

# Curriculum Vitae

## Monica FOCȘAN

Abilitare în Fizică (din 2019), PhD (din 2010), Cercetător Științific grad I în cadrul Departamentului de Nanobiofotonică și Microspectroscopie Laser (NMLC), Institutul de Cercetări Interdisciplinare în Bio-Nano-Științe, Universitatea Babeș-Bolyai  
**Responsabil** al NMLC în cadrul Virtual Labs Universitatea Babeș-Bolyai

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## Carieră profesională

- **18 October 2019:** Titlul tezei de abilitare: *Designed Plasmonic-Based NanoPlatforms to Provide Multiple Functionalities from Efficient Nanoscopic Light Sources to Integrated Multimodal Biosensing and Diagnosis*
- **2016-prezent:** Cercetător Științific grad I (CS I), Universitatea Babeș-Bolyai
- **2012-2013:** Concediu creștere copil
- **2012-2016:** Cercetător Științific grad III (CS III), Universitatea Babeș-Bolyai
- **2010-2012:** Bursă Postdoctorală, Universitatea Babeș-Bolyai, România (Prof. Simion Aștilean)
- **2006-2009:** Doctor în Fizică, co-direcție Universitatea Joseph-Fourier, Franța/Universitatea Babeș-Bolyai, România. Titlul Tezei: *Sinteză de Nanoparticule de Aur și Microfabricarea unor Structuri Proteice pentru Aplicații Biologice* (Prof. Simion Aștilean și Dr Patrice Baldeck)
- **2005-2007:** Masterat în Fizică, Universitatea Babeș-Bolyai, stagiul Erasmus de cercetare pe o perioadă de 6 luni la Universitatea Joseph-Fourier, Grenoble, Franța. Titlul Dizertației: *Applications de l'absorption à deux photons à la photochimie intracellulaire in vivo*
- **2001-2005:** Licență în Fizică Medicală, Universitatea Babeș-Bolyai, Facultatea de Fizică România

## Vizibilitatea activității științifice

- **Publicații: 95 de articole științifice** (vezi anexa I), dintre care 87 în jurnale ISI (IF), dintre care 42 ca prim-autor/autor de corespondență, multe dintre acestea în jurnale prestigioase: [Nano Letters](#) (IF-13.19), [International Journal of Biological Macromolecules](#) (IF-8.02), [Biosensors&Bioelectronics](#) (IF-7.8), [ACS Appl Mater Interfaces](#) (IF-8.4), [Nanoscale](#) (IF-6.7), [Biomaterials Science](#) (IF-7.59), [Analytical Chemistry](#) (6.4), [Int. J. Pharm](#) (IF - 6.5), [Colloids Surfaces B](#) (IF - 5.9); etc
- **1 carte, 2 capitole de carte Editura Elsevier, 3 cereri de brevet, 1 brevet OSIM acordat**
- **Index Hirsh: 28 (Scholar)\26 (WoS)**, citări: 2150 (Scholar)
- **Conferințe Internaționale:** peste 100 comunicări; **8 prezentări invitate**



