

Departamentul 6: Combinații oxidice și știința materialelor

Oxide Compounds and Materials Science Department

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

2021

1. M. Gabrovska, I. Ivanov, D. Nikolova, J. Krstic, A. M. Venezia, D. Crișan, M. Crișan, K. Tenchev, V. Idakiev, T. Tabakova., *Improved water–gas shift performance of Au/NiAl LDHs nanostructured catalysts via CeO₂ addition*, *Nanomaterials*, 2021, 11, 366 (IF=5.076)
2. R. Leu Alexa, H. Iovu, B. Trica, C. Zaharia, A. Serafim, E. Alexandrescu, I.C. Radu, G. Vlasceanu, S. Preda, C. M. Ninciuleanu, R. Ianchis, *Assessment of Naturally Sourced Mineral Clays for the 3D Printing of Biopolymer-Based Nanocomposite Inks*, *Nanomaterials*, 2021, 11(3), pp. 1–22, 703 (IF=5,076)
3. V. Fruth, L. Todan, C. I. Codrea, I. Poenaru, S. Petrescu, L. Aricov, M. Ciobanu, L. Jecu, R. Mariana Ion, L. Predoana, *Multifunctional Composite Coatings Based on Photoactive Metal-Oxide Nanopowders (MgO/TiO₂) in Hydrophobic Polymer Matrix for Stone Heritage Conservation*, *Nanomaterials*, 2021, 11 (10), 2586 (IF=5.076)
4. V. Mușat, E.M. Anghel, A. Zaharia, I. Atkinson, O. C. Mocioiu, M. Bușilă, P. Alexandru, A *Chitosan–Agarose PolysaccharideBased Hydrogel for Biomimetic Remineralization of Dental Enamel*, *Biomolecules* 11(8) ,2021, 1137 (IF=4,879)
5. I. Atkinson, A. Maria Seciu-Grama, O. C. Mocioiu, A. M. Mocioiu, L. Predoana, M. Voicescu, J. Pandelescu, R. Marina Grigorescu, R. Mariana Ion, O. Craciunescu, *Preparation and Biocompatibility of Poly Methyl Methacrylate (PMMA)-Mesoporous Bioactive Glass (MBG) Composite Scaffolds*. *Gels*, 7, 180., 2021 (FI=4.704)
6. L Predoana, I Atkinson, D Attila Karaj, V Otieno Odhiambo, L Péter Bakos, T Nagyné Kovács, J Pandelescu, S Petrescu, A Rusu, Imre M. Szilágyi, György Pokol, M Zaharescu *Comparative study of the thermal behavior of Sr–Cu–O gels obtained by sol–gel and microwave-assisted sol–gel method*, *Journal of Thermal Analysis and Calorimetry*, 2021, 143, 2893–2900 (IF=4.626)
7. R. A. Mitran, S. Ioniță, D. Lincu, D. Berger, C. Matei, *A Review of Composite Phase Change Materials Based on Porous Silica Nanomaterials for Latent Heat Storage Applications*, *Molecules*, 26(1) 2021 241 (IF=4.411)
8. M. R. Buga, A.A. Spinu-Zaulet, C.G. Ungureanu, R.A. Mitran, E. Vasile, M. Florea, F. Neatu, *Carbon-Coated SiO₂ Composites as Promising Anode Material for Li-Ion Batteries*, *Molecules*, 26, 2021, 4531 (IF=4.411).
9. C. I. Codrea, A.-M. Croitoru, C. C. Baciu, A. Melinescu, D. Fikai, V. Fruth, A. Fikai, *Advances in Osteoporotic Bone Tissue Engineering*, *Journal of Clinical Medicine*, 2021, 10(2), 253 (IF=4.241)
10. M. Tudose*, R. D. Baratoiu-Carpen, E. M. Anghel*, M. Voicescu, S. Somacescu, D.C. Culita, A. Hanganu, A. Kuncser, A. Radoi*, *A novel composite based on pyrene thiazole grafted on graphene oxide: physico-chemical characterization and electrochemical investigations*, *Material Chemistry and Physics* 262, 2021, 124315. (IF=4.094)
11. C. M. Ninciuleanu, R. Ianchis, E. Alexandrescu, C. I. Mihăescu, C. Scamoroscenco, C. Lavinia Nistor, S. Preda, C. Petcu, M. Teodorescu, *The Effects of Monomer, Crosslinking Agent, and Filler Concentrations on the Viscoelastic and Swelling Properties of Poly(methacrylic acid) Hydrogels: A Comparison*, *Materials*, 2021, 14(9), 2305 (IF=3.623)
12. T. Sandu, R. A. Mitran, A. Sârbu, N. Stănică, A. M. Gavrilă, D. Pătroi, V. Marinescu, C. Petcu, M. Ghiurea, M. V. Dumitru, T. Verona Iordache, *Two-component polymer beads with magnetic features as efficient means for active principles binding*, *Journal of Polymer Research*, 28(8) 2021 1-14. (FI=3.097)

