

Curriculum Vitae

Monica FOCSAN (born IOSIN), PhD (since 2010), Habilitation (since 2019), Associate Professor at the Faculty of Physics, Babes-Bolyai University (UBB) and Senior Scientific Researcher grade I (CS I) at the Nanobiophotonics and Laser Microspectroscopy Center (NLMC), Interdisciplinary Research Institute in Bio-Nano-Sciences (ICI-BNS), UBB, Cluj-Napoca, Romania.



Vice-Director of ICI-BNS

Responsible of the NMLC in the frame of VIRTUAL LABS, UBB

ORCID: 0000-0001-6735-5146

Google Scholar: scholar.google.ro

Email: monica.iosin@ubbcluj.ro

Phone: +4- 0264-454554/int 117

Web: <https://www.nanobiophotonics.ro/member/monica-focsan-100>

Professional career

- **October 2023-present:** Associate Professor at the Faculty of Physics, Biomolecular Physics Department, Babes-Bolyai University
- **18 October 2019:** Habilitation thesis defense: *Designed Plasmonic-Based NanoPlatforms to Provide Multiple Functionalities from Efficient Nanoscopic Light Sources to Integrated Multimodal Biosensing and Diagnosis*
- **2016-present:** Scientific Researcher I (CS I), ICI-BNS, Babes-Bolyai University
- **2012-2013:** Maternity leave
- **2012-2016:** Scientific Researcher grade III (CS III), Babes-Bolyai University
- **2010-2012:** Postdoctoral Fellowship, Babes-Bolyai University, Romania (Prof. Simion Astilean group)
- **2006-2009:** PhD in Physics, co-direction Joseph Fourier University, France/Babes-Bolyai University, Romania. Thesis title: *Synthesis of Gold Nanoparticles and Microfabrication of Protein Structures for Biological Applications*
- **2005-2007:** M. Sc. in Physics, Babes-Bolyai University, 6 months Erasmus Research internship at Joseph Fourier University, Grenoble, France. Master thesis: *Applications de l'absorption à deux photons à la photochimie intracellulaire in vivo*
- **2001-2005:** B. Sc. in Medical Physics, Babes-Bolyai University, Faculty of Physics, Romania

Visibility of the scientific activity

- **Publications:** 134 articles (124 ISI), from which 69 as a main author/corresponding author, some of them in prestigious journals such as [Nano Letters](#) (IF-13.19), [TrAC Trends in Analytical Chemistry](#) (IF-12), [Biosensors&Bioelectronics](#) (IF-10.7), [ACS Appl Mater Interfaces](#) (IF-8.3), [Sci. Total Environ.](#) (IF-8.2), [Int. J. Biol. Macromol](#) (IF-7.7), [Nanoscale](#) (IF-6.7), [Biomaterials Science](#) (IF-7.59) etc (more details in Annexe 1)
- **2 books, 6 book chapters** (Elsevier, IOP Press, Springer and WSP), **3 O.S.I.M patent applications form, 4 O.S.I.M patents granted**
- **Hirsh Index:** 36 (Scholar)\32 (WoS), citations: ~3700 (Scholar)

- **International Conferences:** over 80 communications; *20 invited lectures*;



Honors and Awards

- **2026:** Featured in “Celebrating Excellence in Research: Women of Materials Science”, Royal Society of Chemistry
- **2025:** Interview for Scientific Excellence (<https://news.ubbcluj.ro/conf-univ-dr-habil-monica-olivia-focsan-studentii-si-doctoranzii-mei-ma-inspira-in-fiecare-zi-si-ma-fac-sa-mi-doresh-sa-fiu-mai-buna/>)
- **2025:** Featured in “Celebrating Excellence in Research: Women of Materials Science”, Royal Society of Chemistry
- **2025:** Scientific Excellence diploma of Babeş-Bolyai University
- **2024:** Scientific Excellence diploma of Babeş-Bolyai University
- **2023:** Excellentia Teacher at the Xth edition of the Excellentia Awards, UBB
- **2023:** **Experienced Researchers Teams trophy** at the 1st Romanian Research Gala organized by the Ministry of Research, Innovation and Digitalization.
- **2021:** **Gold Medal at EUROINVENT**
- **2021:** **Excellence Diploma** by the National Institute for Research, Development, Urban Planning and Sustainable Territorial Development “URBAN-INCERC
- **2020:** **Advanced Fellowship**, Institute for Advanced Studies in Science and Technology-STAR-UBB Institute- UBB’s institute of Excellence
- **2020:** Scientific Excellence diploma of Babeş-Bolyai University
- **2018:** **Constantin Miculescu prize of the Romanian Academy**
- **2018:** **Interview for Scientific Excellence**, <https://news.ubbcluj.ro/monica-focsan-phd-senior-scientific-researcher-i-cs-i-at-the-nanobiophotonics-and-laser-microspectroscopy-center-interdisciplinary-research-institute-in-bio-nano-sciences/>

- **2018: Advanced Fellowship**, Institute for Advanced Studies in Science and Technology-STAR-UBB Institute- UBB's institute of Excellence
- **2016:** Scientific Excellence diploma of National Award "*Rada Mihalcea Young Researcher in Science and Engineering*".
- **2016: L'oreal -UNESCO Fellowship "Women in Science"**
- **2016:** Scientific Excellence diploma of Babeş-Bolyai University
- **2015:** "*High-level scientific visit for invited researchers*" grant, Campus France, Lyon

Teaching activities

- **2024:** Course: *Applications of bio(nano)medical spectroscopy and imaging* (25 %), Doctoral School of Physics, Babes-Bolyai University.
- **November 2023:** Course *ABC in Publishing*, Bachelor, Master and Doctoral level, UBB.
- **2023-2024:** Presentation of the Faculty of Physics during the "*Long weekend for high school students at UBB*" event
- **2023-present:** Course and laboratory: *Medical equipment*, Bachelor level year II course, Faculty of Physics, Babes-Bolyai University.
- **2022-present:** Course and laboratory: *Molecular spectroscopy complements*, Master level year I, Faculty of Physics, Babes-Bolyai University.
- **2022-present:** Course and laboratory: *NanoBiophotonics*, Master level years I-II course, Faculty of Physics, Babes-Bolyai University.
- **2022-present:** Course, seminar and laboratory: *Technological applications of lasers: Biophotonics*, Bachelor level year III course, Faculty of Physics, Babes-Bolyai University.
- **2020-2024:** Course: *Nanostructures and Macromolecular systems* (20 %), Doctoral School of Physics, Babes-Bolyai University.
- **2013-2016:** Teaching laboratory: "*Monitoring protein denaturation using fluorescence spectroscopy*", 1st year master students, Faculty of Physics, Babes-Bolyai University.
- **2011:** Course: *General Optics*, 2nd year undergraduate students, Faculty of Physics, Babes-Bolyai University, Zalau Extension.
- **2010-2016:** Teaching laboratory: *Molecular Fluorescence*, 1st year master students, Faculty of Physics, Babes-Bolyai University.
- **2010-2016:** Teaching laboratory practice: "*Introduction to nanotechnology*", 2nd year undergraduate students, Faculty of Physics, Babes-Bolyai University.
- **2017-2018:** French undergraduate program: "*Biophysics*", University of Agricultural Science and Veterinary Medicine (USAMV), Cluj-Napoca.

Supervision of graduate students and postdoctoral fellows

- **2025-2026:** Coordinator of the bachelor student Daria Ursa awarded with 1 year Special Scholarships for Research Activity, from Babes-Bolyai University, Cluj-Napoca.
- **2024-2025:** Coordinator of the bachelor student Carmen Maxim and master students Madalina Tudor, Mihnea Moruz and Andreea Balmus awarded with 1 year Special Scholarships for Research Activity, from Babes-Bolyai University, Cluj-Napoca.
- **2023-2024:** Coordinator of the bachelor student Vlad Cucuiet awarded with 1 year Special Scholarships for Research Activity, from Babes-Bolyai University, Cluj-Napoca.
- **2022-2024** – Mentor of PhD Andreea Câmpu during her postdoctoral fellow.

- **2022-2023:** Coordinator of the bachelor students Madalina Tudor, Mihnea Moruz and Vlad Cucuiet awarded with 1 year Special Scholarships for Research Activity, from Babes-Bolyai University, Cluj-Napoca.
- **2021-2022:** Coordinator of the master student Daria Stoia awarded with 1 year Special Scholarships for Research Activity, from Babes-Bolyai University, Cluj-Napoca.
- **2021 – present:** Advisor of 6 PhD students (Radu LAPUSAN, Alexandru HOLCA, Daria STOIA, Ismaël MAHBOUB, Vlad CUCUIET and Andreea CIPLEA)
- **2010-present:** Supervision of 18 undergraduate students and 10 master students.