## Activități didactice

- **2023-prezent** – Curs și laborator *Complemente de spectroscopie moleculară*, nivel Master an I, Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2022-prezent** – Curs și laborator: *Nanobiofotonică*, nivel master I-II Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2022-prezent** – Curs, seminar și laborator *Aplicații tehnologice ale laserilor. Biofotonică*, an II, nivel licență Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2022-2023**: Coordonator al **burselor speciale pentru activitate de cercetare** obținute de studenții nivel licență Mădălina Tudor, Mihnea Moruz și Vlad Cucuiet
- **2021-2022**: Coordonator a **bursei speciale pentru activitate de cercetare** obținută de masteranda Daria Stoia.
- **2020- prezent** – Curs *Nanostructuri și sisteme Macromoleculare (20%)*, Școala Doctorală de Fizică, Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2013-2018** – Predare de laboratoare: “*Monitorizarea denaturării proteinelor utilizând spectroscopia de fluorescență*”, studenților de an I și II nivel master, Facultatea de Fizică, Universitatea Babeș-Bolyai. Materialul curricular a fost elaborat de către Monica Focșan.
- **2011** – Curs: “*Optica Generală*”, studenților de anul II nivel licență, Facultatea de Fizică, Universitatea Babeș-Bolyai, Extensia Zalău.
- **2010-2016** – Predare de laboratoare: “*Fluorescență Moleculară*”, studenților de an I nivel master, Facultatea de Fizică, Universitatea Babeș-Bolyai. Materialul curricular a fost elaborat de către Monica Focșan.
- **2010-2016** – Predarea laboratoarelor de practică: “*Introducere în nanotehnologii*”, studenților de anul II nivel licență, Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2017-2018** – *Biophysique*, linia franceză, Universitatea de Științe Agricole și Medicină Veterinară (USAMV), Cluj Napoca.
- **2018-prezent** – Laborator: **Optică**, Fizică medicală și Fizică tehnologică an II, Facultatea de Fizică, Universitatea Babeș-Bolyai.
- **2010 - prezent** – Supervizarea a **18 studenți nivel licență și 10 studenți nivel masterat**

## Participare în comisii naționale/internaționale de doctorat și post-doctorat

- **2022-2023** – Mentor în comisia de doctorat Gherasim (Dezmerean) Elena-Cristina, USAMV Cluj, în cadrul proiectului *Dezvoltarea competențelor de cercetare avansată și aplicată în logica STEAM + Health* (POCU/993/6/13/153310)
- **2022-2023** – Mentor al cercetătoarei postdoctorand Andreea Câmpu
- **2022** – Referent în comisie de doctorat, Mina Raileanu, Universitatea București
- **2022** – Referent în comisie de doctorat, Madalina Nistor, USAMV Cluj Napoca.
- **2021-prezent** – Conducător de doctorat a studenților drd Radu Lapusan and Alexandru Holca
- **2021** – Referent în comisie de doctorat, Cristian Tira, Universitatea Babeș-Bolyai
- **2021** – Referent în comisie de doctorat, Raluca Borlan, Universitatea Babeș-Bolyai
- **2021** – Referent în comisie de doctorat, Tie Bi Dje Leopold, Universitatea Babeș-Bolyai
- **2020** – Referent în comisie de doctorat, Andreea Campu, Universitatea Babeș-Bolyai
- **2018** – Referent în comisie de doctorat internațională, Guillaume Micouin, ENS Lyon, Franța
- **2016-prezent** – Mentor științific în 8 teze doctorale (UBB și USAMV)

## Premii și Distincții

- **2023** – **Diploma de excelență, ediția X a Premiilor Excelentia**, Universitatea Babeș-Bolyai
- **2023** – **Diploma de excelență - Categoria I Cercetători cu experiență Echipă de cercetare** acordată de Ministerul Cercetării, Inovării și Digitalizării în cadrul Primei Ediții a Galei Cercetării Românești
- **2021** – Diplomă de Excelență acordată de Institutul Național de Cercetare-Dezvoltare în Construcții, Urbanism și Dezvoltare Teritorială Durabilă “URBAN-INCERC”
- **2021** – Medalia de Aur la EUROINVENT
- **2020** – Diplomă de Excelență Științifică, Universitatea Babeș-Bolyai
- **2018** – **Premiul Academiei Române “Constantin Miculescu” pentru anul 2016**
- **2018** – **Interviu de Excelență UBB** (<https://news.ubbcluj.ro/dr-monica-focsan-iosin-fizician-cercetator-stiintific-grad-i-cs-i-institutul-de-cercetari-interdisciplinare-in-bio-nano-stiinte/>)
- **2016** – **Bursă L’Oreal -UNESCO “Femeile din Știință”**
- **2016** – **Diplomă de Excelență Științifică**, Premiul II, Concursul Național “Rada Mihalcea, Tineri Cercetători în Știință și Inginerie”
- **2016** – Diplomă de Excelență Științifică, Universitatea Babeș-Bolyai
- **2015** – *High-level scientific visit for invited researchers grant*, Campus France, Lyon

