



Europass Curriculum Vitae

PERSONAL INFORMATION

First name / Surname

Rodica Cristescu

Affiliation:

National Institute for Lasers, Plasma and Radiation Physics

Institution address

409 Atomistilor street, Magurele-Ifov, 077125, Romania

Phone number

(40-21) 457 4550

Fax number

(40-21) 457 42431

E-mail

rodica.cristescu@inflpr.ro

Nationality

Romanian

Gender

Female

WORK EXPERIENCE

2023 – present

Senior Scientific Researcher 1st degrees, National Institute for Lasers, Plasma & Radiation Physics (NILPRP), Lasers Department, Laser-Surface-Plasma Interactions (LSPI) Laboratory, Magurele-Ifov, Romania.

2011 - 2023

Senior Scientific Researcher 2nd degrees, National Institute for Lasers, Plasma & Radiation Physics (NILPRP), Lasers Department, Laser-Surface-Plasma Interactions (LSPI) Laboratory, Magurele-Ifov, Romania.

2006 - 2011

Senior Scientific Researcher 3rd degrees, National Institute for Lasers, Plasma & Radiation Physics (NILPRP), Lasers Department, Laser-Surface-Plasma Interactions (LSPI) Laboratory, Magurele-Ifov, Romania.

May – November 2005

Invited Associate Scientific Researcher, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.

2004 - 2006

Research Assistant, National Institute for Lasers, Plasma & Radiation Physics (NILPRP), Lasers Department, Laser-Surface-Plasma Interactions (LSPI) Laboratory, Magurele-Ifov, Romania.

1998-2000

Maternity leave.

1992 - 2004

Physics Teacher, "Iancu C. Vissarion" Highschool, Titu, Romania.

EDUCATION

2005

PhD in Physics

University of Bucharest, Romania

Thesis: "Laser - Material Interaction: Laser Processing of Polymeric Thin Films for Biomedical Applications"

Thesis scientific supervisor: Professor Ion N. Mihailescu

1992

BSc in Physics, Minor: Optics, Spectroscopy, Lasers & Plasma, University of Bucharest, Romania.

Dissertation title: "Light Propagation in Anisotropic Environments"

Scientific supervisor: Professor Stefan Levai

TRAINING AND CERTIFICATES

Innovation Manager, SC IPA SA CIFATT, Romania (2023)

Development of Innovation Capacity in RDI Eco-system; Steps in technological transfer (2023)

Contract Models for Technology Transfer (2022)

Technological Audit and RDI Evaluation (2022)

Expert on Accessing European Structural and Cohesion Funds (2017)

PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B2	B2	B1	B1	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

[Common European Framework of Reference for Languages](#)

Communication skills

Strong experience in academic and scientific communication
Keynote speaker and invited lecturer at international conferences
Co-organizer and session chair at international symposia

Organisational / managerial skills

Principal investigator of two national research projects
Leadership of research teams of up to 17 members
Member of organizing committees for international conferences

Job-related skills/carrier highlights

Laser physics: materials science, surface engineering by UV excimer lasers and laser-material interactions, thin films, laser-assisted processing by Pulsed Laser Deposition (PLD), Matrix Assisted Pulsed Laser Evaporation (MAPLE), CAD/CAM Rapid Prototyping by Matrix Assisted Pulsed Laser Evaporation Direct Write (MAPLE DW) & Reverse MAPLE.

3D Bioprinting

Studied Materials - Functional Biomaterials: • Biopolymers; • Proteins; • Bacteria; • Fungal strains; • Hybrid inorganic-organic materials (metalloporphyrins); • Nanoparticles: silver and magnetic nanoparticles; • Natural antimicrobials (flavonoids, isoflavonoids, antimicrobial peptides); • Antibiotics; • Antifungal compounds; • Stem cells.

Techniques for Material and Surface Investigation: • FT-IR Spectrophotometry; • Atomic Force Microscopy: AFM; • Electron Microscopy: SEM, HRTEM

Biomedical Applications: • Targeted and Controlled-Release Drug Delivery; • Tissue Engineering; • Faster Diagnosis and Treatment; • Biofouling; • Bio-chem sensors; • Antimicrobial assays; • Antimicrobial resistance; • Drug screening; • Artificial Stem Cells Niches.

Digital competence

MS Office (Word, Excel, PowerPoint), Origin, Adobe Acrobat

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user

[Digital competences - Self-assessment grid](#)

Supplementary informations

Projects

Principal Investigator of two Exploratory Research Projects (PCE) national projects:

- 2017-2019, "Innovative multifunctional nanoparticle-mediated delivery of antimicrobial peptide for improved performance of medical implants" PN-III-P4-ID-PCE-2016-0884 (BIOMATE); leader of a team of 17 researchers, 850,000 Ron ~ 185,000 Euro.
- 2011-2016, "Functionalized flavonoid-biopolymer nanostructured composites processed for antibacterial activity" PN-II-ID-PCE-2011-3-0888; leader of a team of 9 researchers, 1,500,000 Ron ~ 350,000 Euro.

