optics, Lasers and Applications - University of Bucharest, Romania
<http://www.fizica.unibuc.ro>

Oct. 2010 – July 2013
B.Sc. in Physics

Faculty of Sciences/ Department of Physics - University of Craiova, Romania
<http://cis01.central.ucv.ro/physics/>

ADDITIONAL INFORMATION

Qualification

1. *Radiation Protection in the Use of Particle Accelerators* - Level 1, National Institute of Research-Development for Nuclear Physics and Engineering "Horia Hulubei", Bucharest, Romania, 2022.
2. *Radioprotection in the Use of Particle Accelerators* - Level 1, National Institute of Research-Development for Nuclear Physics and Engineering "Horia Hulubei", Bucharest, Romania, 2017.

Reviewer

International Journal of Biological Macromolecules, Materials Today Chemistry, Nuclear Science and Techniques, Food and Bioprocess Technology, Journal of Polymers and the Environment, Scientific Reports, International Journal of Nanomedicine, Chemistry Africa, Polymers, Pharmaceuticals, Gels,

Materials, Biomimetics, International Journal of Molecular Science, Healthcare, Applied Sciences, Coatings, Electronics, Sensors, Starch, Journal of Sol-Gel Science and Technology, Nanomaterials, Colloid and Polymer Science, Biophysica, Discover Polymers, Marinedrugs, Medical Sciences.

Guest Editor Special Issue

Hybrid Hydrogels: From Biomaterials Development to Eco-Friendly Approaches - *Gels*
Polymeric Hydrogels for Biomedical Application - *Gels*
Polymeric Hydrogels for Biomedical Application (2nd Edition) – *Gels*

Research Projects

- PN-IV-P2-2.1-TE-2023-0453: *Biomimetic hydrogel dressing containing natural therapeutic agents developed by radiation synthesis (2025-2027)* – **Project Leader**;
- Romanian National Core Program LAPLAS VII–contract no. 30N/2023: *Advanced research and technological development of lasers - plasma - radiation - space (2023-2026)* – **Team member**;
- PN-III-P4-PCE-2021-1778: *Selection of the competitive reactions for plasma modified starch (2022-2024)* – **Team member**;
- PN-III-P2-2.1-PED-2021-2151: *Biotechnological solution for plant water and biostimulants sustainable delivery system (2022-2024)* – **Team member**;
- PN-III-P1-1.2-PCCDI-2017-0728: *Integrated development project for advanced medical treatment technologies (2018-2021)* – **Team member**;
- LAPLAS VI, Contract no. 16N (2019 -2022): *Advanced research and technological developments of lasers, plasma, radiation, and space* - **Team member**;
- PCDI – STAR – ROSA 140/2017: *Technologies for elastomeric nanocomposites development for low temperature and radiation resistant O-rings manufacturing, with potential applications in space, aeronautics, security and other related fields* - NANOELAST-O – **Team member**;
- Nucleus Program (2014-2015): *Advanced processing of materials using electron beams, microwaves, plasma and laser radiation for environmental protection, agriculture, electronics, and machine building applications* - **Team member**.

Patent applications

- M. Demeter, **I. C. Călina**, A. Scărișoreanu, A. Cîmpean, *Process for obtaining biocompatible semisolid hydrogel with doxorubicin release and pro-generative role*, application number A/00138/2024.
- M. Demeter, **I.C. Călina**, A. Scărișoreanu, *Multicomponent superabsorbent dressing in the form of a hydrogel*, RO-BOPI 6/2021, page 25 (application number/a 2019 00871).

Publications

27 ISI papers (see Annex 1)

Conferences

43 (see Annex 2)

h – index (Web of Science™)

10

h – index (Scopus)

11

PERSONAL LINKS

Scopus Author ID

<https://www.scopus.com/authid/detail.uri?authorid=57189987806>

ORCID

<https://orcid.org/0000-0003-2828-3471>

Researcher ID

<https://www.webofscience.com/wos/author/record/H-8414-2018>

Google Scholar

<https://scholar.google.ro/citations?user=vP7zBwgAAAAJ&hl=ro>

BrainMap

<https://www.brainmap.ro/ion-cosmin-calina>

Annex 1 – List of scientific papers

- E. Mănăilă, **I. Călina**, A. Scărișoreanu, M. Demeter, G. Crăciun, M. Dumitru, *Impact of Water Conductivity on the Structure and Swelling Dynamics of E-Beam Cross-Linked Hydrogels*, *Gels*, 11(8), 611, (2025). (**IF₂₀₂₄ = 5.3**; **AIS₂₀₂₄ = 0.68**).
- E. Stancu, D. Gheorghe, B. Bită, **I. Călina**, M. Gherendi, F. Baiasu, C. Marinescu, A. Sofronia, A. Neacsu, *The influence of electron beam (e-beam) irradiation upon anhydrous and hydrated quercetin*, *Radiation Physics and Chemistry*, 235, 112836 (2025). (**IF₂₀₂₄ = 3.3**; **AIS₂₀₂₄ = 0.425**).
- A. Scărișoreanu, M. Demeter, **I. Călina**, M.A. Raza, *Non-ionizing (UV and MW)-assisted synthesis of polymeric hydrogels for advanced tissue engineering applications*, *Journal of Biomaterials Science, Polymer Edition*, 1–33 (2025). (**IF₂₀₂₄ = 3.6**; **AIS₂₀₂₄ = 0.438**).
- E. Manailă, **I. Calina**, M. Dumitru, G. Craciun, *Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized Using Electron-Beam Irradiation—Part III: An Evaluation of Their Degradation in Soil*, *Molecules*, 30 (5), 1126 (2025). (**IF₂₀₂₄ = 4.6**; **AIS₂₀₂₄ = 0.74**).