## Stagii și specializări internaționale

- **12.2018** – SPINTEC Grenoble, France, cercetător invitat
- **11.2017** – Universitatea Paris 13, Facultatea de Medicină, Subiect de Cercetare: *Platforme senzorialice*
- **6.06.2015-14.06.2015 and oct-nov 2015** – Ecole Normale Supérieure de Lyon, Claude Bernard University, Lyon, France. Subiect de Cercetare: *Microfluidic platform for integrated plasmonic detection*
- **25.02.2014-27.02.2014** – „6<sup>th</sup> European short course on Time-Resolved Microscopy and Correlation Spectroscopy” and „SymPhoTime Training Day” at PicoQuant, Berlin, Germany
- **1.10.2011-15.12.2011** – Laboratoire Interdisciplinaire de Physique, Grenoble, France, Subiect de Cercetare: *Laser Fabrication of 3D highly active and ultrasensitive Surface-enhanced Raman scattering microchips in microfluidic channels*
- **10.06.2011-18.06.2011** – Paris 13 University, Faculty of Medicine, Subiect de Cercetare: *Localized Surface Plasmon Resonance biosensor for protein detection*
- **2006-2009** – (**mai mult de 1 an**) Laboratoire Interdisciplinaire de Physique, Joseph-Fourier University. Research subject: *Microfabrication of protein structures for biological applications*
- **15.02.2006-1.07.2006**: Master internship, Laboratoire Interdisciplinaire de Physique, Joseph-Fourier University, Grenoble. Subiect de Cercetare: *Laser fabrication of biocompatible 3D protein microstructures*

## Proiecte de cercetare majore

- Mai jos sunt enumerate principalele proiecte/burse naționale/internaționale câștigate pe bază de competiție în calitate de director/responsabil de proiect. **Valoarea totală a acestora depășește 930 kEuro:**

► *Ready-to-use flexible wound dressing with synergistic photothermal and antimicrobial capabilities*; Project implementation period: June 2022-June 2024 <https://www.nipne.ro/proiecte/pn3/66-proiecte.html>; Group Lider UBB

► *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

► *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

► *Theranostic microplatforms for multimodal therapy of human ocular pathologies, a new paradigm in biomedical applications*, Project implementation period: Nov 2020 - Oct 2022, <https://sites.google.com/usamvcluj.ro/microplatther>; Group Lider UBB

► *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

► *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

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

► Membru cheie în > 25 proiecte naționale. Pentru detalii vezi: <https://www.nanobiophotonics.ro/projects/national-projects>

### *Membră în societăți stiintifice*

- 2006-2007 Societatea Italiană de Fizică
- 2006-prezent Societatea Română de Biofizică

## *Organizare conferințe*

- **2019: Chair** of the Sixth International Workshop on Advanced, Nano- and Biomaterials and their Applications, Cluj Napoca, Romania.
- **2012: Membru în comitetul de organizare** a conferinței the 31st European Congress on Molecular Spectroscopy (EUCMOS), Cluj Napoca, Romania

## *Activități editoriale*

- **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**

## *Colaborări internaționale*

- **Dr. Patrice Baldeck, Prof. Dr. Stephane Parola, Conf. Dr. 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 Hogue**, McGill University Canada