Key expert for other 7 national projects:

- 2021-2023, "Implant coatings based on low-cost sustainable natural resources for infection prevention" PN-III-P4-ID-PCE-2020-2273.
- 2020-2022, "Novel strategies to improve the performances of medical textiles" PN-III-P2-2.1-PED-2019-4926.
- 2020-2022, "Nano-modified surfaces for g-tubes resistant to microbial colonization" PN-III-P2-2.1-PED-2019-3829.
- 2017-2028, "3D laser additive manufacturing of cranial metallic prostheses functionalized with bioactive ceramic coatings" PN-III-P2-2.1-PED-2016-1309.
- 2014-2017, "RFID device for food traceability" PN-II-PT-PCCA-2013-4-1268.
- 2012-2016, "Fabrication of osteoinductive orthopedic implants with gradual 3D hierarchical structure" PN-II-PT-PCCA-2011-3.2-0898.
- 2013-2016, "Hard and adherent carbon thin films synthesized by pulsed laser deposition for wear protection of metallurgical cutting and drilling tools" PN-II-RU-TE-2012-3-0379.

Honors and awards

- Gold Medal at the International Exhibition INVENTCOR – 5th edition, 04-06 April 2024, Deva, Romania.
- Silver Medal at the INFOINVENT, November 22-24, 2023, online, Chisinau. Department IV Innovative Products and Services.
- Pro Invent Medal at the International Exhibition of Research, Innovations and Inventions PRO INVENT XXI, October 25-27, 2023, Cluj-Napoca.
- Diploma of Excellence at the International Exhibition of Research, Innovations and Inventions PRO INVENT XXI, October 25-27, 2023, Cluj-Napoca.
- Best Poster Award - EMRS 2010 Spring Meeting, Symposium R: Laser processing and diagnostics for micro and nano applications, June 7-11, 2010, Strasbourg, France.
- Best Poster Award - EMRS 2006 Spring Meeting (EMRS-IUMRS-ICEM 06), Symposium H: Photon-assisted Synthesis and Processing of Functional Materials, May 29 - June 2, 2006, Nice, France.
- 3rd Place Award Winner - 2005 Young Investigators Competition - the International Federation for Medical and Biological Engineering (IFMBE) European Conference: 3rd European Medical and Biological Engineering Conference (EMBE05) „Advancement of Medicine and Health Care through Technology – the Challenge for Biomedical Engineering in Europe“, November 20-25, 2005, Prague, Czech Republic.

Research stages

- October 16-21, 2010, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.
- June 18-24, 2008, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.
- November 11-18, 2006, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.
- December 1-16, 2005, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.
- November 14 – December 13, 2004, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.
- October 11- 19, 2004, Institute of Physics, Department of Multilayer Structures, Academy of Sciences of Czech Republic, Prague, Czech Republic.

Organization of international conference

- 18th European Congress and Exhibition on Advanced Materials and Processes – FEMS EUROMAT 2025, September 14 – 18, 2025, Congress Palace of Granada, Granada, Spain: Biomaterials for infection control F3 Symposium Co-Organizer and F3_2 Session Co-Chair.
- Advanced Laser Technologies (ALT), September 15-20, 2019, Prague, Czech Republic: Advanced Laser Processing and Laser Synthesis of Materials V [LP-V] Session Co-Chair.

Member of committee/jury of examination and public defense of PhD thesis	• 2024: "Nanomaterial synthesis through microfluidic methods", National University of Science and Technology POLITEHNICA Bucharest (UNSTPB), Romania
Professional society memberships	• Sigma Xi - the Scientific Research Honor Society, Founding member of Sigma Xi Romania – http://www.sigmaxi.org , 2007 – present. • Ad Astra Association, the On-Line Worldwide Romanian Scientific Community, http://www.ad-astra.ro/ , 2005 – present. • European Society for Nanomedicine, 2023 - present. • The American Ceramic Society. https://ceramics.org/ , 2024 – present.
Journal referee	Advanced Science, ACS Nano, Materials Horizons, Small, Green Chemistry, Advanced Healthcare Materials, Biofabrication, Carbon, Chemical Communications, Microbiological Research, International Journal of Nanomedicine, Journal of Materials Chemistry B, Applied Surface Science, Surface and Coatings Technology, Journal of Biomedical Optics, Physica Status Solidi, Material Science & Engineering: C, Thin Solid Films, Research Letters in Materials Science, Sensor Letters, Materials Letters, Journal of Nanomaterials, Journal of Physics D, Electroanalysis, Smart Materials and Structures, International Journal of Pharmaceutics, New Journal of Chemistry, RSC Advances, Advances in Polymer Technology, Environmental Science and Pollution Research, ACS Applied Bio Materials, etc. (over 160 reviews).
Journal editor	• Guest co-editor with Douglas B. Chrisey, Prem C. Pandey and Roger J. Narayan for the "Laser processing in polymer research" Special Issue of Polymers, January 21, 2019 (IF = 4.9, AIS = 0.701).
Research activity and scientometric indicators:	• Matrix assisted pulsed laser evaporation (MAPLE) (a physical-vapor deposition method patented by Robert A. McGill and Douglas B. Chrisey in 2000 in USA) was implemented and developed by R. Cristescu for the first time both in Romania (2002-2003) and Czech Republic (2004-2005). • Author of 71 publications: 59 ISI peer-reviewed scientific papers (35 as main author), 9 studies at major scientific international conferences proceedings (3 as main author), and 3 book chapters (2 as main author) (October 23, 2025). • Author of 172 scientific communications: 21 keynote/invited lectures/seminars, 40 oral presentations, and 116 poster contributions (October 23, 2025). • Author of 1 patent application. • Total number of citations: 1,489 (1,333 (~89%) without self-citations), according to Web of Science (October 23, 2025). • H-index (Hirsch) = 24, according to WoS (October 23, 2025).
Special achievements	• The paper: R. Cristescu, R. Narayan, and D.B. Chrisey, Novel Antimicrobial Surfaces to Defeat COVID-19 Transmission, in „Materials Advances in Application to COVID-19 related Challenges” Special Issue, MRS Advances 5(56) 2839-2851: https://doi.org/10.1557/adv.2020.418 was spotlighted as MRS Journal Highlights in MRS Bulletin (IF = 4.9; AIS = 1.317) Vol. 46 February 12 Pag. 15 (2021): https://doi.org/10.1557/s43577-021-00041-3 • In the top 100 most-cited, most-cited last month, most-read (248 citations, 2180 reads) in August 8, 2025: https://www.researchgate.net/journal/International-Journal-of-Bioprinting-2424-8002#journal-top-authors
Author Identifiers	https://orcid.org/0000-0002-3092-6168 http://www.researcherid.com/rid/F-1961-2010 https://scholar.google.com/citations?user=ozxIDhcAAAJ&hl=en https://www.scopus.com/authid/detail.uri?authorid=8632718800 https://www.brainmap.ro/rodica-cristescu https://www.researchgate.net/profile/Rodica-Cristescu http://ad-astra.ro/whos-who/?userid=132

