

2022

Published / Accepted / Submitted Articles

1. S.A. Bouzid, A. Essoumhi, A.M. Rostas, A.C. Kuncser, C.C. Negrila, N. Iacob, A. Galatanu, B. Popescu, M. Sajieddine, A.C. Galca, V. Kuncser, *Enhanced magnetocaloric properties of $La_{0.8}K_{0.2-x}Pb_xMnO_3$ nanoparticles by optimizing Pb doping concentrations*, *Ceramics International* **48**(12), 16845-16860 (2022). **JIF = 5.532, AIS = 0.552.**
2. O. El Khouja, C.C. Negrila, K. Nouneh, M. Secu, M.E. Touhami, E. Matei, V. Stancu, M. Enculescu, V. Kuncser, A.C. Galca, *Bulk and surface characteristics of co-electrodeposited Cu_2FeSnS_4 thin films sulfurized at different annealing temperatures*, *Journal of Alloys and Compounds* **906**, 164379:1-164379:12 (2022). **JIF = 6.371, AIS = 0.700.**
3. B. Butoi, C.S. Ciobanu, S.L. Iconaru, C.C. Negrila, M.A. Badea, M. Balas, A. Dinischiotu, G. Predoi, B. Bită, A. Groza, D. Predoi, *Iron-oxide-nanoparticles-doped polyaniline composite thin films*, *Polymers* **14**(9), 1821:1-1821:16 (2022). **JIF = 4.967, AIS = 0.612.**
4. N. Toulbe, I. Smaranda, C. Negrila, C. Bartha, C.M. Manta, M. Baibarac, *Photodegradation of azathioprine in the presence of sodium thiosulfate*, *International Journal of Molecular Sciences* **23**(7), 3975:1-3975:18 (2022). **JIF = 6.208, AIS = 1.064.**
5. A. Vasile, F. Papa, V. Bratan, C. Munteanu, M. Teodorescu, I. Atkinson, M. Anastasescu, D. Kawamoto, C. Negrila, C.D.D. Ene, T. Spataru, I. Balint, *Water denitration over titania-supported Pt and Cu by combined photocatalytic and catalytic processes: implications for hydrogen generation properties in a photocatalytic system*, *Journal of Environmental Chemical Engineering* **10**(2), 107129:1-107129:22 (2022). **JIF = 7.968, AIS = 0.767.**
6. D. Bartos, C. Burducea, I. Burducea, G. Caragheorgheopol, F. Constantin, L. Craciun, D. Dorobantu, M. Ghena, D. Iancu, A. Marcu, G. Mateescu, P. Mereuta, V. Moise, C. Negrila, D. Negut, M. Petris, M. Petrovici, L. Radulescu, V. Aprodu, L. Prodan, A. Radu, G. Stoian, *Ageing studies of multi-strip multi-gap resistive plate counters based on low resistivity glass electrodes in high irradiation dose*, *Nuclear Instruments & Methods in Physics Research A* **1024**, 166122:1-166122:15 (2022). **JIF = 1.335, AIS = 0.387.**
7. P.G. Lebiere, E. Gyorgy, C. Logofatu, D. Naumenko, H. Amenitsch, P. Rajak, R. Ciancio, A.P. del Pino, *Unravelling the origin of the capacitance in nanostructured nitrogen-doped carbon -NiO hybrid electrodes deposited with laser*, *Ceramics International* **48**(11), 15877-15888, (2022). **JIF = 5.532, AIS = 0.552.**
8. H. Li, Y.L. Gan, M.A. Husanu, R.T. Dahm, D.V. Christensen, M. Radovic, J.R. Sun, M. Shi, B.G. Shen, N. Pryds, Y.Z. Chen, *Robust electronic structure of manganite-buffered oxide interfaces with extreme mobility enhancement*, *ACS Nano* **16**(4), 6437-6443 (2022). **JIF = 18.027, AIS = 3.560.**
9. 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 TiO_2 microparticles coated with Ca- and Cu-based composite layers*, *International Journal of Molecular Sciences* **23**(13), 6888:1-6888:18 (2022). **JIF = 6.208, AIS = 1.064.**

