## Publication List (2004-present)

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**Number of publications: 52**
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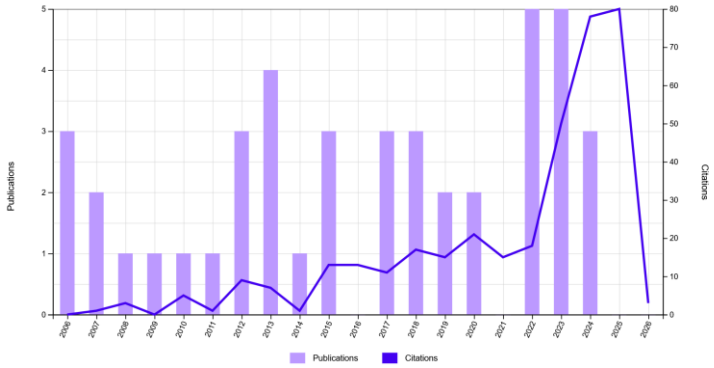


## ISI Papers

1. **N. Tosa**, N.E.Dina, B.I. Cozar, A. Coste, A. Halmagyi, M. Parvu, C.M. Muntean, "Structural Characterization of DNA from *Allium* Leaves and *E. coli* by Surface-Enhanced Raman Spectroscopy (SERS)", *Analytical Letters* **2025**, *58(14)*, 2533–2550. **IF 1.8** https://doi.org/10.1080/00032719.2024.2420343
2. A. Falamas, I. A. Brezestean, **N. Tosa**, S. Boca, C. Farcau, "A simple, rapid, and low-cost approach for colloidal nanoparticle-based surface enhanced Raman Scattering detection of endosulfan pesticide at trace levels", *Nano Express* **2024**, *5(4)*, 045006, 1-12. **IF 2.7** https://doi.org/10.1088/2632-959X/ad858f
3. V. P. Tosa, A. Ilie-Ene, S.- C. Tripon, A. Mesaros, R. Fechete, **N. Tosa**, A. Csapai, G. C. Dindelegan, C. O. Popa, "Electrospun Polymeric Fiber Systems Inoculated with Cyanoacrylate Tissue Adhesive: A Novel Hemostatic Alternative during Open Surgery", *Materials* **2024**, *17(17)*: 4318, 1-13. **IF 5.0** https://doi.org/10.3390/ma17174318
4. C. M. Muntean, D. Cuibus, S. Boca, A. Falamas, **N. Tosa**, I. A. Brezeştean, A. Bende, L. Barbu-Tudoran, R. Moldovan, E. Bodoki, C. Farcau, "Gold vs. Silver Colloidal Nanoparticle Films for Optimized SERS Detection of Propranolol and Electrochemical-SERS Analyses", *Biosensors* **2023**, *13(5)*, 530, 1-17. **IF 5.0** https://doi.org/10.3390/bios13050530
5. A. Falamas, D. Cuibus, **N. Tosa**, I. Brezestean, C. M. Muntean, K. Milenko, E. Vereshchagina, R. Moldovan, E. Bodoki, C. Farcau, "Toward microfluidic SERS and EC-SERS applications via tunable gold films over nanospheres", *Discover Nano (Nanoscale Research Letters)* **2023**, *18(73)*, 1-14. **IF 5.5** https://doi.org/10.1186/s11671-023-03851-3
6. E. Dinte, R. I. Iovanov, A. E. Bodoki, I. A. Colosi, H. A. Colosi, **N. Tosa**, O. Vostinaru, I. Tomuta, "Optimization of a Mucoadhesive Vaginal Gel Containing Clotrimazole Using a D-Optimal Experimental Design and Multivariate Analysis", *Polymers* **2023**; *15(9)*, 2023, 1-21. **IF 5.0** https://doi.org/10.3390/polym15092023
7. O. Grad, M. Dan, L. Barbu-Tudoran, **N. Tosa**, M. D. Lazar, G. Blanita, "MOF/Al2O3 composites obtained by immobilization of MIL-53(Cr) or MIL-101(Cr) on γ-alumina: Preparation and

characterization", *Microporous and Mesoporous Materials* **2023**, *353*, 112518, **IF 5.2** https://doi.org/10.1016/j.micromeso.2023.112518