Annexes:

A. Peer-reviewed ISI research publications, book chapters, conference proceedings, Patent application

B. Conference presentations: keynote/invited lectures/scientific seminars, oral and poster presentations; Outreach activities

Annex A. Peer-reviewed ISI research publications, book chapters, conference proceedings; Patent application

ISI Peer-reviewed research publications:

*Corresponding author

2025

59/1 C.E. Matei, A.I. Visan, **R. Cristescu***, *Aloe Vera Polysaccharides as Therapeutic Agents: Benefits Versus Side Effects in Biomedical Applications*, Polysaccharides **6**(2) (2025) 36. <https://doi.org/10.3390/polysaccharides6020036> (invited paper)

2023

58/1 A.I. Visan, **R. Cristescu***, *Polysaccharide-Based Coatings as Drug Delivery Systems*, Pharmaceutics **15**(9) (2023) 2227. [10.3390/pharmaceutics15092227](https://doi.org/10.3390/pharmaceutics15092227) (invited paper)

2022

57/1 D.E. Mihaiescu, D. Istrati, A. Morosan, M. Stanca, B. Purcaneanu, **R. Cristescu**, B.S. Vasile, R.D. Trusca. *Low Release Study of Cefotaxime by Functionalized Mesoporous Silica Nanomaterials*, Gels **8**(11) (2022) 711. DOI: [10.3390/gels8110711](https://doi.org/10.3390/gels8110711)

2021

56/1 A.I. Visan, C. Ristoscu, G. Popescu-Pelin, M. Sopronyi, C.E. Matei, G. Socol, M.C. Chifiriuc, C. Bleotu, D. Grossin, F. Brouillet, S. Le Grill, G. Bertrand, I. Zgura, **R. Cristescu**, I.N. Mihaiescu, *Composite Drug Delivery System Based on Amorphous Calcium Phosphate–Chitosan: An Efficient Antimicrobial Platform for Extended Release of Tetracycline*, Pharmaceutics **13**(10) (2021) 1659. DOI: [10.3390/pharmaceutics13101659](https://doi.org/10.3390/pharmaceutics13101659)

55/2 V. Grumezescu, I. Negut, **R. Cristescu***, A.M. Grumezescu, A.M. Holban, F. Iordache, M.C. Chifiriuc, R.J. Narayan, D.B. Chrisey, *Isoflavonoid-Antibiotic Thin Films Fabricated by MAPLE for Improved Resistance to Microbial Colonization*, Molecules **26**(12) (2021) 3634. DOI: [10.3390/molecules26123634](https://doi.org/10.3390/molecules26123634) (invited paper)

54/3 G. Gradisteanu Pircalabioru, L.I. Popa, L. Marutescu, I. Gheorghe, M. Popa, I. Czobor Barbu, **R. Cristescu***, M.-C. Chifiriuc, *Bacteriocins in the Era of Antibiotic Resistance: Rising to the Challenge*, Pharmaceutics **13**(2) (2021) 196. DOI: [10.3390/pharmaceutics13020196](https://doi.org/10.3390/pharmaceutics13020196)