10. I. Podolean, S.M. Coman, C. Bucur, C. Teodorescu, S. Kikionis, E. Ioannou, V. Roussis, A. Primo, H. Garcia, V.I. Parvulescu, *Catalytic transformation of the marine polysaccharide ulvan into rare sugars, tartaric and succinic acids*, *Catalysis Today* **383**, 345-357 (2022). **JIF = 6.562, AIS = 0.914.**
11. C.M. Teodorescu, *Self-consistently derived sample permittivity in stabilization of ferroelectricity due to charge accumulated at interfaces*, *Physical Chemistry Chemical Physics* **24**, 5419-5430 (2022). **JIF = 3.945, AIS = 0.756.**
12. C.M. Teodorescu, M.A. Husanu, *Re-entrant ferromagnetism at ultrahigh temperatures in epsilon-iron as possible origin of the geomagnetic field*, *Physics of the Earth and Planetary Interiors* **326**, 106856:1-106856:11 (2022). **JIF = 2.748, AIS = 0.968.**
13. L.E. Abramiuc, L.C. Tanase, A. Barinov, C.F. Chirila, C.M. Teodorescu, *Nanosopic correlations from curve fitting of photoelectron spectromicroscopy data cubes of lead zirconate titanate films*, *Results in Physics* **36**, 105436:1-105436:9 (2022). **JIF = 4.565, AIS = 0.622.**
14. L.L. Lev, I.O. Maiboroda, E.S. Grichuk, N.K. Chumakov, N.B.M. Schroeter, M.A. Husanu, T. Schmitt, G. Aeppli, M.L. Zanaveskin, V.G. Valeyev, V.N. Strocov, *Impact of band-bending on the k-resolved electronic structure of Si-doped GaN*, *Physical Review Research* **4**(1), 013183:1-013183:14 (2022). **JIF = 3.900, AIS = 1.762.**
15. R.J.B. Leote, E. Matei, N.G. Apostol, M. Enculescu, I. Enculescu, V.C. Diculescu, *Monodispersed nanoplatelets of samarium oxides for biosensing applications in biological fluids*, *Electrochimica Acta* **402**, 139532:1-139532:11 (2022). **JIF = 7.336, AIS = 0.888.**
16. A. Pena, *Electron trapping in twisted light driven graphene quantum dots*, *Physical Review B* **105**(4), 045405:1-045405:11 (2022). **JIF = 3.908, AIS = 0.977.**
17. A. Pena, *Lifetime enhancement of quasibound states in graphene quantum dots via circularly polarized light*, *Physical Review B* **105**(12), 125408:1-125408:11 (2022). **JIF = 3.908, AIS = 0.977.**
18. U. Alli, K. McCarthy, I.A. Baragau, N.P. Power, D.J. Morgan, S. Dunn, S. Killian, T. Kennedy, S. Kellici, *In-situ continuous hydrothermal synthesis of TiO₂ nanoparticles on conductive N-doped MXene nanosheets for binder-free Li-ion battery anodes*, *Chemical Engineering Journal* **430**(4), 132976:1-132976:10 (2022). **JIF = 16.744, AIS = 1.758.**
19. K.G. Nguyen, I.A. Baragau, R. Gromicova, A. Nicolaev, S. AJ Thomson, A. Rennie, N.P. Power, M. T. Sajjad, S. Kellici, *Investigating the effect of N-doping on carbon quantum dots structure, optical properties and metal ion screening*, *Scientific Report* **12**(1), 13806:1-13806:12 (2022). **JIF = 4.997, AIS = 1.208.**
20. M.A. Husanu, D.G. Popescu, F. Bisti, L.M. Hrib, L.D. Filip, I. Pasuk, R. Negrea, C. Istrate, L. Lev, T. Schmitt, L. Pintilie, A. Mishchenko, C. M. Teodorescu, V.N. Strocov, *Ferroelectricity modulates polaronic coupling at multiferroic interfaces*, *Communications Physics* **5**(1), 209:1-209:9 (2022). **JIF = 6.497, AIS = 2.484.**
21. A. Pena, *Electron trapping in magnetic driven graphene quantum dots*, *Physica E* **141**(11), 115245:1-15245: (2022). **JIF = 3.369, AIS = 0.449.**

