

Lista lucrări publicate în 2020:

1. *Novel Ecogenic Plasmonic Biohybrids as Multifunctional Bioactive Coatings*, M. E. Barbinta-Patrascu, C. Ungureanu, N. Badea, M. Bacalum, A. Lazea-Stoyanova, I. Zgura, C. Negrila, M. Enculescu, C. Burnei, **Coatings** **10**, 659 (2020). **JIF: 2.436; AIS: 0.376.**
2. *Towards a Correlation between Structural, Magnetic and Luminescence Properties of CeF₃:Tb³⁺ Nanocrystals*, C. Bartha, C. Secu, E.a Matei, C. Negrila, A. Leca, M. Secu, **Materials** **13**, 2980 (2020). **JIF: 3.057; AIS: 0.543.**
3. *Influence of Reduced Graphene Oxide on the Electropolymerization of 5-Amino-1-naphthol and the Interaction of 1,4-Phenylene Diisothiocyanate with the Poly(5-Amino-1-naphthol)/Reduced Graphene Oxide Composite*, M. Baibarac, M. Daescu, M. Socol, C. Bartha, C. Negrila, S. N. Fejer, **Polymers** **12**, 1299 (2020). **JIF: 3.426; AIS: 0.545.**
4. *Highly Active Transition Metal-Promoted CuCeMgAlO Mixed Oxide Catalysts Obtained from Multicationic LDH Precursors for the Total Oxidation of Methane*, H. Mahdi S. Al-Aani, M. M. Trandafir, I. Fechete, L. N. Leonat, M. Badea, C. Negrilă, I. Popescu, M. Florea, I.-C. Marcu, **Catalysts** **10**, 613 (2020). **JIF: 3.520; AIS: 0.584.**
5. *Development of Cerium-Doped Hydroxyapatite Coatings with Antimicrobial Properties for Biomedical Applications*, D. Predoi, S. L. Iconaru, M. V. Predoi, A. Groza, S. Gaiaschi, K. Rokosz, S. Raaen, C. C. Negrila, A.-M. Prodan, A. Costescu, M. L. Badea, P. Chapon, **Coatings** **10**, 516, (2020). **JIF: 2.436; AIS: 0.376.**
6. *Strategy for Modifying Layered Perovskites toward Efficient Solar Light-Driven Photocatalysts for Removal of Chlorinated Pollutants*, M. Raciulete, F. Papa, C. Negrila, V. Bratan, C. Munteanu, J. Pandele-Cusu, D. C. Culita, I. Atkinson, I. Balint, **Catalysts** **10**, 637 (2020). **JIF: 3.520; AIS: 0.584.**
7. *Influence of boric acid concentration on the properties of electrodeposited CZTS absorber layers*, M. Y. Zaki, K. Nouneh, M. Ebn Touhami, E. Matei, P. Badica, M. Burdusel, C. C. Negrila, M. Baibarac, L. Pintilie, A. C. Galca, **Physica Scripta** **95**, 054001 (2020). **JIF: 1.985; AIS: 0.502.**
8. *Cytotoxicity, Antioxidant, Antibacterial, and Photocatalytic Activities of ZnO-CdS Powders*, I. Zgura, N. Preda, M. Enculescu, L. Diamandescu, C. Negrila, M. Bacalum, C. Ungureanu, M. E. Barbinta-Patrascu, **Materials** **13**, 182 (2020). **JIF: 3.057; AIS: 0.543.**
9. *Surface states mediated charge transfer in redox behavior of hemin at GaAs(100) electrodes* M. Enache, C. Negrila, V. Lazarescu, **RSC Advances** **10**, 12318 (2020). **JIF: 3.119; AIS: 0.515.**
10. *Photoluminescence as a Complementary Tool for UV-VIS Spectroscopy to Highlight the Photodegradation of Drugs: A Case Study on Melatonin*, M. Daescu, N'ghaya Toulbe, M. Baibarac, A. Mogos, A. Lőrinczi, C. Logofatu, **Molecules** **25**, 3820 (2020). **JIF: 3.267; AIS: 0.599.**
11. *Laser synthesis of TiO₂-carbon nanomaterial layers with enhanced photodegradation efficiency towards antibiotics and dyes*, R. Ivan, A. Pérez del Pino, I. Yousef, C. Logofatu, E. György, **Journal of Photochemistry & Photobiology A: Chemistry** **399**, 112616 (2020). **JIF: 3.306; AIS: 0.453.**

