

Curriculum vitae

Monica POTARA: PhD since 2012, Scientific Researcher grade I (CS I) at Nanobiophotonics and Laser Microspectroscopy Center, Interdisciplinary Research Institute in Bio-Nano-Sciences, Babes-Bolyai University, Cluj-Napoca, Romania. Email: monica.potara@ubbcluj.ro; Web page: <https://nanobiophotonics.ro/member/monica-potara-106>; ORCID: [0000-0003-4901-2400](https://orcid.org/0000-0003-4901-2400); Researcher ID: <https://www.webofscience.com/wos/author/record/1316674>; BrainMap: <https://www.brainmap.ro/monica-potara>

1. PROFESSIONAL CAREER:

- ▶ **2023-present:** *Scientific Researcher grade I (CS I)*, Babes-Bolyai University
- ▶ **2016-2023:** *Scientific Researcher grade II (CS II)*, Babes-Bolyai University
- ▶ **2014-2015:** *Postdoctoral Fellowship* in POSDRU 159/1.5/S/137750, Babes-Bolyai University
- ▶ **2012-2016:** *Scientific Researcher grade III (CS III)*, Babes-Bolyai University
- ▶ **2007-2012:** *PhD in Physics*, Faculty of Physics, Babes-Bolyai University (Thesis title: *Designing new chitosan-coated plasmonic nanoparticles for biomolecular sensing and antibacterial activity*)
- ▶ **2006-2007:** *M. Sc. in Physics*, Faculty of Physics, Babes-Bolyai University
- ▶ **1993-2006:** *Economic field*, private companies, director from 1998 to 2003
- ▶ **1988-1993:** *B. Sc. in Physics*, Faculty of Physics, Babes-Bolyai University

2. PROFESSIONAL ACTIVITY:

Research expertise in:

- ▶ development of nanoplatforms for applications in nanomedicine (plasmonic nanosensors *via* surface-enhanced Raman spectroscopy (SERS) and localized surface plasmon resonance (LSPR), drug and photosensitizer nanocarriers, contrast agents for intracellular imaging, theranostic agents, antibacterial agents)
- ▶ chemical synthesis and functionalization of various colloidal nanoparticles and nanostructures made of noble-metals, polymers and graphene
- ▶ UV-vis-NIR, Raman, surface-enhanced Raman spectroscopy (SERS), fluorescence, Zeta potential and Dynamic Light Scattering techniques
- ▶ Scanning confocal Raman microscopy: intracellular Raman/SERS sensing and imaging

Academic courses:

- ▶ Advanced instrument operation training for Confocal Raman imaging (9 November 2016, Ulm, Germany)
- ▶ Confocal Raman Spectroscopy data and image processing with WITec Project (9 November 2016, Ulm, Germany)

3. ACHIEVEMENTS & INTERNATIONAL VISIBILITY:

- ▶ **59 scientific papers (53 ISI)**, some of them in prestigious journals such as ACS Appl. Mater. Interfaces (IF = 8.758), Nanoscale (IF = 8.307), J. Colloid. Interface Sci. (IF = 7.489), J. Mater. Chem. (IF = 5.96), Carbohydrate Polymers (IF = 11.2), Talanta (IF = 6.1) etc. (Please see Annex 1)
- ▶ **Invited contributor of 4 chapters** in books published by internationally prestigious publishing houses (Elsevier, Royal Society of Chemistry, Pan Stanford)
- ▶ **2 national O.S.I.M. patents** (code: RO134994 (B1)/2023; RO137390 (B1)/2025) and **2 national O.S.I.M. pending patents** (code: RO136059 (A0)/2022; A00598/2024)
- ▶ **International conferences:** co-author of more than **60** communications
- ▶ **Hirsh Index:** **28** (Google Scholar); **25** (Scopus); **24** (WOS)
- ▶ **Citations:** **2692** (Google Scholar); **2201** (Scopus); **2029** (WOS)
- ▶ **Project leader of 6 national grants/scholarships**
- ▶ **key member/member of 14 national/international research projects**
- ▶ **Excellence Award for extraordinary results in physics and the trophy in the "Experienced Researchers - Teams"** category obtained with the team of the Center for Nanobiophotonics and Laser Microspectroscopy, led by Prof. Dr. Simion Aștilean, at the first edition of the Romanian Research Gala (2023)
- ▶ **Research paper featured** on nanotechweb.org as a Lab Talk Presentation (<http://iopscience.iop.org/0957-4484/labtalk-article/48366>), included in the Highlights 2012 Collection ([http://iopscience.iop.org/0957-4484/page/Highlights of 2012](http://iopscience.iop.org/0957-4484/page/Highlights%20of%202012)) and highlighted in the Editorial of Nanotechnology dedicated to the International Year of Light 2015 (<https://iopscience.iop.org/article/10.1088/0957-4484/26/9/090201>)
- ▶ **Research paper included** in the themed collection: *2021 Nanoscale HOT Article Collection*
- ▶ **Diploma of Scientific Excellence** from Babes-Bolyai University (2015)
- ▶ **e-member** of the Royal Society of Chemistry (RSC) from 2012 to 2014