Invited Positions, Research Visits and Advanced Training

- **19–22 Nov 2025:** Institut des Molécules et des Matériaux du Mans, Le Mans, France – *Invited Professor*
- **27–31 Oct 2025:** Sapienza University of Rome, Rome, Italy – *Invited Professor*
- **18–20 Mar 2025:** *Days of Microscopy*, exclusive ZEISS event, Aalen, Germany
- **Nov 2023:** Institut des Molécules et des Matériaux du Mans, Le Mans, France – *Invited Professor*
- **Dec 2018:** SPINTEC, Grenoble, France – *Invited Researcher*
- **Dec 2018:** École Normale Supérieure de Lyon, Claude Bernard University Lyon 1, Lyon, France – *Invited Researcher*
- **Jun 2015 (6–14 Jun) & Oct–Nov 2015:** École Normale Supérieure de Lyon, Claude Bernard University Lyon 1, Lyon, France
Research topic: Microfluidic platform for integrated plasmonic detection
- **25–27 Feb 2014:** *6th European Short Course on Time-Resolved Microscopy and Correlation Spectroscopy and SymPhoTime Training Day*, PicoQuant, Berlin, Germany
- **Oct–Dec 2011:** Laboratoire Interdisciplinaire de Physique, Grenoble, France
Research topic: Laser fabrication of 3D highly active and ultrasensitive SERS microchips in microfluidic channels
- **10–18 Jun 2011:** Paris 13 University, Faculty of Medicine, France
Research topic: Localized Surface Plasmon Resonance biosensor for protein detection
- **2006–2009:** Laboratoire Interdisciplinaire de Physique, Joseph Fourier University, Grenoble, France
Research topic: Microfabrication of protein structures for biological applications
- **Feb–Jul 2006:** Master’s Internship, Laboratoire Interdisciplinaire de Physique, Joseph Fourier University, Grenoble, France
Research topic: Laser fabrication of biocompatible 3D protein microstructures

Participation to international/national PhD committee

- **2025:** Reviewer of the Assoc. Prof. PhD Marcela-Elisabeta BARBINTA-PATRASCU’s Habilitation defence committee, University of Bucharest
- **2024:** Reviewer of the Aicha AZZIZ’s PhD defence committee, Le Mans University, France.
- **2024:** Reviewer of the Assoc. Prof. PhD Claudia CHILOM ’s Habilitation defence committee, University of Bucharest.
- **2022:** Reviewer of the Mina RĂILEANU’s PhD defence committee, University of Bucharest
- **2022:** Reviewer of the Madalina Nistor’s PhD defence committee, University of Agricultural Sciences and Veterinary Medicine, Cluj Napoca.
- **2021:** Reviewer of the Cristian Tira’s PhD defence committee, Babeş-Bolyai University.

- **2021:** Reviewer of the Raluca Borlan's PhD defence committee, Babeş-Bolyai University.
- **2021:** Reviewer of the Tie Bi Leopold's PhD defence committee, Babeş-Bolyai University.
- **2020:** Reviewer of the Andreea Campu's PhD defence committee, Babeş-Bolyai University.
- **2018:** Reviewer of the Micouin Guillaume's PhD defence committee, Lyon 1 University, Fr.
- **2016 – present:** Scientific advisor in 7 doctoral committees (Babeş-Bolyai University and University of Agricultural Sciences and Veterinary Medicine, respectively)

Research projects

● **Director of 14 international/national grants/fellowships;** Below are listed most important research projects awarded based on competition where the project leader was project coordinator/group lider UBB.

▶ *Plasmon mediated biology: Exploitation of plasmonics to investigate and enhance biological processes and application to biomedical issues*, Contract No.: 760037/23.05.2023, CF 199/28.11.2022, Budget: 1.417.290.95 EUR, Period: 1 July 2023 - 30 Jun 2026, <https://bioplasmonics.eu/>, Institutional Responsible: Assoc. Prof. Monica FOCŞAN

▶ *SERS/Thermoplasmonic nanosensor for portable detection [acron. ThermoPlasSens*, International Bilateral Cooperation Project Brâncuşi Romania-France, PN-IV-P8-8.3-PM-RO-FR-2024-0144, Project implementation period: 2024 – 2025, Project Director: Assoc. prof. dr. Monica Focsan

▶ *Ready-to-use flexible wound dressing with synergistic photothermal and antimicrobial capabilities*; Total amount: ~ 50.500 Euro, Project implementation period: June 2022-June 2024 <https://www.nipne.ro/proiecte/pn3/66-proiecte.html>; UBB Group Lider; Team Members: prof Simion Astilean, PhD Raluca Borlan, PhD Andreea Campu, Master Student Daria Stoia

▶ *Portable Plasmonic Nanochip for Fast-On-Site Cardiac Troponin Biomarker Quantitative Diagnostic Test*, Total amount: ~ 123.000 Euro. Project implementation period: Nov 2020 - Oct 2022, <https://sites.google.com/view/nanofastdiag>; Project Coordinator; Team members: MD Simona Cainap, MD Dan Olinic, MD Calin Homorodean, MD Leontin Lazar, MD Diana Lazar, Prof Simion Astilean, PhD Monica Potara, PhD Ana Maria Craciun, Post Doc. Andreea Campu, Master Student Ilinca Muresan

▶ *Flexible PDMS-integrated Plasmonic Paper as Versatile Nanochip for Metal Enhanced Fluorescence Biosensing*, Total amount: ~ 90.000 Euro. Project implementation period: Sept 2020 - Aug 2022, <https://sites.google.com/view/chip4mef>; Project Coordinator; Team members: PhD Ana Maria Craciun, PhD Andreea Campu, PhD Laurentiu Susu.

▶ *Theranostic microplatforms for multimodal therapy of human ocular pathologies, a new paradigm in biomedical applications*, Total amount: ~ 46.000 Euro. Project implementation period: Nov 2020 - Oct 2022, <https://sites.google.com/usamvcluj.ro/microplatther>; UBB Group Lider; Team members: Prof Simion Astilean, Post Doc. Andreea Campu, Post Doc. Raluca Borlan, Master Student Daria Stoia

► *Designing new, flexible and low-cost paper-based sensing nanoplatfoms through plasmonic calligraphy for performing multiplexed ultrasensitive detection of cancer biomarkers*, Total amount: ~ 100.000 EURO, Period: May 2018-Avril 2020, <https://sites.google.com/site/nanoforall2018/home/project-overview>; Project Coordinator

► *Plasmonic-Microfluidic Biosensor for Real Time Detection of Relevant Biomarkers (NanoFlu)*, Funding agency: UEFISCDI; Partnerships program, 3 parteners (Babes-Bolyai University, University of Medicine and Pharmacy "Iuliu Hatieganu", Private Company-APRIL), Total amount: ~ 327.000 EURO, Period: July 2013-September 2017, <https://sites.google.com/site/nanoflusensorsen/>; Project Coordinator, 24 members, including master students, PhD students, Post Doct, Young and Senior Researchers

► *Controlling FRET by surface plasmon resonance in multilayer "core-shell" metallic nanoparticles towards efficient nanoscopic light sources (NanoLight)*, Funding agency: UEFISCDI; Human Resources Research Projects for Young Independent Team, Total amount: ~122.150 EURO, Period: October 2015 - September 2017, <https://sites.google.com/site/nanolight2014/>; Project Coordinator; Team members: Post Doc Ana Maria Craciun, PhD Sorina Suarasan, Prof Simion Astilean, PhD Cristian Tira, Post Doc Adriana Vulpoi, PhD Andreea Campu

► *Microfluidic platform for integrated plasmonic detection (2plamidet)*, Funding agency: UEFISCDI; Mobility International grant, Brancusi Romania-France, Total amount: ~ 5.000 EURO, Period: 2015-2016

- **Key Member** of more than 25 national and international grants (see <https://www.nanobiophotonics.ro/projects/national-projects>)

Invited Lectures (selection)

1. **M. Focsan** - *Multifunctional Graphene-Based Plasmonic Nanoplatfoms for Enhanced Sensing and Imaging*, Graphene India, March 9-12, 2026, Kochi, India, **Invited Lecture**
2. **M. Focsan** - *Innovative Plasmonic Nanobiosensors in Biophotonics: From Biomarker Detection to Imaging and Therapy*, 3rd International Conference - Advances in 3OM and Photonics Technologies, 8- 11 December 2025, Timisoara, Romania – **Keynote Lecture**
3. **M. Focsan** - *Miniaturized Microfluidic Plasmonic Chip for Enhanced Biosensing*, 15th International Conference on Metamaterials, Photonic Crystals and Plasmonics, 22 - 25 July, 2025, Malaga, Spain - **Invited Lecture**
4. **M. Focsan** - *Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications XXII section*, SPIE Photonics WEST, 25-31 January 2025, San Francisco, USA - **Invited Lecture**
5. **M. Focsan** - *Innovative Plasmonic Nanobiosensors for Fast Real-Time Biomarker Detection: From Simulated to Real Sample Application*, NATO-SPS ARW

Biotechnology and human enhancement: present research and future perspectives, 3-5 October 2023, Italy - **Invited Lecture**

6. **M. Focsan** - *Portable Microfluidic Plasmonic Chip for Fast Real-Time Cardiac Troponin I Biomarker Detection*, The 13th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'2023), special section: SP11., July 2023, Paris, France - **Invited Lecture**
7. **M. Focsan** - *Flexible and Miniaturized Microfluidic Paper-based Plasmonic Chip for Efficient NIR Metal Enhanced Fluorescence Biosensing and Imaging*, International Workshops on Nano and Bio-Photonics" (IWNBP), September 2022, Evian, France - **Invited Lecture**
8. **M. Focsan** - *Calligraphed selective plasmonic sensor on paper platform for multiplex optical detection* Quo vadis, biosensors, a conference in honor of Professor Jean-Louis Marty, July 2020, Bucharest, Romania - **Invited Lecture**
9. **M. Focsan** - *Calligraphed Plasmonic Paper Platforms for Multiplexed Detection* 5th International Workshop on Nano- and Biophotonics (IWNBP 2019), September 2019, St Nectaire, France - **Invited Lecture**
10. **M. Focsan** - *Designed Plasmonic-Based NanoSensors for Integrated Multimodal Biodetection* 6th International Workshop on Advanced, Nano- and Biomaterials and Their Applications and Sixth French-Romanian Topical Meeting on Nano and Biomaterials, May 2019, Cluj-Napoca, Romania - **Invited Lecture**
11. **M. Focsan** - *Gold NanoBipyramids Performing as Highly Sensitive Dual-Modal Optical Immunosensors*, Biosensors as tools for today's challenges, July 2018, Bucharest, Romania - **Invited Lecture**
12. **M. Focsan** - *Self-assembled Plasmonic Nanostructures for Ultrasensitive Detection*, 2nd International Conference on NanoMaterials for health, energy and the environment, Flic en Flac, Mauritius, September 2016 - **Invited Lecture**
13. **M. Focsan** - *Plasmonic Platforms for Ultrasensitive Detection*, IWNBP 2015, 3rd International Workshop on Nano and Bio-Photonics, December 2015, Cabourg, France - **Invited Lecture**

Organization of Scientific Meetings

- **2026: Session Chair and Member of the Program Committee** of the *Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications XXIII section*, SPIE Photonics WEST, 17-23 January 2026, San Francisco, USA
- **2025: Session Chair and Member of the Scientific Committee** of the *Advances in 3OM (Opto-Mechatronics Opto-Mechanics and Optical Metrology) and Photonics Technologies SPIE-affiliated Intl Conference*, 8-11 December, Timisoara, Romania
- **2025: Co-organizer and Chair of Electromagnetic Radiation in Advanced Techniques for Technological Progress and Resilience, Smart Diaspora Conference**, 4 – 7 November 2025, Cluj Napoca, Romania.

