

1. *Room temperature ferromagnetism and its correlation to ferroelectricity of manganese embedded in lead zirco-titanate*, I.C. Bucur, N.G. Apostol, L.E. Abramiuc, L.C. Tănase, C.A. Tache, G.A. Lungu, R.M. Costescu, C.F. Chirilă, L. Trupină, L. Pintilie, C.M. Teodorescu, **Thin Solid Films** **669**, 440–449 (2019). **JIF: 1.888 , AIS: 0.324**
2. *Spirobifluorene-based porous organic polymers as efficient porous support for Pd and Pt for the selective hydrogenations*, M. Trandafir, L. Pop, N.D. Hadade, I.A. Hristea, C.M. Teodorescu, F. Krumeich, J.A. van Bokhoven, I. Grosu, V.I. Parvulescu, **ChemCatChem** **11**, 538-549 (2019). **JIF: 4.495, AIS: 0.991**
3. *Efficient glucose dehydration to HMF onto Nb-BEA catalysts*, N. Candu, M. El Fergani, M. Verziu, B. Cojocar, B. Jurca, N. Apostol, C. Teodorescu, V.I. Parvulescu, S.M. Coman, **Catal. Today** **325**, 109-116 (2019). **JIF: 4.888, AIS: 0.852**
4. *Growth of Ag(111) on Si(111) with nearly flat band and abrupt interface*, A.E. Bocîrne, R.M. Costescu, N.G. Apostol, C.M. Teodorescu, **Appl. Surf. Sci.** **473**, 433–441 (2019). **JIF: 5.155, AIS: 0.671**
5. *Impact on ferroelectricity and band alignment of gradually grown Au on BaTiO₃*, D.G. Popescu, M.A. Husanu, C. Chirila, L. Pintilie, C.M. Teodorescu, **Phys. Stat. Solidi – Rapid Res. Lett.** **1900077(1–5)** (2019). **JIF: 3.729 , AIS: 0.790**
6. *Core-shell nanowire arrays based on ZnO and CuxO for water stable photocatalysts*, C. Florica, A. Costas, N. Preda, M. Beregoi, A. Kuncser, N.G. Apostol, C. Popa, G. Socol, V. Diculescu, I. Enculescu, **Sci. Rep.** **9**, 17268 (2019). **JIF: 4.011, AIS: 1.286**
7. *Physical properties of the ferroelectric capacitors based on Al-doped HfO₂ grown via Atomic Layer Deposition on Si*, S. Vulpe, F. Nastase, M. Dragoman, A. Dinescu, C. Romanitan, S. Iftimie, A. Moldovan, N.G. Apostol, **Appl. Surf. Sci.** **483**, 324-333 (2019). **JIF: 5.155, AIS: 0.671**
8. *Palladium/palladium oxide coated electrospun fibers for wearable sweat pH-sensors*, V.C. Diculescu, M. Beregoi, A. Evanghelidis, R.F. Negrea, N.G. Apostol, I. Enculescu, **Sci. Rep.** **9**, 8902 (2019). **JIF: 4.011, AIS: 1.286**
9. *Direct Immobilization of Biomolecules through Magnetic Forces on Ni Electrodes via Ni Nanoparticles: Applications in Electrochemical Biosensors*, M.M. Barsan, T.A. Enache, N. Preda, G. Stan, N.G. Apostol, E. Matei, A. Kuncser, V.C. Diculescu, **ACS Appl. Mater. Interf.** **11**, 19867-19877 (2019). **JIF: 8.456 , AIS: 1.650**
10. *Radial heterojunction based on single ZnO-CuxO core-shell nanowire for photodetector applications*, A. Costas, C. Florica, N. Preda, N.G. Apostol, A. Kuncser, A. Nitescu, I. Enculescu, **Sci. Rep.** **9**, 5553 (2019). **JIF: 4.011, AIS: 1.286**
11. *Nanostructured palladium doped nickel electrodes for immobilization of oxidases through nickel nanoparticles*, M.M. Barsan, E. Matei, M. Enculescu, R. Costescu, N. Preda, T.A. Enache, I. Enculescu, V.C. Diculescu, **Electrochim. Acta** **315**, 102-113 (2019). **JIF: 5.383 , AIS: 0.810**
12. *Electronic Structure of a Graphene-like Artificial Crystal of NdNiO₃*, A. Arab, X. Liu, O. Koksal, W. Yang, R.U. Chandrasena, S. Middey, M. Kareev, S. Kumar, M.A. Husanu, Z. Yang, L.