8. A. Csapai, D. A. Toc, V. Pascalau, **N. Tosa**, S. Tripon, A. Ciorîță, R. M. Mihaila, B. Mociran, C. Costache, C. Popa, "Study of the Influence of the Dielectrophoretic Force on the Preferential Growth of Bacterial Biofilms in 3D Printed Microfluidic Devices", *Applied Sciences* **2023**; *13(1)*, 60, 1-13. **IF 2.7**. https://doi.org/10.3390/app13010060
9. D. A Toc, A. Csapai, F. Popa, C. Popa, V. Pascalau, **N. Tosa**, A. Botan, R. M. Mihaila, C.A. Costache, I. A. Colosi, L. M. Junie, "Easy and Affordable: A New Method for the Studying of Bacterial Biofilm Formation", *Cells* **2022**; *11(24)*:4119, 1-15. IF 6.0 https://doi.org/10.3390/cells11244119
10. A. Csapai, D. A. Toc, F. Popa, **N. Tosa**, V. Pascalau, C. Costache, A. Botan, C. O. Popa, "3D Printed Microfluidic Bioreactors Used for the Preferential Growth of Bacterial Biofilms through Dielectrophoresis", *Micromachines* **2022**, *13(9)*, 1377, 1-15. **IF 3.4** https://doi.org/10.3390/mi13091377
11. I. A. Brezestean, **N. Tosa**, A. Falamas, D. Cuibus, C. M. Muntean, A. Bende, B. Cozar, C. Berghian-Grosan, C. Farcău, "Silver Nanoparticle Films Obtained by Convective Self-Assembly for Surface-Enhanced Raman Spectroscopy Analyses of the Pesticides Thiabendazole and Endosulfan", *Frontiers in Chemistry* **2022**, *10*, 10:915337, 1-14. **IF 5.5** https://doi.org/10.3389/fchem.2022.915337
12. R. Moldovan, E. Vereshchagina, K. Milenko, B.-C. Iacob, A. E. Bodoki, A. Falamas, **N. Tosa**, C. M. Muntean, C. Farcău, E. Bodoki, "Review on combining surface-enhanced Raman spectroscopy and electrochemistry for analytical applications", *Analytica Chimica Acta* **2022**, *1209*, 339250, 1-25. **IF 6.2** https://doi.org/10.1016/j.aca.2021.339250
13. C. M. Muntean, N. E. Dina, M. Coroş, **N. Toşa**, A. I. Turza and M. Dan, "Graphene/silver nanoparticles-based surface-enhanced Raman spectroscopy detection platforms: Application in the study of DNA molecules at low pH", *Journal of Raman Spectroscopy* **2019**, *50(12)*, 1849-1860. **IF 2.809**, https://doi.org/10.1002/jrs.5722,
14. C. M. Muntean, T.-L. Biter, I. Bratu, **N. Toşa** "Metallic surface dynamics of genomic DNA and its nitrogenous bases: SERS assessment and theoretical considerations", *Journal of Molecular Modeling* **2019**, *25 (6)*: 162, 1-8. **IF 1.507** https://doi.org/10.1007/s00894-019-4039-y
15. A. M. M. Gherman, **N. Tosa**, M. V. Cristea, V. Tosa, S. Porav, P. S. Agachi, „Artificial neural networks modeling of the parameterized gold nanoparticles generation through photo-induced process", *Materials Research Express* **2018**, *5(8)*, 085011, 1-13. **IF 1.449** https://doi.org/10.1088/2053-1591/aad0d5
16. A. M. M. Gherman, **N. Tosa**, D. N. Dadarlat, V. Tosa, M. V. Cristea, P. S. Agachi, „Temperature dynamics of laser irradiated gold nanoparticles embedded in a polymer matrix", *Thermochimica Acta* **2017**, *656*, 25-31. **IF 2.189** https://doi.org/10.1016/j.tca.2017.08.008
17. A. Falamas**, N. Tosa**, V. Tosa, "Measuring the frequency chirp of white-light continuum in a pump-probe system", *Journal of Optoelectronics and Advanced Materials* **2017**, *5-6*, 291-297. **IF 0.39** https://www.researchgate.net/publication/319351073_Measuring_the_frequency_chirp_of_white-light_continuum_in_a_pump-probe_system
18. E. Pavel, S. Jinga, B. S. Vasile, A. Dinescu, R. Trusca, **N. Tosa**, „3D direct laser writing of Petabyte Optical Disk", *Optics and Laser Technology* **2015,** *71*, 45-49. **IF 1.649** https://doi.org/10.1016/j.optlastec.2015.02.011
19. A. Falamas, **N. Tosa**, V. Tosa, "Dynamics of laser excited colloidal gold nanoparticles functionalized with cysteine derivatives" *Journal of Quantitative Spectroscopy and Radiative Transfer* **2015**, *162*, 207-212. **IF 2.600** https://doi.org/10.1016/j.jqsrt.2015.03.011