- **2025: Session Chair and Member of the Program Committee** of the *Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications XXII section*, SPIE Photonics WEST, 25-31 January 2025, San Francisco, USA
- **2023: Session Chair** of the *4th International Conference on NanoMaterials for Health, Energy and the Environment (ICNM2023)*, 27 – 31 August 2023, Caloundra, Australia.
- **2023: Session Chair** of the *Advanced Research Workshop (ARW) Biotechnology and Human Enhancement: Present Research and Future Perspectives*, San Felice Circeo, Latina, Italy
- **2019: Local Chair** of the *Sixth International Workshop on Advanced, Nano- and Biomaterials and their Applications*, Cluj Napoca, Romania.
- **2012: Member of the organization committee** of the *31st European Congress on Molecular Spectroscopy (EUCMOS)*, Cluj Napoca, Romania

Editorial activities

- **2025:** Guest editor for **Journal of Biomedical Optics**, *Nanoscale Imaging, Sensing, and Actuation* <https://www.spiedigitallibrary.org/journals/journal-of-biomedical-optics/call-for-papers>
- **2025:** Guest editor for **Frontiers in Immunology** - "*MicroRNAs in Skin Cancers: Modulators of Immune Responses and Implications for Immunotherapy*", <https://loop.frontiersin.org/people/864651/editorial>
- **2022:** Guest editor for **International Journal of Molecular Sciences**– "*Molecules and Nanoparticles for Cancer Diagnosis and Therapy*"
- **2021:** Special issue guest editor for **Journal of Molecular Structure** – "*Bridging molecules and nanoparticles - the way from optical spectroscopy to cancer therapy*", ELSEVIER

Major collaborations

- **Dr. Patrice Baldeck, Prof. Dr. Stephane Parola, Assoc Prof. Frederic Lerouge**, Université Lyon 1, ENS de Lyon, Laboratoire de Chimie, Lyon, France
- **Dr Nadia Djaker**, Université Paris 13, Laboratoire CSPBAT, Equipe Spectroscopies Biomolécules et Milieux Biologiques, Paris, France.
- **Prof. Marc Lamy de la Chapelle**, Le Mans Université, l'Institut des Molécules et Matériaux du Mans, Le Mans, France
- **Prof. Anna Piperno**, University of Messina, Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, Messina, Italy
- **Prof. Luciano de Sio**, Sapienza - University of Rome
- **Dr. Francesca Petronella**, Italian National Research Council, Italy
- **Prof. Filippo Pierini**, Institute of Fundamental Technological Research of Polish Academy of Sciences in Warsaw, Poland.
- **Prof. Sebastian Wachsmann Hogiu**, McGill University Canada.

Memberships of Scientific Societies

- **2025-2026:** SPIE - The International Society for Optics and Photonics
- **2006-2007:** Italian Physics Society
- **2006-present:** Romanian Society of Biophysics

Media Coverage and Public Visibility

- ✓ <https://www.efainlacluj.ro/cercetatoarea-de-la-ubb-care-lupta-cu-celulele-canceroase-si-inspira-o-generatie-studentii-mei-ma-fac-sa-vreau-sa-fiu-mai-buna-in-fiecare-zi/>
- ✓ <https://agerpres.ro/educatie-stiinta/2025/09/09/cluj-ubb-pe-coperta-journal-of-materials-chemistry-c-cu-un-studiu-coordonat-de-conf-dr-monica-focsan--1482738>

PATENTS

1. **M. Focsan**, A. Campu, S. Astilean, T. Murariu, I. Turcu, *Plasmonic microfluidic device based on gold bipyramidal nanoparticles*; Brevet Național O.S.I.M. RO 133447 B1; 2021 – **granted**
2. **M. Focsan**, A. Campu, A. M. Craciun, S. Astilean; *Microfluidic detection device fabricated through the integration of calligraphed plasmonic paper in polydimethylsiloxane*; Brevet Național O.S.I.M. RO 135233 A0; 2021 – **granted** RO135233 (B1)
3. M. Moruz, A. Campu, S. Astilean, **M. Focsan** *Miniaturized electrochemical sensor based on integrated gold electrodes on a flexible support*, O.S.I.M., Romania, A100091 - **granted**
4. A. Campu, M. Moruz, M.Potara, S. Astilean, **M. Focsan**, *Metallized micro-rough flexible polydimethylsiloxane substrate for dual SPR-SERS detection*; Brevet Național O.S.I.M. RO 137390 B1; 2025 – **granted**
5. A. Campu, I. Muresan, M.Potara, S. Astilean, S. Cainap, **M. Focsan**; *Efficient plasmonic nanosensor based on gold nanobipyramids for the multimodal detection of the cardiac troponin I biomarker I*; Brevet Național O.S.I.M. RO 136059 A0; 2022.
6. Daria Stoia, F.-. Zorila, R. Moisa (Stoica), I. Turcu, S. Astilean, M. Bacalum, **M. Focsan**, *SmartWoundPatch – Smart dressings with thermoplasmonically enhanced antimicrobial activity (ro. SmartWoundPatch – Pansamente inteligente cu activitate antimicrobiana amplificata termoplasmonic)*, National O.S.I.M Patent, 2024, A100347.

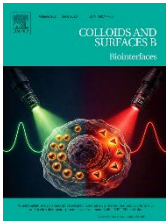

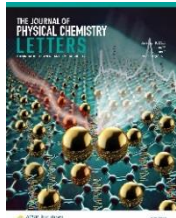
BOOKS AND BOOKS CHAPTERS

1. **Book:** Edited by V. Chis, **M. Focsan**, M. de la Chapelle, R. Fausto, *Journal of Molecular Structure Elsevier, Special Issue Bridging molecules and nanoparticles the way from optical spectroscopy to cancer therapy*, vol 1254F1, 2022.
2. **Book:** **M. Focsan**, *Laser Microfabrication of Proteins for Biological Applications*, Monica Focsan, Editura Alma Mater, 2013, ISBN 978-606-504-164-6



3. **Book Chapter:** R. Borlan, A. Campu, **M. Focsan**, S. Astilean, Synergistic nano-photodynamic therapy/nano-photothermal therapy combination book chapter in NanoPDT Nanomaterials-Enhanced Photodynamic Therapy, - editors Saeid Moghassemi, Ricardo Bentes Azevedo and Christiani Andrade Amorim, Elsevier 2026, 369-417, ISBN: 978-0-443-40431-3
4. **Book Chapter:** Daria Stoia, **Monica Focsan***, Multifunctional Polymeric Microspheres for Targeted Delivery and NIR-Light Stimulated Release of the Therapeutic Molecule Avastin at Human Retina Level, Biotechnology and Human Enhancement, Present Research and Future Perspectives, editors Luciano De Sio, Eypun Kuntay Turmus, 2025, 79-110, ISBN 978-94-024-2295-5
5. **Book Chapter:** V. Sprincean, A. Chirita, L. Leontie, S. Astilean, **M. Focsan**, A.M. Craciun, A. Paladi, V. Andruh, F. Paladi, Advanced Physical Technologies with the UVS Application in Environment Security, book chapter in Monitoring and Protection of critical infrastructure by unmanned systems, editors P. Daponte and F. Paladi, IOS Press, Amsterdam, 2023, 101- 113, ISBN 978-1-64368-376-8
6. **Book Chapter:** F. Petronella, D. Stoia, Y. Ziai, F. Zaccagnini, V. Scognamiglio, D. Maniu, C. Rinoldi, **M. Focsan**, A. Antonacci, F. Pierini, L. De Sio, Plasmonic-based biosensors for the rapid detection of harmful pathogens, book chapter in Optical Materials and Applications: Volume 1 Novel Optical Materials, Edited By: Iam Choon Khoo, Francesco Simoni and Cesare Umeton, World Scientific Publishing, https://doi.org/10.1142/9789811280603_0006, 2023, 155–194, ISBN 978-981-12-8059-7.
7. **Book Chapter:** M. Potara, A. Campu, S. D. Maniu, **M. Focsan***, I. Botiz, S. Astilean, *Advanced nanostructures for microbial contaminants detection by means of spectroscopic methods*, book chapter in Advanced Nanostructures for Environmental Health, editors L. Baia, Z. Pap, M. Baia and K. Hernadi, Elsevier Inc (2020) 347 - 384, ISBN: 978-0-12-815882-1. ***All authors contributed equally to this work.**
8. **Book Chapter:** M. Potara, **M. Focsan***, A.M. Craciun, I. Botiz and S. Astilean, *Polymer-coated plasmonic nanoparticles for environmental remediation: synthesis, functionalization and properties*, chapter in New Polymer Nanocomposites for Environmental Remediation, eds. C. M. Hussain and M. Ajay, Elsevier, eds. C. M. Hussain and M. Ajay, *Elsevier*, 2018, Pages 361-387, ISBN:9780128110331, ***All authors contributed equally to this work.**