4. EXPERIENCE IN NATIONAL/INTERNATIONAL PROJECTS & MANAGERIAL ACTIVITIES:

- ▶ **2022-2024:** Director of 1 national project (PN-III-P2-2.1-PED-2021-1998 - Development of a highly sensitive and selective SERS aptasensor for medical diagnosis) Funding agency: UEFISCDI; Competitiveness through research, development and innovation - Project experimental – demonstrative PED 2021
- ▶ **2021-2023:** Director of 1 national project (PN-III-P4-ID-PCE-2020-1592 - Designing new plasmonic aptasensors for detection and monitoring of infections) Funding agency: UEFISCDI; Exploratory Research Projects – PCE 2020
- ▶ **2020-2022:** Team leader of 1 national project (PN-III-P2-2.1-PED-2019-3813 - Smart nanoparticles as delivery systems for otoprotective agents of the inner ear) Funding agency: UEFISCDI; Competitiveness through research, development and innovation - Project experimental – demonstrative PED 2019
- ▶ **2020:** Director of 1 Advanced Fellowship awarded from Institute for Advanced Studies in Science and Technology- (STAR- Babes-Bolyai University) through national competition
- ▶ **2015-2017:** Director of 1 national project (PN-II-RU-TE-2014-4-1988 - Drug-loaded and SERS-encoded plasmonic nanoparticles for targeted and image-guided treatment of ovarian cancer cells) Funding agency: UEFISCDI; Human Resources Research Projects for Young Independent Team TE 2014
- ▶ **2014-2015:** Director of 1 national fellowship (POSDRU 159/1.5/S/137750-Chitosan-coated plasmonic nanoparticles with potential applications in diagnosis, imaging and cancer therapy)
- ▶ Key member/member of 14 national/international grants (some relevant projects as a key member in the research team: PN-III-P4-ID-PCCF-2016-0142 *New Targeted Optical Imaging NanoProbes for Near-Infrared (NIR) Real-Time (RT) Image-Guided Surgery of Ovarian Cancer (2018-2022)*; PN-III-P1-1.2-PCCDI2017-0010 *Emerging molecular technologies based on micro and nano-structured systems with biomedical applications (2018-2021)*; PN-III-P4-ID-PCE-2016-0837 *Nanoplatforms for enhanced treatment of cancer by synergistically combined multiple NIR light-activated nanotherapies (2017-2019)*; PN-II-PT-PCCA-2013-4-1961 *Plasmonic-Microfluidic Biosensor for Real Time Detection of Relevant Biomarkers (2014-2017)*; ID PCCE No. 129/2008 *Biofunctional nanoparticles for development of new methods of imaging, sensing, diagnostic and therapy in biological environment (2010-2013)*)

- ▶ **2012** *Member in the local organizing committee* of 31st European Congress on Molecular Spectroscopy, August 26-31, 2012, Cluj-Napoca, Romania
- ▶ **1998-2003**: *Director – economic field*, private company.

5. TEACHING ACTIVITIES:

- ▶ **2012-present**: *Member in the PhD student supervision committees* (11 PhD students), Babes-Bolyai University
- ▶ **2012-present**: *Scientific co-advisor for elaboration of 5 B.Sc. and 3 M.Sc. theses*, Babes-Bolyai University
- ▶ **2014-present**: *Teaching laboratory*: “The use of noble metal nanoparticles for cellular imaging: Raman reporters”, 1st year M.Sc students, Faculty of Physics, Babes-Bolyai University. This curricular material has been developed by the project leader
- ▶ **2010-2016**: *Teaching laboratory*: “Determination of the concentration of ethanol in alcoholic beverages using a portable Raman spectrometer”, 1st year master students, Faculty of Physics, Babes-Bolyai University. This curricular material has been developed by the project leader
- ▶ **2009-2010**: *Teaching optics laboratories*, Faculty of Physics, Babes-Bolyai University
- ▶ **2008-2010**: *Laboratory assistant* at Faculty of Physics, Babes-Bolyai University.