Articole publicate în reviste de specialitate de circulație internațională

1. 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 8.02**).
2. D. Stoia, M. Nistor, M. Suci, R. Borlan, A. Campu, D. Rugina, D. Maniu, S. Astilean, **M. Focsan\***, NIR photothermal-activable drug-conjugated microcapsules for in vitro targeted delivery and release: an alternative treatment of diabetic retinopathy, *Int. J. Pharm*, 635, 2023, 122700 (**\*corresponding author, IF 6.51**).
3. Z.-R. Tóth, D. Debreczeni, T. Gyulavári, I. Székely, M. Todea, G. Kovács, **M. Focsan**, K. Magyari, L. Baia, Z. Pap, K. Hernadi, Rapid Synthesis Method of Ag<sub>3</sub>PO<sub>4</sub> as Reusable Photocatalytically Active Semiconductor, *Nanomaterials*, 13, 2023, 89 (**IF 5.719**).
4. D. Stoia, R. Pop, A. Campu, M. Nistor, S. Astilean, A. Pinte, M. Suci, D. Rugina, **M. Focsan**, Hybrid polymeric therapeutic microcarriers for thermoplasmonic-triggered release of resveratrol, *Colloids and Surfaces B: Biointerfaces*, 220, 2022, 112915 (**corresponding author, IF 5.999**).
5. L. Susu, A. Vulpoi, S. Astilean, **M. Focsan\***, 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 6.208**).
6. A. Hada, M. Zetes, **M. Focsan**, 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 6.208**).
7. A. Campu, I. Muresan, A-M. Craciun, S. Cainap, S. Astilean, **M Focsan\***, Cardiac Troponin Biosensor Designs: Current Developments and Remaining Challenges, *International Journal of Molecular Sciences*, 23(14), 2022, 7728 (**\*corresponding author, IF 6.208**).
8. A. Hada, A-M Craciun, **M. Focsan**, 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 6.408**).
9. 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 7.675**).



10. B. Stoean, L. Gaina, C. Cristea, R. Silaghi-Dumitrescu, A. Branzanic, **M. Focsan**, E. Fischer-Fodor, B. Tigu, C. Moldovan, A. Cecan, 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 5.122**).
11. 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 6.556**).
12. 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 3.434**).
13. B. Boga, I. Székely, **M. Focşan**, M. Baia, T. Szabó, L. Nagy, Z. Pap, Sensor surface via inspiration from Nature: The specific case of electron trapping in TiO<sub>2</sub>/WO<sub>3</sub> (· 0.33 H<sub>2</sub>O) and reaction center/WO<sub>3</sub> (· 0.33 H<sub>2</sub>O) systems, *Applied Surface Science* 572, 2022, 151139 (**IF 7.392**).
14. 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 3.841**).
15. V. Chis, **M. Focsan**, M. de la Chapelle, R. Fausto, *Journal of Molecular Structure* 1250, 2022, 131971 (**IF 3.841**).
16. A. Campu, F. Lerouge, D. Maniu, K. Magyari, **M. Focsan**<sup>\*</sup>, Ultrasensitive SEIRA detection using gold nanobipyramids: Toward efficient multimodal immunosensor, *Journal of Molecular Structure* 1246, 2021, 131160 (**corresponding author, IF 3.841**).
17. 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 Cu<sup>2+</sup>, *Journal of Molecular Structure* 1244, 2021, 130990 (**IF 3.841**).
18. S. Suarasan, C. Tira, M. M. Rusu, A.-M. Craciun, **M. Focsan**<sup>\*</sup>, 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 3.841**).
19. 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 3.841**).
20. 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).

21. 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).
22. R. Borlan, D. Stoia, L. Gaina, A. Campu, G. Marc, M. Perde-Schrepler, M. Silion, 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).
23. 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).
24. 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).
25. R. Ghiman, M. Nistor, **M. Focsan\***, A. Pinte, S. Aștilean and D. Rugina, Fluorescent Polyelectrolyte System to Track Anthocyanins Delivery inside Melanoma Cells, *Nanomaterials* 11, 2021, 782 (corresponding author, IF 5.076).
26. 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).
27. 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).
28. 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).
29. 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**).





30. 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).
31. 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).
32. 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).
33. 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).
34. 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).
35. 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).
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