12. *Carbon-based nanomaterials and ZnO ternary compound layers grown by laser technique for environmental and energy storage applications*, R. Ivan, C. Popescu, A. Pérez del Pino, C. Logofatu, E György, **Applied Surface Science** **509**, 145359 (2020). **JIF: 6.182; AIS: 0.772.**
13. *SiGe nanocrystals in SiO₂ with high photosensitivity from visible to short-wave infrared*, I. Stavarache, C. Logofatu, M. Taha Sultan, A. Manolescu, H. G. Svavarsson, V. S. Teodorescu, M. L. Ciurea, **Scientific Reports** **10**, 3252 (2020). **JIF: 3.998; AIS: 1.261.**
14. *TiO₂/Fe₂O₃ photoanodes for solar water oxidation prepared via electrodeposition of amorphous precursors*, E. Vasile, M. Sima, A. Sima, C. Logofatu, **Materials Research Bulletin** **121**, 110623 (2020). **JIF: 4.019; AIS: 0.463.**
15. *The interplay of work function and polarization state at the Schottky barriers height for Cu/BaTiO₃ interface*, D. G. Popescu, M. A. Husanu, C. Chirila, L. Pintilie, C. M. Teodorescu, **Applied Surface Science** **502**, 144101(1–7) (2020). **JIF: 6.182; AIS: 0.772.**
16. *Resistance hysteresis in atomic layers of carbon synthesized on ferroelectric (001) lead zirconate titanate in ultrahigh vacuum*, N. G. Apostol, D. Lizzit, G. A. Lungu, P. Lacovig, C. F. Chirilă, L. Pintilie, S. Lizzit, C. M. Teodorescu, **RSC Advances** **10**, 1522–1534 (2020). **JIF: 3.119; AIS: 0.515.**
17. *Degenerated TiO₂ semiconductor modified with Ni and Zn as efficient photocatalysts for photocatalytic water splitting reaction*, F. Neațu, L. E. Abramiuc, M. M. Trandafir, R. F. Negrea, M. Florea, C. M. Teodorescu, Ș. Neațu, **ChemCatChem**, DOI: 10.1002/cctc.202000691 (2020). **JIF: 4.853; AIS: 0.983.**
18. *Mechano-chemical versus co-precipitation for the preparation of Y-modified LDHs for cyclohexene oxidation and Claisen-Schmidt condensations*, O. D. Pavel, A.-E. Stamate, R. Zăvoianu, I. C. Bucur, R. Bîrjega, E. Angelescu, V. I. Pârvulescu, **Applied Catalysis A, General** **605**, 117797 (2020). **JIF: 5.006; AIS: 0.796.**
19. *Nanometer-thick films of antimony oxide nanoparticles grafted on defective graphenes as heterogeneous base catalysts for coupling reactions*, A. Simion, N. Candu, B. Cojocaru, S. Coman, C. Bucur, A. Forneli, A. Primo, I. C. Man, V. I. Parvulescu, H. Garcia, **Journal of Catalysis** **390**, 135–149 (2020). **JIF: 7.888; AIS: 1.564.**
20. *Exploring the effect of aliovalent substitution of Pb²⁺ by Eu³⁺ on structural, morphological and optical properties of CH₃NH₃PbI₃ perovskite films*, S. Derbali, K. Nouneh, M. Florea, F. Neatu, S. Neatu, L. Leonat, M. Secu, A. Tomulescu, V. Stancu, L. Pintilie, M. Ebn Touhami, A.-C. Galca, **Physica Scripta** **95**, 044003 (2020). **JIF: 1.985; AIS: 0.502.**
21. *Undoped SnO₂ as a Support for Ni Species to Boost Oxygen Generation through Alkaline Water Electrolysis*, S. Neatu, F. Neatu, V. C. Diculescu, M. M. Trandafir, N. Petrea, S. Somacescu, F. Krumeich, J. Wennmacher, A. Knorpp, J. van Bokhoven, M. Florea, **ACS Applied Materials & Interfaces** **12**, 18407–18420 (2020). **JIF: 8.758; AIS: 1.685.**
22. *Highly Efficient Ultra-low Pd Loading Supported on MAX Phases for Chemoselective Hydrogenation*, M. M. Trandafir, F. Neatu, I. Chirica, S. Neatu, A. Kuncser, E. Cucolea, V. Natu, M. Barsoum, M. Florea, **ACS Catalysis** **10**, 5899–5908 (2020). **JIF: 12.350; AIS: 3.003.**

