

PERSONAL INFORMATION**Irina UNGUREANU (NEGUȚ)**

 8 Alexandria, Sector 5, Bucharest, Romania

 (RO) +40 764.447.737

 irina_negutz@yahoo.com;
negut.irina@inflpr.ro

Researcher ID's:

- orcid.org/0000-0003-4038-7548
- UEFISCDI ID (UEF-ID): U-1700-039L-3933
- https://scholar.google.ro/citations?user=OP_JOeIAAAJ&hl=ro

Sex: F | Date of birth: 22/03/1987 | Nationality: Romanian

PROFESSIONAL EXPERIENCE**March 2024 – present****Senior Scientific Researcher 2nd Degree**

Lasers Department, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, Romania

- Designing, conducting and supervising laser deposition experiments of (composite) thin films and nanoparticles from single and/or doped compounds for applications in nanobiomedicine, drug delivery, environmental protection, etc.;
- Evaluating the compositional and microstructural characteristics of nanomaterials and thin films, as well as assessing their optical and electrochemical properties;
- Conducting experiments for biomaterials degradation and release of bioactive compounds;
- Processing and interpreting of experimental data;
- Preparing research reports and participating in results dissemination through scientific papers;
- Writing and submitting project proposals for international programs of the European Community and national R&D competitions;
- Presenting and attending at national and international scientific events;
- Translating research findings into industry applications through contracts and economic orders;
- Teaching and guiding students on experimental techniques, data analysis, and scientific writing.

October 2024 – present**Lecturer**

Electricity, Solid State Physics and Biophysics, University of Bucharest, Faculty of Physics, Măgurele, Romania

- Teaching laboratory experiments in the "Biostructural Elements" course to 2nd year students

July 2022 – March 2024**Scientific Researcher 3rd Degree**

Lasers Department, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, Romania

- Preparing and conducting laser deposition experiments of (composite) thin films and nanoparticles from single and/or doped compounds for applications in nanobiomedicine, drug delivery, environmental protection, etc.
- Evaluating the compositional and microstructural characteristics of nanomaterials and thin films, as well as assessing their optical and electrochemical properties;
- Conducting experiments for biomaterials degradation and release of bioactive compounds;
- Processing and interpreting of experimental data;
- Preparing research reports and participating in results dissemination through scientific papers;
- Writing and submitting project proposals for international programs of the European Community and national R&D competitions;
- Presenting and attending at national and international scientific events;

Jan. 2014 – June 2022**Research Assistant**

Lasers Department, National Institute for Lasers, Plasma and Radiation Physics, Măgurele, Romania

- Preparing, conducting and supervising laser deposition experiments of (composite) thin films and nanoparticles from single and/or doped compounds for applications in nanobiomedicine, drug delivery, environmental protection, etc.
- Performing spectrophotometric measurements on thin films, solutions and powders;
- Preparing and conducting experiments for degradation of biomaterials and release of bioactive compounds;
- Processing and interpretation of experimental data;
- Preparing research reports and participation in results dissemination through scientific papers;
- Participating at national and international scientific events
- Presenting and attending at national and international scientific events;

EDUCATION AND TRAINING

- 2012 – 2019** **Doctoral program (Ph.D.) in Optics, Spectroscopy, Plasma, Lasers**
Title awarded: Doctor in Physics
Faculty of Physics, University of Bucharest, Bucharest, Romania
PhD thesis: "Thin films of bioglasses and magnetic nanoparticles obtained by advanced pulsed laser techniques": EXCELLENT/SUMMA CUM LAUDE
- 2010 – 2012** **Master program (M.Sc.) in Applied Engineering Sciences**
Title awarded: Master in Applied Engineering Sciences
Faculty of Materials Science and Engineering, Politehnica University of Bucharest, Bucharest, Romania
Dissertation thesis: "Thin films of "papain" type proteins obtained by laser techniques with applicability in the field of biosensors": 10 / 10
- 2006 – 2010** **Bachelor program (B.Sc.) in Applied Engineering Sciences**
Title awarded: Engineer in Applied Engineering Sciences
Faculty of Materials Science and Engineering, Politehnica University of Bucharest, Bucharest, Romania
Diploma thesis: "Bioactive ceramics thin films based on Ca phosphates obtained by pulsed laser deposition method": 10 / 10

SCIENTIFIC OUTPUT

Project management

Project Director of LICOMAR - Low-cost implantable/prosthetic elements coated with marine-based resources and components

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-IV-PCB-RO-MD-2024-0254
URL: <http://licomar.lspi.inflpr.ro/>

Project Director of BioHeal - Biofunctionalized dressings for enhanced wound healing and infection control

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-IV-P8-8.3-ROMD-2023-0060 (2024-2026)
URL: <http://bioheal.lspi.inflpr.ro/>

Project Director of Mircond - Multifunctional coatings for reducing implant failure under diabetic conditions

