



Școala Doctorală de Chimie

TEMATICA PENTRU CONCURSUL DE ADMITERE LA DOCTORAT sesiunea iulie și septembrie 2024

Prof. univ. dr. Aurel PUI

- 1. Nanostructuri oxidice avansate pentru fotocataliza și producerea de energie verde (ro)**
Advanced oxide nanostructures for catalysis and green energy production (en)

Bibliografie/References

1. Vladislav Sadykov (Editor), Advanced Nanomaterials for Catalysis and Energy, Synthesis, Characterization and Applications, ISBN: 9780128148075, 1st Edition - August 27, **2018**.
2. Borhan, A.I., Herea, D.D., Husanu, M.A., Popescu, D.G., Borca, C.N., Huthwelker, T., Bulai, G., Radu, I., Dirtu, A.C., Dirtu, D., Mita, C., Stoian, G., Ababei, G., Lupu, N., Pui, A., Ghercă, D., Straightforward FeOOH nanografting of Al-based SrTiO₃ perovskite material as core-shell nanoflower-like heteronanostructure with enhanced solar light-driven photodegradation capability, Applied Surface Science, 614, 156247, **2023**.
3. Gherca, D., Borhan, A.I., Mihai, M.M., Herea, D.D., Stoian, G., Roman, T., ... & Buema, G. (2022), Magnetite-induced topological transformation of 3D hierarchical MgAl layered double hydroxides to highly dispersed 2D magnetic hetero-nanosheets for effective removal of cadmium ions from aqueous solutions, Materials Chemistry and Physics, 284, 126047, **2022**.
4. Roman, T., Ghercă, D., Borhan, A.I., Grigoraș, M., Stoian, G., Lupu, N., ... & Pui, A., Nanostructured quaternary Ni_{1-x}Cu_xFe_{2-y}Ce_yO₄ complex system: Cerium content and copper substitution dependence of cation distribution and magnetic-electric properties in spinel ferrites. Ceramics International, 47(13), 18177-18187, **2021**.

- 2. Compusi coordinativi cu baze Schiff (ro)**
Coordination compounds with Schiff bases (en)

Bibliografie/References

1. Ghanghas, P., Choudhary, A., Kumar, D., Poonia, K., Coordination metal complexes with Schiff bases: Useful pharmacophores with comprehensive biological applications, *Inorganic Chemistry Communications*, 108710, 130, 2021;
2. Boulechfar, B., Ferkous, H., Delimi, A., Djedouani, A., Kahlouche, A., Boubli, A., Darwish, A.S., Lemaoui, T., Verma, R., Benguerba, Y., Schiff bases and their metal Complexes: A review on the history, synthesis, and applications, *Inorganic Chemistry Communications*, 110451, 150, 2023;
3. Attia Kanwal, Bushra Parveen, Rizwan Ashraf, Noman Haider, Kulsoom Ghulam Ali, A review on synthesis and applications of some selected Schiff bases with their transition metal complexes, *Journal of Coordination Chemistry*, 75, 19-24, 2022;
4. Aurel Pui, Jean-Pierre Mahy, Synthesis, characterization and catalytic activity of halo- methyl-bis(salicylaldehyde) ethylenediamine cobalt(II) complexes, *Polyhedron*, 26, 3143-3152, 2007.

Conducător de doctorat,
Prof. univ. dr. Aurel PUI