PULISHED ARTICLES

1. O. Raducu, R. Borlan, A. Holca, A.-M. Craciun, S. Tripon, O. Soritau, G. Chereches, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, Tunable gelatin-coated biosynthesized gold nanotriangles: Thermoplasmonic performance and in vitro therapeutic potential via on-demand visible-NIR LED activation, *Colloids and Surfaces B: Biointerfaces*, 262 (2026) 115476 (***corresponding author, IF 5.5**) 
2. D. Stoia, A.-M. Craciun, G. Chereches, O. Soritau, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan**, DNA-hybridization on gold nanospheres: a dual-fluorescence investigation of surface loading and strand length effects, *J. Biomed. Opt.*, 31 (2026) 064304 (***corresponding author, IF 2.9**)
3. S. R. Ranamalla, L. Tefas, A. Porfire, E. Licarete, R. P. Parvathaneni, O. P Varghese, A. Sesarman, **M. Focsan***, I. Tomuta, M. Banciu, A quality by design strategy to develop curcumin and siRNA co-loaded lipoplexes to target osteoarthritis-related inflammation and oxidative stress *Int. J. Pharm.*, 691 (2026) 126532 (**IF 5.2**)
4. Q. Liu, A. Azziz, V. Cucuiet, M. Majdinasab, C. Arib, X. Yang, W. Fu, M. Focsan, F. Amiard, M. Edelya, M. Lamy de la Chapelle, Investigating the reproducibility and repeatability of commercial SERS substrates using a new methodological approach, *Anal. Methods* 18 (2026) 1917-1927 (**IF 2.7**)
5. A. M. Hada, S. Grecu, A. Timar-Gabor, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, Ag Nanoparticles for Plasmon-Driven Conversion of pATP to DMAB under LED Excitation *ACS Applied Nano Materials*, 8 (2025) 24453–24465 (***corresponding author, IF 5.5**)
6. A. Holca, R. Borlan, A. Campu, S. Dragan, M. Muntean, A.-M. Craciun, A. Sesarman, M. Banciu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, LED-Activated NIR-II Gold Nanorods for Photothermal Therapy of 3D Melanoma Spheroids, *ACS Applied Nano Materials* 8, 2025, 19796–19809 (***corresponding author, IF 5.5**) 
7. V. Cucuiet, D. Maniu, A.M. Craciun, S. Tripton, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, Probing the Local Field Enhancement Using SERS Detection of DNA Strands with Different Lengths and Grafting Strategies on Graphene Oxide Plasmonic Nanoplatfoms, *J. Phys. Chem. Lett.*, 16, 2025, 435–442, *Nature index* (***corresponding author, IF 4.6**) 
8. D. Stoia, E. Fazio, C. Corsaro, A. Campu, O. Soritau, A.-M. Craciun, G. Chereches, **M. Focsan***, G. Neri, A Piperno, Graphene-Poly (methacrylic acid)-Gold bipyramids

hybrid plasmonic nanocomposite for in vitro bioimaging and photothermal therapy, *J. Mater. Chem. B*, 13, 2025, 4433-4446 (*corresponding author, IF 5.7)

9. R. Lapusan, A. Balmus, R. Fechete, B. Neamtu, J. Ponti, R. Borlan, and **M. Focsan***, From fundamentals to applications: magnetic nanoparticles for MRI imaging and NIR-induced thermal activation in tissue-mimicking environments, *J. Mater. Chem. B*, 13, 2025, 12056-12072 (*corresponding author, IF 5.7)



10. V. Cucuiet, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan*** SERS detection of DNA hybridization on a graphene oxide plasmonic nanoplatform: Influence of DNA sequence length, *Appl. Phys. Lett.*, 127, 2025, 063701 *Nature index* (*corresponding author, IF 3.6)

11. V. Cucuiet, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan*** Graphene-mediated surface enhanced Raman spectroscopy for DNA Detection&hybridization: Breakthroughs and challenges, *Biosens. Bioelectron*, 286, 2025, 117610 (*corresponding author, IF 10.7)

12. A. Campu, I. A. Brezestean, S.C. Tripon, S. Astilean and **M. Focsan*** Advancing thermoplasmonic sensing: gold nanobipyramids for enhanced light-to-heat conversion, *J. Mater. Chem. C*, 13, 2025, 16378 – 16386 (*corresponding author, IF 5.1)

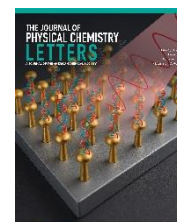


13. A-M. Hada, M-M. Moruz, A. Holca, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, Plasmon-Driven Catalytic Inhibition of pATP Oxidation as a Mechanism for Indirect Fe²⁺ Detection on a SERS-Active Platform, *Catalysts* 15(7), 2025, 667 (*corresponding author, IF 4.0)

14. A-M. Hada, M. Lamy de la Chapelle, **M. Focsan**, Simion Astilean, Recent Advances in Metal Nanoclusters: From Novel Synthesis to Emerging Applications, *Molecules* 2025, 30(19), 3848 (IF 4.6)

15. A. M. Craciun, D. Stoia, A. Azziz, S. Astilean, **M. Focsan***, Investigation of local field enhancement near plain and shell-coated gold nanospheres for the optimization of surface enhanced spectroscopy *RSC Advances*, 15 (2025) 20848-20862 (*corresponding author, IF 4.6)

16. D. Stoia, D. Maniu, M. Potara, A. M. Craciun, M. Edely, S. Grecu, A. Timar-Gabor, S. Astilean, **M. Focsan***, M. Lamy de la Chapelle, Unveiling DNA Hybridization Dynamics via High-Sensitivity SERS Detection: Insights into Conformational Changes and Oligonucleotide Length Effects *J. Phys. Chem. Lett.*, 16 (2025) 5610-5618 *Nature index* (*corresponding author, IF 4.6)



17. A. Holca, V. Cucuiet, S. Astillean, M. Lamy de la Chapelle, **M. Focsan***, Recent advances in gold nanoparticle-graphene hybrid nanoplatforms with visible to near-infrared response for photodynamic and photothermal therapy and bioimaging, *RSC Advances*, 5, 2025, 111902-11922 (*corresponding author, IF 4.6)

18. A.-M. Craciun, A. Colnita, D. Marconi, L. Barbu-Tudoran, I. Turcu, **M. Focsan**, A. Vasilescu, M. Potara, S. Astilean, Fabrication and characterization of large-scale ordered silver-coated polystyrene microspheres films for surface-enhanced Raman spectroscopy, *Phys. Scr.* 100, 2005, 045524 (IF 2.6)
19. B. Balázs, B. Stoean, É. Molnár, E. Fischer-Fodor, O. Balacescu, R. Borlan, **M. Focsan**, A. Grozav, P. Achimas-Cadariu, G. Emese, L. Gaina, Meso-substituted AB 3-type phenothiazinyl-porphyrins and their indium and zinc complexes photosensitizing properties, cytotoxicity and phototoxicity on ovarian cancer cells, *RSC Med. Chem.* 16, 2025, 747-766 (IF 3.6)
20. P. Achimas-Cadariu, P. Kubelac, A. Pasca, V. Gata, B. Fetica, O. Balacescu, E. Fischer-Fodor, **M. Focsan**, S. Astilean, C. Vlad, Intraoperative imaging of residual ovarian cancer after neoadjuvant chemotherapy using indocyanine green, *Int. J. Gynecol. Cancer* 2025 1-8. (IF 4.7)
21. M. Negrutiu, S. Danescu, M. Focsan, S. C. Vesa, A. Cadar, S. Vaida, A. Oiegar and A. Baican, Enhancing Diagnosis in Squamous Cell Carcinoma: Non-Invasive Imaging and Multimodal Approach, *Diagnostics*, 15(8), 2025, 1018 (IF 3.3)
22. A.M. Craciun, S. Astilean, **M. Focsan***, M. Lamy de la Chapelle, Gold nanoparticles conjugated with fluorophore-labeled DNA: Overview of sensing and imaging applications, *TrAC Trends in Analytical Chemistry*, 180, 2024, 117913 (*corresponding author, IF 12)
23. D. Stoia, L de Sio, F. Petronella, **M. Focsan***, Recent advances towards point-of-care devices for fungal detection: Emphasizing the role of plasmonic nanomaterials in current and future technologies, *Biosensors and Bioelectronics*, 255, 2024, 116243 (*corresponding author, IF 10.5)
24. M. Tudor, R. Borlan, D. Maniu, S. Astilean, M. Lamy de la Chapelle, **M. Focsan***, Plasmon-Enhanced Photocatalysis: New Horizons in Carbon Dioxide Reduction Technologies, *Science of the Total Environment*, 932, 2024, 172792 (*corresponding author, IF 8)
25. R. Lapusan, R. Borlan, **M. Focsan***, Advancing MRI with magnetic nanoparticles: a comprehensive review of translational research and clinical trials, *Nanoscale Advances*, 6, 2024, 2234-2259 (*corresponding author, IF 4.6, Back Cover of *Nanoscale Advances*).
26. S. Danescu, M. Negrutiu, **M. Focsan**, A. Baican, An overview of cutaneous squamous cell carcinoma imaging diagnosis methods, *Frontiers in Medicine*, 11, 2024 (IF 3)
27. C. Gherasim, **M. Focșan**, C. Ciont, A. Bunea, D. Rugină, A. Pinteia, Stability and Bioaccessibility of Carotenoids from Sea Buckthorn Pomace Encapsulated in Alginate Hydrogel Beads, *Nutrients* 16, 2024, 2726 (IF 5)