13. A. M. Mocioiu, I.A. Tudor, O.C. Mocioiu, *Application of polyaniline for flexible semiconductors*, Coatings, 2021, 11(1), pp. 1–10, 49 (IF=2.881)
14. A. Gaspar-Pintiliescu, E. D. Anton, A. Iosageanu, D. Berger, C. Matei, R.-A. Mitran, T. Negreanu-Pirjol, O. Craciunescu, L. Moldovan, *Enhanced Wound Healing Activity of Undenatured Type I Collagen Isolated from Discarded Skin of Black Sea Gilthead Bream (*Sparusaurata*) Conditioned as 3D Porous Dressing*, Chemistry & biodiversity, 2021 (IF=2.408)
15. I. Atkinson, O.C. Mocioiu, E.M. Anghel, *A study of zircon crystallization, structure, and chemical resistance relationships in ZrO₂ containing ceramics glazes*, Boletín de la Sociedad Española de Cerámica y Vidrio <https://doi.org/10.1016/j.bsecv.2021.07.002> (IF=2.383)
16. A.M. Mocioiu, O.C. Mocioiu, *Thermal behavior of lead silicate vitreous materials for sealants*, Manufacturing Review, 2021, 8, 4 (IF=2.148)
17. L. Todan, M. Voicescu, Daniela C. Culita, J. Pandele-Cuşu, C. Albu Andrei C. Kuncser, *Ecological formulation for improving resveratrol stability and release in aqueous environment*, Chemical Papers, 75, 2033–2041 (2021) (IF=1.68)
18. M. E. David, R. M. Grigorescu, L. Iancu, E. R. Andrei, R. Somoghi, A. N. Frone, I. Atkinson, L. Predoana, A.I. Nicoara, R.M. Ion, *Synthesis and characterization of multi-walled carbon nanotubes decorated with hydroxyapatite*, Fullerenes Nanotubes and Carbon Nanostructures, 2021, 29(6), 423–430 (IF=1.648)
19. A. M. Mocioiu, O. C. Mocioiu, *Intelligent Textile with Doped Polyaniline*, Macromolecular Symposia, 2021, 396(1), 2000331 (IF=0.85)
20. A. M. Mocioiu, O.C. Mocioiu, *Flexible and Conductive Materials for Solar Cell Applications*, Macromolecular Symposia, 2021, 396(1), 2000330 (IF=0.85)
21. Mocioiu, O.C., Băilă, D.I., Atkinson, I., Brătan, V., Mocioiu, A.M., *Manufacturing of SiO₂-ZnO materials with optical properties*, IOP Conference Series: Materials Science and Engineering, 2021, 1018(1), 012009 (IF=0.51)
22. Mocioiu, A.M., Băilă, D.I., Mocioiu, O.C., *Chemical and mechanical tests on the SiO₂-ZnO materials for protective coatings of industrial use*, IOP Conference Series: Materials Science and Engineering, 2021, 1018(1), 012008 (IF=0.51)
23. J. Pandele-Cusu, I. Atkinson, A. Rusu, N. Apostol, V. Teodorescu, L. Predoana, I.M. Szilágyi, György Pokol, M. Zaharescu*, *Thermal behavior of Cu-doped TiO₂ gels synthesized by the sol-gel method* –accepted paper nr. Omagial Acad Oancea/2021