5. **I. Călina**, M. Demeter, A. Scărișoreanu, M.A. Raza, *Role of Ionizing Radiation Techniques in Polymeric Hydrogel Synthesis for Tissue Engineering Applications*, Gels, 11 (1), 47 (2025). (IF₂₀₂₄ = 5.3; AIS₂₀₂₄ = 0.68).
6. M. Demeter, **I. Călina**, A. Scărișoreanu, M.R. Nemțanu, M. Brașoveanu, M. Micutz, M. Dumitru, *E-Beam Crosslinking, and Comprehensive Characterization of Lavender Oil-Enriched Hydrogels*, Polymers, 16 (22), 3150 (2024). (IF₂₀₂₄ = 4.9; AIS₂₀₂₄ = 0.70).
7. **I. Călina**, M. Demeter, G. Crăciun, A. Scărișoreanu, E. Mănăilă, *The Influence of the Structural Architecture on the Swelling Kinetics and the Network Behavior of Sodium-Alginate-Based Hydrogels Cross-Linked with Ionizing Radiation*, Gels, 10 (9), 588 (2024). (IF₂₀₂₄ = 5.3; AIS₂₀₂₄ = 0.68).
8. M. Demeter, **I. Călina**, A. Scărișoreanu, V. Mitran, M. Popa, A. Cîmpean, M. C. Chifiriuc, M. Micutz, E. Matei, B. Mitu, *Biocompatible and antimicrobial chitosan/PVP/PEO/PAA/AgNP composite hydrogels: e-beam cross-linking, biodegradation and rheological behaviors*, Radiation Physics and Chemistry, 216, 111391 (2024). (IF₂₀₂₄ = 3.3; AIS₂₀₂₄ = 0.425).
9. M. Demeter, A.M. Negrescu, **I. Calina**, A. Scărișoreanu, M. Abu-Kaya, M. Micutz, M. Dumitru, A. Cimpean, *Synthesis, Physicochemical Characteristics, and Biocompatibility of Multi-Component Collagen-Based Hydrogels Developed by E-Beam Irradiation*, Journal of Functional Biomaterials 14 (9), 454 (2023). (IF₂₀₂₃ = 5; AIS₂₀₂₃ = 0.743).
10. G. Crăciun, **I. Călina**, M. Demeter, A. Scărișoreanu, E. Manaila, *Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized by Electron Beam Irradiation Part I: Impact of Initiator Concentration and Irradiation Dose on Structure, Network Parameters and Swelling Properties*, Materials 16 (13), 4552, (2023). (IF₂₀₂₂ = 3.1; AIS₂₀₂₂ = 0.508).
11. E. Mănăilă, M. Demeter, **I. Călina**, G. Crăciun, *NaAlg-g-AA Hydrogels: Candidates in Sustainable Agriculture Applications*, Gels 9 (4), 316, (2023). (IF₂₀₂₃ = 5; AIS₂₀₂₃ = 0.594).
12. M. Demeter, A. Scărișoreanu, **I. Călina**, *State of the Art of Hydrogel Wound Dressings Developed by Ionizing Radiation*, Gels 9(1), 55, (2023). (IF₂₀₂₃ = 5; AIS₂₀₂₁ = 0.594).
13. E. Mănăilă, G. Crăciun, **I. Călina**, *Sodium Alginate-g-acrylamide/acrylic Acid Hydrogels Obtained by Electron Beam Irradiation for Soil Conditioning*, International Journal of Molecular Sciences 24 (1), 104, (2023). (IF₂₀₂₃ = 4.9; AIS₂₀₂₃ = 1.055).
14. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, M. Abu Kaya, *Correlations on the Structure and Properties of Collagen Hydrogels Produced by E-Beam Crosslinking*, Materials 15(21), 7663, (2022). ((IF₂₀₂₃ = 3.4; AIS₂₀₂₃ = 0.510).
15. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, *E-Beam Cross-Linking of Complex Hydrogels Formulation: The Influence of Poly(Ethylene Oxide) Concentration on the Hydrogel Properties*, Gels 8(1), 27, (2022). (IF₂₀₂₂ = 4.6; AIS₂₀₂₂ = 0.626).
16. **I. Călina**, M. Demeter, A. Scărișoreanu, M. Micutz, *Development of novel superabsorbent hybrid hydrogels by e-beam crosslinking*”; Gels 7(4), 189, (2021). IF₂₀₂₁ = 4.432; AIS₂₀₂₁ = 0.766).
17. **I. Călina**, M. Demeter, A. Scărișoreanu, V. Sătulu, B. Mitu, *One step e-beam radiation cross-linking of quaternary hydrogels dressings based on Chitosan-Poly(Vinyl-Pyrrolidone)-Poly(ethylene Glycol)-Poly(Acrylic acid)*, International Journal of Molecular Sciences, 21(23), 9236, 2020. (IF₂₀₂₀ = 5.923; AIS₂₀₂₀ = 1.123).
18. E. Bădița, C. Vancea, **I. Călina**, *A possible use of optical fibers in radiation monitoring /dosimetry*, Romanian Journal of Physics, Vol. 65 (3-4), 902, 2020. (IF₂₀₂₀ = 1.888; AIS₂₀₁₉ = 0.194).
19. M. Demeter, V. Meltzer, **I. Călina**, A. Scărișoreanu, M. Micutz, M. Abu Kaya, *Highly elastic superabsorbent collagen/PVP/PEO hydrogels cross-linked via e-beam radiation*, Radiation Physics and Chemistry, Vol. 174, 108898, 2020. (IF₂₀₂₀ = 2.858; AIS₂₀₂₀ = 0.396).
20. D. Ticos, A. Scurtu, M. Oane, C. Diplășu, G. Giubega, **I. Călina**, C. M. Ticos, *Complementary dosimetry for a 6 MeV electron beam*, Results in Physics, Vol. 14, 102377, 2019. (IF₂₀₁₉ = 4.019; AIS₂₀₁₉ = 0.491).
21. M. Demeter, **I. Călina**, C. Vancea, M. Șen, M. Abu Kaya, E. Manaila, M. Dumitru, V. Meltzer, *E-Beam Processing of Collagen-Poly(N-vinyl-2-pyrrolidone) Double-Network Superabsorbent Hydrogels: Structural and Rheological Investigations*, Macromolecular Research, Vol.27,255-267, 2019. (IF₂₀₁₉ = 2.047; AIS₂₀₁₉ = 0.272).
22. D. Aksüt, M. Demeter, **I. Călina**, M. Șen, *Effect of Radiation on Mechanical Properties of Phenyl-vinyl-methylpolysiloxane (PVMQ) Elastomers Cured with Peroxide and Type I and Type II Coagents*, Radiation Physics and Chemistry, Vol. 158, 148-152, 2019. (IF₂₀₁₉ = 2.226; AIS₂₀₁₉ = 0.338).
23. E. Bădița, C. Vancea, **I. Călina**, D. Stroe, M. Dumitrache, M. Dumitrache, *Dosimetric comparison for radiation quality in high energy photon beams*, Romanian Reports in Physics, Vol.71 (2), 205, 2019. (IF₂₀₁₉ = 2.147; AIS₂₀₁₉ = 0.269).
24. **I. Călina**, M. Demeter, C. Vancea, A. Scărișoreanu, V. Meltzer, *E-beam radiation synthesis of xanthan-gum/ carboxymethylcellulose superabsorbent hydrogels with incorporated graphene oxide*, Journal of Macromolecular Science Part A: Pure and Applied Chemistry, Vol. 55 (3), 260-268, 2018.) (IF₂₀₁₈ = 1.163; AIS₂₀₁₈ = 0.143).