28. M. Gal, L. Gaina, T. Lovasz, E. Gal, A-M Craciun, **M. Focsan**, A. Turza, D. Rugina, A. MV Brânzanic, S. Pesek, R. Silaghi-Dumitrescu, C. Cristea, Sonochemical synthesis, optical properties and DFT studies on novel (N-arylamino)phenothiazinium dyes suitable for fluorescence cells imaging, *Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy* 322, 5 2024, 124768 (**IF 4.6**)
29. I. Abid, J. González-Colsa, C. Naveaux, A. Campu, C. Arib, **M. Focsan**, P. Albella, M. Edely, M. Lamy de La Chapelle Correlation between Plasmonic and Thermal Properties of Metallic Nanoparticles, *Nanomaterials* 14(10), 2024, 820 (**IF 4.3**)
30. A. Campu, I. Muresan, M. Potara, D. Lazar, L. Lazar, S. Cainap, D. M. Olinic, D. Maniu, S. Astilean and **M. Focsan***, Portable Microfluidic Plasmonic Chip for Fast Real-Time Cardiac Troponin I Biomarker Thermoplasmonic Detection, *Journal of Materials Chemistry B*, 12, 2024, 962-972 (***corresponding author, IF 5.7, Front Cover of Journal of Materials Chemistry B**).
- 
31. M. Negrutiu, S. Danescu, T. Popa, **M. Focșan**, ȘC Vesa, A Baican, Advancements in Basal Cell Carcinoma Diagnosis: Non-Invasive Imaging and Multimodal Approach, *Journal of Clinical Medicine* 13 (1), 2024, 39 (**IF 2.9**).
32. A. Campu, I. Muresan, A-M Craciun, A. Vulpoi, S. Cainap, S. Astilean, and **M. Focsan***, Innovative, Flexible, and Miniaturized Microfluidic Paper-Based Plasmonic Chip for Efficient Near-Infrared Metal Enhanced Fluorescence Biosensing and Imaging, *ACS Applied Materials & Interfaces*, 15, 48, 2023, 55925–55937 (***corresponding author, IF 8.3**).
33. R. Borlan, O. Soritau, D. Maniu, A. Hada, A. Florea, S. Astilean, **M. Focsan***, Albumin Nanoparticles with Tunable Ultraviolet-to-Red Autofluorescence for Label-Free Cell Imaging and Selective Biosensing of Copper Ions, *International Journal of Biological Macromolecules*, 242, 2023, 125129 (***corresponding author, IF 7.7, TOP 10 % articles**).
34. V. Cucuiet, M. Iliuț, M. Potara, K. Magyari, S. Tripon, O. Soritau, D. Maniu, S. Astilean, **M. Focsan***, Gelatin-assisted fabrication of reduced NanoGraphene Oxide for dual-modal imaging of melanoma cells, *Colloids and Surfaces B: Biointerfaces*, 231, 2023, 113546 (***corresponding author, IF 5.4**).
35. M. Raileanu, R. Borlan, A. Campu, L. Janosi, I. Turcu, **M. Focsan***, M. Bacalum, No country for old antibiotics! Antimicrobial peptides (AMPs) as next-generation treatment for skin and soft tissue infection, *International Journal of Pharmaceutics*, 642 2023 123169 (***corresponding author, IF 5.3**).
36. G. Marc, A. Stana, M. Tertiș, C. Cristea, A. Ciorîță, Ș.-M. Drăgan, V.-A. Toma, R. Borlan, **M. Focșan**, A. Pîrnău, L. Vlase, S. Oniga, O. Oniga, Discovery of New Hydrazone-Thiazole Polyphenolic Antioxidants through Computer-Aided Design

and In Vitro Experimental Validation, *International Journal of Molecular Sciences*, 24 13277 2023 (IF 4.9).

37. I. Székely, Z. Kovács, M. Rusu, T. Gyulavári, M. Todea, **M. Focșan**, M. Baia, Z. Pap, Tungsten Oxide Morphology-Dependent Au/TiO₂/WO₃ Heterostructures with Applications in Heterogenous Photocatalysis and Surface-Enhanced Raman Spectroscopy, *Catalysts* 13(6), 2023, 1015 (IF 3.8).
38. A. Urcan, A. Criste, K. Szanto, R. Ștefan, M. Zahan, A. Muscă, **M. Focșan**, R. Burtescu, N. Olah, Antimicrobial and Antiproliferative Activity of Green Synthesized Silver Nanoparticles Using Bee Bread Extracts, *Pharmaceutics* 15(7), 2023, 1797 (IF 4.9).
39. D. Stoia, M. Nistor, M. Suci, R. Borlan, A. Campu, D. Rugina, D. Maniu, S. Astilean, **M. Focșan***, NIR photothermal-activable drug-conjugated microcapsules for in vitro targeted delivery and release: an alternative treatment of diabetic retinopathy, *International Journal of Pharmaceutics*, 635, 2023, 122700 (*corresponding author, IF 5.3).
40. Z.-R. Tóth, D. Debreczeni, T. Gyulavári, I. Székely, M. Todea, G. Kovács, **M. Focșan**, K. Magyar, L. Baia, Z. Pap, K. Hernadi, Rapid Synthesis Method of Ag₃PO₄ as Reusable Photocatalytically Active Semiconductor, *Nanomaterials*, 13, 2023, 89 (IF 4.4).
41. D. Stoia, R. Pop, A. Campu, M. Nistor, S. Astilean, A. Pinte, M. Suci, D. Rugina, **M. Focșan**, Hybrid polymeric therapeutic microcarriers for thermoplasmonic-triggered release of resveratrol, *Colloids and Surfaces B: Biointerfaces*, 220, 2022, 112915 (corresponding author, IF 5.3).
42. L. Susu, A. Vulpoi, S. Astilean, **M. Focșan***, Portable Plasmonic Paper-Based Biosensor for Simple and Rapid Indirect Detection of CEACAM5 Biomarker via Metal-Enhanced Fluorescence *International Journal of Molecular Sciences*, 23(19), 2022, 11982 (*corresponding author, IF 4.9).
43. A. Hada, M. Zetes, **M. Focșan**, S. Astilean A-M Craciun, Photoluminescent Histidine-Stabilized Gold Nanoclusters as Efficient Sensors for Fast and Easy Visual Detection of Fe Ions in Water Using Paper-Based Portable Platform, *International Journal of Molecular Sciences*, 23(14), 2022, 7728 (IF 5.6).
44. A. Campu, I. Muresan, A-M. Craciun, S. Cainap, S. Astilean, **M Focșan***, Cardiac Troponin Biosensor Designs: Current Developments and Remaining Challenges, *International Journal of Molecular Sciences*, 23(14), 2022, 7728 (*corresponding author, IF 5.6).
45. A. Hada, A-M Craciun, **M. Focșan**, A. Vulpoi, E.-L. Borcan, S. Astilean, Glutathione-capped gold nanoclusters as near-infrared-emitting efficient contrast agents for confocal fluorescence imaging of tissue-mimicking phantoms, *Microchimica Acta*, 189, 2022, 337 (IF 5.7).

46. M. Mic, A. Pîrnău, C. G. Floare, R. Borlan, **M. Focsan**, O. Oniga, O. Bogdan, L. Vlase, I. Oniga, G. Marc, Antioxidant Activity Evaluation and Assessment of the Binding Affinity to HSA of a New Catechol Hydrazinyl-Thiazole Derivative, *Antioxidants* 11(7), 2022, 1245 (**IF 7**).
47. B. Stoean, L. Gaina, C. Cristea, R. Silaghi-Dumitrescu, A. Branzanic, **M. Focsan**, E. Fischer-Fodor, B. Tigu, C. Moldovan, A. Cegan, P. Achimas-Cadariu, S. Astilean, L. Silaghi-Dumitrescu, New methylene blue analogues with N-piperidinyl-carbinol units: Synthesis, optical properties and in vitro internalization in human ovarian cancer cells, *Dyes and Pigments* 205, 2022, 110460 (**IF 4.5**).
48. M. Potara, S. Suarasan, A.-M. Craciun, **M. Focsan**, A.-M. Hada, S. Astilean, Probing polyvinylpyrrolidone-passivated graphene oxide nanoflakes as contrast agents inside tissue-like phantoms via multimodal confocal microscopy, *Talanta* 247, 2022, 123581 (**IF 6.1**).
49. D. R. Lazar, F. L. Lazar, C. Homorodean, C. Cainap, **M. Focsan**, S. Cainap, D. M. Olinic, High-Sensitivity Troponin: A Review on Characteristics, Assessment, and Clinical Implications, *Disease Markers*, 2022, 9713326 (**IF 3.4**).
50. B. Boga, I. Székely, **M. Focșan**, M. Baia, T. Szabó, L. Nagy, Z. Pap, Sensor surface via inspiration from Nature: The specific case of electron trapping in TiO₂/WO₃ (· 0.33 H₂O) and reaction center/WO₃ (· 0.33 H₂O) systems, *Applied Surface Science* 572, 2022, 151139 (**IF 6.7**).
51. R. Ghiman, R. Pop, D. Rugina, **M. Focsan**, Recent progress in preparation of microcapsules with tailored structures for bio-medical applications, *Journal of Molecular Structure* 1248, 2022, 131366 (**IF 3.8**).
52. V. Chis, **M. Focsan**, M. de la Chapelle, R. Fausto, *Journal of Molecular Structure* 1250, 2022, 131971 (**IF 3.8**).
53. A. Campu, F. Lerouge, D. Maniu, K. Magyari, **M. Focsan***, Ultrasensitive SEIRA detection using gold nanobipyramids: Toward efficient multimodal immunosensor, *Journal of Molecular Structure* 1246, 2021, 131160 (**corresponding author, IF 3.8**).
54. A.-M. Hada, M. Zetes, **M. Focsan**, T. Nagy-Simon, A. M. Craciun, Novel paper-based sensing platform using photoluminescent gold nanoclusters for easy, sensitive and selective naked-eye detection of Cu²⁺, *Journal of Molecular Structure* 1244, 2021, 130990 (**IF 3.8**).
55. S. Suarasan, C. Tira, M. M. Rusu, A.-M. Craciun, **M. Focsan***, Controlled Fluorescence Manipulation by Core-Shell Multilayer of Spherical Gold Nanoparticles: Theoretical and Experimental evaluation *Journal of Molecular Structure* 1244, 2021, 130950 (***corresponding author, IF 3.8**).
56. T. Nagy-Simon, O. Diaconu, **M. Focsan**, A. Vulpoi, I. Botiz, A.-M. Craciun, Pluronic stabilized conjugated polymer nanoparticles for NIR fluorescence imaging and dual phototherapy applications, *Journal of Molecular Structure* 1243, 2021, 130931 (**IF 3.8**).