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2. R. A. Mitran, D. Lincu; S. Ionita; M. Deaconu; V. V. Jerca; O. C. Mocioiu; D. Berger; C. Matei, *High temperature shape - stabilized phase change materials obtained using mesoporous silica and NaCl - NaBr - Na₂MoO₄ salt eutectic*, Solar Energy Materials and Solar Cells 218, 2020, 110760 (IF=6,984)
3. A. M. Brezoiu, L. Bajenaru, D. Berger, R. A. Mitran, M. Deaconu, D. Lincu, A. StoicaGuzun, C. Matei, M.G. Moiescu, T. Negreanu-Pirjol, *Effect of Nanoconfinement of Polyphenolic Extract from Grape Pomace into Functionalized Mesoporous Silica on Its Biocompatibility and Radical Scavenging Activity*, Antioxidants, 9, 2020, 696. (IF= 6.312)
4. I. Ivanov, P. Petrova, G. Munteanu, Y. Karakirova, J.W. Sobczak, W. Lisowski, E.M. Anghel, Z. Kaszkur, T. Tabakova, *Effect of Y-doping on the catalytic properties of CuO/CeO₂ catalysts for water-gas shift reaction*, International Journal of Hydrogen Energy 45(49), 2020, 26286-26299 (IF=5,816)
5. M. Deaconu, A. M. Brezoiu, R. A. Mitran, I. Nicu, B. Manolescu, C. Matei, D. Berger, *Exploiting the zwitterionic properties of lomefloxacin to tailor its delivery from functionalized MCM-41 silica*, Microporous and Mesoporous Materials, 305 (2020) 110323 (IF= 4.551)

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8. S. Petrescu, S. Avramescu, A. M. Musuc, F. Neatu, M. Florea, P. Ionita, *Crown-ether functionalized graphene oxide for metal ions sequestration*, Materials Research Bulletin, 122, 2020, 110643 (IF 3.355)
9. P.E. Florian, M. Icriverzi, C.M. Ninciuleanu, E. Alexandrescu, B. Trica, S. Preda, R. Ianchis, A. Roseanu, Salecan, *Clay Based Polymer Nanocomposites for Chemotherapeutic Drug Delivery Systems; Characterization and In Vitro Biocompatibility Studies*, Materials 13 (23), 2020, 5389 (IF=3.057)
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11. S. Avramescu, S. Petrescu, D.C. Culita, M. Tudose, A.M Hanganu, I.Zarafu, P.Ionita, "A mixed organic functionalized silica-graphene oxide as advanced material for pollutant removal, J Nanopart Res 22: 194 2020, (IF 2.132)
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13. A. Banu, S. Petrescu, I. Atkinson, A. Paraschiv, M. Marcu*, E.M. Anghel*, *Isothermal Oxidation Behavior of Novel Al₂O₃ / NiCrAlY / Ti₃Al System at 850°C*, Revista de Chimie 71(5) (2020) 1060116. (IF=1.755)
14. D. I. Baila, C. Zaharia, O. C. Mocioiu, *Contact angle measurements at the interface of Co-Cr alloy sintered by DLMS and coated with hydroxyapatite* TehnickiVjesnik, 27, 2020, 583-588. (IF=0,644)
15. M. G. Parvan, G. Voicu, O. C. Mocioiu, C. Hornoiu, *Cementitious composites containing barium titanate for obtaining of some smart structures*, Revista Romana de Materiale / Romanian Journal of Materials 2020, 50(3), 307 – 313 (IF=0,542)

2019

1. S. Preda, C. Anastasescu, I. Balint, P. Umek, M. Sluban, C.C. Negrila, D.G. Angelescu, V. Bratan, A. Rusu, M. Zaharescu, M, *Charge separation and ROS generation on tubular sodium titanates exposed to simulated solar light*, Applied Surface Science, 470, 2019, 1053-1063 (IF=6.182)
2. C. Matei, L. Buhălțeanu, D. Berger, R.-A. Mitran, *Functionalized mesoporous silica as matrix for shape-stabilized phase change materials*, International Journal of Heat and Mass Transfer, 144 ,2019, 118699. (IF= 4.947)
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5. F. Craciun, F. Cordero, M. Cernea, V. Fruth, I. Atkinson, N. Stanica, B.S. Vasile, R. Trusca, A. Iuga, P. Galizia, C. Galassi, *Multiferroic (Nd,Fe)-doped PbTiO₃ ceramics with coexistent ferroelectricity and magnetism at room temperature*, Ceramics International 45(7), 2019. (IF=3.83)
6. M. Deaconu, L. Pintilie, E. Vasile, R.A. Mitran, G.G. Pircalabioru, C. Matei, M.C. Chifiriuc, D. Berger, *Norfloxacin delivery systems based on MCM-type silica carriers designed for the*