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-IV-P2-2.1-TE-2023-0993 (2024-2026)
URL: <https://mircond.lspi.inflpr.ro/>

Project Director of Fibercare - Biofunctional nanofibers for advanced wound care

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-IV-P7-7.1-PED-2024-0137 (2024-2026)
URL: <http://fibercare.lspi.inflpr.ro/>

Project Director of BioCoat - Innovative coatings for increasing implants biocompatibility and preventing associated infections

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-III-P1-1.1-PD-2021-0598 (2022-2024)
URL: <http://biocoat.lspi.inflpr.ro/>

Project Director of InnovaMed - Innovative strategies to improve the performances of medical grade metallic surfaces

Executive Agency for Higher Education, Research, Development, and Innovation Funding, Romania
Grant Number: PN-III-P2-2.1-PED-2021-3178 (2022-2024)
URL: <http://innovamed.lspi.inflpr.ro/>

Contract Manager for Technology Transfer to an Economic Entity –Subcontract No. 3 with S.C. ACCENT PRO 2000 (2019-2022)

European Commission, Competitiveness Operational Programme (COP) 2014-2020
Grant Number: POC G 135/23.09.2016
URL: <http://prelam.inflpr.ro/>

H-index **23 (Web of Science)**
24 (Google Scholar)

- Patents**
1. **A/00191/2025** - "Thin film made of bioglass and statins for improving implant-type surfaces and the method for obtaining it", Ungureanu (**Neguț**), I., Ristoscu, C.
 2. **A/00592/2024** - "Bioactive glass target in the form of nanostructures for bone tissue regeneration and the method for its fabrication", Ungureanu (**Neguț**), I., Sava, B., C.G. Ristoscu, Bită, B., C. Albu
 3. **A/00615/2023** - "Bio-borate glass doped with cerium oxide in the form of a thin film for improving surfaces of medical interest and obtaining method", Ungureanu (**Neguț**), I., Sava, B., Grădișteanu, G., Bită, B.
 4. **RO138169(A2), patent nr. 138169/30.05.2024** - "Process for obtaining a compound based on core/shell magnetic nanosystems for improving the surface of dressings", Grumezescu, V., Ungureanu (**Neguț**), I., Dorcioman, G.
 5. **RO131045A0** - "Process for functionalization of implants surface by using nanocompositions with complementary properties", Floroian, L., Badea, M., Samoila, C., Floroian, D., Ristoscu, C., Mihăilescu, N., **Neguț, G.**, Mihăilescu, I.

Prizes and awards

- **Best paper award** for "Functionalization of Titanium Implants with Mellitin-Bioactive Glass Thin Films via MAPLE", Applications of Chemistry in Nanosciences and Biomaterials Engineering (NanoBioMat) 25-27 June 2025
- **Pharmaceutics Best Paper Awards** In recognition of the paper "Polymeric Micellar Systems—A Special Emphasis on "Smart" Drug Delivery", Authored by: Irina Negut and Bogdan Bită, Pharmaceutics 2023, 15(3), 976; <https://doi.org/10.3390/pharmaceutics15030976>
- **Gold Medal** at EUROINVENT, 6th– 8th of June 2024, Iasi, Romania, for A/00615/27.10.2023- "Bio-borate glass doped with cerium oxide in the form of a thin film for improving surfaces of medical interest and obtaining method", Ungureanu (**Neguț**), I., Sava, B., Grădișteanu, G., Bită, B.
- **Silver Medal** at EURO POLITEHNICUS, 22nd – 24th of November 2024, Bucharest, Romania, for A/00615/27.10.2023- "Bio-borate glass doped with cerium oxide in the form of a thin film for improving surfaces of medical interest and obtaining method", Ungureanu (**Neguț**), I., Sava, B., Grădișteanu, G., Bită, B.
- **Gold Medal** at INVENTCOR, 5th edition, 4th– 6th of April 2024, Deva, Romania, for A/00615/27.10.2023- "Bio-borate glass doped with cerium oxide in the form of a thin film for improving surfaces of medical interest and obtaining method", Ungureanu (**Neguț**), I., Sava, B., Grădișteanu, G., Bită, B.
- **Silver Medal** at INFOINVENT 2023, Chisinau, Republic of Moldova, for A/00615/27.10.2023- "Bio-borate glass doped with cerium oxide in the form of a thin film for improving surfaces of medical interest and obtaining method", Ungureanu (**Neguț**), I., Sava, B., Grădișteanu, G., Bită, B.
- **Silver Medal** at EUROINVENT, 16th– 18th of May 2019, Iasi, Romania, for "Subsidiary contracts as a source of intellectual property and areas of application of laser cladding of materials by technological transfer: New advanced surface coating technologies using high power laser beam to increase reliability and performance of materials– PRELAM" by INFLPR: M. Besenyey, M. Badiceanu, C. Hapenciu, A. Ionita, I.N. Mihăilescu, C. Mihăilescu, **I. Neguț**, et al.;
- **Best poster award - First place** at ISCP-INDLAS 2018, 3rd– 7th of September 2018, Alba-Iulia, Romania, for "Laser coatings based on *Nigella sativa* essential oil functionalized nanoparticles for antimicrobial applications" by **I. Neguț**, et.al
- **Diploma of Excellence** at EUROINVENT, 17th– 19th of May 2018, Iasi, Romania, for "PRELAM- advanced technology - based coatings using high power laser beam to increase the reliability and performance of materials" by I.N. Mihăilescu, C. Ristoscu, M. Opran, C. Hapenciu, M. Oane, G. Popescu-Pelin, **I. Ungureanu**, et.al;
- **Silver Medal and Special Award for environmental protection** at EUROINVENT, 17th– 19th of May 2018, Iasi, Romania, for "Energy-efficient decontamination by UV & cold plasma using metamaterials" by I. N. Mihăilescu, C. Ristoscu, C. Hapenciu, **I. Ungureanu** et.al.;
- **Best poster award - Third place** at Micro- to Nano-Photonics IV Conference– ROMOPTO 2015, 1st– 4th September 2015, Bucharest, Romania, for "Combinatorial Ag:C structures synthesized by Pulsed Laser Deposition for biomedical applications", by **I. Neguț** et.al.
- **Best poster award - First place** at LASER and PLASMA MATTER INTERACTION Workshop, November 2015, Plovdiv, Bulgaria, for "Combinatorial Ag:C structures synthesized by Pulsed Laser Deposition for biomedical applications" by **I. Neguț**, et.al.