2020

53/1 A. Visan, G. Popescu-Pelin, O. Gherasim, A. Mihaiescu, M. Socol, I. Zgura, M. Chiritoiu, L. Elena Sima, F. Antohe, L. Radulescu, D. Vranceanu, C. Cotrut, **R. Cristescu**, G. Socol, *Long-term Evaluation of Dip-Coated PCL/PEG Coatings in Simulated Conditions*, Polymers **12**(3) (2020) 717. DOI: [10.3390/polym12030717](https://doi.org/10.3390/polym12030717)

52/2 C. Ravariu, D.E. Mihaiescu, A. Morosan, D. Istrati, B. Purcaneanu, **R. Cristescu**, R. Trusca, B.S. Vasile, *Solution for Green Organic Thin Film Transistors: Fe₃O₄ Nano-Core with PABA External Shell as p-type Film*, Journal of Materials Science: Materials in Electronics **31** (2020) 3063–3073. DOI: [10.1007/s10854-019-02851-3](https://doi.org/10.1007/s10854-019-02851-3)

51/3 **R. Cristescu**, R. Narayan, and D.B. Chrisey, *Novel Antimicrobial Surfaces to Defeat COVID-19 Transmission*, in „Materials Advances in Application to COVID-19 related Challenges” Special Issue, MRS Advances **5**(56) (2020) 2839-2851. DOI: [10.1557/adv.2020.418](https://doi.org/10.1557/adv.2020.418)

50/4 B. Zhang, **R. Cristescu**, D.B. Chrisey, R.J. Narayan, *Solvent-based Extrusion 3D Printing for the Fabrication of Tissue Engineering Scaffolds*, International Journal of Bioprinting **6**(1) (2020) 211. DOI: [10.18063/IJB.V6i1.211](https://doi.org/10.18063/IJB.V6i1.211)

49/5 **R. Cristescu**, I. Negut, A.I. Visan, A.K. Nguyen, A. Sachan, P.L. Goering, D.B. Chrisey, R.J. Narayan, *Matrix Assisted Pulsed-Laser Evaporation-Deposited Rapamycin Coatings Maintain Anti-Proliferative Activity*, International Journal of Bioprinting **6**(1) (2020) 188. DOI: [10.18063/IJB.V6i1.188](https://doi.org/10.18063/IJB.V6i1.188)

2019

48/1 I. Negut, A.I. Visan, C.E. Popescu, **R. Cristescu***, A. Ficai, A.M. Grumezescu, M.C. Chifiriuc, R.D. Boehm, D. Yamaleyeva, M. Taylor, R.J. Narayan, and D.B. Chrisey, *Successful Release of Voriconazole and Flavonoids from MAPLE Deposited Bioactive Surfaces*, Applied Sciences **9**(4) (2019) 786. DOI: [10.3390/app9040786](https://doi.org/10.3390/app9040786) (invited paper)

47/2 A.I. Visan, G. Popescu-Pelin, O. Gherasim, V. Grumezescu, M. Socol, I. Zgura, C. Florica, R.C. Popescu, D. Savu, A.M. Holban, **R. Cristescu**, C.E. Matei, G. Socol, *Laser Processed Antimicrobial Nanocomposite Based on Polyaniline Grafted Lignin Loaded with Gentamicin-Functionalized Magnetite*, Polymers **11** (2019) 283. DOI: [10.3390/polym11020283](https://doi.org/10.3390/polym11020283)

2018

46/1 A.M. Iordache, **R. Cristescu***, E. Fagadar-Cosma, A.C. Popescu, A.A. Ciucu, S.M. Iordache, A. Balan, C. Nichita, I. Stamatin, and D.B. Chrisey, *Histamine Detection using Functionalized Porphyrin as Electrochemical Mediator*, *Comptes Rendus Chimie* **21** (2018) 270-276. DOI: [10.1016/J.CRCI.2017.05.008](https://doi.org/10.1016/J.CRCI.2017.05.008)

2017

45/1 C. Popescu, D. Cristea, B. Bitu, **R. Cristescu**, D. Craciun, G.D. Chioibas, C. Luculescu, I. Paun, L. Duta, A.C. Popescu, *An Experimental Study on Nano-Carbon Films as an Anti-Wear Protection for Drilling Tools*, *Coatings* **7**(12) (2017) 228. DOI: [10.3390/COATINGS7120228](https://doi.org/10.3390/COATINGS7120228)

44/2 A. Visan, **R. Cristescu**, N. Stefan, M. Miroiu, C. Nita, I.N. Mihailescu, G. Socol, M. Socol, C. Florica, O. Rasoga, I. Zgura, L.E. Sima, M. Chiritoiu, M.C. Chifiriuc, A.M. Holban, *Antimicrobial Polycaprolactone/Polyethylene Glycol Embedded Lysozyme Coatings of Ti Implants for Osteoblast Functional Properties in Tissue Engineering*, *Applied Surface Science* **417** (2017) 234-243. DOI: [10.1016/J.APSUSC.2016.11.129](https://doi.org/10.1016/J.APSUSC.2016.11.129)