- Gu, V.N. Strocov, T.L. Lee, J. Minar, R. Pentcheva, J. Chakhalian, A.X. Gray, **Nano Lett.** **19**, 8311-8317 (2019). **JIF: 12.279 , AIS: 4.018**
13. *Electronic phase separation at LaAlO₃/SrTiO₃ interfaces tunable by oxygen deficiency*, V.N. Strocov, A. Chikina, M. Caputo, M.A. Husanu, F. Bisti, D. Bracher, T. Schmitt, F.M. Granozio, C.A.F. Vaz, F. Lechermann, **Phys. Rev. Materials** **3**, 106001 (2019). **JIF: 2.926 , AIS: 1.022**
14. *k-resolved electronic structure of buried heterostructure and impurity systems by soft-X-ray ARPES*, V.N. Strocov, L.L. Lev, M. Kobayashi, C. Cancellieri, M.A. Husanu, A. Chikina, N.B.M. Schroter, X. Wang, J.A. Krieger, Z. Salman, **J. Electr. Spectrosc. Relat. Phenom.** **236**, 1-8 (2019). **JIF: 1.343 , AIS: 0.544**
15. *Probing single-unit-cell resolved electronic structure modulations in oxide superlattices with standing-wave photoemission*, W. Yang, R.U. Chandrasena, M. Gu, R.M.S. dos Reis, E.J. Moon, A. Arab, M.A. Husanu, S. Nemsak, E.M. Gullikson, J. Ciston, V.N. Strocov, J.M. Rondinelli, S.J. May, A.X. Gray, **Phys. Rev. B** **100**, 125119 (2019). **JIF: 3.736 , AIS: 1.089**
16. *Do topology and ferromagnetism cooperate at the EuS/Bi₂Se₃ interface?*, J.A. Krieger, Y. Ou, M. Caputo, A. Chikina, M. Dobeli, M.A. Husanu, I. Keren, T. Prokscha, A. Suter, C.Z. Chang, J.S. Moodera, V.N. Strocov, Z. Salman, **Phys. Rev. B** **99**, 064423 (2019). **JIF: 3.736 , AIS:1.089**
17. *Orthorhombic HfO₂ with embedded Ge nanoparticles in nonvolatile memories used for the detection of ionizing radiation*, C. Palade, A. Slav, A.M. Lepadatu, I. Stavarache, I. Dascalescu, A.V. Maraloiu, C. Negrila, C. Logofatu, T. Stoica, V.S. Teodorescu, M.L. Ciurea, S. Lazanu, **Nanotechnology** **30**, 445501 (2019). **JIF: 3.399, AIS: 0.744**
18. *Photoluminescence and thermoluminescence properties of the Sr₃Al₂O₆:Eu³⁺/Eu²⁺,Tb³⁺ persistent phosphor*, D. Gingasu, I. Mindru, A. Ianculescu, S. Preda, C. Negrila, M. Secu, **J. Luminescence** **214**, 116540 (2019). **JIF: 2.961 , AIS: 0.421**
19. *Cu_xCeMgAlO mixed oxide catalysts derived from multicationic LDH precursors for methane total oxidation*, H.M.S. Al-Aani, E. Iro, P. Chirra, I. Fechete, M. Badea, C. Negrila, I. Popescu, M. Olea, I.C. Marcu, **Appl. Catalysis A-General** **586**, 117215 (2019). **JIF: 4.630, AIS: 0.770**
20. *Photoluminescence and structural properties of the nitrogen doped TiO₂ and the influence of SiO₂ and Ag nanoparticles*, A. Nila, M. Baibarac, A. Udrescu, I. Smaranda, A. Mateescu, G. Mateescu, P. Mereuta, C.C. Negrila, **J. Phys. – Cond. Matt.** **31**, 375201 (2019). **JIF: 2.711, AIS: 0.846**
21. *Rapid thermal annealing for high-quality ITO thin films deposited by radio-frequency magnetron sputtering*, P. Prepelita, I. Stavarache, D. Craciun, F. Garoi, C. Negrila, B.G Sbarcea, V. Craciun, **Beilstein J. Nanotechnol.** **10**,1511-1522 (2019). **JIF: 2.269 , AIS: 0.633**