Scientific articles and book chapters

See Annex 1

PERSONAL SKILLS

Mother tongue(s)	Romanian				
	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	A2	A1	A1	A1	A1
German	A2	A1	A1	A1	A1

Levels: A1/2: Basic user; B1/2: Independent user; C1/2 Proficient user
 Common European Framework of Reference for Languages

Communication and writing skills

Excellent communication and scientific dissemination skills acquired through:

- Scientific presentations and active participation in over 50 conferences, workshops, and summer schools
- Writing of various scientific reports and peer-reviewed publications
- Experience as Guest Editor for international scientific journals, contributing to special issues on advanced materials and biomedical applications
- Regular peer-reviewing for high-impact journals, ensuring the quality and rigor of published scientific research
- Effective communication of complex scientific concepts to multidisciplinary audiences, including researchers, students, and industry professionals

Organizational skills

Acquired as Organizing Committee member of:

- *Session chair* for the “6th International Conference on Biomaterials & Biodevices”, 8th–9th of October 2025, Prague, Czech Republic
- “5th International Conference on Applied Science and Engineering”, 26th – 27th of June 2025, Amsterdam, Netherlands;
- *Session chair* for the “4th International Conference on Biomaterials & Biodevices”, 16th– 17th of November 2023, Rome, Italy
- “6th International Student Conference on Photonics”, 3rd – 7th of September 2018, Sibiu, Romania;
- “IONS Balvanyos Conference”, 25th – 28th of July 2017, Balvanyos, Romania;
- “10th International Conference on Photoexcited Processes and Applications”, 29th of August-2nd of September 2016, Braşov, Romania;
- “5th International Student Conference on Photonics”, 23rd – 26th of September 2014, Orăştie, Romania.

Software and instrumentation skills

- Operating systems: All versions of Microsoft Windows, Linux
- Programming languages: C++
- Document and image processing: Microsoft Office Suite (Word, Excel, PowerPoint), Adobe Acrobat, Photoshop
- Specialized software: AutoCAD 2D, Google SketchUp, Origin
- Scientific equipment and instrumentation: UV-Vis Spectroscopy, Scanning Electron Microscopy, Fourier-Transform Infrared Spectroscopy, Atomic Force Microscopy, and other analytical characterization tools
- Data analysis and visualization: ImageJ, OriginPro, Spectroscopy and microscopy data processing software

Membership of professional societies

Member of The International Society for Optical Engineering - SPIE (since 2013):

- Jan 2017 – Jan 2018 – President of Institute for Atomic Physics Student Chapter, Romania;
- Jan 2018-2019 – Vice-president of Institute for Atomic Physics Student Chapter, Romania;

