

## Listă de lucrări

### A. 10 articole considerate relevante pentru realizările profesionale proprii

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. . Stoia, M. Nistor, M. Suciu, 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. 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**).
4. 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**).
5. 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**).
6. 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, 8567–8575 (**\*corresponding author, IF 6.350**).
7. **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**).

8. **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**).
9. 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**).
10. 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**).

**B. Teză de doctorat:** Titlul tezei: *Synthesis of Gold Nanoparticles and Microfabrication of Protein Structures for Biological Applications*, co-directie Joseph Fourier University, France/Babes-Bolyai University, Romania, 2006-2009.

**Teză de abilitare:** Titlul tezei de abilitare: *Designed Plasmonic-Based NanoPlatforms to Provide Multiple Functionalities from Efficient Nanoscopic Light Sources to Integrated Multimodal Biosensing and Diagnosis*, 2019.

### C. Brevete de invenție:

1. **M. Focsan**, A. Campu, S. Astilean, T. Murariu, I. Turcu; *Dispozitiv microfluidic plasmonic pe bază de nanoparticule bipiramidice de aur*; Brevet Național O.S.I.M. RO 133447 B1; 2021.
2. A. Campu, M. Moruz, M.Potara, S. Astilean, **M. Focsan**; *Substrat flexibil micro-rugos de polidimetilsiloxan metalizat pentru detecție duală SPR-SERS*; Brevet Național O.S.I.M. RO 137390 A0; 2022.
3. A. Campu, I. Muresan, M.Potara, S. Astilean, S. Cainap, **M. Focsan**; *Nanosenzor plasmonic eficient pe bază de nanobipiramide de aur pentru detecția multimodală a biomarker-ului cardiac troponină I*; Brevet Național O.S.I.M. RO 136059 A0; 2022.
4. **M. Focsan**, A. Campu, A. M. Craciun, S. Astilean; *Dispozitiv microfluidic de detecție fabricat prin integrare de hârtie plasmonică caligrafiată în polidimetilsiloxan*; Brevet Național O.S.I.M. RO 135233 A0; 2021

## D. Cărți și capitole de cărți

1. **Carte:** 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. **Carte:** **M. Focsan**, *Laser Microfabrication of Proteins for Biological Applications*, Monica Focsan, Editura Alma Mater, 2013, ISBN 978-606-504-164-6
3. **Capitol carte:** 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.**
4. **Capitol carte:** 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.**




## E. 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. Suciu, 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. Magyar, 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. Suciu, 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. Focșan**, 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> ( $\cdot$  0.33 H<sub>2</sub>O) and reaction center/WO<sub>3</sub> ( $\cdot$  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. Sillion, D. Maniu, **M. Focsan**<sup>\*</sup>, 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**<sup>\*</sup>, 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. Focșan\***, A. Pinteia, 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**).
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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**).
36. 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**).
37. 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**).
38. 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**).
39. 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**).
40. 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**).
41. A. Campu, AM Craciun, **M Focsan\***, 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).
42. D. Rugină\*, R. Ghiman\*, **M. Focșan\***, F. Tăbăran, F. Copaciuc, M. Suciuc, A. Pinteau, 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**).
43. S. Suarasan, AM Craciun, E Licarete, **M Focsan**, 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**).
44. A. Piperno\*, A. Mazzaglia, A. Scala, R. Pennisi, R. Zagami, G. Neri, S. M. Torcasio, C. Rosmini, P. G. Mineo, M. Potara, **M. Focsan**, 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**).
45. L. Tie, **M Focsan\***, 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**).
46. 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**).
47. A. Campu, L. Susu, F. Orzan, D. Maniu, AM Craciun, A. Vulpoi, L. Roiban, **M. Focsan\***, S. Astilean, Multimodal Biosensing on Paper-Based Platform Fabricated by Plasmonic Calligraphy Using Gold Nanobipyramids Ink, *Frontiers in Chemistry*, 7, 2019, 55 (\* **corresponding author, IF 3.693**).
48. 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**).
49. L. Susu, A. Campu, A. M Craciun, A. Vulpoi, S. Astilean, **M. Focsan\***, Designing Efficient Low-Cost Paper-Based Sensing Plasmonic Nanoplatfoms, *Sensors* 18, 2018, 3035 (\* **corresponding author, IF 3.031**).



50. 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/TiO<sub>2</sub> Composite Photocatalysts, *ACS Sustainable Chemistry & Engineering*, 6 2018, 12993-13006 (**IF 6.970**)
51. **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**).  SCIENTIFIC REPORTS
52. 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**).
53. 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**).
54. **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**).
55. 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**).
56. 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).
57. **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**).
58. 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**).

59. 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**).
60. 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**).
61. 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).
62. 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**).
63. **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**).
64. 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**).
65. 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**).
66. 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**).
67. N. Thioune, N. Lidgi-Guigui, N. Cottat, A.M. Gabudean, **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**).
68. 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**).

69. 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**).
70. A. Bensouici, M. Ayadi, **M. Iosin**, et al. Chemical Decomposition of CdTe and CdBr<sub>2</sub> Dopants in KBr, *International Conference on Transparent Optical Networks-ICTON* (2013).
71. 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**).
72. 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**).
73. **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**).
74. **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**).
75. 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**).
76. **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**).
77. **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**).
78. 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**).

79. 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**).
80. **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**).
81. 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**).
82. 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**).
83. **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**).
84. **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**).
85. 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**).
86. **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**).
87. **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**).

## F. Publicații in extenso NON-ISI

88. 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.
89. 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**)

90. P. Baldeck, T. Scheul, J. Bosson, **M. Iosin**, C. L. Lin, G. Vitrant, O. Stephan, Advances in two-photon microstructuration of polymers, proteins and metallic materials with Q-switched microlasers, *Nonlinear Optics Quantum Optics*, 40 (2010) 193-197.
91. S. Suarasan, **M. Focsan**, D. Maniu, S. Astilean, Synthesis and stabilization of gold nanoparticles by gelatin biopolymer, *Studia UBB Physica* 56 (2011) 133.
92. **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**).
93. 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.
94. **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**).
95. F. Toderas, **M. Iosin**, M. Baia and S. Aştilean, 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.