ANNEX 1

List of publications

▶ Articles in ISI journals

1. *Unveiling DNA Hybridization Dynamics via High-Sensitivity SERS Detection: Insights into Conformational Changes and Oligonucleotide Length Effects*, 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, **Journal of Physical Chemistry Letters**, 16 (2025) 5610-5618
2. *Fabrication and characterization of large-scale ordered silver-coated polystyrene microspheres films for surface-enhanced Raman spectroscopy*, A. M. Craciun, A. Colnita, D. Marconi, L. Barbu-Tudoran, I. Turcu, M. Focsan, A. Vasilescu, M. Potara, S. Astilean, **Physica Scripta**, 100 (2025) 045524

3. *Aptamer-conjugated gold nanoparticles for portable, ultrasensitive naked-eye detection of C-reactive protein based on the Tyndall effect*, A.M. Hada, S. Suarasan, M. Muntean, M. Potara, S. Astilean, **Analytica Chimica Acta**, 1307 (2024) Article ID 342626
4. *Interaction of Low-Density Polyethylene Nanofragments with Autotrophic and Chemotrophic Bacteria*, A. Ciorîță, M. Suciu, A. M. Rostas, A. Tarța, G. Popovici, M. Bocăneală, F. Nekvapil, S. G. Macavei, *M. Potara*, I. Marica, I. Kacso, C. S. Moldovan, R. I. Știufiuc, C. S. Tuta, S. Cînta-Pânzaru, L. Barbu-Tudoran, **ACS Sustainable Chemistry & Engineering**, 12 (2024) 10831-10840
5. *Portable microfluidic plasmonic chip for fast real-time cardiac troponin I biomarker thermoplasmonic detection*, A. Campu, I. Muresan, M. Potara, D. R. Lazar, F. L. Lazar, S. Cainap, D. M. Olinic, D. Maniu, S. Astilean, M. Focsan, **Journal of Materials Chemistry B**, 12 (2024) 962-972
6. *Controlling the optical and morphological stability of 4-mercaptopbenzoic acid-modified triangular silver nanoplates in saline environments*, S. Suarasan, A.-M. Hada, M. Muntean, A. Vulpoi, M. Potara, S. Astilean, **Applied Surface Science**, 638 (2023) Article ID 158126
7. *Gelatin-assisted fabrication of reduced nanographene oxide for dual-modal imaging of melanoma cells*, V. Cucuiet, M. Iliuț, M. Potara, K. Magyari, S. Tripon, O. Soritau, D. Maniu, S. Astilean, M. Focsan, **Colloids and Surfaces B-Biointerfaces**, 231 (2023) Article ID 113546
8. *Progress in the Optical Sensing of Cardiac Biomarkers*, C. Polonschii, M. Potara, M. Iancu, S. David, R. M. Banciu, A. Vasilescu, S. Astilean, **Biosensors-Basel**, 13 (2023)) Article ID 632
9. *Probing polyvinylpyrrolidone-passivated graphene oxide nanoflakes as contrast agents inside tissue-like phantoms via multimodal confocal microscopy*, M. Potara, S. Suarasan, A.-M. Craciun, M. Focsan, A.-M. Hada, S. Astilean, **Talanta**, 247 (2022) Article ID 123581
10. *Linezolid nanoAntibiotics and SERS-nanoTags based on Polymeric Cyclodextrin Bimetallic core-shell Nanoarchitectures*, A.-M. Hada, M. Potara, S. Astilean, A. Cordaro, G. Neri, M. Malanga, A. Nostro, A. Mazzaglia, A. Scala, A. Piperno, **Carbohydrate Polymers**, 293 (2022) Article ID 119736
11. *The Effect of Pluronic-Coated Gold Nanoparticles in Hearing Preservation Following Cochlear Implantation-Pilot Study*, C. M. Blebea, V. Necula, M. Potara, M. G. Dindelegan, L. P. Ujvary, E. C. Botan, A. A. Maniu, M. Cosgarea, **Audiology Research**, 12 (2022) 466-475
12. *Viburnum opulus fruit extract-capped gold nanoparticles attenuated oxidative stress and acute inflammation in carrageenan-induced paw edema model*, C. Bidian, G. A. Filip, L. David, B. Moldovan, I. Baldea, D. Olteanu, M. Filip, P. Bolfa, M. Potara, A. M. Toader, S. Clichici, **Green Chemistry Letters and Reviews**, 15 (2022) 319-335