43/3 R. Sachan, P. Jaipani, J.Y. Zhang, S. Degan, D. Erdmann, J. Tedesco, L. Vanderwal, S.J. Stafslien, I. Negut, A. Visan, G. Dorcioman, G. Socol, **R. Cristescu**, D.B. Chrisey, R.J. Narayan, *Printing Amphotericin B on Microneedles using Matrix-Assisted Pulsed Laser Evaporation*, *International Journal of Bioprinting* **3** (2017) 147-157. DOI: [10.18063/IJB.2017.02.004](https://doi.org/10.18063/IJB.2017.02.004)

2016

42/1 **R. Cristescu***, A. Visan, G. Socol, A.V. Surdu, A.E. Oprea, A.M. Grumezescu, M.C. Chifiriuc, R.D. Boehm, D. Yamaleyeva, M. Taylor, R.J. Narayan, and D.B. Chrisey, *Antimicrobial Activity of Biopolymeric Thin Films Containing Flavonoid Natural Compounds and Silver Nanoparticles Fabricated by MAPLE: A Comparative Study*, *Applied Surface Science* **374** (2016) 290-296. DOI: [10.1016/J.APSUSC.2015.11.252](https://doi.org/10.1016/J.APSUSC.2015.11.252)

2015

41/1 F.M. Miroiu, N. Stefan, A.I. Visan, C. Nita, C.R. Luculescu, O. Rasoga, M. Socol, I. Zgura, **R. Cristescu**, D. Craciun, G. Socol, *Composite biodegradable biopolymer coatings of Silk Fibroin – Poly(3-Hydroxybutyric-acid-co-3-Hydroxyvaleric-acid) for biomedical applications*, *Applied Surface Science* **355** (2015) 1123–1131. DOI: [10.1016/J.APSUSC.2015.07.120](https://doi.org/10.1016/J.APSUSC.2015.07.120)

40/2 **R. Cristescu***, A.V. Surdu, A.M. Grumezescu, A.E. Oprea, R. Trusca, O. Vasile, G. Dorcioman, A. Visan, G. Socol, I.N. Mihailescu, D. Mihaiescu, M. Enculescu, M.C. Chifiriuc, R.D. Boehm, R.J. Narayan, and D.B. Chrisey, *Microbial Colonization of Biopolymeric Thin Films Containing Natural Compounds and Antibiotics Fabricated by MAPLE*, *Applied Surface Science* **336** (2015) 234–239. DOI: [10.1016/J.APSUSC.2014.11.145](https://doi.org/10.1016/J.APSUSC.2014.11.145)

39/3 A.M. Grumezescu, **R. Cristescu***, M.C. Chifiriuc, G. Dorcioman, G. Socol, I.N. Mihailescu, D.E. Mihaiescu, A. Ficai, O. Vasile, M. Enculescu, D.B. Chrisey, *Fabrication of Magnetite-Based Core-Shell Coated Nanoparticles with Antibacterial Properties*, *Biofabrication* **7** (2015) 015014. DOI: [10.1088/1758-5090/7/1/015014](https://doi.org/10.1088/1758-5090/7/1/015014)

2014

38/1 E. Fagadar-Cosma, D. Vlascici, Gh. Fagadar-Cosma, A. Palade, A. Lascu, I. Creanga, M. Birdeanu, **R. Cristescu**, I. Cernica, *A Sensitive A3B porphyrin nanomaterial for CO₂ detection*, *Molecules* **19** (2014) 21239-21252. DOI: [10.3390/MOLECULES191221239](https://doi.org/10.3390/MOLECULES191221239)

37/2 A.M. Holban, V. Grumezescu, A.M. Grumezescu, B.S. Vasile, R. Trusca, **R. Cristescu**, G. Socol, F. Iordache, *Antimicrobial Nanospheres Thin Coatings Prepared by Advanced Pulsed Laser Technique*, *Beilstein Journal of Nanotechnology* **5** (2014) 872–880. DOI: [10.3762/BJNANO.5.99](https://doi.org/10.3762/BJNANO.5.99)

36/3 V. Grumezescu, G. Socol, A.M. Grumezescu, A.M. Holban, A. Ficai, R. Trusca, C. Bleotu, P.C. Balaure, **R. Cristescu**, M.C. Chifiriuc, *Functionalized Antibiofilm Thin Coatings based on PLA-PVA Microspheres Loaded with Usnic Acid Natural Compounds Fabricated by MAPLE*, *Applied Surface Science* **302** (2014) 262–267. DOI: [10.1016/J.APSUSC.2013.09.081](https://doi.org/10.1016/J.APSUSC.2013.09.081)

2013

35/1 S. Iordache, **R. Cristescu***, A.C. Popescu, C.E. Popescu, G. Dorcioman, I.N. Mihailescu, A.A. Ciucu, A. Balan, I. Stamatin, E. Fagadar-Cosma, and D.B. Chrisey, *Functionalized Porphyrin Conjugate Thin Films Deposited by Matrix Assisted Pulsed Laser Evaporation*, *Applied Surface Science* **278** (2013) 207–210. DOI: [10.1016/J.APSUSC.2013.01.080](https://doi.org/10.1016/J.APSUSC.2013.01.080)