22. C. Palade, A. Slav, I. Stavarache, V.A. Maraloiu, C. Negri, M.L. Ciurea, *Memory properties of Zr-doped ZrO₂ MOS-like capacitor*, *Coatings* **12**(9), 1369- (2022). **JIF = 3.236, AIS = 0.410.**
23. M. Raciulete, F. Papa, I. Atkinson, C. Bradu, C. Negri, D. Eftemie, D. C. Culita, A. Miyazaki, V. Bratan, J. Pandele-Cusu, C. Munteanu, G. Dobrescu, A. Sandulescu, I. Balint, *Band-gap engineering of layered perovskites by Cu spacer insertion as photocatalysts for depollution reaction*, *Catalysts* **12**(12), 1529:1-1529:28 (2022). **JIF = 4.501, AIS = 0.615.**
24. M. Baibarac, T. Burlanescu, M. Stroe, I. Smaranda, C. Negri, *The photoluminescence and vibrational properties of black phosphorous sheets chemically/ electrochemically functionalized in the presence of diphenylamine*, *Polymers* **14**(21), 4479, (2022), **JIF = 4.967, AIS = 0.612.**
25. T. Tite, A.C. Popa, B.W. Stuart, H.R. Fernandes, I.M. Chirica, G.A. Lungu, D. Macovei, C. Bartha, L. Albulescu, C. Tanase, S. Nita, N. Rusu, D.M. Grant, J.M.F. Ferreira, G.E. Stan, *Independent and complementary bio-functional effects of CuO and Ga₂O₃ incorporated as therapeutic agents in silica- and phosphate- based bioactive glasses*, *Journal of Materiomics* **8**(4), 893-905 (2022). **JIF = 8.589, AIS = 1.369.**
26. M. Zaharescu, M. Anastasescu, H. Stroescu, J.M. Calderon-Moreno, N. Apostol, S. Preda, C.M. Vladut, S. Mihaiu, P. Petrik, M. Gartner, *Comparative study of the dopants (Mn vs. V) influence on the properties of sol-gel ZnO films*, *Journal of Sol-Gel Science and Technology* **104**(1), 67-77 (2022). **JIF = 2.606, AIS = 0.297.**
27. A. Rendon-Patino, A. Primo, B. Cojocar, S.G. Ion, D.G. Popescu, V. Parvulescu, H. Garcia, *Nanometric-thick metal-free h-boron nitride/graphene films as base catalyst for the synthesis of benzoxazoles*, *ChemCatChem* **14**(12), e202200356:1- e202200356:7 (2022). **JIF = 5.501, AIS = 0.949.**
28. V.N. Strocov, F. Lechermann, A. Chikina, F. Alarab, L.L. Lev, V.A. Rogalev, T. Schmitt, M.A. Husanu, *Dimensionality of mobile electrons at x-ray-irradiated LaAlO₃/SrTiO₃ interfaces*, *Electronic Structure* **4**(1), 015003:1-015003:13 (2022). **JIF = 2.500, AIS = 0.999.**
29. A.T. Buruiana, A.E. Bocirnea, A.C. Kuncser, T. Tite, E. Matei, C. Mihai, N. Zawadzka, K. Olkowska-Pucko, L. Kipczak, A. Babinski, M.R. Molas, A. Velea, A.C. Galca, *Layered SnSe nanoflakes with anharmonic phonon properties and memristive characteristics*, *Applied Surface Science* **599**, 153983:1-153983:10 (2022). **JIF = 7.392, AIS = 0.848.**
30. A.M. Hada, A.M. Craciun, M. Focsan, A. Vulpoi, E.L. Borcan, S. Astilean, *Glutathione-capped gold nanoclusters as near-infrared-emitting efficient contrast agents for confocal fluorescence imaging of tissue-mimicking phantoms*, *Microchimica Acta* **189**(9), 337:1-337:10 (2022). **JIF = 6.408, AIS = 0.752.**
31. S. Preda, J. Pandele-Cusu, S.V. Petrescu, E.M. Ciobanu, G. Petcu, D.C. Culița, N.G. Apostol, R.M. Costescu, I. Rauț, M. Constantin, L. Predoana, *Photocatalytic and antibacterial properties of doped TiO₂ nanopowders prepared by sol-gel method*, *Gels* **8**(10), 673:1-673:20 (2022). **JIF = 4.432, AIS = 0.766.**
32. M. Florea, A. Bocirnea, S. Neațu, A.M. Kuncser, M.M. Trandafir, F. Neațu, *Tuning the acidity by addition of transition metal to Mn modified hollow silica spheres and their catalytic activity in ethanol dehydration to ethylene* *Applied Catalysis A* **646**, 118860:1-118860:11 (2022). **JIF = 5.723, AIS = 0.859.**

