

Laboratory of surface chemistry and catalysis

2022

Lucrări publicate în reviste clasificate ISI/ Scientific Papers in ISI ranked journals

1. S. Avramescu, C. D. Ene, **M. Ciobanu**, J. Schnee, F.Devred, I. Bucur, E. Vasile, L. Colaciello, R. Richards, E. Gaigneaux, M. Verziu, Nanocrystalline rhenium-doped TiO₂: an efficient catalyst in the one-pot conversion of carbohydrates into levulinic acid. The synergistic effect between Bronsted and Lewis acid sites, *Catalysis Science & Technology*, 12, 167-180, 2022, IF= 6.177
2. A. Stanoiu, C. Ghica , C. G. Mihalcea, D. Ghica, **S. Somacescu** , O.G. Florea, C. E. Simion, Effects of Calcination Temperature on CO-Sensing Mechanism for NiO-Based Gas Sensors *Chemosensors* 10(5), 191; 2022, IF= 4.229
3. **G. Petcu**, E. M. Anghel, E. Buixaderas, I. Atkinson, **S. Somacescu**, A. Baran, D. Culita, B. Trica, C. Bradu, **M. Ciobanu**, **V. Parvulescu**, Au/Ti Synergistically Modified Supports Based on SiO₂ with Different Pore Geometries and Architectures. *Catalysts* 12, 1129, 2022, , IF= 4.501
4. G. Paun, E. Neagu, **V. Parvulescu**, **M. Anastasescu**, S. Petrescu, C. Albu, G. Nechifor, G.L. Radu, New Hybrid Nanofiltration Membranes with Enhanced Flux and Separation Performances Based on Polyphenylene Ether-Ether- Sulfone/Polyacrylonitrile/SBA-15, *Membranes* 12, 689. 2022, IF=4.562
5. R. Bucuresteanu, M. Ionita, **V. Chihaiia**, A. Ficai, R.-D. Trusca, C.-I. Ilie , A. Kuncser, A.-M. Holban, G. Mihaescu, **G. Petcu**, A. Nicolaev, R. M. Costescu, M. Husch, **V. Parvulescu**, L.M. Ditu, Antimicrobial Properties of TiO₂ Microparticles Coated with Ca- and Cu-Based Composite Layers, *Int. J. Mol. Sci.*, 23, 2022, IF= 6.208
6. C.S. Stoicescu, D. Culita, N. Stanica, **F. Papa**, **R.N. State**, G. Munteanu, Temperature programmed reduction of a core-shell synthetic magnetite: Dependence on the heating rate of the reduction mechanism, *Thermochimica Acta* 709, 179146, 2022, IF=3.378
7. L. Ilieva, D. Dimitrov, E. Kolentsova, A. Maria Venezia, D. Karashanova, G. Avdeev, P. Petrova, **R. State**, T. Tabakova, Gold-Based Catalysts for Complete Formaldehyde Oxidation: Insights into the Role of Support Composition, *Catalysts* 12 (7), 705, 2022, IF=4.501
8. R.G. State, J.K.F. van Staden, **R.N. State**, **F. Papa**, Rapid and sensitive electrochemical determination of tartrazine in commercial food samples using IL/AuTiO₂/GO composite modified carbon paste electrode, *Food Chemistry* 385, 132616, 2022, IF=9.231
9. I.R. Comnea-Stancu, J.K.F. van Staden, R.I. S.-van Staden, **R.N. State**, Simultaneous determination of anthracene and phenanthrene using a poly-alizarin red S/carbon paste electrode, *Chemosphere*, 136909, 2022, IF=8.943
10. V. Purcar, V. Raditoiu, F. M. Raduly, A. Raditoiu, **M. Anastasescu**, M. Popa, S. S. Caprarescu, R. Ažomoghi, G. C. Ispas, Physicochemical and Morphological Properties of Hybrid Films Containing Silver-Based Silica Materials Deposited on Glass Substrates, *Coatings* 12(2), 242, 2022, IF= 3.236