34/2 **R. Cristescu***, C. Popescu, G. Dorcioman, F.M. Miroiu, G. Socol, I.N. Mihailescu, S.D. Gittard, P.R. Miller, R.J. Narayan, M. Enculescu, D.B. Chrisey, *Antimicrobial Activity of Biopolymer–Antibiotic Thin Films Fabricated by Advanced Pulsed Laser Methods*, *Applied Surface Science* **278** (2013) 211–213. DOI: [10.1016/J.APSUSC.2013.01.062](https://doi.org/10.1016/J.APSUSC.2013.01.062)

33/3 G. Socol, N. Preda, M. Socol, L. Sima, C. R. Luculescu, F. Sima, M. Miroiu, E. Axente, A. Visan, N. Stefan, **R. Cristescu**, G. Dorcioman, A. Stanculescu, L. Radulescu, I.N. Mihailescu, *MAPLE Deposition of PLGA Micro- and Nanoparticles Embedded Into Polymeric Coatings*, *Digest Journal of Nanomaterials and Biostructures* **8**(2) (2013) 621 – 630.

32/4 D.E. Mihaiescu, **R. Cristescu***, G. Dorcioman, C.E. Popescu, C. Nita, G. Socol, I.N. Mihailescu, A.M. Grumezescu, D. Tamas, M. Enculescu, R.F. Negrea, C. Ghica, C. Chifiriuc, C. Bleotu and D.B. Chrisey, *Functionalized magnetite silica thin films fabricated by MAPLE with antibiofilm properties*, *Biofabrication* **5** (2013) 015007. DOI: [10.1088/1758-5082/5/1/015007](https://doi.org/10.1088/1758-5082/5/1/015007)

2012

31/1 **R. Cristescu***, C. Popescu, G. Socol, I. Iordache, I.N. Mihailescu, D.E. Mihaiescu, A.M. Grumezescu, A. Andronie, I. Stamatin, C. Chifiriuc, C. Bleotu, C. Saviuc, M. Popa, and D.B. Chrisey, *Magnetic Core/Shell Nanoparticle Thin Films Deposited by MAPLE: Investigation by Chemical, Morphological and In Vitro Biological Assays*, Applied Surface Science 258 (2012) 9250–9255. DOI: [10.1016/J.APSUSC.2012.02.055](https://doi.org/10.1016/J.APSUSC.2012.02.055)

30/2 G. Socol, M. Socol, L. Sima, S. Petrescu, M. Enculescu, F. Sima, M. Miroiu, G. Popescu-Pelin, N. Stefan, **R. Cristescu**, C. N. Mihailescu, A. Stanculescu, C. Sutan, I. N. Mihailescu, *Combinatorial Pulsed Laser Deposition of Ag-Containing Calcium Phosphate Coatings*, Digest Journal of Nanomaterials and Biostructures 7(2) (2012) 563-576.

2011

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3. D.B. Chrisey, **R. Cristescu***, Nanotechnology in Biology and Medicine, NATO - Advanced Study Institute, Functionalized Properties of Nanostructured Materials, June 3-14, 2005, Sozopol, Bulgaria.
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39. A.I. Visan, G. Socol, **R. Cristescu**, G.F. Pelin-Popescu, L.I. Jinga, C.E. Matei, M. Popa, M.C. Chifiriuc Implant coatings based on low-cost sustainable natural resources for infection prevention, The 15th International Conference on Physics of Advanced Materials (ICPAM-15), November 19-26, 2023, Sharm El Sheikh, Egypt.
38. Anita Ioana Visan, Carmen Ristoscu, Socol Gabriel, **Rodica Cristescu**, Gianina Pelin-Popescu, Luiza Izabela Jinga, Consuela Elena Matei, Marcela Popa, Mariana Carmen Chifiriuc, George Stan, T. Tite, MAPLE Functionalized Implant Coatings based on Low-cost Sustainable Natural Resources for Infection Preventions, 7th International Conference on Material Science and Engineering, June 29, 2023, on line.
37. A. I. Visan, S. Gabriel, **R. Cristescu**, G. Pelin-Popescu, L. I. Jinga, C. E. Matei, M. Popa, M. C. Chifiriuc, MAPLE fabrication of implant coatings based on low-cost sustainable natural resources for infection prevention, 5th International Conference of Emerging Technologies in Materials Engineering – EmergeMAT, Bucharest, Romania, October 27-28, 2022.
36. Anita Ioana Visan, Carmen Ristoscu, Gianina Popescupelin, Mihai Sopronyi, Consuela Matei, Gabriel Socol, Mariana Chifiriuc, Coralia Bleotu, David Grossin, Fabien Brouillet, Sylvain Le Grill, Ghislaine Bertrand, Irina Zgura, **Rodica Cristescu**, Ion N. Mihailescu, Controlled release of antibiotic from composite implant coatings, International Conference on Laser, Plasma and Radiation – Science and Technology” (ICLPR-ST), June 7-10, 2022.
35. Anita Ioana Visan, Socol Gabriel, **Rodica Cristescu**, Gianina Pelin Popescu, Luiza Izabela Jinga, Consuela Elena Matei, Marcela Popa, Mariana Carmen Chifiriuc, MAPLE functionalization of medical surfaces based on sustainable natural resources, Virtual International Scientific Conference on “Applications of Chemistry in Nanosciences and Biomaterials Engineering – NanoBioMat 2022”, November 24-26, 2022.
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32. **R. Cristescu***, I. Negut, A. Visan, D. Istrati, D.E. Mihailescu, M. Popa, M.C. Chifiriuc, R.J. Narayan, D.B. Chrisey, Laser processing of antimicrobial peptides releasing thin films for the inhibition of microbial attachment and biofilms formation on medical implants, Advanced Laser Technologies (ALT), September 15-20, 2019, Prague, Czech Republic.
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115. Anita Ioana Visan, Carmen Ristoscu, Gianina Popescu-Pelin, Mihai Sopronyi, Consuela Elena Matei, Gabriel Socol, Mariana Carmen Chifiriuc, Coralia Bleotu, David Grossin, Fabien Brouillet, Sylvain Le Grill, Ghislaine Bertrand, Irina Zgura, **Rodica Cristescu**, Ion N Mihailescu, MAPLE-Synthesized Composites for Drug Delivery, 17th International Conference on Physics of Advanced Materials, 8th Autumn School on Physics of Advanced Materials, November 14-24, 2025, Shizuoka University, Hamamatsu Campus, Japan.
114. Anita Ioana Visan, Gianina Popescu-Pelin, Oana Gherasim, Andreea Mihailescu, Marcela Socol, Irina Zgura, Mari Chiritoiu, Livia Elena Sima, Felicia Antohe, Luminita Ivan, Diana M. Vranceanu, Cosmin M. Cotrut, **Rodica Cristescu**, Gabriel Socol, A Study of Long-Term Performance of Biocoatings In Simulated Body Fluids, 8th International Conference on Emerging Technologies in Materials Engineering – EmergeMAT, October 6-7, 2025, Bucharest, Romania.