33. M.Y. Zaki, F. Sava, I.D. Simandan, A.T. Buruiana, A.E. Bocirnea, C. Mihai, A. Velea, A.C. Galca, *A two-step magnetron sputtering approach for the synthesis of Cu_2ZnSnS_4 films from Cu_2SnS_3/ZnS stacks*, ACS Omega **7**(27), 23800-23814 (2022). **JIF = 4.132, AIS = 0.630.**
34. M.C. Stoian, C. Romanitan, G. Craciun, D.C. Culita, F. Papa, M. Badea, C. Negrila, I. Popescu, I.C. Marcu, *Multicationic LDH-derived $Co_xCeMgAlO$ mixed oxide catalysts for the total oxidation of methane*, Applied Catalysis A (2022), submitted. **JIF = 5.723, AIS = 0.859.**
35. A.I. Borhan, D. Gherca, I.A. Ghemes, A.C. Dirtu, D. Dirtu, M.N. Palamaru, D.G. Popescu, M.A. Husanu, A.R. Iordan, *Visible-driven highly efficient photocatalyst based on MWCNTs for total degradation of tetracycline antibiotic*, Applied Materials Today (2022), submitted. **JIF = 8.663, AIS = 1.456.**
36. C.M. Teodorescu, *Kittel's model for ferromagnetic domains, revised and completed. Occurrence of hysteresis and derivation of coercive fields*, Results in Physics (2022), submitted. **JIF = 4.565, AIS = 0.622.**
37. A.I. Borhan, D. Gherca, I.A. Ghemes, A.C. Dirtu, D. Dirtu, M.N. Palamaru, D.G. Popescu, M.A. Husanu, A.R. Iordan, *Visible-driven highly efficient photocatalyst based on MWCNTs for total degradation of tetracycline antibiotic*, Matter (2022), submitted. **JIF = 19.967, AIS = 4.641.**
38. A.I. Borhan, D.D. Herea, M.A. Husanu, D.G. Popescu, C.N. Borca, T. Huthwelker, G. Bulai, I. Radu, A. Constantin Dirtu, D. Dirtu, C. Mita, G. Stoian, G. Ababei, N. Lupu, A. Pui, D. Gherca, *Straightforward $FeOOH$ nanografting of Al-based $SrTiO_3$ perovskite material as core-shell nanoflower-like heteronanostructure with enhanced solar light-driven photodegradation capability*, Applied Surface Science (2022), submitted. **JIF = 7.392, AIS = 0.848.**
39. D.G. Popescu, M.A. Husanu, P.C. Constantinou, L.D. Filip, L. Trupina, C.I. Bucur, I. Pasuk, C. Chirila, V. Stancu, L.M. Hrib, L. Pintilie, T. Schmitt, C.M. Teodorescu, V.N. Strocov, *Experimental band structure of $PbZrTiO_3$: Mechanism of ferroelectric stabilization*, Advanced Science (2022), submitted. **JIF = 17.521, AIS = 3.539.**
40. N. Iacob, C. Chirila, A. E. Stanciu A. Kuncser, M. Sangare, M. Socol, C. C. Negrila, M. Botea, C. Locovei, G. Schinteie, A. C. Galca, A. Stanculescu, L. Pintilie, V. Kuncser, B. Borca, *Artificial memory element based on guanine nucleobase*, RSC Advances (2022), submitted. **JIF = 4.036, AIS = 0.519.**
41. M. Sima, E. Vasile, N. Preda, E. Matei, A. Sima, C. Negrila, *Role of electrophoretic deposited WO_3 underlayer and MIL-101(Fe) co-catalyst in $WO_3/BiVO_4$ heterojunction for efficient photoelectrochemical water oxidation*, Materials Research Bulletin (2022), submitted. **JIF = 5.600, AIS = 0.515.**
42. C. Besleaga, A. Kuncser, C. C. Negrila, A. Nitescu, G. E. Stan, *Fourier-transform infrared spectroscopy as a complementary method for phase identification in hafnia-based materials*, Applied Surface Science (2022), submitted. **JIF = 7.392, AIS = 0.848.**
43. M. E. Fergani, N. Candu, I. Podolean, B. Cojocar, A. Nicolaev, C. M. Teodorescu, M. Tudorache, V. I. Parvulescu and S. M. Coman *Catalytic hydrotreatment of humins waste over bifunctional Pd-based zeolite catalysts* Catalysts **12**(10) 1202 (2022), JIF = 4,501, AIS = 0,615.

Indexed / Published / Accepted / Submitted Patents

1. C. Cotîrlan-Simioniuc, *Fototranzistor unijonțiune iluminat transversal cu metasuprafață integrată*, CBI A/00080/16.05.2022.
2. C. Cotîrlan-Simioniuc, I. R. Șchiopu, *Celulă solară tandem cu o structură metal-oxid-semiconductor și metasuprafață integrate*, CBI A/00434/21.07.2022.
3. C. Cotîrlan-Simioniuc, *Ochelari cu metasuprafețe plasmonice*, Brevet nr. 132835/30.06.2022.
4. C. Cotîrlan-Simioniuc, A. Rizea, D. V. Ursu, *Dispozitiv optoelectronic cu metasuprafața configurabilă electric pentru controlul polarizării luminii*, Hotărârea OSIM nr. 44/82 din 30.05.2022, brevet nepublicat încă în BOPI.
5. C. Cotîrlan-Simioniuc, *Superlens for continuously changing direction or focus of refracted optical beam, has transparent dielectric substrate successively coated with continuous gold layer, insulating silica layer, non-degenerate n-type semiconductor layer and surface with parallel rectangular gold elements*, RO135497-A2 / 28 Jan 2022.
6. Petre Badica, Mihai Alexandru Grigoroscuta, Mihail Burdusel, Ruxandra Costescu, *Compozite stratificate pe baza de folii de plastic reciclate din ambalaje*, CBI A/00516/25.08.2022.
7. A. Slav, T. Stoica, I.M. Dascalescu, C. Palade, G.A. Lungu, *Procedeu de obținere a unui film subțire de GeSn pasivat cu fotosensibilitate crescută în SWIR*, CBI A/00646/18.10.2022.