13. *Trojan Horse Treatment Based on Peg-Coated Extracellular Vesicles to Deliver Doxorubicin to Melanoma in Vitro and in Vivo*, L. I. Patras, A. E. Ionescu, C. V. A. Munteanu, R. Hajdu, A. C. Kosa, A. Porfire, E. Licarete, V. F. Rauca, A. Sesarman, L. Luput, P. Bulzu, P. Chiroi, R. A. Tranca, M. S. Meszaros, G. Negrea, L. Barbu-Tudoran, M. Potara, S. S. Szedlacsek, M. Banciu, **Cancer Biology & Therapy**, 23 (2022) Article ID 19
14. *Stratified Diffusion of HOD-D2O inside COOH- and NH2-Functionalized Multi-Walled Carbon Nanotubes studied by NMR Spectroscopy*, A. Simion, A. Pirnau, F.R.V. Turcu, A. Vulpoi, M. Todea, M. Potara, M. Vasilescu, **Journal of Molecular Structure**, 1249 (2022) Article ID 131653
15. *Folate-targeted Pluronic-chitosan nanocapsules loaded with IR780 for near-infrared fluorescence imaging and photothermal-photodynamic therapy of ovarian cancer*, M. Potara, T. Nagy-Simon, M. Focsan, E. Licarete, O. Soritau, A. Vulpoi, S. Astilean, **Colloids and Surfaces B-Biointerfaces**, 203 (2021) Article ID 111755
16. *Recent advances on the development of plasmon-assisted biosensors for detection of C-reactive protein*, T. Nagy-Simon, A.-M. Hada, S. Suarasan, M. Potara, **Journal of Molecular Structure**, 1246 (2021) Article ID 131178
17. *New Insight on the Aptamer Conformation and Aptamer/protein Interaction by Surface Enhanced Raman Scattering and Multivariate Statistical Analysis*, W. Safar, A.-S. Tatar, A. Leray, M. Potara, L. Qiqian, M. Edely, N. Djaker, J. Spadavecchia, W. Fu, S. Gam Derouich, N. Felidj, S. Astilean, E. Finot, M. Lamy de la Chapelle, **Nanoscale** 13 (2021) 12443-12453 ► included in the themed collection: *2021 Nanoscale HOT Article Collection*
18. *Biosynthesis of silver nanoparticles using Sambucus nigra L. fruit extract for targeting cell death in oral dysplastic cells*, G. A. Filip, A. Florea, D. Olteanu, S. Clichici, L. David, B. Moldovan, M. Cenariu, I. Scrobota, M. Potara, I. Baldea, **Materials Science & Engineering C-Materials for Biological Applications**, 123 (2021), Article ID 111974
19. *SERS characterization of aggregated and isolated bacteria deposited on silver-based substrates*, C. C. Andrei, A. Moraillon, E. Larquet, M. Potara, S. Astilean, E. Jakab, J. Bouckaert, L. Rosselle, N. Skandrani, R. Boukherroub, F. Ozanam, S. Szunerits, A. Chantal Gouget-Laemmel, **Analytical and Bioanalytical Chemistry**, 413 (2021) 1417–1428
20. *The Pulmonary Toxicity of Carboxylated or Aminated Multi-Walled Carbon Nanotubes in Mice is Determined by the Prior Purification Method*, A. J. Taylor-Just, M. D. Ihrie, K. S. Duke, H. Y. Lee, D. J. You, S. Hussain, V. K. Kodali, C. Ziemann, O. Creutzenberg, A. Vulpoi, F. Turcu, M. Potara, M. Todea, S. van den Brule, D. Lison, J. C. Bonner, **Particle and Fibre Toxicology**, 17 (2020) Article ID 60
21. *Intracellular fate and impact on gene expression of Doxorubicin/Cyclodextrin-Graphene nanomaterials*, D. Caccamo, M. Currò, R. Ientile, E. Verderio, A. Scala, A. Mazzaglia, R.