ANNEX I

SCIENTIFIC ISI ARTICLES

1. Negut, I.; Bită, B.; Dinu, M.; Parau A.C.; Tozar, T.; Gherasim, O.; Grumezescu, V.; Ristoscu, C.; Marutescu, L.; Grădișteanu-Pircălăbioru, G.; "Multifunctional Bioactive Coatings Based on Bioglass, Vitamin D3, and Melittin Deposited via MAPLE for Enhanced Osseointegration, Antibacterial Activity, and Corrosion Resistance of Titanium Implants" <https://doi.org/10.1002/admi.202500505>
2. Manoliu, D.S.; Zagar, C.; Negut, I.; Visan, A. I.; "Laser-Based Fabrication of Hydrogel Scaffolds for Medicine: From Principles to Clinical Applications", *Gels* **2025**, *11*(10), 811; <https://doi.org/10.3390/gels11100811>
3. Visan, A.I.; **Negut, I.**; "Sustainable Hydrogels in Water Treatment—A Short Review", *Gels* **2025**, *11*(10), 812; <https://doi.org/10.3390/gels11100812>
4. Visan, A.I.; **Negut, I.**; "Polymeric Composite Thin Films Deposited by Laser Techniques for Antimicrobial Applications—A Short Overview", *Polymers* **2025**, *17*(15), 2020; <https://doi.org/10.3390/polym17152020>
5. Iordache, S.-M.; Iordache, A.-M.; Florea, A.-M.; Caramizoiu, S.; Parvulescu, C.; Baiașu, F.; **Negut, I.**, Bită, B.; "Raman spectroscopy of graphene/CNT layers deposited on interdigit sensors for application in gas detection", *C* **2025**, *11*(1), 9; <https://doi.org/10.3390/c11010009>
6. Dinu, M.; Bită, B.; Parau A.C.; Ristoscu, C.; **Negut, I.**; "Bioactive Glass and Melittin Thin Films Deposited by MAPLE for Titanium Implant Functionalization", *Materials* **2025**, *18*(10), 2410; <https://doi.org/10.3390/ma18102410>
7. Matei, A.T.; Visan, A.I.; **Negut, I.**; "Laser-Fabricated Micro/Nanostructures: Mechanisms, Fabrication Techniques, and Applications", *Micromachines* **2025**, *16*(5), 573; <https://doi.org/10.3390/mi16050573>
8. Grădișteanu-Pircălăbioru, G.; **Negut, I.**; Dinu, M.; Parau A.C.; Bită, B.; Duta, L.; Ristoscu, C.; Sava, B.; "Enhancing orthopaedic implant efficacy: the development of cerium-doped bioactive glass and polyvinylpyrrolidone composite coatings via MAPLE technique"; <https://iopscience.iop.org/article/10.1088/1748-605X/ad98d5/meta>
9. Visan, A.; **Negut, I.**; "Environmental and Wastewater Treatment Applications of Stimulus-Responsive Hydrogels", *Gels* **11** (1), 72 (2025); <https://doi.org/10.3390/gels11010072>
10. Barbintă-Patrascu, M.E.; Bită, B.; **Negut, I.**; "From nature to technology: Exploring the potential of plant-based materials and modified plants in biomimetics, bionics, and green innovations", *Biomimetics* **9** (7) 390 (2024); <https://doi.org/10.3390/biomimetics9070390>
11. Visan, A.; **Negut, I.**; "Development and applications of PLGA hydrogels for sustained delivery of therapeutic agents", *Gels* **10** (8) 497 (2024); <https://doi.org/10.3390/gels10080497>
12. Visan, A.; **Negut, I.**; "Coatings based on essential oils for combating antibiotic resistance", *Antibiotics* **13** (7) 625 (2024); <https://doi.org/10.3390/antibiotics13070625>
13. Zarif, M.E.; Bită, B.; Yehia-Alexe, S.A.; **Negut, I.**; Grădișteanu Pircălăbioru, G.; Andronescu, E.; Groza, A.; "Biological and Physicochemical Analysis of Sr-Doped Hydroxyapatite/Chitosan Composite Layers", *Polymers* **16** (13) 1922 (2024); <https://doi.org/10.3390/polym16131922>
14. **Negut, I.**; Bită, B.; "Polymersomes as Innovative, Stimuli-Responsive Platforms for Cancer Therapy"; *Pharmaceutics* **16** (4) 463 (2024); <https://doi.org/10.3390/pharmaceutics16040463>
15. **Negut, I.**; Albu, C.; Bită, B.; "Advances in Antimicrobial Coatings for Preventing Infections of Head-Related Implantable Medical Devices", *Coatings* **14** (3) 256 (2024); <https://doi.org/10.3390/coatings14030256>
16. **Negut, I.**; Visan, A.; "Integrating Artificial Intelligence for Drug Discovery in the Context of Revolutionizing Drug Delivery"; *Life* **14**(2) 233 (2024); <https://doi.org/10.3390/life14020233>
17. Zarif, M.E.; Bită, B.; Yehia-Alexe, S.A.; **Negut, I.**; Groza, A.; "Spectral Analysis of Strontium-Doped Calcium Phosphate/Chitosan Composite Films"; *Polymers* **15**(21) 4245 (2023); <https://doi.org/10.3390/polym15214245>
18. **Negut, I.**; Bită, B.; "Exploring the Potential of Artificial Intelligence for Hydrogel Development—A Short Review"; *Gels* **9**(11), 845 (2023); <https://doi.org/10.3390/gels9110845>
19. **Negut, I.**; Grădișteanu-Pircălăbioru, G.; Dinu, M.; Bită, B.; Parau, A.C.; Grumezescu, V.; Ristoscu, C.; Chiriac, M.C.C.; "Bioglass and Vitamin D3 Coatings for Titanium Implants: Osseointegration and Corrosion Protection"; *Biomedicines* **11**(10) 2772 (2023). <https://doi.org/10.3390/biomedicines11102772>
20. **Negut, I.**; Ristoscu, C.; "Bioactive Glasses for Soft and Hard Tissue Healing Applications-A Short Review"; *APPLIED SCIENCES-BASEL* **13** (10) 6151 (2023); <https://doi.org/10.3390/app13106151>
21. **Negut, I.**; Bită, B.; "Polymeric Micellar Systems-A Special Emphasis on "Smart" Drug Delivery"; *PHARMACEUTICS* **15** (3) 976 (2023); <https://doi.org/10.3390/pharmaceutics15030976>
22. Dorcioman, G.; Hudita, A.; Galateanu, B.; Craciun, D.; Mercioniu, I.; Oprea, O.C.; **Negut, I.**; Grumezescu, V.; Grumezescu, A.M.; Ditu, L.M.; Holban, A.M.; "Magnetite-Based Nanostructured Coatings Functionalized with Nigella sativa and Dicloxacillin for Improved Wound Dressings"; *ANTIBIOTICS-BASEL* **12** (1) 59 (2023); <https://doi.org/10.3390/antibiotics12010059>