57. N. Sharma, Z. Pap, I. Székely, M. **Focsan**, G. Karacs, Z. Nemet, S. Garg, K. Hernadi, Combination of iodine-deficient BiOI phases in the presence of CNT to enhance photocatalytic activity towards phenol decomposition under visible light, *Applied Surface Science* 565, 2021, 150605 (**IF 7.392**).
58. M. Nistor, M. **Focsan**, L. Gaina, M. Cenariu, A. Pinte, C. Socaciu, D. Rugina, Real-time fluorescence imaging of anthocyanins complexed with diphenylboric acid 2-aminoethyl inside B16–F10 melanoma cells, *Phytochemistry* 189, 2021, 112849 (**IF 4.004**).
59. R. Borlan, D. Stoia, L. Gaina, A. Campu, G. Marc, M. Perde-Schrepler, M. Sillion, D. Maniu, M. **Focsan***, S. Astilean, Fluorescent Phtalocyanine-Encapsulated Bovine Serum Albumin Nanoparticles: Their Deployment as Therapeutic Agents in the NIR Region, *Molecules*, 26, 2021, 4679 (***corresponding author, IF 4.927**).
60. R. Borlan, M. **Focsan***, M. Perde-Schrepler, O. Soritau, A. Campu, L. Gaina, E. Pall, B. Pop, O. Baldasici, C. Gherman, D. Stoia, D. Maniu, S. Astilean, Antibody Functionalized Theranostic Protein Nanoparticles for Synergistic Deep Red Fluorescence Imaging and Multimodal Therapy of Ovarian Cancer, *Biomaterials Science* 9, 2021, 6183-6202 (***corresponding author, IF 7.59**).
61. M. Potara, T. Nagy-Simon, M. **Focsan**, E. Licarete, O. Soritau, A. Vulpoi, S. Astilean, Folate-targeted Pluronic-chitosan nanocapsules loaded with IR780 for near-infrared fluorescence imaging and photothermal-photodynamic therapy of ovarian cancer, *Colloids Surf. B Biointerfaces*, 203, 2021, 111755 (**IF 5.999**).
62. R. Ghiman, M. Nistor, M. **Focsan***, A. Pinte, S. Aştilean and D. Rugina, Fluorescent Polyelectrolyte System to Track Anthocyanins Delivery inside Melanoma Cells, *Nanomaterials* 11, 2021, 782 (**corresponding author, IF 5.076**).
63. B. Stoean, D. Rugina, M. **Focsan**, A-M. Craciun, M. Nistor, T. Lovasz, A. Turza, I-D. Porumb, E. Gál, C. Cristea, L. Silaghi-Dumitrescu, S. Astilean and L. Gaina, Novel (Phenothiazinyl)Vinyl-Pyridinium Dyes and Their Potential Applications as Cellular Staining Agents, *International Journal of Molecular Sciences*, 22, 2021, 2985 (**IF 6.208**).
64. R. Borlan, M. **Focsan***, D. Maniu, S. Astilean, Interventional NIR Fluorescence Imaging of Cancer: Review on Next Generation of Dye-Loaded Protein-Based Nanoparticles for Real-Time Feedback During Cancer Surgery, *International Journal of Nanomedicine*, 16, 2021, 2147—2171 (***corresponding author, IF 7.033**).
65. A.M Craciun, S. Suarasan, M. **Focsan**, S. Astilean, One-photon excited photoluminescence of gold nanospheres and its application in prostate specific antigen detection via fluorescence correlation spectroscopy (FCS), *Talanta*, 228, 2021, 122242 (**IF 6.556**).

66. L. De Sio, B. Ding, **M. Focsan**, K. Kogermann, P. Pascoal-Faria, F. Petronella, G. Mitchell, E. Zussman, F. Pierini, Personalized Reusable Face Masks with Smart Nano-Assisted Destruction of Pathogens for COVID-19: A Visionary Road, *Chem. Eur. J.*, 27, 2021, 1-20 (**IF 5.02, FRONTISPIECE, Most downloaded in Chem. Eur. J, Wiley**).
- 
67. A.-M. Hada, A.-M. Craciun, M. Focsan, R. Borlan, O. Soritau, M. Todea, S. Astilean, Folic acid functionalized gold nanoclusters for enabling targeted fluorescence imaging of human ovarian cancer cells, *Talanta*, 225, 2021, 121960 (**IF 6.556**).
68. A. Campu, **M. Focsan***, F. Lerouge, R. Borlan, L. Tie, D. Rugina, S. Astilean, ICG-loaded gold nano-bipyramids with NIR activatable dual PTT-PDT therapeutic potential in melanoma cells, *Colloids and Surfaces B: Biointerfaces* 194, 2020, 111213 (***corresponding author, IF 5.268**).
69. L. Susu, A. Campu, S. Astilean and **M Focsan***, Calligraphed Selective Plasmonic Arrays on Paper Platforms for Complementary Dual Optical “ON/OFF Switch” Sensing, *Nanomaterials* 10(6), 2020, 1025 (***corresponding author, IF 5.076**).
70. A. Campu, F. Lerouge, A-M. Craciun, T. Murariu, I. Turcu, S. Astilean and **M. Focsan***, Microfluidic platform for integrated plasmonic detection in laminar flow, *Nanotechnology* 31(33), 2020, 335502 (***corresponding author, IF 3.874**).
71. R. Borlan, A.S. Tatar, O. Soritau, D. Maniu, G. Marc, A. Florea, **M. Focsan***, S. Astilean, Design of fluorophore-loaded human serum albumin nanoparticles for specific targeting of NIH: OVCAR3 ovarian cancer cells, *Nanotechnology* 31 (31), 2020, 315102 (***corresponding author, IF 3.874**).
72. A.-I. Pricopie, **M. Focșan***, I. Ionuț, G. Marc, L. Vlase, L. Găină, D. C. Vodnar, E. Simon, G. Barta, A. Pîrnău and O. Oniga, Novel 2,4-Disubstituted-1,3-Thiazole Derivatives: Synthesis, Anti-Candida Activity Evaluation and Interaction with Bovine Serum Albumine, *Molecules* 25(5), 2020, 1079 (***corresponding author, IF 4.412**).
73. L. Tie, M. Răileanu, M. Bacalum, I. Codita, Ș. M. Negrea, C.Ș. Caracoti, E.C. Drăgulescu, A. Campu, S. Astilean and **M. Focsan***, Versatile Polypeptide-Functionalized Plasmonic Paper as Synergistic Biocompatible and Antimicrobial Nanoplatfrom, *Molecules* 25(14), 2020, 3182 (***corresponding author, IF 4.412**).
74. D. Caccamo, M. Currò, R. Ientile, E AM Verderio, A. Scala, A. Mazzaglia, R. Pennisi, M. Musarra-Pizzo, R. Zagami, G. Neri, C. Rosmini, M. Potara, **M. Focsan**, S. Astilean, A. Piperno and M. T. Sciortino, Intracellular Fate and Impact on Gene Expression of Doxorubicin/Cyclodextrin-Graphene Nanomaterials at Sub-Toxic Concentration, *International Journal of Molecular Sciences*, 21(14), 2020, 4891 (**IF 5.984**).
75. E. Molnar, E. Gal, L. Gaina, C. Cristea, E. Fischer-Fodor, M. Perde-Schrepler, P. Achimas-Cadariu, **M. Focsan**, L. Silaghi-Dumitrescu, Novel Phenothiazine-Bridged Porphyrin-(Hetero)aryl dyads: Synthesis, Optical Properties, In Vitro Cytotoxicity