22. *Gd³⁺ co-doping influence on the morphological, up-conversion luminescence and magnetic properties of LiYF₄:Yb³⁺/Er³⁺ nanocrystals*, C.E. Secu, C. Bartha, E. Matei, C. Negrila, A. Crisan, M. Secu, **J. Phys. Chem. Solids** **130**, 236-241 (2019). **JIF: 2.752, AIS: 0.385**
23. *Effect of dilute doping and non-equilibrium synthesis on the structural, luminescent and magnetic properties of nanocrystalline Zn_{1-x}Ni_xO (x=0.0025-0.03)*, V. Mihalache, C. Negrila, V. Bercu, M. Secu, E. Vasile, G.E. Stan, **Mater. Res. Bull.** **115**,37-48 (2019). **JIF: 3.355 , AIS: 0.412**

24. *The influence of the nanocrystals size and surface on the Yb/Er doped LaF₃ luminescence properties*, C.E. Secu, E. Matei, C. Negrila, M. Secu, **J. Alloys Compds.** **791**, 1098-1104 (2019). **JIF: 4.175**, **AIS: 0.602**
25. *Charge separation and ROS generation on tubular sodium titanates exposed to simulated solar light*, S. Preda, C. Anastasescu, I. Balint, P. Umek, M. Sluban, C.C. Negrila, D.G. Angelescu, V. Bratan, A. Rusu, M. Zaharescu, **Appl. Surf. Sci.** **470**, 1053-1063 (2019). **JIF: 5.155**, **AIS: 0.671**
26. *Particularities of trichloroethylene photocatalytic degradation over crystalline RbLaTa₂O₇ nanowire bundles grown by solid-state synthesis route*, M. Raciulete, F. Papa, D. Kawamoto, C. Munteanu, D.C. Culita, C. Negrila, I. Atkinson, V. Bratan, J. Pandelescu, I. Balint, **J. Environ. Chem. Eng.** **7**, 102789 (2019). **JIF: 4.020 (estimated)**
27. *TiO₂/Fe₂O₃ photoanodes for solar water oxidation prepared via electrodeposition of amorphous precursors*, E. Vasile, M. Sima, A. Sima, C. Logofatu, **Mater. Res. Bull.** **121**, 110623 (2020). **JIF: 3.355**, **AIS: 0.412**
28. *Enhancement of the supercapacitive properties of laser deposited graphene-based electrodes through carbon nanotube loading and nitrogen doping*, A.P. del Pino, M. Rodriguez Lopez, M.A. Ramadan, P. Garcia Lebiere, C. Logofatu, I. Martinez-Rovira, I. Yousef, E. Gyorgy, **Phys. Chem. Chem. Phys.** **21**, 25175-25186 (2019). **JIF: 3.567**, **AIS: 0.942**
29. *Graphitic carbon nitride based photoanodes prepared by spray coating method*, M. Sima, E. Vasile, A. Sima, N. Preda, C. Logofatu, **Internatl. J. Hydrogen Energy** **44**, 24430-24440 (2019). **JIF: 4.082**, **AIS: 0.581**
30. *Mineralization-Inspired Synthesis of Magnetic Zeolitic Imidazole Framework Composites*, A. Terzopoulou, M. Hoop, X.Z. Chen, A.M. Hirt, M. Charilaou, Y. Shen, F. Mushtaq, A.P. del Pino, C. Logofatu, L. Simonelli, A.J. de Mello, C.J. Doonan, J. Sort, B.J. Nelson, S. Pane, J. Puigmarti-Luis, **Angew. Chemie – Internatl. Ed.** **58**, 13550-13555 (2019). **JIF: 12.257**, **AIS: 3.243**
31. *Fabrication of graphene-based electrochemical capacitors through reactive inverse matrix assisted pulsed laser evaporation*, A.P. del Pino, M.A. Ramadan, P.G. Lebiere, R. Ivan, C. Logofatu, I. Yousef, E. Gyorgy, **Appl. Surf. Sci.** **484**, 245-256 (2019). **JIF: 5.155**, **AIS: 0.671**
32. *Ge nanoparticles in SiO₂ for near infrared photodetectors with high performance*, I. Stavarache, V.S. Teodorescu, P. Prepelita, C. Logofatu, M.L. Ciurea, **Sci. Rep.** **9**, 10286 (2019). **JIF: 4.011**, **AIS: 1.286**