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112. Anita Ioana Visan, George Stan, Carmen Georgeta Ristoscu, Gianina Florentina Popescu-Pelin, Luiza Izabela Toderascu, Consuela Elena Matei, Valentin Paul Arangel, Gabriel Socol, **Rodica Cristescu**, Reteta de Obtinere a unor Sisteme Compozite pe baza de Materiale Regenerabile, leftine, folosite pentru Functionalizarea Suprafetelor Dispozitivelor Medicale in Scopul Preventiei si Protectiei pe Termen Lung impotriva unui Spectru Larg de Specii Microbiene, de Interes Clinic, International Specialized Exhibition „INFOINVENT 2023”, XVIII Ed., November 22-24, 2023, Chisinau, Republic of Moldova.
111. Anita Ioana Visan, Socol Gabriel, **Rodica Cristescu**, Gianina Pelin-Popescu, Luiza Izabela Jinga, Consuela Elena Matei, Marcela Popa, Mariana Carmen Chifiriuc MAPLE Fabrication of Implant Coatings Based On Low-Cost Sustainable Natural Resources For Infection Prevention, Winter College on Optics: Terahertz Optics and Photonics”, February 9, 2023, Abdus Salam International Centre for Theoretical Physics, Trieste, Italia.
110. **Rodica Cristescu***, Irina Negut, Anita Visan, Valentina Grumezescu, Gabriela Dorcioman, Consuela Matei, Alina Morosan, Dan Eduard Mihaiescu, Adriana Balan, Gratiela Gradisteanu, Marcela Popa, Mariana Carmen Chifiriuc, Roger J. Narayan, Douglas B. Chrisey, Multifunctional core-shell Fe₃O₄ nanoparticle thin films with antimicrobial activity for biomedical applications, International Conference on Laser, Plasma and Radiation – Science and Technology” (ICLPR-ST), June 7-10, 2022, Bucharest, Romania.
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104. **A. Visan**, G. Popescu-Pelin, I. Zgura, M. Chiritoiu, L.E. Sima, M.C. Cotrut, **R. Cristescu**, **G. Socol**, *Surface functionalization with anticorrosive and antimicrobial biodegradable polymeric implants*, E-MRS Spring Meeting 2019, Symposium L : New strategies for smart biointerfaces), May 27-June 1, 2019, Nice, France.
103. Alexander K. Nguyen, Irina Negut, **Rodica Cristescu**, Douglas B. Chrisey, Roger J. Narayan Matrix assisted pulsed laser evaporation for layer-by-layer nanomanufacturing of pharmaceuticals, 2018 NSF Nanoscale Science and Engineering Grantees Conference, December 6-7, 2018, The Westin Alexandria - Alexandria, VA, USA.
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100. Camelia Popescu, Andrei C. Popescu, **Rodica Cristescu**, Michael Kompitsas, Camelia Bala, Detection of Small Organic Compounds Based upon the Surface Plasmon Resonance of a Gold/ITO Structure, The 8th International Workshop on Surface Modification for Chemical and Biochemical Sensing (SMCBS), November 3-7, 2017, Żelechów (near Warsaw), Poland.
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11. **R. Cristescu***, A. Doraiswamy, T. Patz, G. Socol, S. Grigorescu, F. Sima, R.J. Narayan, D. Mihaiescu, A. Moldovan, I. Stamatin, I.N. Mihailescu, B. Chisom, D.B. Chrisey, Matrix Assisted Pulsed Laser Evaporation of Poly-d,l-Lactide Thin Films for Controlled-Release Drug Systems, EMRS 2006 Spring Meeting (EMRS-IUMRS-ICEM 06), Symposium H: Photon-assisted Synthesis and Processing of Functional Materials, May 29 - June 2, 2006, Nice, France.
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7. **R. Cristescu***, G. Dorcioman, C. Ristoscu, A. Moldovan, I.N. Mihaiescu, T. Kocourek, M. Jelinek, M. Albulescu, T. Buruiana, D. Mihaiescu, I. Stamatina, D.B. Chrisey, Matrix Assisted Pulsed Laser Evaporation Processing of Triacetate-Pullulan Polysaccharides Thin Films for Drug Delivery Systems, 22nd EMRS 2005 Spring Meeting, Symposium J - Advanced in Laser and Lamp Processing of Functional Materials, May 31 - June 3, 2005, Strasbourg, France.
6. **R. Cristescu***, A. Moldovan, I.N. Mihaiescu, T. Kocourek, M. Jelinek, L. Stamatina, D. Mihaiescu, I. Stamatina, D.B. Chrisey, Laser Deposition of Cryoglobulin Blood Protein Thin Films by Matrix Assisted Pulsed Laser Evaporation, 22nd EMRS 2005 Spring Meeting, Symposium J - Advanced in Laser and Lamp Processing of Functional Materials, May 31 - June 3, 2005, Strasbourg, France.
5. T.M. Patz, **R. Cristescu**, R.J. Narayan, N. Menegazzo, B. Mizaikoff, D.E. Mihaiescu, P.B. Messersmith, I. Stamatina, I.N. Mihaiescu, D.B. Chrisey, Processing of Mussel Adhesive Protein Analog Thin Films By Matrix Assisted Pulsed Laser Evaporation, Z SYMPOSIUM: Bio-Inspired and Bio-Derived Materials And Processes, 2004 MRS Fall Meeting, November 29 – December 3, 2004, Boston, MA, USA.
4. L. Stamatina, **R. Cristescu***, G. Socol, D. Mihaiescu, I. Stamatina, I.N. Mihaiescu, D.B. Chrisey, Laser Deposition of Fibrinogen and Cryoglobulin Blood Proteins Thin Films by Matrix Assisted Pulsed Laser Evaporation, 4th International Conference on Photo-Excited Processes & Applications (4-ICPEPA), September 5-9, 2004, Lecce, Italy.
3. **R. Cristescu***, G. Socol, I.N. Mihaiescu, D. Mihaiescu, I. Stamatina, D.B. Chrisey, Deposition of Polymer Thin Films by Matrix Assisted Pulsed Laser Evaporation, 7th International Conference on Laser Ablation COLA 2003, October 5-10, 2003, Hersonissos, Crete, Greece.
2. **R. Cristescu***, C. Ristoscu, G. Socol, I.N. Mihaiescu, M. Popescu, I. Stamatina, C. Nastase, T. Buruiana, E.C. Buruiana, Pulsed Laser Deposition of Azobenzene-Polyurethanes Thin Films, 20th E-MRS 2003 Spring Meeting, Symposium H "Photonic Processing of Surfaces, Thin Films and Devices", June 10-13, 2003, Strasbourg, France.
1. **R. Cristescu***, G. Socol, I.N. Mihaiescu, F. Sava, M. Popescu, Pulsed Laser Deposition of Polymer Thin Films, 19th E-MRS Spring Meeting 2002, Symposium D "Physics & Chemistry of Advanced Laser Materials Processing", June 18-21, 2002, Strasbourg, France.