23. Hudita, A; Grumezescu, V; Gherasim, O; Grumezescu, AM; Dorcioman, G; **Negut, I**; Oprea, OC; Vasile, BS; Galateanu, B; Curutiu, C; Holban, AM; "MAPLE Processed Nanostructures for Antimicrobial Coatings"; INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES 23 (23) 15355 (2022), <https://doi.org/10.3390/ijms232315355>.
24. Zarif, ME; Yehia-Alexe, SA; Bitu, B; **Negut, I**; Locovei, C; Groza, A; "Calcium Phosphates-Chitosan Composite Layers Obtained by Combining Radio-Frequency Magnetron Sputtering and Matrix-Assisted Pulsed Laser Evaporation Techniques"; POLYMERS 14 (23) 5241 (2022), <https://doi.org/10.3390/polym14235241>.
25. Tozar, T; Nistorescu, S; Boni, M; Pircalabioru, GG; **Negut, I**; Staicu, A; "Pulsed Laser Photo-Crosslinking of Gelatin Methacryloyl Hydrogels for the Controlled Delivery of Chlorpromazine to Combat Antimicrobial Resistance"; PHARMACEUTICS 14 (10) 2121 (2022), <https://doi.org/10.3390/pharmaceutics14102121>.
26. Grumezescu, V; Grumezescu, AM; Ficai, A; **Negut, I**; Vasile, BS; Galateanu, B; Hudita, A; "Composite Coatings for Osteoblast Growth Attachment Fabricated by Matrix-Assisted Pulsed Laser Evaporation"; POLYMERS 14 (14) 2934 (2022), <https://doi.org/10.3390/polym14142934>.
27. **Negut, I**; Ristoscu, C; Tozar, T; Dinu, M; Parau, AC; Grumezescu, V; Hapenciu, C; Popa, M; Stan, MS; Marutescu, L; Mihailescu, IN; Chifiriuc, MC; "Implant Surfaces Containing Bioglasses and Ciprofloxacin as Platforms for Bone Repair and Improved Resistance to Microbial Colonization"; PHARMACEUTICS 14 (6) 1175 (2022), <https://doi.org/10.3390/pharmaceutics14061175>.
28. **Negut, I**; Bitu, B; Groza, A; "Polymeric Coatings and Antimicrobial Peptides as Efficient Systems for Treating Implantable Medical Devices Associated-Infections"; POLYMERS 14 (8) 1611 (2022), <https://doi.org/10.3390/polym14081611>.
29. Hapenciu, CL; **Negut, I**; Visan, A; Borca-Tasciuc, T; Mihailescu, IN; "The effect of the contact point asymmetry on the accuracy of thin films thermal conductivity measurement by scanning thermal microscopy using Wollaston probes"; JOURNAL OF APPLIED PHYSICS 131 (9) 94902 (2022), <https://doi.org/10.1063/5.0069273>.
30. Caciandone, M; Niculescu, AG; Rosu, AR; Grumezescu, V; **Negut, I**; Holban, AM; Oprea, O; Vasile, BS; Birca, AC; Grumezescu, AM; Stan, MS; Anghel, AG; Anghel, I; "PEG-Functionalized Magnetite Nanoparticles for Modulation of Microbial Biofilms on Voice Prosthesis"; ANTIBIOTICS-BASEL 11 (1) 39 (2022), <https://doi.org/10.3390/antibiotics11010039>.
31. Gherasim, O; Grumezescu, AM; Grumezescu, V; Andronescu, E; **Negut, I**; Birca, AC; Galateanu, B; Hudita, A; "Bioactive Coatings Loaded with Osteogenic Protein for Metallic Implants"; POLYMERS 13 (24) 4303 (2021), <https://doi.org/10.3390/polym13244303>.
32. Popa, C; Petrus, M; Bratu, AM; **Negut, I**; "Experimental Investigation on Water Adsorption Using Laser Photoacoustic Spectroscopy and Numerical Simulations"; MATERIALS 14 (19) 5839 (2021), <https://doi.org/10.3390/ma14195839>.