25. **I. Călina**, M. Demeter, E. Bădița, E. Stancu, A. Scărișoreanu, C. Vancea, *Reduction of freestanding graphene oxide films using continuous wave laser*, Romanian Reports in Physics, Vol. 69 (2), 504, 2017. (IF₂₀₁₇ = 1.582; AIS₂₀₁₇ = 0.255)
26. E. Bădița, C. Vancea, **I. Călina**, D. Stroe, M. Dumitrache, E. Stancu, F. Scarlat, *Long-term stability of the performance of a clinical linear accelerator and z-score assessment for absorbed dose to water quantity*, Romanian Reports in Physics, Vol. 69 (1), 606, 2017. (IF₂₀₁₇ = 1.582; AIS₂₀₁₇ = 0.255)
27. E. Bădița, C. Vancea, E. Stancu, F. Scarlat, **I. Călina**, A. Scărișoreanu, *Study on the development of a new single mode optic fiber radiation dosimeter for electron beams*, Romanian Reports in Physics, Vol. 68, No. 2, 604-614, 2016. (IF₂₀₁₆ = 1.467; AIS₂₀₁₆ = 0.242)

Annex 2 – Scientific presentations at national/international conferences

1. **I. Călina**, E. Mănăilă, G. Crăciun, M. Demeter, M. Dumitru, A. Scărișoreanu/ Novel e-beam cross-linked hydrogels for sustainable agriculture and environmental applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 146, Pantelimon, Ilfov, Romania, 06 – 07 October 2025.
2. **I. Călina**, M. Demeter, A. Scărișoreanu, M. Micutz/ Advanced hybrid hydrogel composites processed by electron beam technology for biomedical applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 96, Pantelimon, Ilfov, Romania, 06 – 07 October 2025
3. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, F. Bilea, M. A. Kaya/ E-beam processed hybrid hydrogels: emerging materials for biomedical applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 104, Pantelimon, Ilfov, Romania, 06 – 07 October 2025.
4. M. Brașoveanu, **I. Călina**, M.R. Nemțanu/ Modified Starches as Novel Materials for Environmental Applications: Exploring Cold Plasma Sensitivity from a Botanical Source Perspective/ The 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0416), No. 7/2024, p 129, Bucharest, Romania, 30 – 31 October 2024.
5. E. Mănăilă, **I. Călina**, M. Brașoveanu, M.R. Nemțanu, G. Crăciun/ Innovative Plasma-Modified Starch-Based Hydrogels Synthesized by Electron Beam for Water Remediation/ The 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0416), No. 7/2024, p 147, Bucharest, Romania, 30 – 31 October 2024.
6. G. Crăciun, M. Brașoveanu, E. Manaila, **I. Calina**, M. Demeter, M. Dumitru/ TAILORED ELECTRON BEAM-IRRADIATED HYDROGELS FOR SUSTAINABLE AGRICULTURE/ VI. International Agricultural, Biological & Life Science Conference (AGBIOL 2024)/Proceedings of Abstracts (ISBN-978-625-95132-0-1), p 173, Edirne, Turkey, 18 – 20 September 2024.
7. E. Manaila, M. R. Nemțanu, G. Craciun, **I. Calina**, M. Dumitru/POTENTIAL OF NATURAL-INSPIRED HYDROGELS IN AGRICULTURE: A FOCUS ON DIFFUSION MECHANISMS/ VI. International Agricultural, Biological & Life Science Conference (AGBIOL 2024) – Proceedings of Abstracts (ISBN-978-625-95132-0-1), p 174, Edirne, Turkey, 18 – 20 September 2024.
8. G. Crăciun, **I. Călina**, M. Demeter, A. Scărișoreanu, E. Mănăilă, Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized by Electron Beam Irradiation Part I: Impact of Initiator Concentration and Irradiation Dose on Structure, Network Parameters and Swelling Properties, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023.
9. E. Mănăilă, **I. Călina**, M. Dumitru, G. Craciun, Swelling Kinetics of Sodium Alginate-G-Acrylic Acid Hydrogels Obtained by Electron Beam Irradiation, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023.
10. M. Brașoveanu, D. Ticoș, M.R. Nemțanu, **I. Călina**, Impact of Low-Vacuum Level on Starch Modification via Cold Plasma, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023 (Poster Session-II, ID 2495)
11. A. Scărișoreanu, M. Demeter, **I. Călina**, M. Bojan, *Gold nanoparticle-composite hydrogel synthesized by e-beam irradiation*; International Conference on Radiation Applications in Physics, Chemistry, Biology, Medical Sciences, Engineering and Environmental Sciences (RAP 2023), page 173, May 29 – June 2, 2023, Anavyssos, Attica, Greece.
12. A. Scărișoreanu, M. Demeter, **I. Călina**, M Dumitru Grivei, M. Micutz, *Radiation synthesis of microemulsion-based hydrogels loaded with lavender oil*; International Conference on Radiation Applications in Physics, Chemistry, Biology, Medical Sciences, Engineering and Environmental Sciences (RAP 2023), page 171, May 29 – June 2, 2023, Anavyssos, Attica, Greece.
13. M. Demeter, A. M. Negrescu, A. Cimpean, **I. Călina**, A. Scărișoreanu, M. Albu Kaya, M. Micutz, B. Mitu, V Satulu, M Dumitru Grivei, *Biocompatible collagen-based hydrogels with a hybrid structure developed by e-beam irradiation technology*; International

Conference on Radiation Applications In Physics, Chemistry, Biology, Medical Sciences, Engineering and Environmental Sciences (RAP 2023), page 164, May 29 – June 2, 2023, Anavyssos, Attica, Greece.