33. *GeSn Nanocrystals in GeSnSiO₂ by Magnetron Sputtering for Short-Wave Infrared Detection*, A. Slav, C. Palade, C. Logofatu, I. Dascalescu, A.M. Lepadatu, I. Stavarache, F. Comanescu, S. Iftimie, S. Antohe, S. Lazanu, V.S. Teodorescu, D. Buca, M.L. Ciurea, M. Braic, T. Stoica, **ACS Appl. Nano Materials** **2**, 3626-3635 (2019). **JIF: 7.5–10 (estimated)**
34. *Laser-induced synthesis and photocatalytic properties of hybrid organic-inorganic composite layers*, R. Ivan, C. Popescu, A.P. del Pino, I. Yousef, C. Logofatu, E. Gyorgy, **J. Mater. Sci.** **54**, 3927-3941 (2019). **JIF: 3.442**, **AIS: 0.558**
35. *Enhanced photoconductivity of SiGe nanocrystals in SiO₂ driven by mild annealing*, M.T. Sultan, A. Manolescu, J.T. Gudmundsson, K. Torfason, G.A. Nemnes, I. Stavarache, C. Logofatu, V.S. Teodorescu, M.L. Ciurea, H.G. Svavarsson, **Appl. Surf. Sci.** **469**, 870-878 (2019). **JIF: 5.155**, **AIS: 0.671**

36. *UV-vis light induced photocatalytic activity of TiO₂/graphene oxide nanocomposite coatings*, A. Datcu, M.L. Mendoza, A.P. del Pino, C. Logofatu, C. Luculescu, E. Gyorgy, **Catal. Today** **321**, 81-86 (2019). **JIF: 4.888, AIS: 0.852**
37. *Tailoring sp² / sp³ ratio in diamond-like carbon films via deposition parameters in a high voltage anodic vacuum plasma*, M. Badulescu, A. Anghel, C.C. Surdu-Bob, C. Logofatu, C. Luculescu, **Romanian Rep. Phys.** **71**, 414 (2019). **JIF: 1.940, AIS: 0.296**
38. *Bulk Versus Surface Modification of Alumina with Mn and Ce Based Oxides for CH₄ Catalytic Combustion*, S. Neatu, M.M. Trandafir, A. Stanoiu, O.G. Florea, C.E. Simion, L.N. Leonat, C. Cobianu, M. Gheorghe, M. Florea, F. Neatu, **Materials** **12**, 1771 (2019). **JIF: 2.972, AIS: 0.608**
39. *La_{0.75}Sr_{0.25}XO₃ (X = Fe, Mn or Cr) with coking tolerance for CH₄/H₂O reaction: effect of H₂S on catalytic performance*, M. Florea, S. Somacescu, G. Postole, A. Urda, F. Neatu, S. Neatu, L. Massin, P. Gelin, **Catal. Sci. Technol.** **9**, 2351-2366 (2019). **JIF: 5.726, AIS: 1.131**
40. *Next frontiers in cleaner synthesis: 3D printed graphene-supported CeZrLa mixed -oxide nanocatalyst for CO₂ utilisation and direct propylene carbonate production*, V. Middelkoop, T. Slater, M. Florea, F. Neatu, S. Danaci, V. Onyenkeadi, K. Boonen, B. Saha, L.A. Baragau, S. Kellici, **J. Cleaner Prod.** **214**, 606-614 (2019). **JIF: 6.395, AIS: 0.864**
41. *Behavior of Molybdenum-Vanadium Mixed Oxides in Selective Oxidation and Disproportionation of Toluene*, G. Mitran, F. Neatu, O.D. Pavel, M.M. Trandafir, M. Florea, **Materials** **12**, 748 (2019). **JIF: 2.972, AIS: 0.608**
42. *Bimodal mesoporous NiO/CeO₂-delta-YSZ with enhanced carbon tolerance in catalytic partial oxidation of methane-Potential IT-SOFCs anode*, S. Somacescu, N. Cioatera, P. Osiceanu, J.M. Calderon-Moreno, C. Ghica, F. Neatu, M. Florea, **Appl. Catalysis B -Environmental** **241**, 393-406 (2019). **JIF: 14.229, AIS: 1.918**