20. E. Pavel, S. Jinga, B. S. Vasile, A. Dinescu, V. Marinescu, R. Trusca, **N. Tosa**, „Quantum Optical Lithography from 1 nm resolution to pattern transfer on silicon wafer", *Optics and Laser Technology* **2014,** *60*, 80-84. **IF 1.649** https://doi.org/10.1016/j.optlastec.2014.01.016
21. E. Pavel, S. Jinga, E. Andronescu, B.S. Vasile, G. Kada, A. Sasahara, **N. Tosa**, A. Matei, M. Dinescu, A. Dinescu, O.R. Vasile, "2 nm Quantum Optical Lithography", *Optics Communication* **2013**, *291*, 259-263. **IF 1.542** https://doi.org/10.1016/j.optcom.2012.10.079
22. S. Neamtu, **N. Tosa,** M. Bogdan, "Spectroscopic investigation of tolmetin interaction with human serum albumin", *J. Pharmaceutical and Biomedical Analysis* **2013,** *85*, 277-282. **IF 2.829** https://doi.org/10.1016/j.jpba.2013.07.032
23. L. Buimaga-Iarinca, C. Morari, **N. Tosa**, "Adsorption of cysteine on gold (111) surfaces: a DFT study", *European Biophysics Journal with Biophysics Letters* **2011**, 40 (Suppl. 1), 103-103. **IF 2.139** https://doi.org/10.1007/s00249-011-0734-z
24. C. Varodi, **N. Tosa**, E. Bogdan, I. Grosu, L. M. Muresan, I. Turcu, „Novel Carbon Paste Selective Material for Potassium Detection", *Optoelectronics and Advanced Materials - Rapid Communications* **2010,** *4(11),* 1724-1727**. IF 0.477** https://oam-rc.inoe.ro/articles/novel-carbon-paste-selective-material-for-potassium-detection/fulltext
25. **N. Tosa**, A. Bende, R. A. Varga, A. Terec, I. Bratu, I. Grosu, „H-Bond-Driven Supramolecular Architectures of the Syn and Anti Isomers of the Dioxime of Bicyclo[3.3.1]nonane-3,7-dione"**,** *Journal of Organic Chemistry* **2009,** *74,* 3944-3947. **IF 3.952** https://doi.org/10.1021/jo900484v
26. **N. Tosa**, G. Vitrant, P. L. Baldeck, O. Stephan, I. Grosu, "Fabrication of 3D Metallic Micro/nanostructures by Two-Photon Absorption", *Journal of Optoelectronics and. Advanced Materials* **2008**, *10*(*9),* 2199-2204. **IF 0.577** https://old.joam.inoe.ro/index.php?option=magazine&op=view&idu=590&catid=8
27. **N. Tosa**, G. Vitrant, P. L. Baldeck, O. Stephan, S. Astilean, I. Grosu**, "**Two-photon laser deposition of gold nanowires"*, Journal of Optoelectronics and Advanced Materials* **2007***, 9(3), 641-645.* **IF 0.827** https://old.joam.inoe.ro/index.php?option=magazine&op=view&idu=590&catid=8
28. J. Bosson-Ehoomann, A. Mihut, **N. Tosa**, S. Astilean, M. Pierre, C. Rambaud, L. Vurth, P. Baldeck, O. Stephan, **"**Two -Photon Fabrication of Metallic Nanowires for Plasmonics**"**, *Nonlinear Optics, Quantum Optics* **2006**, *35(1-3)*,195-200. **IF 0.478** https://www.oldcitypublishing.com/journals/nlogo-home/nlogo-issue-contents/nlogo-volume-35-number-1-3-2006/

## Papers in ISI Indexed volumes

1. F. Toadere, **N. Tosa**, A. S. Porav, „Quality Enhancement of the SEM Images", IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR), Cluj-Napoca, Romania **2022**, 1-4 http://dx.doi.org/10.1109/aqtr55203.2022.9801911
2. **N. Tosa,** F. Toadere, "Enhancement of the optical polarization effect on the SPR response in gold micro/nanoparticles imaging", *Proc._SPIE*, Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies X **2020**, *11718*, 117181Y, 1-5. https://doi.org/10.1117/12.2571242
3. F. Toadere, **N. Tosa**, „Enhancement of the raw OCT image quality", *AIP Conf. Proceedings* **2020**, *2206*, 040002, 1-4. https://doi.org/10.1063/5.0000303
4. **N. Tosa**, F. Toadere, „Investigation of optical properties of periodically arranged gold nanostructured patterns in transparent polymer films", *Proc. SPIE, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies IX* **2018**, *10977*, 109770O, 1-4; https://doi.org/10.1117/12.2323971
5. F. Toadere, **N. Tosa** „Noise removal from raw OCT images achieved using an OCT system

operating in the bandwidth 827 nm-873 nm", *Proc. SPIE, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies IX*, **2018**, *10977*, 109770N, 1-4; http://dx.doi.org/10.1117/12.2323488