14. B. Mitu, M. Demeter, A. Ardeleanu, A. Scărișoreanu, **I. Călina**, V. Sătulu, A. Bonciu, G. Dinescu, V. Mitran, A. Cîmpean, C.M. Saviuc CM, M. Popa, C. Chifriuc, E. Matei, A. Roseanu, L. Sima, C. Coman, A. Salagean, *Plasma and electron-beam irradiation approaches for obtaining chitosan - based patches with Ag nanoparticles inclusion for wound healing*; 14th International Conference on Physics of Advanced Materials (ICPAM-14), September 8 – 15, 2022, Dubrovnik, Croatia / T2-I-online.
15. M. Demeter, A. Negrescu, A. Cîmpean, A. Scărișoreanu, **I. Călina**, M. Albu Kaya, *Hydrogel with hybrid structure designed for chemotherapeutic drug delivery obtained in situ by e-beam crosslinking*; 5th Autumn School on Physics of Advanced Materials (PAMS-5) September 8 – 15, 2022, Dubrovnik, Croatia.
16. **I. Călina**, M. Demeter, A. Scărișoreanu, B. Mitu, *Hybrid Hydrogels Obtained by e-beam Crosslinking*, The International Conference on Lasers, Plasma, and Radiation – Science and Technology (ICLPR-ST), 7-10 June, 2022, Bucharest, Romania (P3.10).
17. M. Demeter, A. Cîmpean, M. Popa, **I. Călina**, A. Scărișoreanu, *Highly Biocompatible and Antimicrobial Hydrogels Composites Produced by e-beam Crosslinking*, The International Conference on Lasers, Plasma, and Radiation – Science and Technology (ICLPR-ST), 7-10 June 2022, Bucharest, Romania (P5.24).
18. A. Scărișoreanu, M. Demeter, **I. Călina**, M. Albu Kaya, *Correlations on the Structure and Properties of Collagen Hydrogels Produced by e-beam Crosslinking*, The International Conference on Lasers, Plasma, and Radiation – Science and Technology (ICLPR-ST), 7-10 June, 2022, Bucharest, Romania (P3.09).
19. **I. Călina**, M. Demeter, A. Scărișoreanu, V. Sătulu, B. Mitu, M. Șen, *Evaluation of chitosan/PVP hydrogels containing ibuprofen and nanosilver prepared by e-beam cross-linking*, 19th International Balkan Workshop on Applied Physics, 16-19 July, 2019, Constanta, Romania (S1 O7, 10:45).
20. D. Aksüt, Z. Çınar, M. Demeter, **I. Călina**, M. Șen, *Effect of Radiation on Mechanical Properties of Peroxide and Platinum cured phenyl-vinyl-methyl-polysiloxane (PVMQ) Elastomers*, International Rubber Conference (IRC2019), 3-6 September 2019, London, England.
21. A. Neacșu, C. Marinescu, D. Gheorghe, M. Demeter, **I. Călina**, A. Scărișoreanu, *A thermochemical study of some e-beam irradiated guanidine compounds*, 8th Symposium on Thermal Analysis and Calorimetry-Eugen Segal: of the Commission for Thermal Analysis and calorimetry of the Romanian Academy (CATCAR28) and 2nd Symposium on Thermal Analysis and Calorimetry of Moldova (MoldTAC2), 9-10 May 2019, Timisoara, Romania.
22. E. Bădița, **I. Călina**, C. Vancea, *A possible use of optical fibers in radiation monitoring/dosimetry*, Bucharest University Faculty of Physics 2019 Meeting, 21-22 July, Măgurele, Romania.
23. **I. Călina**, M. Demeter, C. Vancea, M. Micutz, T. Staicu, M. Albu Kaya, *E-beam cross-linking of collagen-co-poly(vinylpyrrolidone)-poly(ethylene oxide) triblock superabsorbant hydrogels*, 82nd Prague Meeting on Macromolecules - Polymer Networks and Gels 2018 and 24th Polymer Networks Group Meeting, 17-21 June 2018, Prague, Czech Republic.
24. M. Demeter, **I. Călina**, C. Vancea, T. Paneva, E. Koleva, L. Koleva, *Modelling of E-beam crosslinking of composite hydrogels*, Thirteenth International Conference on Electron Beam Technologies, 18-22 June 2018, Varna, Bulgaria.
25. **I. Călina**, M. Demeter, C. Vancea, E. Mănăilă, G. Crăciun, *E-Beam Radiation Cross-linking of Chitosan-PEG-Poly(Vinyl-Pyrrolidone) Hydrogels for Skin Healing*, The 15th National Conference of Biophysics, 7-9 September 2018, P6, Bucharest, Romania.
26. D. Aksüt, M. Demeter, **I. Călina**, M. Șen, *Effect of Radiation on Mechanical Properties of Phenyl-Vinyl-Methyl-Polysiloxane (PVMQ) Elastomers Cured with Peroxide and Type I and Type II Accelerators*, The Ionizing Radiation and Polymers Symposium, 26-31 August 2018, Moscow, Rusia.
27. F. Scarlat, E. Stancu, E. Bădița, A. Scărișoreanu, C. Vancea, **I. Călina**, M. Demeter, Fl.Scarlat, R. Chiru, *Ionization dosimetry principles for conventional and laser-driven clinical particle beams*, The 13th World Congress on Healthcare & Technology, 14-15 June 2018, Dublin, Ireland.
28. **I. Călina**, M. Demeter, C. Vancea, A. Scărișoreanu, A. Popescu, *Structural changes and swelling behavior of e-beam crosslinked gellan gum-co-lactic acid hydrogels*, Bucharest University Faculty of Physics 2017 Meeting, 23 June 2017, Măgurele, Romania/ 11.
29. E. Bădița, C. Vancea, **I. Călina**, *Investigation of optical fibers as a radiation dosimeter*, Bucharest University Faculty of Physics 2017 Meeting, 23 June, Măgurele, Romania/ 9.
30. F. Scarlat, E. Stancu, E. Bădița, A. Scărișoreanu, C. Vancea, **I. Călina**, M. Demeter, *Detection and absorbed dose determination in clinical radiation fields*, 3rd International Conference on Sensors and Electronic Instrumentation Advances (SEIA' 2017), 20-22 September 2017, Moscow, Rusia.