23. *Influence of doping the inorganic cation with Eu or Sb on the properties of perovskite films*, V. Stancu, L. Leonat, A. Tomulescu, S. Derbali, L. Pintilie, C. Besleaga, A.-C. Galca, F. Neatu, S. Neatu, M. Florea, I. Pintilie, **Physica Scripta** **95**, 075707 (2020). **JIF: 1.985; AIS: 0.502.**
24. *CeO₂:Mn₃O₄ catalytic micro-converters tuned for CH₄ detection based on catalytic combustion under real operating conditions*, C. E. Simion, O. G. Florea, M. Florea, F. Neatu, S. Neatu, M. M. Trandafir, A. Stanoiu, **Materials** **13**, 2196 (2020). **JIF: 3.057; AIS: 0.543.**
25. *VAIPOs as Efficient Catalysts for Glycerol Conversion to Methanol*, G. Mitran, F. Neatu, S. Neatu, M.M. Trandafir, M. Florea, **Catalysts** **10**, 728 (2020). **JIF: 3.520; AIS: 0.584.**
26. *Crown-ether functionalized graphene oxide for metal ions sequestration*, S. Petrescu, S. Avramescu, A. M. Musuc, F. Neatu, M. Florea, P. Ionita, **Materials Research Bulletin** **122**, 110643 (2020). **JIF: 4.019; AIS: 0.463.**
27. *Highly active transition-metal-promoted CuCeMgAlO mixed oxide catalysts obtained from multicationic LDH precursors for the total oxidation of methane*, H. M. S. Al-Aani, M. M. Trandafir, I. Fechet, L. N. Leonat, M. Badea, C. Negrila, I. Popescu, M. Florea, I.-C. Marcu, **Catalysts** **10**, 613 (2020). **JIF: 3.520; AIS: 0.584.**
28. *Electron-polaron dichotomy of charge carriers in perovskite oxides*, M. A. Husanu, L. Vistoli, C. Verdi, A. Sander, V. Garcia, J. Rault, F. Bisti, L. L. Lev, T. Schmitt, F. Giustino, A. S. Mishchenko, M. Bibes, V. N. Strocov, **Communications Physics** **3**, 62 (2020). **JIF: 4.684; AIS: 1.960.**
29. *Polarization-dependent magnetism of the Ni/BaTiO₃ interface*, A. E. Bocirnea, D. G. Popescu, C. Chirila, R. M. Costescu, V. Kuncser, V. Stancu, L. Trupina, I. Pasuk, A. M. Vlaicu, M. A. Husanu, **Physical Review Materials** **4**, 034402 (2020). **JIF: 3.337; AIS: 1.154.**
30. *Magnetic properties of BaNi_xFe_{12-x}O₁₉ (x = 0.0–1.0) hexaferrites, synthesized by citrate -gel auto-combustion and sintered by conventional and spark plasma methods*, M. Cernea, S. G. Greculeasa, R. Radu, G. Aldica, P. Ganea, V. A. Surdu, E. T. Tanasa, M. Cioangher, N. Iacob, R. M. Costescu, **Journal of Alloys and Compounds** **831**, 154850 (2020). **JIF: 4.650; AIS: 0.629.**
31. *Temperature dependence and defect related structure, photoluminescence, (ferro)magnetism and ammonia sensitivity of un-doped nanocrystalline ZnO*, V. Mihalache, M. Secu, C. Negrila, V. Bercu, I. Mercioniu, A. Leca, **Materials Science & Engineering B** **262**, 114748 (2020). **JIF: 4.706; AIS: 0.605.**
32. *Photoluminescence as a Valuable Tool in the Optical Characterization of Acetaminophen and the Monitoring of Its Photodegradation Reactions*, M. Daescu, A. Matea, C. Negrila, C. Serbschi, A. C. Ion, M. Baibarac, **Molecules** **25**, 4571 (2020). **JIF: 3.267; AIS: 0.599.**
33. *A comparative investigation of hetero-epitaxial TiC thin films deposited by magnetron sputtering using either hybrid DCMS/HiPIMS or reactive DCMS process*, N. C. Zoita, M. Dinu, A. E. Kiss, C. Logofatu, M. Braic, **Applied Surface Science** **537**, 147903 (2021). **JIF: 6.182; AIS: 0.772.**
34. *CO adsorption and oxidation at room temperature on graphene synthesized on atomically clean Pt(001)*, N. G. Apostol, I. C. Bucur, G. A. Lungu, C. A. Tache, C. M. Teodorescu, **Catalysis Today**, DOI: 10.1016/j.cattod.2020.02.006, (2020). **JIF: 5.825; AIS: 0.928.**