6. P. Farago, R. Galatus, C. Farcas, G. Oltean, **N. Tosa**, „Low-cost Quasi-distributed Position Sensing Platform based on Blue Fluorescent Optical Fiber", *IEEE 23rd International Symposium For Design and Technology in Electronic Packaging (Siitme)* **2017**, 328-331. 10.1109/SIITME.2017.8259918
7. C. D. Tudoran, D. N. Dadarlat, **N. Tosa**, I. Misan, „High Performance Protection Circuit for Power Electronics Applications", *AIP Conf. Proceedings* **2015**, *1700*, 050007 1-5. http://dx.doi.org/10.1063/1.4938445
8. **N. Tosa**, F. Toadere, C. Hojbota, V.Tosa, "Laser-induced metallic nanograined thin films processing" *AIP Conf. Proceedings* **2013**, *1565*, 179-184. **ISSN 1551-7616** https://doi.org/10.1063/1.4833723
9. F. Toadere, **N. Tosa "**Spectral characterization of the Rhodamine 6G thin films effect on the color image" *AIP Conf. Proceedings* **2013**, *1565*, 263-268. **ISSN 1551-7616** https://doi.org/10.1063/1.4833741
10. F. Toadere, **N. Tosa**, "Functioning of the Protective UV Filters Based on Gold Nanoparticles", *AIP: Conf. Proceedings* **2012**, *1425*, 93-97. **ISSN 1551-7616** https://doi.org/10.1063/1.3681975
11. **N. Tosa,** Z. Moldovan, I. Bratu, "Simultaneous Determination of Some Artificial Sweeteners in Ternary Formulations by FT-IR and EI-MS", *AIP: Conf. Proceedings* **2012**, *1425*, 98-101. **ISSN 1551-7616** https://doi.org/10.1063/1.3681976
12. L. Buimaga-Iarinca, **N. Tosa**, "*DFT study of cysteine adsorption on gold defect surfaces*", *AIP: Conf. Proceedings* **2012**, *1425*, 22-25. **ISSN 1551-7616** https://doi.org/10.1063/1.3681957
13. **N. Tosa**, L. Olenic, I. Bratu, R. Turdeanu, I. Turcu, "Infrared and UV-Vis Spectroscopic Study of 3,7,10-Substituted-Phenothiazine Derivatives Adsorbed on Gold Nanoparticles"*, J. Phys.: Conf. Ser.* **2009**, *182,* 012019, 1-5. **ISSN 1742-6596.** https://doi.org/10.1088/1742-6596/182/1/012019
14. G. Vitrant, J. Bosson, **N. Tosa**, T. Rosenzveig, O. Stephan, S. Astilean, P.L. Baldeck, "Observation of optical dispersion effects in metallic nanostructure s fabricated by laser illumination of an organic polymer matrix doped with metallic salts" *Proc. SPIE* **2007***, 6470*, *64700O, 1-6.* **ISSN 0277-786x.** https://doi.org/10.1117/12.705881
15. **N. Tosa**, J. Bosson, M. Pierre, C. Rambaud, M. Bouriau, G. Vitrant, O. Stephan, S. Astilean, P. L. Baldeck, "Optical properties of metallic nanostructures fabricated by two-photon induced photoreduction", *Proc. SPIE* **2006***, 6195*, 619501, 1-8. **ISSN 0277-786x.** https://doi.org/10.1117/12.663696

## Papers (non-ISI)

1. H. Nuszer, A. Calugar, A. D. Costin, U. Hakl, M.Gorgan, **N. Tosa**, I. Oltean**,** "Monitoring Thrips setosus Population Using Colored Panels and the Berlese-Tullgren Method", *ProEnvironment* **2025**, 18(61), 20–40 **ISSN 2066-1363**
2. A. Scrob, J.-L. Auguste, R. Galatus, L. Szolga, **N. Tosa**, „Design for sensor based on suspended core microstructured optical fiber", *Acta Technica Napocensis Electronics and Telecommunications* **2017**, *58(3)*, 7-10. **ISSN 1221-6542**.
3. A. Falamas, **N. Tosa**, V. Tosa "Dynamics of laser excited nanoparticles conjugated with cysteine"

*Proceeding of the 10th International Conference on Laser-light and Interactions with Particles*, **2014**, MT-5.1-5.3, (F. Onofri and B. Stout eds., Aix-Marseille University, Marseille, 2014) **ISBN: 978-2-9548080-0-0**.