- treatment of severe infections*, Materials Chemistry and Physics, 238, 2019, 121886. (IF=3.408)
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 8. A. Nakova, E.M. Anghel, C. Lete, S. Lupu, Tz. Boijadjieva-Scherzer, V. Tsakova, *Graphite electrode-assisted electroless deposition of palladium the absence and presence of poly(3,4-ethylenedioxythiophene) coatings*, Synthetic Metals 247, 2019, 18-23 (IF=3.286)
 9. C. Vladuț, S. Mihaiu, O. C. Mocioiu, I. Atkinson, J. Pandele-Cusu, E. Anghel, J. Calderon-Moreno, M. Zaharescu, *Thermal studies of Mn-doped ZnO powders formation by sol-gel method*, Journal of Thermal Analysis and Calorimetry, 135, 2019, 2943-2951 (IF=2.325)
 10. R. A. Mitran, S. Petrescu, S. Șomăcescu, O.C. Mocioiu, L. Buhălțeanu, D. Berger, C. Matei, *Nanocomposite phase change materials based on NaCl–CaC₂ and mesoporous silica*, Journal of Thermal Analysis and Calorimetry, 138, 2019, 2555-2563. (IF=2.325)
 11. C. M. Vladuț, S. Mihaiu, I. M. Szilagy, T. N. Kovacs, I. Atkinson, O.C. Mocioiu, S. Petrescu, M. Zaharescu, *Thermal investigations of the Sn–Zn–O gels obtained by sol–gel method*, Journal of Thermal Analysis and Calorimetry, 136, 2019, 461–470. (IF=2.325)
 12. C. M. Vlăduț, S. Mihaiu, E. Țenea, S. Preda, J.M. Calderon-Moreno, H. Stroescu, I. Atkinson, M. Gartner, C. Moldovan, M. Zaharescu, *Optical and Piezoelectric Properties of Mn-Doped ZnO Films Deposited by Sol-Gel and Hydrothermal Methods*, Journal of Nanomaterials, V 2019, (2019) Article number 6269145. (IF=1.98)
 13. L. Todan, D. Crișan, N. Drăgan, D. C. Culita, C. Ciuculescu, S. M. Doncea, *Bentonite derived adsorbent for sequestering pyridine from aqueous solution/ Adsorbent pebază de bentonită pentru îndepărtarea piridinei din soluțiile apoase*, Revista Romana de Materiale 2019, 49(4), 491-496 (IF=0.628)
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5. A. Zaharia, A. L. Radu, S. Iancu, A. M. Florea, T. Sandu, I. Minca, V. Fruth-Oprisan, M. Teodorescu, A. Sarbu, T.V. Iordache, *Bacterial cellulose-poly(acrylic acid-co-N,N'-methylene-bis-acrylamide) interpenetrated networks for the controlled release of fertilizers*, RSC Advances., 2018, 8, 17635 (IF=3.123)
6. A. Zaharescu, A. L. Chiriac, S. Ion, A. M. Gavrilă, T. Sandu, I.I. Minca, V. Fruth, M. Teodorescu, T.V. Niculescu, *Bacterial cellulose-poly(acrylic acid-co-N, N'-methylene-bis-acrylamide) interpenetrated networks for the controlled release of fertilizers*, RSC Advances 8(32) 2018, 17635-17644, (IF=3.123)