33. Spirescu, VA; Suhan, R; Niculescu, AG; Grumezescu, V; **Negut, I**; Holban, AM; Oprea, OC; Birca, AC; Vasile, BS; Grumezescu, AM; Bejenaru, LE; Mogoșanu, GD; Bejenaru, C; Balaure, PC; Andronescu, E; Mogoanta, L; "Biofilm-Resistant Nanocoatings Based on ZnO Nanoparticles and Lincolol"; NANOMATERIALS 11 (10) 2564 (2021), <https://doi.org/10.3390/nano11102564>.
34. Puiu, RA; Balaure, PC; Constantinescu, E; Grumezescu, AM; Andronescu, E; Oprea, OC; Vasile, BS; Grumezescu, V; **Negut, I**; Nica, IC; Stan, MS; "Anti-Cancer Nanopowders and MAPLE-Fabricated Thin Films Based on SPIONs Surface Modified with Paclitaxel Loaded beta-Cyclodextrin"; PHARMACEUTICS 13 (9) 1356 (2021), <https://doi.org/10.3390/pharmaceutics13091356>.
35. Grumezescu, V; **Negut, I**; Cristescu, R; Grumezescu, AM; Holban, AM; Iordache, F; Chifiriuc, MC; Narayan, RJ; Chrisey, DB; "Isoflavonoid-Antibiotic Thin Films Fabricated by MAPLE with Improved Resistance to Microbial Colonization"; MOLECULES 26 (12) 3634 (2021), <https://doi.org/10.3390/molecules26123634>.
36. Gherasim, O; Grumezescu, AM; Grumezescu, V; **Negut, I**; Dumitrescu, MF; Stan, MS; Nica, IC; Holban, AM; Socol, G; Andronescu, E; "Bioactive Coatings Based on Hydroxyapatite, Kanamycin, and Growth Factor for Biofilm Modulation"; ANTIBIOTICS-BASEL 10 (2) 160 (2021), <https://doi.org/10.3390/antibiotics10020160>.
37. **Negut, I**; Grumezescu, V; Grumezescu, AM; Birca, AC; Holban, AM; Urzica, I; Avramescu, SM; Galateanu, B; Hudita, A; "Nanostructured Thin Coatings Containing Anthriscus sylvestris Extract with Dual Bioactivity"; MOLECULES 25 (17) 3866 (2020), <https://doi.org/10.3390/molecules25173866>.
38. **Negut, I**; Dorcioman, G; Grumezescu, V; "Scaffolds for Wound Healing Applications"; POLYMERS 12 (9) 2010 (2020), <https://doi.org/10.3390/polym12092010>.
39. Sima, LE; Chiritoiu, G; **Negut, I**; Grumezescu, V; Orobeti, S; Munteanu, CVA; Sima, F; Axente, E; "Functionalized Graphene Oxide Thin Films for Anti-tumor Drug Delivery to Melanoma Cells"; FRONTIERS IN CHEMISTRY 8, 184 (2020), <https://doi.org/10.3389/fchem.2020.00184>.
40. **Negut, I**; Floroian, L; Ristoscu, C; Mihailescu, CN; Rosca, JCM; Tozar, T; Badea, M; Grumezescu, V; Hapenciu, C; Mihailescu, IN; "Functional Bioglass-Biopolymer Double Nanostructure for Natural Antimicrobial Drug Extracts Delivery"; NANOMATERIALS 10 (2) 385 (2020), <https://doi.org/10.3390/nano10020385>.
41. Cristescu, R; **Negut, I**; Visan, AI; "Matrix-assisted pulsed laser evaporation-deposited rapamycin thin films maintain antiproliferative activity"; INTERNATIONAL JOURNAL OF BIOPRINTING 6 (1) 188 (2020), <https://doi.org/10.18063/ijb.v6i1.188>.
42. Grumezescu, V; **Negut, I**; Gherasim, O; Birca, AC; Grumezescu, AM; Hudita, A; Galateanu, B; Costache, M; Andronescu, E; Holban, AM; "Antimicrobial applications of MAPLE processed coatings based on PLGA and lincomycin functionalized magnetite nanoparticles"; APPLIED SURFACE SCIENCE 484 587-599 (2019), <https://doi.org/10.1016/j.apsusc.2019.04.112>.
43. Grumezescu, V; Gherasim, O; **Negut, I**; Banita, S; Holban, AM; Florian, P; Icriverzi, M; Socol, G; "Nanomagnetite-embedded PLGA Spheres for Multipurpose Medical Applications"; MATERIALS 12 (16) 2521 (2019), <https://doi.org/10.3390/ma12162521>.