31. M. Demeter, I. **Călina**, C. Vancea, A. Scărișoreanu, M. Virgolici, V. Meltzer, C. Pintilie, *Thermal and structural behavior of reduced graphene oxide-xanthan gum/poly(N-vinyl-2-pyrrolidone) hydrogels synthesized by e-beam crosslinking*, 4th Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC4), 28-31 August 2017, Chisinau, Republic of Moldova; PS3.71.
32. M. Demeter, C. Vancea, I. **Călina**, A. Scărișoreanu, M. Micuț, V. Meltzer, *E-beam radiation synthesis of xanthan gum-carboxymethylcellulose-graphene oxide composite hydrogels*, The 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 20)[®] 6-9 September 2017, Poiana Brasov, Romania, S6-307.
33. F. Scarlat, A. Scărișoreanu, E. Bădița, E. Stancu, M. Demeter, C. Vancea, I. **Călina**, *Particle Acceleration Produced by Laser Beams*, The 9th Annual International Conference on Sustainable Development through Nuclear Research and Education, 18-20 mai 2016, Pitesti, Romania (14:40-15:00).
34. C. Vancea, M. Demeter, I. **Călina**, A. Scărișoreanu, E. Stancu, E. Bădița, *Synthesis of superabsorbent xanthan/reduced graphene oxide hydrogels using electron beam irradiation*, Fourth International Conference on Radiation and applications in various fields of Research, 21-27 Mai 2016, Nis, Serbia.
35. A. Scărișoreanu, M. Demeter, I. **Călina**, C. Vancea, E. Stancu, E. Bădița, *Radiation synthesis and characterization of the network structure of PVP-collagen superabsorbent hydrogels*, Fourth International Conference on Radiation and applications in various fields of Research, 21-27 Mai 2016, Nis, Serbia.
36. I. **Călina**, C. Vancea, M. Demeter, A. Scărișoreanu, E. Bădița, E. Stancu, *Swelling behavior of Xanthan/ Acrylic acid/N, N Methylenebis(acrylamide)/PVP/Graphene superabsorbent hydrogels nanocomposites*, Bucharest University Faculty of Physics 2016 Meeting, 17 June, Măgurele, Romania 2.
37. I. **Călina**, E. Bădița, C. Vancea, D. Stroe, M. Dumitrache, E. Stancu, F. Scarlat, M. Dumitrache, *Quality Assurance in the Linear Accelerator Clinical Dosimetry of Colțea Hospital*, Bucharest University Faculty of Physics 2016 Meeting, 17 June, Măgurele, Romania/12.
38. E. Bădița, C. Vancea, I. **Călina**, D. Stroe, M. Dumitrache, E. Stancu, F. Scarlat, M. Dumitrache, *Influence of the assessment method of radiation beam quality on delivered absorbed dose to water quantity*, Bucharest University Faculty of Physics 2016 Meeting, 17 June, Măgurele, Romania/ 5.
39. I. **Călina**, C. Vancea, I. Ioniță, *Laser procesing of graphene-based nanomaterials*, Bucharest University Faculty of Physics 2015 Meeting, 19 June, Măgurele, Romania/ 27.
40. M. Dumitrache, M. Dumitrache, D. Stroe, C. Chilom, C. Vancea, I. **Călina**, E. Bădița, *The effect of ionizing radiation. Calibration of dosimetric apparatus used in radiology*, Bucharest University Faculty of Physics 2015 Meeting, 19 June, Măgurele, Romania / 12.
41. E. Bădița, C. Vancea, I. **Călina**, D. Stroe, M. Dumitrache, E. Stancu, A. Scărișoreanu, F. Scarlat, *Long term stability of clinical linear accelerator performance. Z-score assessment for absorbed dose to water quantity*, Bucharest University Faculty of Physics 2015 Meeting, 19 June, Măgurele, Romania / 7.
42. E. Bădița, C. Vancea, F. Scarlat, I. **Călina**, A. Scărișoreanu, *Influence of high energy ionizing radiation on single mode optical fiber properties*, Third International Conference on Radiation and Applications in Various Fields of Research"-RAD 2015, 8-12 June 2015, Budva, Montenegro.
43. F. Scarlat, A. Scărișoreanu, E. Bădița, C. Vancea, I. **Călina**, Fl. Scarlat, N. Verga, *Ionization Chamber Dosimetry for Conventional and Laser – Driven Clinical Hadron Beams*, The Spring World Congress on Engineering and Technology (SCET 2015), Spring International Conference on Biomedical Engineering and Biotechnology, 14-16 April 2015, Beijing, China.

Date
08.10.2025

Signature





Curriculum vitae Europass

Informații personale

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Locul de muncă **Institutul National pentru Fizica Laserilor, Plasmei și Radiației - INFLPR,
Laboratorul Acceleratoare de electroni**

Domeniul ocupațional **Cercetare & Dezvoltare & Inovare**

Experiența profesională

Perioada	Decembrie 2023 – prezent
Funcția sau postul ocupat	Cercetător Științific gr. III
Numele și adresa angajatorului	Institutul National pentru Fizica Laserilor, Plasmei și Radiației, Laboratorul Acceleratoare de electroni, Str. Atomistilor 409, PO Box MG-36, București-Măgurele, România; Tel: +40-21-457-45-50, http://www.inflpr.ro
Tipul activității sau sectorul de activitate	Cercetare, dezvoltare și inovare
Perioada	August 2022 – Noiembrie 2023
Funcția sau postul ocupat	Cercetător Științific
Numele și adresa angajatorului	Institutul National pentru Fizica Laserilor, Plasmei și Radiației, Laboratorul Acceleratoare de electroni, Str. Atomistilor 409, PO Box MG-36, București-Măgurele, România; Tel: +40-21-457-45-50, http://www.inflpr.ro
Tipul activității sau sectorul de activitate	Cercetare, dezvoltare și inovare
Perioada	Ianuarie 2014 – Iulie 2022
Funcția sau postul ocupat	Asistent Științific
Numele și adresa angajatorului	Institutul National pentru Fizica Laserilor, Plasmei și Radiației, Laboratorul Acceleratoare de electroni, Str. Atomistilor 409, PO Box MG-36, București-Măgurele, România; Tel: +40-21-457-45-50, http://www.inflpr.ro
Tipul activității sau sectorul de activitate	Cercetare, dezvoltare și inovare

Educație și formare

Perioada Octombrie 2015- Martie 2021
Calificarea / diploma obținută **Diplomă de Doctorat**
Disciplinele principale studiate / Titlul tezei: Hidrogeluri biomedicale cu structură hibridă obținute prin procesare cu fascicule de
competențe profesionale dobândite electroni accelerați
Conducător: Prof. Univ. Dr. Aurel POPESCU

Numele și tipul instituției de învățământ / furnizorului de formare	Facultatea de Fizică, Specializarea Biofizică și Fizică Medicală, Universitatea din București, România http://www.fizica.unibuc.ro
Perioada	Octombrie 2013 – Iunie 2015
Calificarea / diploma obținută	Diplomă de master
Disciplinele principale studiate / competențe profesionale dobândite	Titlul tezei: Procesarea unor nanomateriale pe bază de grafenă cu fascicul laser
Numele și tipul instituției de învățământ / furnizorului de formare	Facultatea de Fizică, Universitatea din București, România http://www.fizica.unibuc.ro
Perioada	Octombrie 2010 – Iulie 2013
Calificarea / diploma obținută	Diplomă de licență
Disciplinele principale studiate / competențe profesionale dobândite	Titlul lucrării de licență: MODELUL SCHWINGER AL MOMENTULUI CINETIC
Numele și tipul instituției de învățământ / furnizorului de formare	Facultatea de Fizică, Universitatea din Craiova, România http://cis01.central.ucv.ro/physics/

