FARCĂU Cosmin-Adrian

LIST OF SCIENTIFIC PUBLICATIONS

► Doctoral thesis, published as a **book**:

Ordered Plasmonic Nanostructures: from Fabrication to Relevant Applications in Optical Spectroscopy and Sensing, GRIN Publishing GmbH Munich, ISBN (eBook) 978-3-656-91121-0; ISBN (Book) 978-3-656-91122-7.

► Book chapters

C. Farcau, S. Astilean, *Surface Enhanced Raman Scattering: Fundamentals and Biosensing Applications*, capitol in *Handbook on Enhanced Spectroscopies*, (Eds. Pietro Gucciardi, Nathalie Lidgi, Marc Lamy de la Chapelle), Pan Stanford Publishing, 2015, ISBN 9789814613323. (WoS)

M. Potara, C. Farcau, I. Botiz, S. Astilean, *Detection of environmental pollutants by surface-enhanced Raman spectroscopy*, capitol in *Advanced Environmental Analysis: Applications of Nanomaterials*, Eds. Chaudhery Mustansar Hussain and Boris Kharisov, Book Series: RSC Detection Science Series, Volume9, Page479-503. Royal Society of Chemistry 2017, Print ISBN: 978-1- 78262-144-7; ISSN2052-3068. (WoS, Article; Book Chapter)

► Articles in WoS-indexed, IF-journals

1. F. Toadere, D. Cuibus, I. Cardan, C. Farcău, *Camera-based colorimetric refractive index sensing using silver film over nanospheres (AgFoN) plasmonic substrates*, **Sens. Actuators A 2026**, accpeted.
2. D. Cuibus, I. Cârdan, N. Tosa, A. M. M. Gherman, C. Farcău, *Self-Assembly Route Controls Nanoscale Structural Order and SERS Sensing Performance in Ag Film-over-Nanosphere Plasmonic Substrates*, **ACS Appl. Nano Mat. 2026**, 9, 14177.
3. I. Cardan, A. Falamaș, D. Cuibus, V. Zani, R. Signorini, R. Pilot, C. Farcău, *Quasi-3D Sculpted Gold Film over Nanospheres (AuFoN) for Enhanced SERS Detection of Emerging Pollutants*, **Microchem. J. 2026**, 228, 118905.
4. A. Falamaș, I. Cardan, D. Cuibus, M. Stefan, C. Farcau, *Dye-Dependent Fluorescence Enhancement in ZnO Nanorod–Polymer Films: Excitation and Emission Contributions Probed by Time-Resolved Fluorescence*, **Appl. Spectrosc. 2026**, accepted.

5. A. Falamaș, A.M.M. Gherman, R. Vallée, C. Farcău, *Metasurface Engineering with Tantalum Pentoxide-Coated Microspheres: Tailoring Optical Resonances and Enhancing Local Density of States*, **ACS Appl. Opt. Mat. 2026**, 4, 1769.
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7. A. Falamaș, A.-S. Tatar, S. Boca, C. Farcău, *Plasmonic Nanosensors for EGFR Detection: Optimizing Aptamer-Based Competitive Displacement Assays*, **Biosensors 2025**, 15, 699.
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9. A. Falamaș, C. Farcău, *Plasmon-Enhanced Fluorescence of Polyvinylpyrrolidone-Embedded CdSeS/ZnS Quantum Dots on Gold Film over Nanospheres*, **Methods Appl. Fluoresc. 2025**, 13, 035003.
10. F. Nekvapil, C. Farcău, *The Role of Focused Laser Plasmonics in Shaping SERS Spectra of Molecules on Nanostructured Surfaces*, **Nanoscale Adv. 2025**, 7, 3008.
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13. F. Toadere, C. Farcău, *Plasmonic structurally colored surfaces with metal film over microsphere lattices*, **Opt. Mater. 2024**, 156, 115936.
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15. C. Farcau, *Linear Arrays of Metal-Coated Microspheres: a Polarization –Sensitive Hybrid Colloidal Plasmonic-Photonic Crystal*, **Eur. Phys. J. Plus 2023**, 138, 1000.
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