44. Hapenciu, CL; **Negut, I**; Borca-Tasciuc, T; Mihailescu, IN; "A steady-state hot-wire method for thermal conductivity measurements of fluids"; INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER 134, 993-1002 (2019), <https://doi.org/10.1016/j.ijheatmasstransfer.2019.01.098>.
45. Teleanu, DM; **Negut, I**; Grumezescu, V; Grumezescu, AM; Teleanu, AI; "Nanomaterials for Drug Delivery to the Central Nervous System"; NANOMATERIALS 9 (3) 371 (2019), <https://doi.org/10.3390/nano9030371>.
46. **Negut, I**; Visan, AI; Popescu, C; Cristescu, R; Ficai, A; Grumezescu, AM; Chifiriu, MC; Boehm, RD; Yamaleyeva, D; Taylor, M; Narayan, RJ; Chrisey, DB; "Successful Release of Voriconazole and Flavonoids from MAPLE Deposited Bioactive Surfaces"; APPLIED SCIENCES-BASEL 9 (4) 786 (2019), <https://doi.org/10.3390/app9040786>.
47. **Negut, I**; Grumezescu, V; Ficai, A; Grumezescu, AM; Holban, AM; Popescu, RC; Savu, D; Vasile, BS; Socol, G; "MAPLE deposition of Nigella sativa functionalized Fe3O4 nanoparticles for antimicrobial coatings"; APPLIED SURFACE SCIENCE 455 513-521 (2018), <https://doi.org/10.1016/j.apsusc.2018.05.202>.
48. **Negut, I**; Grumezescu, V; Grumezescu, AM; "Treatment Strategies for Infected Wounds"; MOLECULES 23 (9) 2392 (2018), <https://doi.org/10.3390/molecules23092392>.
49. Grumezescu, V; **Negut, I**; Grumezescu, AM; Ficai, A; Dorcioman, G; Socol, G; Iordache, F; Trusca, R; Vasile, BS; Holban, AM; "MAPLE fabricated coatings based on magnetite nanoparticles embedded into biopolymeric spheres resistant to microbial colonization"; APPLIED SURFACE SCIENCE 448 230-236 (2018), <https://doi.org/10.1016/j.apsusc.2018.04.053>.
50. Petrovic, S; Gakovic, B; Panjan, P; Kovac, J; Lazovic, V; Ristoscu, C; **Negut, I**; Mihailescu, IN; "Oxidation behaviour of composite CrN/(Cr)VN coatings with different contents of vanadium induced by UV nanosecond laser pulses"; OPTICAL AND QUANTUM ELECTRONICS 50 (5) 1-10 (2018), <https://doi.org/10.1007/s11082-018-1475-3>.
51. Zgura, I; Preda, N; Socol, G; Ghica, C; Ghica, D; Enculescu, M; **Negut, I**; Nedelcu, L; Frunza, L; Ganea, CP; Frunza, S; "Wet chemical synthesis of ZnO-CdS composites and their photocatalytic activity"; MATERIALS RESEARCH BULLETIN 99 174-181 (2018), <https://doi.org/10.1016/j.materresbull.2017.11.013>.
52. Floroian, L; Ristoscu, C; Candiani, G; Pastori, N; Moscatelli, M; Mihailescu, N; **Negut, I**; Badea, M; Gilca, M; Chiesa, R; Mihailescu, IN; "Antimicrobial thin films based on ayurvedic plants extracts embedded in a bioactive glass matrix"; APPLIED SURFACE SCIENCE 417 224-233 (2017), <https://doi.org/10.1016/j.apsusc.2017.02.197>.
53. Mihailescu, IN; Bociaga, D; Popescu-Pelin, G; Stan, GE; Duta, L; Socol, G; Chifiriu, MC; Bleotu, C; Lazar, V; Husanu, MA; Zgura, I; Miculescu, F; **Negut, I**; Hapenciu, C; "Optimized silicon reinforcement of carbon coatings by pulsed laser technique for superior functional biomedical surfaces fabrication"; BIOFABRICATION 9 (2) 25029 (2017), <https://doi.org/10.1088/1758-5090/aa7076>.
54. Mihailescu, IN; Bociaga, D; Socol, G; Stan, GE; Chifiriu, MC; Bleotu, C; Husanu, MA; Popescu-Pelin, G; Duta, L; Luculescu, CR; **Negut, I**; Hapenciu, C; Besleaga, C; Zgura, I; Miculescu, F; "Fabrication of antimicrobial silver-doped carbon structures by combinatorial pulsed laser deposition"; INTERNATIONAL JOURNAL OF PHARMACEUTICS 515 (1-2) 592-606 (2016), <https://doi.org/10.1016/j.ijpharm.2016.10.041>.
55. Floroian, L; Ristoscu, C; Mihailescu, N; **Negut, I**; Badea, M; Ursutiu, D; Chifiriu, MC; Urzica, I; Dyia, HM; Bleotu, C; Mihailescu, IN; "Functionalized Antimicrobial Composite Thin Films Printing for Stainless Steel Implant Coatings"; MOLECULES 21 (6) 740 (2016), <https://doi.org/10.3390/molecules21060740>.
56. Ivanov, VG; Vlachov, ES; Stan, GE; Zamfirescu, M; Albu, C; Mihailescu, N; **Negut, I**; Luculescu, C; Socol, M; Ristoscu, C; Mihailescu, IN; "Surface-enhanced Raman scattering activity of niobium surface after irradiation with femtosecond laser pulses"; JOURNAL OF APPLIED PHYSICS 118 (20) 203104 (2015), <https://doi.org/10.1063/1.4936363>.
57. Floroian, L; Samoila, C; Badea, M; Munteanu, D; Ristoscu, C; Sima, F; **Negut, I**; Chifiriu, MC; Mihailescu, IN; "Stainless steel surface bifunctionalization with PMMA-bioglass coatings: compositional, electrochemical corrosion studies and microbiological assay"; JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE 26 (6) 195 (2015), <https://doi.org/10.1007/s10856-015-5527-y>.
58. Bazgan, S; Ristoscu, C; **Negut, I**; Hapenciu, C; Turcan, M; Ciobanu, N; Mihailescu, IN; Enaki, N; "Propagation of UV radiation through meta-materials and its application in bio decontamination"; ROMANIAN REPORTS IN PHYSICS 67 (4) 1602-1607 (2015).