Aptitudini și competențe personale

Limba maternă	Română									
Limba(i) străină(e) cunoscută(e)	Engleza, Franceza, Italiana									
Autoevaluare	Înțelegere		Vorbire				Sciere			
<i>Nivel european (*)</i>	Ascultare		Citire		Participare la conversație		Discurs oral		Exprimare scrisă	
Engleza	C2	Independent	C2	Independent	C1	Independent	C1	Independent	C1	Independent
Franceza	B2	Independent	B1	independent	B1	Nivel elementar	B1	Nivel elementar	B1	Nivel elementar
Italiana	B1	Independent	B1	Independent	B1	Nivel elementar	B1	Nivel elementar	B1	Nivel elementar
(*) Nivelul Cadrului European Comun de Referință Pentru Limbi Străine										
Competențe și abilități sociale	Inițiativa și dorința de a lucra în echipă; Capacitate foarte bună de comunicare și relaționare; Spirit de echipă, prin participarea la activități propuse în cadrul proiectelor de cercetare.									
Competențe și aptitudini organizatorice	Capacitate de învățare și asimilare pe termen lung.									
Competențe și aptitudini tehnice	Caracterizarea materialelor prin Spectroscopie în infraroșu cu transformată Fourier (FT-IR); Cunoașterea și manipularea dozimetrelor de radiații (camere de ionizare, calorimetre) și a diferitelor dispozitive utilizate pentru dozimetria radiațiilor ionizante.									
Competențe și aptitudini de utilizare a calculatorului	Microsoft Office: (Word, Excel, Power Point, Outlook); Grafică și programe de calculator: Origin, Photoshop; Programe de spectrometrie FTIR: Spectrum 100 (Perkin-Elmer);									

Competențe adiționale

Cursuri

1. Radiation Protection in the Use of Particle Accelerators - Level 1, National Institute of Research-Development for Nuclear Physics and Engineering "Horia Hulubei", Bucharest, Romania, 2022.
2. Radioprotection in the Use of Particle Accelerators - Level 1, National Institute of Research-Development for Nuclear Physics and Engineering "Horia Hulubei", Bucharest, Romania, 2017.

Proiecte de cercetare

1. PN-IV-P2-2.1-TE-2023-0453: *Biomimetic hydrogel dressing containing natural therapeutic agents developed by radiation synthesis* (2025-2027) – **Project Leader**;
2. Romanian National Core Program LAPLAS VII—contract no. 30N/2023: *Advanced research and technological development of lasers - plasma - radiation - space* (2023-2026) – **Team member**;
3. PN-III-P4-PCE-2021-1778: *Selection of the competitive reactions for plasma modified starch* (2022-2024) – **Team member**;
4. PN-III-P2-2.1-PED-2021-2151: *Biotechnological solution for plant water and biostimulants sustainable delivery system* (2022-2024) – **Team member**;
5. PN-III-P1-1.2-PCCDI-2017-0728: *Integrated development project for advanced medical treatment technologies* (2018-2021) – **Team member**;
6. LAPLAS VI, Contract no. 16N (2019 -2022): *Advanced research and technological developments of lasers, plasma, radiation, and space* - **Team member**;
7. PCDI – STAR – ROSA 140/2017: *Technologies for elastomeric nanocomposites development for low temperature and radiation resistant O-rings manufacturing, with potential applications in space, aeronautics, security and other related fields* - NANOELAST-O – **Team member**;
8. Nucleus Program (2014-2015): *Advanced processing of materials using electron beams, microwaves, plasma and laser radiation for environmental protection, agriculture, electronics, and machine building applications* - **Team member**.

Brevete depuse

1. M. Demeter, I. C. Călina, A. Scărișoreanu, A. Cîmpean, *Process for obtaining biocompatible semisolid hydrogel with doxorubicin release and pro-generative role*, application number A/00138/2024.
2. M. Demeter, I.C. Călina, A. Scărișoreanu, *Multicomponent superabsorbent dressing in the form of a hydrogel*, RO-BOPI 6/2021, page 25 (application number/a 2019 00871).

Referent

International Journal of Biological Macromolecules, Materials Today Chemistry, Nuclear Science and Techniques, Food and Bioprocess Technology, Journal of Polymers and the Environment, Scientific Reports, International Journal of Nanomedicine, Chemistry Africa, Polymers, Pharmaceuticals, Gels, Materials, Biomimetics, International Journal of Molecular Science, Healthcare, Applied Sciences, Coatings, Electronics, Sensors, Starch, Journal of Sol-Gel Science and Technology, Nanomaterials, Colloid and Polymer Science, Biophysica, Discover Polymers, Marinedrugs, Medical Sciences.

Editor Invitat

Hybrid Hydrogels: From Biomaterials Development to Eco-Friendly Approaches - Gels
Polymeric Hydrogels for Biomedical Application - Gels
Polymeric Hydrogels for Biomedical Application (2nd Edition) – Gels

Publications

27 lucrari ISI (vezi Anexa 1)

Conferences

43 (vezi Anexa 2)

h – index (Web of Science™)

10

h – index (Scopus)

11

PERSONAL LINKS

Scopus Author ID

<https://www.scopus.com/authid/detail.uri?authorId=57189987806>

ORCID

<https://orcid.org/0000-0003-2828-3471>

Researcher ID

<https://www.webofscience.com/wos/author/record/H-8414-2018>

Google Scholar

<https://scholar.google.ro/citations?user=vP7zBwgAAAAJ&hl=ro>

BrainMap

<https://www.brainmap.ro/ion-cosmin-calina>

Anexa 1 – Lista lucrărilor științifice publicate în reviste cotate ISI

1. E. Mănăilă, I. Călina, A. Scărișoreanu, M. Demeter, G. Crăciun, M. Dumitru, *Impact of Water Conductivity on the Structure and Swelling Dynamics of E-Beam Cross-Linked Hydrogels*, Gels, 11(8), 611, (2025). ($F_{2024} = 5.3$; $AI S_{2024} = 0.61$).
2. E. Stancu, D. Gheorghe, B. Bită, I. Călina, M. Gherendi, F. Baiasu, C. Marinescu, A. Sofronia, A. Neacsu, *The influence of electron beam (e-beam) irradiation upon anhydrous and hydrated quercetin*, Radiation Physics and Chemistry, 235, 112836 (2025). ($F_{2024} = 3.5$; $AI S_{2024} = 0.425$).