- Pennisi, M. Musarra-Pizzo, R. Zagami, G. Neri, C. Rosmini, M. Potara, M. Focsan, S. Astilean, A. Piperno, M. T. Sciortino, **International Journal of Molecular Sciences**, 21 (2020) Article ID 4891
22. *Evaluation of physico-chemical properties and biocompatibility of new surface functionalized Fe₃O₄ clusters of nanoparticles*, T. Radu, A. Petran, D. Olteanu, I. Baldea, M. Potara, R. Turcu, **Applied Surface Science**, 501 (2020) Article ID 144267
23. *Efficient combined near-infrared-triggered therapy: phototherapy over chemotherapy in chitosan-reduced graphene oxide-IR820 dye-doxorubicin nanoplatforms*, D. Zaharie-Butucel, M. Potara, S. Suarasan, E. Licarete, S. Astilean, **Journal of Colloid and Interface Science**, 552 (2019) 218-229
24. *Fabrication of gold-silver core-shell nanoparticles for performing as ultrabright SERS-nanotags inside human ovarian cancer cells*, A.M. Hada, M. Potara, S. Suarasan, A. Vulpoi, T. Nagy-Simon, E. Licarete, S. Astilean, **Nanotechnology**, 30 (2019) article ID 315701
25. *Casting light on intracellular tracking of a new functional graphene-based microRNA delivery system by FLIM and Raman imaging*, 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, **ACS Applied Materials & Interfaces** 11 (2019) 46101-46111
26. *Adsorption of trans- and cis-Resveratrol on Graphene*, R.A. Domokos, M. Potara, S. Astilean, V. Chis, **Physica Status Solidi B-Basic Solid State Physics**, 256 (2019) article ID 1800335
27. *Spectral investigation of the stability of a photopolymerizable composite material*, M. Constantiniuc, M. Muresan Pop, M. Potara, M. Todica, A. Ispas, M. E. Barbinta-Patrascu, D. Popa, **Journal of Optoelectronics and Advanced Materials** 21 (2019) 740-745
28. *Chitosan-capped gold nanoparticles impair radioresistant glioblastoma stem-like cells*, M. Aldea, M. Potara, O. Soritau, I.S. Florian, A. Florea, T. Nagy-Simon, V. Pileczki, I. Brie, D. Maniu, G. Kacso, **Journal of Buon**, 23 (2018) 800-813
29. *IR780-dye loaded gold nanoparticles as new near infrared activatable nanotheranostic agents for simultaneous photodynamic and photothermal therapy and intracellular tracking by surface enhanced resonant Raman scattering imaging*, T. Nagy Simon, M. Potara, A. M. Craciun, E. Licarete, S. Astilean, **Journal of Colloid and Interface Science**, 517 (2018) 239-250
30. *Flexible and Tunable 3D Gold Nanocups Platform as Plasmonic Biosensor for Specific Dual LSPR SERS Immuno-Detection*, M. Focsan, A.M. Craciun, M. Potara, C. Leordean, A. Vulpoi, D. Maniu, S. Astilean, **Scientific Reports**, 7 (2017) article ID 14240
31. *Carboplatin-Loaded, Raman-Encoded, Chitosan-Coated Silver Nanotriangles as Multimodal Traceable Nanotherapeutic Delivery Systems and pH Reporters inside Human Ovarian Cancer*