BOOK CHAPTERS

1. Visan, AI; **Negut, I**; Hapenciu, C; Recent Advances in Thermoelectric Materials for Biomedical Applications: Energy Harvesting and Wearables in Advanced Thermoelectric Materials - Theory, Development, and Applications, Doi 10.5772/intechopen.1006434, ISBN 978-1-83634-823-8
2. **Negut, I**; Ristoscu, C; Bitu, B; Chapter 3 - Bioactive glass coatings on metallic implants for biomedical applications, Antimicrobial Materials and Coatings, Woodhead Publishing in Materials, 45-78 (2025), 978-0-323-95460-0
3. **Negut, I**; Visan, AI; Chapter 3 - AI-Enhanced Diagnosis for Immunological Disorders (pages 63-106), In AI-Assisted Computational Approaches for Immunological Disorders, IGI Global Scientific Publishing, DOI: 10.4018/979-8-3693-9725-1 (2025), ISBN13: 9798369397251
4. Visan, AI; **Negut, I**; Chapter 1 - AI Algorithms in Sustainable Healthcare (pages 1-38), In AI-Assisted Computational Approaches for Immunological Disorders, IGI Global Scientific Publishing, DOI: 10.4018/979-8-3693-9725-1 (2025), ISBN13: 9798369397251
5. Visan, AI; **Negut, I**; Hapenciu, C; Chapter "Recent Advances in Thermoelectric Materials for Biomedical Applications: Energy Harvesting and Wearables" in Advanced Thermoelectric Materials - Theory, Development, and Applications", Intech, ISBN 978-1-83634-824-5 (2025)

6. Grumezescu, V; **Negut, I.**; Chapter 7 - Hyaluronic acid nanoparticles; Biopolymeric Nanomaterials, Fundamentals and Applications -Micro and Nano Technologies, 155-171 (2021), ISBN 978-0-12-824364-0.
7. Grumezescu, V; **Negut, I.**; Chapter 14 - Nanocoatings and thin films; Materials for Biomedical Engineering: Inorganic Micro- and Nanostructures, 463-477 (2019), ISBN 978-0-08-102814-8.
8. **Negut, I.**; Grumezescu, V.; Chapter 3 - Nanoparticles and hyperthermia; Biomedical Applications of Nanoparticles, 63-90 (2019), ISBN 978-0-12-816506-5.
9. **Negut, I.**; Grumezescu, V.; Sima, L.E.; Axente, E.; Chapter 11 - Recent advances of graphene family nanomaterials for nanomedicine; Fullerenes, Graphenes and Nanotubes: A Pharmaceutical Approach, 413-455 (2018), ISBN 978-0-12-813691-1.
10. **Negut, I.**; Grumezescu, V.; Dorcioman, G.; Chapter 6 - Progress of nanoparticles research in cancer therapy and diagnosis; Nanostructures for Cancer Therapy: Micro and Nano Technologies, 159-176 (2017), ISBN 978-0-323-46144-3.
11. **Negut, I.**; Grumezescu, V.; Dorcioman, G.; Socol, G.; Chapter 1 - Microscale Drug Delivery Systems: Current Perspectives and Novel Approaches; Nano- and Microscale Drug Delivery Systems: Design and Fabrication, 1-15 (2017), ISBN 978-0-323-52727-9.