3. A. Scărișoreanu, M. Demeter, **I. Călina**, M.A. Raza, *Non-ionizing (UV and MW)-assisted synthesis of polymeric hydrogels for advanced tissue engineering applications*, Journal of Biomaterials Science, Polymer Edition, 1–33 (2025). ($IF_{2024} = 3.6$; $AI5_{2024} = 0.436$).
4. E. Manaila, **I. Calina**, M. Dumitru, G. Craciun, *Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized Using Electron-Beam Irradiation—Part III: An Evaluation of Their Degradation in Soil*, Molecules, 30 (5), 1126 (2025). ($IF_{2024} = 4.6$; $AI5_{2024} = 0.710$).
5. **I. Călina**, M. Demeter, A. Scărișoreanu, M.A. Raza, *Role of Ionizing Radiation Techniques in Polymeric Hydrogel Synthesis for Tissue Engineering Applications*, Gels, 11 (1), 47 (2025). ($IF_{2024} = 5.3$; $AI5_{2024} = 0.61$).
6. M. Demeter, **I. Călina**, A. Scărișoreanu, M.R. Nemțanu, M. Brașoveanu, M. Micutz, M. Dumitru, *E-Beam Crosslinking, and Comprehensive Characterization of Lavender Oil-Enriched Hydrogels*, Polymers, 16 (22), 3150 (2024). ($IF_{2024} = 4.1$; $AI5_{2024} = 0.710$).
7. **I. Călina**, M. Demeter, G. Crăciun, A. Scărișoreanu, E. Mănăilă, *The Influence of the Structural Architecture on the Swelling Kinetics and the Network Behavior of Sodium-Alginate-Based Hydrogels Cross-Linked with Ionizing Radiation*, Gels, 10 (9), 588 (2024). ($IF_{2024} = 5.3$; $AI5_{2024} = 0.61$).
8. M. Demeter, **I. Călina**, A. Scărișoreanu, V. Mitran, M. Popa, A. Cîmpean, M. C. Chifiriuc, M. Micutz, E. Matei, B. Mitu, *Biocompatible and antimicrobial chitosan/PVP/PEO/PAA/AgNP composite hydrogels: e-beam cross-linking, biodegradation and rheological behaviors*, Radiation Physics and Chemistry, 216, 111391 (2024). ($IF_{2024} = 3.2$; $AI5_{2024} = 0.425$).
9. M. Demeter, A.M. Negrescu, **I. Calina**, A. Scărișoreanu, M. Albu-Kaya, M. Micutz, M. Dumitru, A. Cimpean, *Synthesis, Physicochemical Characteristics, and Biocompatibility of Multi-Component Collagen-Based Hydrogels Developed by E-Beam Irradiation*, Journal of Functional Biomaterials 14 (9), 454 (2023). ($IF_{2024} = 1$; $AI5_{2024} = 0.741$).
10. G. Crăciun, **I. Călina**, M. Demeter, A. Scărișoreanu, E. Manaila, *Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized by Electron Beam Irradiation Part I: Impact of Initiator Concentration and Irradiation Dose on Structure, Network Parameters and Swelling Properties*, Materials 16 (13), 4552, (2023). ($IF_{2024} = 3.1$; $AI5_{2024} = 0.501$).
11. E. Mănăilă, M. Demeter, **I. Călina**, G. Crăciun, *NaAlg-g-AA Hydrogels: Candidates in Sustainable Agriculture Applications*, Gels 9 (4), 316, (2023). ($IF_{2024} = 1$; $AI5_{2024} = 0.594$).
12. M. Demeter, A. Scărișoreanu, **I. Călina**, *State of the Art of Hydrogel Wound Dressings Developed by Ionizing Radiation*, Gels 9(1), 55, (2023). ($IF_{2024} = 1$; $AI5_{2024} = 0.594$).
13. E. Mănăilă, G. Crăciun, **I. Călina**, *Sodium Alginate-g-acrylamide/acrylic Acid Hydrogels Obtained by Electron Beam Irradiation for Soil Conditioning*, International Journal of Molecular Sciences 24 (1), 104, (2023). ($IF_{2024} = 4.5$; $AI5_{2024} = 1.055$).
14. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, M. Albu Kaya, *Correlations on the Structure and Properties of Collagen Hydrogels Produced by E-Beam Crosslinking*, Materials 15(21), 7663, (2022). ($IF_{2024} = 3.4$; $AI5_{2024} = 0.510$).
15. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, *E-Beam Cross-Linking of Complex Hydrogels Formulation: The Influence of Poly(Ethylene Oxide) Concentration on the Hydrogel Properties*, Gels 8(1), 27, (2022). ($IF_{2024} = 4.6$; $AI5_{2024} = 0.626$).
16. **I. Călina**, M. Demeter, A. Scărișoreanu, M. Micutz, *Development of novel superabsorbent hybrid hydrogels by e-beam crosslinking*; Gels 7(4), 189, (2021). ($IF_{2024} = 4.432$; $AI5_{2024} = 0.766$).
17. **I. Călina**, M. Demeter, A. Scărișoreanu, V. Sătulu, B. Mitu, *One step e-beam radiation cross-linking of quaternary hydrogels dressings based on Chitosan-Poly(Vinyl-Pyrrolidone)-Poly(ethylene Glycol)-Poly(Acrylic acid)*, International Journal of Molecular Sciences, 21(23), 9236, 2020. ($IF_{2024} = 5.923$; $AI5_{2024} = 1.123$).
18. E. Bădița, C. Vancea, **I. Călina**, *A possible use of optical fibers in radiation monitoring /dosimetry*, Romanian Journal of Physics, Vol. 65 (3-4), 902, 2020. ($IF_{2024} = 1.888$; $AI5_{2024} = 0.194$).
19. M. Demeter, V. Meltzer, **I. Călina**, A. Scărișoreanu, M. Micutz, M. Albu Kaya, *Highly elastic superabsorbent collagen/PVP/PEO hydrogels cross-linked via e-beam radiation*, Radiation Physics and Chemistry, Vol. 174, 108898, 2020. ($IF_{2024} = 2.858$; $AI5_{2024} = 0.396$).
20. D. Ticos, A. Scurtu, M. Oane, C. Diplășu, G. Giubega, **I. Călina**, C. M. Ticos, *Complementary dosimetry for a 6 MeV electron beam*, Results in Physics, Vol. 14, 102377, 2019. ($IF_{2024} = 4.019$; $AI5_{2024} = 0.491$).
21. M. Demeter, **I. Călina**, C. Vancea, M. Șen, M. Albu Kaya, E. Manaila, M. Dumitru, V. Meltzer, *E-Beam Processing of Collagen-Poly(N-vinyl-2-pyrrolidone) Double-Network Superabsorbent Hydrogels: Structural and Rheological Investigations*, Macromolecular Research, Vol.27,255-267, 2019. ($IF_{2024} = 2.047$; $AI5_{2024} = 0.272$).
22. D. Aksüt, M. Demeter, **I. Călina**, M. Șen, *Effect of Radiation on Mechanical Properties of Phenyl-vinyl-methylpolysiloxane (PVMQ) Elastomers Cured with Peroxide and Type I and Type II Coagents*, Radiation Physics and Chemistry, Vol. 158, 148-152, 2019. ($IF_{2024} = 2.226$; $AI5_{2024} = 0.336$).
23. E. Bădița, C. Vancea, **I. Călina**, D. Stroe, M. Dumitrache, M. Dumitrache, *Dosimetric comparison for radiation quality in high energy photon beams*, Romanian Reports in Physics, Vol.71 (2), 205, 2019. ($IF_{2024} = 2.147$; $AI5_{2024} = 0.269$).
24. **I. Călina**, M. Demeter, C. Vancea, A. Scărișoreanu, V. Meltzer, *E-beam radiation synthesis of xanthan-gum/ carboxymethylcellulose superabsorbent hydrogels with incorporated graphene oxide*, Journal of Macromolecular Science Part A: Pure and Applied Chemistry, Vol. 55 (3), 260-268, 2018.) ($IF_{2024} = 1.163$; $AI5_{2024} = 0.143$).