- Cells*, M. Potara, T. Nagy Simon, A. M. Craciun, S. Suarasan, E. Licarete, F. Imre Lucaci, S. Astilean, **ACS Applied Materials & Interfaces**, 9 (2017) 32565- 32576
32. *Revealing the structure and functionality of graphene oxide and reduced graphene oxide/pyrene carboxylic acid interfaces by correlative spectral and imaging analysis*, D. Zaharie-Butucel, M. Potara, A.M. Craciun, R. Boukherroub, S. Szunerits, S. Astilean, **Physical Chemistry Chemical Physics**, 19 (2017) 16038-16046
33. *A simple and efficient design to improve the detection of biotin-streptavidin interaction with plasmonic nanobiosensors*, M. Focsan, A. Campu, A.M Craciun, M. Potara, C. Leordean, D. Maniu, S. Astilean, **Biosensors & Bioelectronics**, 86 (2016) 728-735
34. *Doxorubicin-Incorporated Nanotherapeutic Delivery System Based on Gelatin-Coated Gold Nanoparticles: Formulation, Drug Release, and Multimodal Imaging of Cellular Internalization*, S. Suarasan, M. Focsan, M. Potara, O. Soritau, A. Florea, D. Maniu, S. Astilean, **ACS Applied Materials & Interfaces**, 8 (2016) 22900-22913
35. *Gold nanoparticles synthesized with a polyphenols-rich extract from Cornelian cherry (Cornus mas) fruits – effects on human skin cells*, M. Perde-Schrepler, L. David, L. Olenic, M. Potara, E. Fischer-Fodor, P. Virag, F. Imre-Lucaci, I. Brie,A. Florea, **Journal of Nanomaterials**, 2016 (2016) article ID 6986370
36. *Novel Strategies for the Improvement of Stem Cells' Transplantation in Degenerative Retinal Diseases*, S. D. Nicoara, S. Susman, O. Tudoran, O. Barbos, G. Chereches, S. Astilean, M. Potara, O. Soritau, **Stem Cells International**, 2016 (2016) article ID 1236721
37. *Designing chitosan-silver nanoparticles-graphene oxide nanohybrids with enhanced antibacterial activity against Staphylococcus aureus*, B. Marta, M. Potara, M. Iliut, E. Jakab, T. Radu, F. Imre-Lucaci, G. Katona, O. Popescu, S. Astilean, **Colloids and Surfaces A-Physicochemical and Engineering Aspects**, 487 (2015) 113-120
38. *Biosynthesized silver nanoparticles performing as biogenic SERS-nanotags for investigation of C26 colon carcinoma cells*, M. Potara, M. Bawaskar, T. Simon, S. Gaikwad, E. Licarete, A. Ingle, M. Banciu, A. Vulpoi, S. Astilean, M. Rai, **Colloids and Surfaces B-Biointerfaces**, 133 (2015) 296-303
39. *Designing Theranostic Agents Based on Pluronic Stabilized Gold Nanoaggregates Loaded with Methylene Blue for Multimodal Cell Imaging and Enhanced Photodynamic Therapy*, T. Simon, M. Potara, A. M. Gabudean, E. Licarete, M. Banciu, S. Astilean, **ACS Applied Materials & Interfaces**, 7 (2015) 16191-16202
40. *Fabrication of stable network-like gold nanostructures in solution and their assessment as efficient NIR-SERS platforms for organic pollutants detection*, D. S. Tira, M. Potara, S. Astilean, **Materials Research Bulletin**, 64 (2015) 267-273

41. *Comparative evaluation by scanning confocal Raman spectroscopy and transmission electron microscopy of therapeutic effects of noble metal nanoparticles in experimental acute inflammation*, A. Filip, M. Potara, A. Florea, I. Baldea, D. Olteanu, P. Bolfa, S. Clichici, L. David, B. Moldovan, L. Olenic and S. Astilean, **RSC Advances**, 5 (2015) 67435-67448
42. *Multiscale electromagnetic SERS enhancement on self-assembled micropatterned gold nanoparticle films*, C. Leordean, M. Potara, S. Boca-Farcau, A. Vulpoi, S. Astilean, C. Farcau, **Journal of Raman Spectroscopy**, 45 (2014) 627-635
43. *Folic acid-conjugated, SERS-labeled silver nanotriangles for multimodal detection and targeted photothermal treatment on human ovarian cancer cells*, S. Boca-Farcau, M. Potara, T. Simon, A. Juhem, P. Baldeck, S. Astilean, **Molecular Pharmaceutics**, 11 (2014) 391–399
44. *Pluronic-coated silver nanoprisms: Synthesis, characterization and their antibacterial activity*, B. Marta, E. Jakab, M. Potara, T. Simon, F. Imre-Lucaci, L. Barbu-Tudoran, O. Popescu, S. Astilean, **Colloids and Surfaces A: Physicochemical and Engineering Aspects** 441 (2014) 77– 83
45. *Chitosan-coated triangular silver nanoparticles as a novel class of biocompatible, highly sensitive plasmonic platforms for intracellular SERS sensing and imaging*, M. Potara, S. Boca, E. Licarete, A. Damert, M. C. Alupeii, M. T. Chiriac, O. Popescu, U. Schmidt, S. Astilean, **Nanoscale** 5 (2013), 6013–6022
46. *Reliable plasmonic substrates for bioanalytical SERS applications easily prepared by convective assembly of gold nanocolloids*, C. Farcau, M. Potara, C. Leordean, S. Boca, S. Astilean, **Analyst** 138 (2013) 546-552
47. *Chitosan-coated anisotropic silver nanoparticles as a SERS substrate for single molecule detection*, M. Potara, M. Baia, C. Farcau, S. Astilean, **Nanotechnology** 23 (2012) Article ID 055501, ► highlighted on the web page Lab Talk presentation (<http://iopscience.iop.org/0957-4484/labtalk-article/48366>) and included in the Highlights 2012 collection ([http://iopscience.iop.org/0957-4484/page/Highlights of 2012](http://iopscience.iop.org/0957-4484/page/Highlights%20of%202012))
48. *Optical properties of single silver triangular nanoprism*, F. K. Guedje, M. Gilloian, M. Potara, M. N. Hounkonnou, S. Astilean, **Physica Scripta** 86 (2012) Article ID 055702
49. *Solution phase, dual LSPR-SERS plasmonic sensors of high sensitivity and stability based on chitosan-coated anisotropic silver nanoparticles*, M. Potara, A.-M. Gabudean, S. Astilean, **Journal of Materials Chemistry** 11 (2011) 3625-3633
50. *Synergistic antibacterial activity of chitosan-silver nanocomposites on Staphylococcus aureus*, M. Potara, E. Jakab, A. Damert, O. Popescu, V. Canpean, S. Astilean, **Nanotechnology** 22 (2011) Article ID 135101