4. 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 & Photonics* **2009**, 3-8. **ISSN 0277-786x**.

5. **N. Tosa**, J. Bosson, G. Vitrant, P. Baldeck, O. Stephan, "Fabrication of metallic nanowires by two-photon absorption" *Scientific Study&Research-Chemistry&Chemical Engineering* **2006**, *VII(4)*, 899-904. **ISSN 1582-540x.**

6. A. Mihis, **N. Tosa**, L. Drule, "Synthesis of Some Compounds having 1,3-Dioxane Rings with Liquid-Crystalline Properties", *Scientific Bulletin of North University of Baia-Mare* **2005,** *XIX(D)*, 185-192. **ISSN 1582-0548**

7. **N. Tosa**, A. Bende, I. Bratu, I. Grosu, "Theoretical Modeling and Experimental Study of Intramolecular Hydrogen-bond in Tetramethyl 3,7-dihydroxybicyclo[3.3.1]nona-2,6-diene-2,4,6,8-tetracarboxylate", *Studia Univ. Babes-Bolyai,Chemia* **2005**, *L( 2)*, 157-162**. ISSN 2065-9520**.

8. **N. Tosa**, A. Bende, S. Panzaru, I. Grosu, E. Surducan, "Structure and Vibrational Spectra of Tetramethyl 3,7-Dihydroxybicyclo[3.3.1.]nona-2,6-diene-2,4,6,8-tetracarboxylate and Bicyclo[3.3.1]nonane-3,7-dione", *Studia Univ. Babes-Bolyai, Physica* **2004**, *XLIV (3)*, 289-292. ISSN 0370-8578

## Book Chapters

**1**. F. Toadere, **N. Tosa**, M. E. Badea, A. Miron, V. Cebotari, R. Chifor, "Improvement of the *in vitro* pig mandible images quality recorded by an OCT handheld in 1200-1400 nm infrared domain: A preliminary study", *Vlad S., Roman N.M. (eds) 7th International Conference on Advancements of Medicine and Health Care through Technology. MEDITECH 2020. IFMBE Proceedings, Springer, Cham.* 2022, vol 88., 143-150. https://doi.org/10.1007/978-3-030-93564-1_16

## Patents

**1.** C.D. Tudoran, M.C. Tudoran, V. Surducan, E. Surducan, D. Dadârlat, **N.I. Toşa**, „Reactor cu plasmă rece pentru obţinerea combustibilului tip biodisel prin reactie indusa de efectul plasmei reci produse la inalta frecventa" (Cold plasma reactor for preparing biodiesel fuel based on reaction assisted by effects of high-frequency cold plasma), Patent **RO131043B1**, 29.04.2021

**2.** C.D. Tudoran, M.V. Stefan, **N.I. Toşa**, I.O. Pană, G.S. Macavei, "Instalatie automata pentru purificarea avansata a apei potabile cu nanoparticule magnetice si plasma rece" ("Automatic installation for advanced purification of drinking water with magnetic nanoparticles and cold plasma") Patent **RO131867B1**,30.12.2024

**3.** C. M. Varodi, C.D. Tudoran, M. Coros, **N. I. Tosa**, R. C. Suciu," Reactor pentru obţinerea rapidă a grafenelor prin exfolierea electrochimică în plasmă a grafitului" Patent pending: RO-A00441 (**a 2023 00441**), 05.10.2023

**4. N.I. Tosa**, A. Falamas, S.-C.Tripon, D.C. Cuibus, C.-A. Farcau, R. Moldovan, B.-C. Iacob, E. Bodoki, K. Milenko-Kuszewska, E. Vereshchagina, "Electrodepunere directionata de micro/ nanostructuri plasmonice de tip emisfere negative interconectate în retea pe electrozi de aur pentru aplicacatii (EC-

)SERS" ("Template-directed electrodeposition of plasmonic micro/nanostructured interconnected hemisphere-voids lattice on gold electrodes for (EC-)SERS applications") Patent application: RO-A00225 (**a 2024 00225**), 29.04.2024; Published as: RO138633A0, 28.02.2025.