Innovation project competitions

- NeuroBand project team: Alice-Georgiana Stoica, Anita Ioana Visan, Consuela Elena Matei, **Rodica Cristescu**, Cristian Sandu, Mihai Sandu, Cristian Carp, Laser Valley Innovation Bootcamp 2025, May 22–24, 2025, Oteteleşanu Manor, Magurele-Ilfov, and Builders House, Bucuresti, Romania

Science popularization:

- **Rodica Cristescu**, Corina Negrea, Mariuca Mihaiescu, and Andrei Aradits, Romanian final jury of the FameLab edition - a project of the British Council and Cheltenham Science Festival partnership, May 20, 2019, ARCUB, Bucharest, Romania <https://www.gds.ro/Actualitate/2019-05-21/un-student-la-biochimie-va-reprezenta-romania-la-competitia-famelab/>
- Ruxandra Jurcut, Sanda Velea, Iulia Ghiu, Liliana Velea, **Rodica Cristescu**, Mirela Nemțanu, Roxana Bojariu, Feminine (scientific) roles at the Science Café - Ipostaze (stiintifico) feminine la Cafeneaua de stiinta, March 5, 2012, Carturesti Verona Library, Bucharest, Romania <https://www.srr.ro/informatii-publice/comunicate-de-presa/ipostaze-stiintifico-feminine-la-cafeneaua-de-stiinta-id805.html>

Non-work society membership:

- MENSA (www.mensa.org) – 1992-present.
- SONG Choir (Grupul Coral SONG) – 1989-1993.