11. V. Purcar, V. Raditoiu, A. Raditoiu, F.M. Raduly, S. Caprarescu, G.C. Ispas, C.A. Nicolae, **M. Anastasescu**, Structural, morphological and optical properties of the thin films based on silver-silica materials, *Romanian J. Phys.*, 67, 603, 2022, IF=1.662
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13. E. Chifor, I. Bordeianu, **C. Anastasescu, J.M. Calderon-Moreno, V. Bratan, D.-I. Eftemie, M. Anastasescu, S. Preda, G. Plavan, D. Pelinescu, R. Ionescu, I. Stoica, M. Zaharescu, I. Balint**, Bioactive coatings based on nanostructured TiO₂ modified with noble metal nanoparticles and lysozyme for Ti dental implants, *Nanomaterials*, 12, 3186, 2022, IF= 5.719
14. E. Goncarenco, I.P. Morjan, E. Dutu, M. Scarisoreanu, C. Fleaca, L. Gavrilă-Florescu, F. Dumitrache, A.M. Banici, V.S. Teodorescu, **C. Anastasescu, A. Sandulescu, I. Balint**, The effect of noble metal addition on the properties of oxide semiconductors nanoparticles, *Journal of Solid State Chemistry*, 307, 122817, 2022, IF=3.656
15. C-R. Dumitrescu, V-A. Surdu, **H. Stroescu, A-I. Nicoara, I.A. Neacsu, R. Trusca, E. Andronescu, L.T. Ciocan**, Alkali niobate powder synthesis using an emerging microwave-assisted hydrothermal method, *Materials*, 15, 5410, 2022, IF= 3.748
16. **M. Gartner, M. Anastasescu, H. Stroescu, J. M. Calderon-Moreno, S. Preda, O.-G. Simionescu, A. Avram, O. Buiu**, Evolution of physical properties during nanocrystalline graphene film formation, *Coatings*, 12(9), 1274, 2022, IF=3.236
17. **M. Gartner, M. Anastasescu, J. M. Calderon Moreno, H. Stroescu, M. Nicolescu, C. Hornoiu, S. Preda, L. Predoana, M. Covei, V.-A. Maraloiu, V. S. Teodorescu, C. Moldovan, P. Petrik, M. Zaharescu**, Multifunctional Zn-doped ITO sol-gel films deposited on different substrates. Application as CO₂ sensing material, *Nanomaterials*, 12, 3244, 2022, IF= 5.719
18. S. Simeonov, A. Szekeres, D. Spassov, **M. Anastasescu, I. Stanculescu, M. Nicolescu, E. Aperathitis, M. Modreanu, M. Gartner**, Investigation of the effects of Rapid Thermal Annealing on the electron transport mechanism in nitrogen-doped ZnO thin films grown by RF Magnetron Sputtering, *Nanomaterials*, 12(1), 19, 2022, IF= 5.719
19. **M. Nicolescu, D. Mitrea, C. Hornoiu, S. Preda, H. Stroescu, M. Anastasescu, J. M. Calderon-Moreno, L. Predoana, V.S. Teodorescu, V.-A. Maraloiu, M. Zaharescu, M. Gartner**, Structural, optical and sensing properties of Nb-doped ITO thin films deposited by sol-gel method, *Gels*, 8, 717. 2022, IF=4.432
20. **G. Petcu, G. Dobrescu, I. Atkinson, M. Ciobanu, J.L. Blin, V. Parvulescu**, Evolution of Morphology, Fractal Dimensions, and Structure of (Titanium) Aluminosilicate Gel during Synthesis of Zeolites Y and Ti-Y, *Fractal Fract.* 6, 663, 2022, IF= 3.577
21. M. Popa, A. Cursaru, **V. Popa, A. Munteanu, B. Serban, B. Cretu, S. Iordache, C.G. Smarandache, C. Orban, C. Cîrstoiu**, Understanding orthopedic infections through a different perspective: Microcalorimetry growth curves, *Experimental and Therapeutic Medicine*, 23(4), 1-6, 2022, IF=2.751
22. **A. M. Toader, M. C. Buta, A. Mischie, M. V. Putz, F. Cimpoesu**, The Density Functional Theory account of interplaying long-range exchange and dispersion effects in

supramolecular assemblies of aromatic hydrocarbons with spin, *Molecules*, 27, 45, 2022, IF=4.927

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24. V. Chihaiia, M. Ghinea, S. Chihaiia, A. Neacsu, Mathematical Chemistry Approaches for Computer-Aid Design of Free-Shaped Structures in Architecture and Construction Engineering, *Mathematics*, 10(23), 4415, 2022, IF=2.592

25. O.K. Le, V. Chihaiia, P. T. Hong Hoa, P.T. Haia, D. N. Son, Physical insights into the Au growth on the surface of a LaAlO₃/SrTiO₃ heterointerface, *RSC Adv.*, 12, 24146-24155, 2022, IF=4.036

26. A.M. Toader, I. Dascalu, M. Enache, Effect of SDS micelles on actinomycin D- DNA complexes, *Acta Chimica Slovenica*, 69, 331-335, 2022, IF=1.735

Lucrări publicate în reviste clasificate Non- ISI/ Scientific Papers in Non- ISI ranked journals

1. M. Gartner, IR-VASE at the Institute of Physical Chemistry of the Romanian Academy of Sciences, Bucharest, *Spectrum, International Edition-Materials Science*, 38, June 2022

2. N. T. X. Huynh, V. Chihaiia, D.N. Son, Insights into Interaction of CO₂ with N and B-doped Graphenes, *Communications in Physics*, 32(3), 243, 2022

3. D.A. Neacsu, V. Chihaiia, V. Alexiev, D.G. Angelescu, Surface energies for the alpha polymorph of the magnesium hydride, *Alternative Energy Sources, Materials & Technologies (AESMT 22)*, Volume 4, (pp. 77-78) 2022 *Alternative Technologies, Hydrogen Energy*

4. S. Minkovska, G. B. Hadjichristov, A. Neacsu, V. Chihaiia, Y. V. Fedorov, Photoswitchable photochromic fluorescent spirooxazine derivative for metal ions sensing: Photophysical properties and quantum-chemical calculations, *Proceedings - State of the Art in Functional Materials & Technologies August 29th - September 2nd, 2022 Varna, Bulgaria*

5. V. T. Popa, Ilie Murgulescu Institute of Physical Chemistry of the Romanian Academy, *Noesis, TOME I (XLI), NO. 1-2, 113-122, 2022*