43. *Highly Efficient, Easily Recoverable, and Recyclable Re-SiO₂-Fe₃O₄ Catalyst for the Fragmentation of Lignin*, M. Tudorache, C. Opris, B. Cojocar, N.G. Apostol, A. Tirsoaga, S.M. Coman, V.I. Parvulescu, B. Duraki, F. Krumeich, J.A. Bokhoven, **ACS Sustain. Chem. Eng.** **6**, 9606-9618 (2019). **JIF: 6.970, AIS: 1.209**
44. *N-Doped Defective Graphene from Biomass as Catalyst for CO₂ Hydrogenation to Methane*, B. Jurca, C. Bucur, A. Primo, P. Concepcion, V.I. Parvulescu, H. Garcia, **ChemCatChem** **11**, 985-990 (2019). **JIF: 4.495, AIS: 0.991**
45. *CO₂ methanation catalyzed by oriented MoS₂ nanoplatelets supported on few layers graphene*, A. Primo, J. He, B. Jurca, B. Cojocar, C. Bucur, V.I. Parvulescu, H. Garcia, **Appl. Catalysis B -Environmental** **245**, 351-359 (2019). **JIF: 14.229, AIS: 1.918**
46. *Nitrogen-doped graphene as metal free basic catalyst for coupling reactions*, N. Candu, I. Man, A. Simion, B. Cojocar, S.M. Coman, C. Bucur, A. Primo, H. Garcia, V.I. Parvulescu, **J. Catal.** **376**, 238-247 (2019). **JIF: 7.723, AIS: 1.561**
47. *The Influence of Heteroatom Dopants Nitrogen, Boron, Sulfur, and Phosphorus on Carbon Electrocatalysts for the Oxygen Reduction Reaction*, K. Preuss, A.M. Siwoniku, C. Bucur, M.M. Titirici, **ChemPlusChem** **84**, 457-464 (2019). **JIF: 3.441, AIS: 0.575**

48. *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, **Appl. Surf. Sci.** **502**, 144101(1-7) (2020). **JIF: 5.155, AIS: 0.671**
49. *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 Adv.** **10**, 1522-1534 (2020). **JIF: 3.049, AIS: 0.547**
50. *Crown-ether functionalized graphene oxide for metal ions sequestration*, S. Petrescu, S. Avramescu, A.M. Musuc, F. Neatu, M. Florea, P. Ionita, **Mater. Res. Bull.** **122**, 110643 (2020). **JIF: 3.355, AIS: 0.412**
51. *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.N. Leonat, M. Secu, A.G. Tomulescu, V. Stancu, L. Pintilie, M. Ebn Touhami, A.C. Galca, **Phys. Scripta**, DOI: 10.1088/1402-4896/ab5baa (2020). **JIF: 2.151, AIS: 0.442**
52. *Influence of boric acid concentration on the properties of electrodeposited CZTS absorber layers*, M.Y. Zaki, K. Nouneh, M. Ebn Touhami, E. Matei, M. Burdusel, P. Badica, C. Negrila, M. Baibarac, L. Pintilie, A.C. Galca, **Phys. Scripta**, DOI: 10.1088/1402-4896/ab6afd (2020). **JIF: 2.151, AIS: 0.442**
53. *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: 2.972, AIS: 0.608**
54. *Highly-sensitive near infrared luminescent nanothermometers based on binary mixture*, D. Avram, C. Colbea, M. Florea, C. Tiseanu, **J. Alloys Compds.** **785**, 250-259 (2019). **JIF: 4.175, AIS: 0.601**
55. *Reticulated Mesoporous TiO₂ Scaffold, Fabricated by Spray Coating, for Large-Area Perovskite Solar Cells*, A.G. Tomulescu, V. Stancu, M. Enculescu, C. Besleaga, G.A. Nemnes, M. Florea, V. Dumitru, L. Pintilie, I. Pintilie, L. Leonat, **Energy Technol.** **8**, 1900922 (2020). **JIF: 3.163, AIS: 0.615**

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.