- and Staining of Human Ovarian Tumor Cell Lines, *International Journal of Molecular Sciences*, 21(9), 2020, 3178 (IF 5.984).
76. A. Terec, A. Crisan, A.M. Craciun, I. Mihalache, M. Focsan, C. Socaci, D. Maniu, S. Astilean, M. Veca, Surface passivation of carbon nanoparticles with 1,2-phenylenediamine towards photoluminescent carbon dots, *Rev. Roum. Chim.*, 65, 2020, 559-566 (IF 0.278).
 77. C. Tudor, T. Bohn, M. Iddir, F. V. Dulf, **M. Focșan**, D. Rugină, and A. Pinteia, Sea Buckthorn Oil as a Valuable Source of Bioaccessible Xanthophylls, *Nutrients* 12(1), 2020, 76 (IF 5.719).
 78. A. Campu, AM Craciun, **M Focșan***, S Astilean, Assessment of the photothermal conversion efficiencies of tunable gold bipyramids under irradiation by two laser lines in a NIR biological window, *Nanotechnology* 30(40), 2019, 405701 (*corresponding author, IF 3.551).
 79. D. Rugină*, R. Ghiman*, **M. Focșan***, F. Tăbăran, F. Copaciuc, M. Suciuc, A. Pinteia, S. Aștilean, Resveratrol-delivery vehicle with anti-VEGF activity carried to human retinal pigmented epithelial cells exposed to high-glucose induced conditions, *Colloids and Surfaces B: Biointerfaces* 181, 2019, 66-75. (*These authors contributed equally to this work, IF 4.389).
 80. S. Suarasan, AM Craciun, E Licarete, **M Focșan**, K Magyari, S Astilean, Intracellular dynamic disentangling of Doxorubicin release from luminescent nanogold carriers by Fluorescence Lifetime Imaging Microscopy (FLIM) under two-photon excitation, *ACS applied materials & interfaces*, *ACS Applied Materials & Interfaces*, 118, 2019, 7812-7822 (IF 8.758).
 81. A. Piperno, A. Mazzaglia, A. Scala, R. Pennisi, R. Zagami, G. Neri, S. M. Torcasio, C. Rosmini, P. G. Mineo, M. Potara, **M. Focșan**, S. Astilean, G. G. Zhou, M.T Sciortino, Casting Light on Intracellular Tracking of a New Functional Graphene-Based MicroRNA Delivery System by FLIM and Raman Imaging, *ACS Applied Materials & Interfaces*, 11, 2019, 46101-46111 (IF 8.758).
 82. L. Tie, **M Focșan***, J Bosson, C Tira, A Campu, A Vulpoi, S Astilean Controlling the end-to-end assembly of gold nanorods to enhance the plasmonic response in near infrared, *Materials Research Express* 6 (9), 2019, 095038 (*corresponding author, IF 1.929).
 83. Sz. Fodor, L.Baia, **M. Focșan**, K. Hernadi, Sz Papp, Designed and controlled synthesis of visible light active copper(I)oxide photocatalyst: From the cubes towards the polyhedrons - with Cu nanoparticles, *Applied Surface Science* 484, 2019, 175-183 (IF 6.182).
 84. A. Campu, L. Susu, F. Orzan, D. Maniu, AM Craciun, A. Vulpoi, L. Roiban, **M. Focșan***, S. Astilean, Multimodal Biosensing on Paper-Based Platform Fabricated by Plasmonic Calligraphy Using Gold Nanobypiramids Ink, *Frontiers in Chemistry*, 7, 2019, 55 (*corresponding author, IF 3.693).

85. A. Campu, F. Lerouge, D. Chateau, F. Chaput, P. Baldeck, S. Parola, D. Maniu, A. M Craciun, A. Vulpoi, S. Astilean, **M. Focsan***, Gold NanoBipyramids Performing as Highly Sensitive Dual-Modal Optical Immunosensors, *Analytical Chemistry*, 90, 2018, (14), 8567–8575 (***corresponding author, IF 6.350**).
86. L. Susu, A. Campu, A. M Craciun, A. Vulpoi, S. Astilean, **M. Focsan***, Designing Efficient Low-Cost Paper-Based Sensing Plasmonic Nanoplatforms, *Sensors* 18 (2018) 3035 (***corresponding author, IF 3.031**).
87. B. Hampel, G. Kovács, Z. Czekes, K. Hernádi, V. Danciu, O. Ersen, M. Girleanu, **M. Focsan**, L. Baia, Z. Pap, Mapping the Photocatalytic Activity and Ecotoxicology of Au, Pt/TiO₂ Composite Photocatalysts, *ACS Sustainable Chemistry & Engineering*, 6 2018, 12993-13006 (**IF 6.970**).
88. **M. Focsan**, A. M. Craciun, M. Potara, C. Leordean, D. Maniu, S. Astileana, Flexible and Tunable 3D Gold Nanocups Platform as Plasmonic Biosensor for Specific Dual LSPR-SERS Immuno-Detection, *Scientific Reports* (Nature Publishing Group), 7 (2017) 14240 (**first-author, Top 100 read chemistry papers for Scientific Reports in 2017, first-author, IF 4.122**).
89. A.M Craciun*, **M. Focsan***, K. Magyari*, A. Vulpoi*, Z. Pap*, Surface Plasmon Resonance or Biocompatibility—Key Properties for Determining the Applicability of Noble Metal Nanoparticles, article review, *Materials* 10 836 (2017) 1-37 (***These authors contributed equally to this work, IF 2.476**).
90. A. M. Craciun, **M. Focsan**, L. Gaina, S. Astilean, Enhanced one- and two-photon excited fluorescence of cationic (phenothiazinyl)vinyl-pyridinium chromophore attached to polyelectrolyte-coated gold nanorods, *Dyes And Pigments* 136 (2017) 24-30 (**IF 3.767**).
91. **M. Focsan**, A.M. Craciun, S. Astilean, P. Baldeck, Two-photon fabrication of three-dimensional silver microstructures in microfluidic channels for volumetric surface-enhanced Raman scattering detection, *Optical Materials Express* 6 (2016) 1587-1593 (**first-author, IF 2.591**).
92. A. M. Craciun, A. Diac, **M. Focsan**, C. Socaci, K. Magyari, D. Maniu, I. Mihalache, L. M. Veca, S. Astilean, A. Terec, Surface passivation of carbon nanoparticles with p-phenylenediamine towards photoluminescent carbon dots, *RSC Advances* 6 (2016) 56944-56951 (**IF = 3.108**).
93. J. Laura Da Silva Gonçalves, S. R. Valandro, H.F. Wu, Y-H. Lee, B. Mettra, C. Monnereau, C. C. Cavalheiro; A. Pawlicka; **M. Focsan**; C.-L. Lin; P. L. Baldeck, *3D printing of natural organic materials by photochemistry*, Proc. SPIE 9745 (2016).
94. **M. Focsan**, A. Campu, A.M Craciun, M. Potara, C. Leordean, D. Maniu, S. Astilean, A Simple and Efficient Design to Improve the Detection of Biotin-Streptavidin Interaction with Plasmonic Nanobiosensors, *Biosensors and Bioelectronics* 86 (2016) 728-735 (**first-author, IF 7.78**).



95. S. Suarasan, **M. Focsan**, M. Potara, O. Soritau, A. Florea, D. Maniu, S. Astilean, Doxorubicin-Incorporated Nanotherapeutic Delivery System Based on Gelatin-Coated Gold Nanoparticles: Formulation, Drug Release, and Multimodal Imaging of Cellular Internalization, *ACS Applied Materials and Interfaces* 8 (2016) 22900-22913 (**IF 7.504**).
96. C. Leordean, B. Marta, A.M. Gabudean, **M. Focsan**, I. Botiz, S. Astilean, Fabrication of highly active and cost effective SERS plasmonic substrates by electrophoretic deposition of gold nanoparticles on a DVD template, *Applied Surface Science* 349 (2015) 190-195 (**IF 3.150**).
97. S. Suarasan, **M. Focsan**, O. Soritau, D. Maniu, S. Astilean, One-pot, green synthesis of gold nanoparticles by gelatin and investigation of their biological effects on Osteoblast cells, *Colloids and Surfaces B: Biointerfaces*, 132 (2015) 122-13 (**IF 3.902**).
98. F. Lerouge, J. R. G Navarro, **M. Focsan**, et al, Sharp gold based hybrid nanoprobe for cell imaging through dark field microscopy, *Nanobiosystems: Processing, Characterization, and Applications Viii Volume*: 9557 (2015).
99. A. Diac*, **M. Focsan***, C. Socaci. A. M. Gabudean, C. Farcau, D. Maniu, E. Vasile, A. Terec, L. M. Veca, S. Astilean, Covalent conjugation of carbon dots with Rhodamine B and assessment of their photophysical properties, *RSC Advances* 5 (2015) 77662-77669 (* **first-author, IF 3.289**).
100. **M. Focsan**, A.M. Gabudean, A. Vulpoi, S. Astilean, Controlling the luminescence of carboxyl-functionalized CdSe/ZnS core-shell quantum dots in solution by binding with gold nanorods, *Journal of Physical Chemistry C* 118 (2014) 25190-25199 (**first-author IF=4.772**).
101. DS. Tira, **M. Focsan**, M. Ulinici, D. Maniu, S. Astilean, Rhodamine B-coated gold nanoparticles as effective "turn-on" fluorescent sensors for detection of zinc II ions in water, *Spectroscopy Letters* 47 (2014) 153-159 (**IF 0.852**).
102. J.R.G. Navarro, F. Lerouge, G. Micouin, C. Cepraga, A. Favier, M.T. Charreyre, N.P. J. Lermé, F. Chaput, **M. Focsan**, K. Kamada, P.L. Baldeck, S. Parola, Plasmonic bipyramids for fluorescence enhancement and protection against photobleaching, *Nanoscale* 6 (2014) 5138-5145 (**IF 7.394**).
103. M. Iliut, **M. Iosin**, S. Astilean, Monitoring the Effects of Ultraviolet and Visible Light on RB and Vitamin A in Milk, *Environmental Engineering and Management Journal*, 12 (2013), 2443-2448 (**IF 1.258**).
104. N. Thioune, N. Lidgi-Guigui, N. Cottat, A.M. Gadudean, **M. Focsan**, H.M. Benoist, S. Astilean, M.L. de la Chapelle, Study of gold nanorods-protein interaction by localized surface plasmon resonance spectroscopy, *Gold Bulletin* 46 (2013) 275-281 (**IF 1.840**).