25. **I. Călina**, M. Demeter, E. Bădița, E. Stancu, A. Scărișoreanu, C. Vancea, *Reduction of freestanding graphene oxide films using continuous wave laser*, Romanian Reports in Physics, Vol. 69 (2), 504, 2017. (IF₂₀₁₇ = 1.582; AIS₂₀₁₇ = 0.255)
26. E. Bădița, C. Vancea, **I. Călina**, D. Stroe, M. Dumitrache, E. Stancu, F. Scarlat, *Long-term stability of the performance of a clinical linear accelerator and z-score assessment for absorbed dose to water quantity*, Romanian Reports in Physics, Vol. 69 (1), 606, 2017. (IF₂₀₁₇ = 1.582; AIS₂₀₁₇ = 0.255)
27. E. Bădița, C. Vancea, E. Stancu, F. Scarlat, **I. Călina**, A. Scărișoreanu, *Study on the development of a new single mode optic fiber radiation dosimeter for electron beams*, Romanian Reports in Physics, Vol. 68, No. 2, 604-614, 2016. (IF₂₀₁₆ = 1.467; AIS₂₀₁₆ = 0.242)

Anexa 2 – Lista prezentărilor științifice la conferințe naționale/internaționale

1. **I. Călina**, E. Mănăilă, G. Crăciun, M. Demeter, M. Dumitru, A. Scărișoreanu/ Novel e-beam cross-linked hydrogels for sustainable agriculture and environmental applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 146, Pantelimon, Ilfov, Romania, 06 – 07 October 2025.
2. **I. Călina**, M. Demeter, A. Scărișoreanu, M. Micutz/ Advanced hybrid hydrogel composites processed by electron beam technology for biomedical applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 96, Pantelimon, Ilfov, Romania, 06 – 07 October 2025
3. M. Demeter, **I. Călina**, A. Scărișoreanu, M. Micutz, F. Bîlea, M. A. Kaya/ E-beam processed hybrid hydrogels: emerging materials for biomedical applications/ The 8th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0424), No. 8/2025, p 104, Pantelimon, Ilfov, Romania, 06 – 07 October 2025.
4. M. Brașoveanu, **I. Călina**, M.R. Nemțanu/ Modified Starches as Novel Materials for Environmental Applications: Exploring Cold Plasma Sensitivity from a Botanical Source Perspective/ The 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0416), No. 7/2024, p 129, Bucharest, Romania, 30 – 31 October 2024.
5. E. Mănăilă, **I. Călina**, M. Brașoveanu, M.R. Nemțanu, G. Crăciun/ Innovative Plasma-Modified Starch-Based Hydrogels Synthesized by Electron Beam for Water Remediation/ The 7th International Conference on Emerging Technologies in Materials Engineering (EmergeMAT)/ Programme and Book of Abstracts (ISSN 2602-0416), No. 7/2024, p 147, Bucharest, Romania, 30 – 31 October 2024.
6. G. Crăciun, M. Brașoveanu, E. Manaila, **I. Calina**, M. Demeter, M. Dumitru/ TAILORED ELECTRON BEAM-IRRADIATED HYDROGELS FOR SUSTAINABLE AGRICULTURE/ VI. International Agricultural, Biological & Life Science Conference (AGBIOL 2024)/Proceedings of Abstracts (ISBN-978-625-95132-0-1), p 173, Edirne, Turkey, 18 – 20 September 2024.
7. E. Manaila, M. R. Nemțanu, G. Craciun, **I. Calina**, M. Dumitru/POTENTIAL OF NATURAL-INSPIRED HYDROGELS IN AGRICULTURE: A FOCUS ON DIFFUSION MECHANISMS/ VI. International Agricultural, Biological & Life Science Conference (AGBIOL 2024) – Proceedings of Abstracts (ISBN-978-625-95132-0-1), p 174, Edirne, Turkey, 18 – 20 September 2024.
8. G. Crăciun, **I. Călina**, M. Demeter, A. Scărișoreanu, E. Mănăilă, Poly(Acrylic Acid)-Sodium Alginate Superabsorbent Hydrogels Synthesized by Electron Beam Irradiation Part I: Impact of Initiator Concentration and Irradiation Dose on Structure, Network Parameters and Swelling Properties, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023.
9. E. Mănăilă, **I. Călina**, M. Dumitru, G. Craciun, Swelling Kinetics of Sodium Alginate-G-Acrylic Acid Hydrogels Obtained by Electron Beam Irradiation, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023.
10. M. Brașoveanu, D. Ticoș, M.R. Nemțanu, **I. Călina**, Impact of Low-Vacuum Level on Starch Modification via Cold Plasma, 13th International Advances in Applied Physics & Materials Science Congress & Exhibition (APMAS), Oludeniz, Turkey, October 11-17, 2023 (Poster Session-II, ID 2495)
11. A. Scărișoreanu, M. Demeter, **I. Călina**, M. Bojan, *Gold nanoparticle-composite hydrogel synthesized by e-beam irradiation*; International Conference on Radiation Applications in Physics, Chemistry, Biology, Medical Sciences, Engineering and Environmental Sciences (RAP 2023), page 173, May 29 – June 2, 2023, Anavyssos, Attica, Greece.
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Data

08.10.2025

Semnătura