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37. *New photoactive mesoporous Ce-modified TiO₂ for simultaneous wastewater treatment and electric power generation*, M. Mureseanu, V. Chivu, M. Osiac, M. Ciobanu, C. Bucur, V. Parvulescu, N. Cioatera, **Catalysis Today**, DOI: 10.1016/j.cattod.2020.09.035 (2020). **JIF: 5.825; AIS: 0.928.**
38. *The role of acidity in terephthalic acid synthesis from renewable carbon source*, M. M. Trandafir, S. Neatu, A. Bocirnea, J. Counsell, F. Cavani, M. Florea, F. Neatu, **ChemCatChem** **12**, 6248–6258 (2020). **JIF: 4.853; AIS: 0.983.**
39. *Methane combustion using Pd deposited on CeO_x-MnO_x/La-Al₂O₃ pellistors*, O. G. Florea, A. Stanoiu, M. Gheorghe, C. Cobianu, F. Neatu, M. M. Trandafir, S. Neatu, M. Florea, C. E. Simion, **Materials** **13**, 4888 (12 pp.) (2020). **JIF: 3.057; AIS: 0.543.**
40. *Laser Fabrication of Hybrid Electrodes Composed of Nanocarbons Mixed with Cerium and Manganese Oxides for Supercapacitive Energy Storage*, P. G. Lebière, Á. P. del Pino, G. D. Domingo, C. Logofatu, I. Martínez-Rovira, I. Yousef, E. György, **Journal of Materials Chemistry A**, accepted (2020). DOI: 10.1039/D0TA06756C. **JIF: 11.301; AIS: 1.999.**
41. *Ferroelectricity in thin films driven by charges accumulated at interfaces*, C. M. Teodorescu, **Physical Chemistry Chemical Physics**, accepted (2020). DOI: 10.1039/D0CP05617K. **JIF: 3.43; AIS: 0.854.**
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43. *Potassium-containing triple-cation mixed-halide perovskite materials: Toward efficient and stable solar cells*, S. Derbali, K. Nouneh, M. Florea, L. N. Leonat, V. Stancu, A. G. Tomulescu, A. C. Galca, M. Secu, L. Pintilie, M. Ebn Touhami, **Journal of Alloy and Compounds**, accepted review (2020). DOI: 10.1016/j.jallcom.2020.158335. **JIF: 4.650; AIS: 0.629.**

Lista Brevete acordate in 2020:

Procedeu de pasivare a suprafetei de n-GaSb(100), R. Ghita, C. Logofatu, C. C. Negrila, F. Frumosu, D. Predoi, Brevet OSIM Nr. 132453, 28.08.2020

Procedeu de realizare a unei structuri fotoactive, R. Ghita, C. Logofatu, C. C. Negrila, M. D. Mihai, D. Predoi, M. Stoicu, Brevet OSIM Nr. 133228, 28.02.2020

Lista Cereri de Brevet in 2020:

Superlentila cu metasuprafata controlata electric pentru modificarea continua a directiei sau focalizarii fasciculului optic refractat, C. Cotirlan-Simioniuc, A00386/06.07.2020.