105. M. Cottat, N. Thioune, A.M Gabudean, **M. Focsan** et al. Localized Surface Plasmon Resonance (LSPR) Biosensor for the Protein Detection, *Plasmonics* 8 (2013) 699-704 (**IF 2.738**).
106. S. Suarasan, **M. Focsan**, D. Maniu, S. Astilean, Gelatin-nanogold bioconjugates as effective plasmonic platforms for SERS detection and tagging, *Colloids and Surfaces B: Biointerfaces* 103 (2013) 475-481 (**IF 4.287**).
107. A. Bensouici, M. Ayadi, **M. Iosin**, et al. Chemical Decomposition of CdTe and CdBr₂ Dopants in KBr, *International Conference on Transparent Optical Networks-ICTON* (2013).
108. M. Oltean, A. Calborean, G. Mile, M. Vidrighin, **M. Iosin**, L. Leopold, D. Maniu, N. Leopold, V. Chis, Absorption spectra of PTCDI: A combined UV-Vis and TD-DFT study, *Spectrochimica Acta Part A-Molecular and Biomolecular Spectroscopy*, 97 (2012) 703-710 (**IF 1.977**).
109. A.M. Gabudean, **M. Focsan**, S. Astilean, Gold nanorods performing as dual-modal nanoprobe via metal-enhanced fluorescence (MEF) and surface-enhanced Raman scattering (SERS), *Journal of Physical Chemistry C* 116 (2012) 12240-12249 (**IF 4.814**).
110. **M. Focsan**, I.I. Ardelean, C. Craciun, S. Astilean, Interplay between gold nanoparticles biosynthesis and metabolic activity of Cyanobacterium *Synechocystis* sp. PCC 6803, *Nanotechnology* 22 (2011) 485101 (**first-author, IF 3.979**).
111. **M. Focsan**, AM Gabudean, V Canpean, Formation of size and shape tunable gold nanoparticles in solution by bio-assisted synthesis with bovine serum albumin in native and denaturated state, *Materials Chemistry and Physics* 129 (2011) 939-942 (**first-author IF = 2.234**).
112. S. Zaiba, F. Lerouge, AM Gabudean, **M. Focsan**, et al. Transparent Plasmonic Nanocontainers Protect Organic Fluorophores against Photobleaching, *Nano Letters* 11 (2011) 2043-2047 (**IF 13.198**).
113. **M. Iosin**, T Scheul, C. Nizak, O. Stephan, S. Astilean, P. Baldeck. Laser microstructuring of three-dimensional enzyme reactors in microfluidic channels, *Microfluidics and Nanofluidics* 10 (2011) 685-690 (**first-author, IF 3.371**).
114. **M. Iosin**, V. Canpean, S. Astilean Spectroscopic studies on pH- and thermally induced conformational changes of Bovine Serum Albumin adsorbed onto gold nanoparticles, *Journal of Photochemistry and Photobiology A – Chemistry* 217 (2011) 395-401 (**first-author, IF 2.421**).
115. V. Canpean, **M. Iosin**, S Astilean, Disentangling SERS signals from two molecular species: A new evidence for the production of p,p'-dimercaptoazobenzene by catalytic coupling reaction of p-aminothiophenol on metallic nanostructures, *Chemical Physics Letters* 500 (2011) 277-282 (**IF 2.242**).

116. A.M. Gabudean, F. Lerouge, T. Gallavardin, **M Iosin** et al., Synthesis and optical properties of dyes encapsulated in gold hollow nanoshells, *Optical Materials*, 33 (2011) 1377-138 (**IF 2.023**).
117. **M. Iosin**, P.L. Baldeck, S. Astilean Study of tryptophan – assisted synthesis of gold nanoparticles by combining UV-Vis, fluorescence and SERS spectroscopy, *Journal of Nanoparticle Research* 12 (2010) 2843-2849 (**first-author, IF 3.287**).
118. M.M. Dzagli, V. Canpean, **M. Iosin***, M. A. Mohou, S. Astilean, Study of the interaction between CdSe/ZnS core-shell quantum dots and bovine serum albumin by spectroscopic techniques, *Journal of Photochemistry and Photobiology A: Chemistry* 215 (2010) 118-122 (***corresponding author, IF 2.243**).
119. R. Stiuftuc, F. Toderas, **M. Iosin**, G. Stiuftuc, Anisotropic Gold Nanocrystals: Synthesis and Characterization, *International Journal of Modern Physics B* 24 (2010) 757-761 (**IF 0.402**).
120. **M. Iosin**, F. Toderas, P.L. Baldeck, S. Astilean, Study of protein–gold nanoparticle conjugates by fluorescence and surface-enhanced Raman scattering, *Journal of Molecular Structure* 924-926 (2009) 196-200 (**first-author, IF 1.551, TOP 1 Hotness article 2009- 2010**).
121. **M. Iosin**, P.L. Baldeck and S. Astilean, Plasmon-enhanced fluorescence of dye molecules, *Nuclear Instruments and Methods in Physics Research B*, 267 (2009) 403-405 (**first-author, IF 1.156**).
122. F. Toderas, **M. Iosin** and S. Astilean, Luminescence Properties of gold nanorods, *Nuclear Instruments and Methods in Physics Research B*, 267 (2009) 400-402 (**IF 1.156**).
123. **M. Iosin**, F. Toderas, P. Baldeck and S. Astilean, In Vitro Biosynthesis of Gold Nanotriangles for Surface-Enhanced Raman Spectroscopy, *Journal of Optoelectronics and Advanced Materials*, 10(9) (2008) 2285-2288 (**first-author, IF 0.577**).
124. **M. Iosin**, O. Stephan, S. Astilean, A. Dupperay, P.L Baldeck, Microstructuration of protein matrices by laser-induced photochemistry, *Journal of Optoelectronics and Advanced Materials*, 9 (2007) 716-720 (**first-author, IF=0.872**).

NON-ISI PUBLISHED ARTICLES

1. I. Mahboub, M. Potara, S. Tripon, S. Astilean, M. Focsan, M. Lamy de la Chapelle, Développement d'une nanoplateforme SERS simple et abordable à base de papier pour la détection rapide d'acides nucléiques, Les actes du symposium de la recherche scientifique francophone en europe centrale et orientale – Tome II (2025) 69 – 71

2. V. Sprincean, A. Chirita, S. Astilean, **M. Focsan**, A-M Craciun, F. Paladi, Airborne pollutants collection and analysis based on their fluorescence spectral measurements: a case study on diesel exhaust combustion particles, *Discover Environment*, 2, 2024, 37.
3. R. Borlan, **M. Focsan**, S. Astilean and P. Achimas-Cadariu, NIR Fluorescence Captures Clear Images of Cancerous Tumors During Surgery, *BioPhotonics*, September/October (2021) 38-41.
4. F Orzan, A Campu, S Suarasan, S Astilean, **M Focsan***, Engineering paper platform loaded with gold nanospheres to improve SERS performance for analyte detection, *Studia UBB Physica* 63 (1-2) 2018 143-151 (***corresponding author**).
5. P. Baldeck, T. Scheul, J. Bosson, **M. Iosin**, C. L. Lin, G. Vitrant, O. Stephan, Advances in two-photon microstructuring of polymers, proteins and metallic materials with Q-switched microlasers, *Nonlinear Optics Quantum Optics*, 40 (2010) 193-197.
6. S. Suarasan, **M. Focsan**, D. Maniu, S. Astilean, Synthesis and stabilization of gold nanoparticles by gelatin biopolymer, *Studia UBB Physica* 56 (2011) 133.
7. **M. Iosin**, F. Toderas, P. Baldeck, S Astilean, Investigation of the binding constant of biocompatible gold nanoparticles to Bovine Serum Albumine using fluorescence and LSPR spectroscopy, *New applications of micro and nanotechnologies*, Editura Academiei Romane (2009) 235-241, ISBN 978-973-27-1576 (**first-author**).
8. P.L. Baldeck, J. Bosson, **M. Iosin**, C.-L. Lin, N. Tosa, L. Vurtz, G. Vitrant and O. Stephan, 3D Laser Micro-Structuration of Polymers, Metals and Biomaterials by Two-Photon Induced Photochemistry, *Trends in Optics and Photonics* (2009) 3-8 ISBN 978-81-908188-0-3.
9. **M. Iosin**, S. Astilean, O. Stephan, PL Baldeck, Cross-linked protein nanostructures fabricated by two-photon laser induced photochemistry, *Progress in nanoscience and nanotechnologies*, Editura Academiei Romane (2007) 102, ISBN 978-973-27-1576-5 (**first-author**).
10. F. Toderas, **M. Iosin**, M. Baia and S. Aștilean, Probing the interaction of bovine serum albumin (BSA) and gold nanoparticle, *Progress in nanoscience and nanotechnologies*, Editura Academiei Romane (2007) 215-221, ISBN 978-973-27-1576-5.