7. E. Craciun, L. Predoana, I. Atkinson, I. Jitarua, E.M. Anghel, V. Bratan, C. Gifu, C. Anastasescu, A Rusu, V. Raditoiu, E. Vasile, M. Anastasescu, I. Balint, M. Zaharescu, *Journal of Photochemistry Photobiology A356*, 2018, 18-28.(IF=2.891)
8. R. A. Mitran, D. Berger, C. Matei, *Improving thermal properties of shape-stabilized phase change materials containing lauric acid and mesocellular, silica by assessing thermodynamic properties of the non-melting layer*, *Thermochimica Acta* 2018, 660, 70-76. (IF=2.251)
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11. R. A. Mitran, D. Berger, C. Matei, *Phase Change Materials Based on Mesoporous Silica*, *Current Organic Chemistry*, 2018, 22 (27), 2644-2663 (IF=2.173)
12. D. Crisan, N. Dragan, M. Crisan, A. Ianculescu, L. Todan, J. C. Vedrine c, D. Filkova, M. Gabrovska, R. Edreva-Kardjieva, *Structural study of the MO-Nd₂O₃ system obtained by a sol-gel procedure - Etude structurale du systeme MO-Nd₂O₃obtenu par un procede sol-gel*, *C. R. Chimie*, 21, 2018, 232-246 (IF=1.877)
13. M. Zaharescu, L. Predoana, J. Pandeale, *Relevance of thermal analysis for sol-gel-derived nanomaterials*, *Journal of Sol-Gel Science and Technology* 86:7-23, 2018, (IF=1.5)
14. I. Bunoiu, M. Mindroiu, C. C. Manole, M. Andrei, A. Nicoara, E. Vasilescu, M. Popa, Andreea C. Didilescu, *Electrochemical testing of a novel alloy in natural and artificial body fluids*, *Annals of Anatomy - AnatomischerAnzeiger* 217, 2018, 54-59 (IF=1.483)
15. M. Petrescu, R.A. Mitran, C. Matei, M. Radulescu, D. Berger, *Silica-Alginate Composites for Intestinal Ketoprofen Delivery*, *Revista de Chimie*, 2018, 69(12), 3416 – 3422 (IF=1.351)
16. M. Deaconu, I. Nicu, R. Tincu, A.-M. Brezoiu, R.-A. Mitran, E. Vasile, C. Matei, D. Berger, *Tailored doxycycline delivery from MCM-41-type silica carriers*, *Chemical Papers*, 2018, 72, 1869–1880. (IF=1.246)
17. S. Neagu, S. Preda, M. Zaharescu, M. Kamekura, R. Cojoc, M. Enache, *The effect of titanate nanotubes towards moderately halophilic bacteria*, *Romanian Biotechnological Letters*, 23 (4),13814-13822 (IF=0.58)
18. L. Todan, D. Culita, D. Crisan, N. Dragan, J. Pandeale-Cusu, F. Papa, *Oxide powders from tartaric acid Mg/Zr coordination compounds with CO₂ adsorption properties*, *Revista Romana de Materiale* 48(3), 2018, 301-307 (IF=0.661)
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20. A. Rusu, L. Predoană, S. Preda, J. Pandeale-Cușu, S. Petrescu, M. Zaharescu, *Erbium doped SiO₂-TiO₂ or SiO₂-TiO₂-Al₂O₃ nanopowders prepared by sol-gel method*, *Rev. Rom. Mater.*, 48, 2018, 3-10 (IF=0.661)
21. M. V. Gabrovska, D. Crișan, D. A. Nikolova, I. Z. Shtereva, L. P. Bilyarska, M. Crișan, R. M. Edreva – Kardjieva, *Structure and activity of M-Al layered double hydroxides in CO₂ methanation reaction as function of the divalent metal*, *Bulgarian Chemical Communications*, 50, (2018), Spec Iss H, 24-33 (IF= 0.43)
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23. M. Crisan, *A short history of the sol-gel processes initiated in Institute of Physical Chemistry*, *Revue Roumaine de Chimie*, 63, 2018, 385-392 (IF=0.370)
24. O. C. Mocioiu, I. Atkinson, J. Cusu-Pandeale, V. Bratan, S. Petrescu, D.I.Baila, A. M. Mocioiu, *Structural and physico-chemical characterization of Zn-doped SiO₂ glasses obtained by sol-gel route*, *Revue Roumaine de Chimie* 63(5-6), 2018, 419-424 (IF=0.370)

2017

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