51. *Chitosan-coated triangular silver nanoparticles as a novel class of biocompatible, highly effective photothermal transducers for in vitro cancer cell therapy*, S. C. Boca, M. Potara, A.-M. Gabudean, A. Juhem, P. L. Baldeck, S. Astilean, **Cancer Letters** 311 (2011) 131-140
52. *Uptake and biological effects of chitosan-capped gold nanoparticles on Chinese Hamster Ovary cells*, S. C. Boca, M. Potara, F. Toderas, O. Stephan, P. L. Baldeck, S. Astilean, **Materials Science and Engineering C** 31 (2011) 184-189
53. *The synthesis of biocompatible and SERS-active gold nanoparticles using chitosan*, M. Potara, D. Maniu, S. Astilean, **Nanotechnology** 20 (2009) Article ID 315602

► Book chapters

1. *Advanced nanostructures for microbial contaminants detection by means of spectroscopic methods*, M. Potara, A. Campu, S. D. Maniu, M. Focsan, I. Botiz, S. Astilean, contributed chapter in *Advanced Nanostructures for Environmental Health* eds. L. Baia, Z. Pap, M. Baia, K. Hernadi, **Elsevier Inc** (2020) 347-384 ISBN: 978-0-12-815882-1. ► indexed in WOS Core Collection (Accession Number: WOS:000552536900008)
2. *Plasmonic-based SERS traceable drug nanocarriers in cancer theranostic*, M. Potara, T. Nagy-Simon, S. Suarasan, S. Astilean, contributed chapter in *Plasmonics in Chemistry and Biology* eds. M. Lamy de la Chapelle and N. Felidj, **Pan Stanford Publishing** (2019) 157-196, ISBN: 978-981480003-7. ► indexed in WOS Core Collection (Accession Number: WOS:000626482400008)
3. *Polymer-coated plasmonic nanoparticles for environmental remediation: Synthesis, functionalization, and properties*, M. Potara, M. Focsan, A.M. Craciun, I. Botiz, S. Astilean, contributed chapter in *New Polymer Nanocomposites for Environmental Remediation*, eds. C. M. Hussain, A. K. Mishra, **Elsevier Inc** (2018) 361-387, ISBN: 978-012811034-8. ► indexed in WOS Core Collection (Accession Number: WOS:000462130300016)
4. *Detection of Environmental Pollutants by Surface-Enhanced Raman Spectroscopy*, M. Potara, C. Farcau, I. Botiz, S. Astilean, contributed chapter in *Advanced Environmental Analysis: Applications of Nanomaterials, Volume 1*, eds. C. M. Hussain, B. Kharissov **Royal Society of Chemistry** (2017) 479-503, ISBN: 978-1-78262-144-7. ► indexed in WOS Core Collection (Accession Number: WOS:000415208700018)

► Patents

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