

MARIA IGNAT

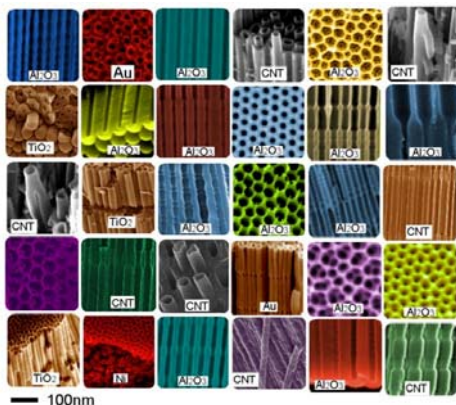
Research themes:

- **Metaterials chemistry:** materials synthesis and characterization at nanoscale;
- **Nanomaterials:** nanostructured materials for sorption processes and (photo)catalytic applications;
- **Nanomaterials:** nanostructured materials for nanomedicine applications.

Materials chemistry: synthesis of polymeric and inorganic compounds structured at nanoscale level, characterization of nanostructured polymeric and inorganic compounds. nitrogen sorption measurements, small and wide angle X-ray diffraction, electron microscopy;

Nanomaterials: developing of new nanostructured materials (nanodimensioned), mono-, bi-, and multicomponent materials with sorptive and (photo)catalytic properties; nanomaterials loaded with various active principles, targeted delivery of active principles.

Key words: oxidic nanomaterials, polymeric nanomaterials, functionalized nanostructures, sorption, (photo)catalysis, nanomedicine.



Publications (selection)

Ignat, M., Sacarescu, L., Fortuna, M., Cool, P., Harabagiu, V., Effect of synthesis parameters on sorptive properties of glycerol-derived mesoporous carbon, *Environmental Engineering and Management Journal*, acceptat spre publicare, **2016**.

Ignat, M., Samoila, P., Cojocar, C., Sacarescu, L., Harabagiu, V., Novel Synthesis Route for Chitosan-Coated Zinc Ferrite Nanoparticles as Potential Sorbents for Wastewater Treatment (Chitosan-ZnFe₂O₄ Sorbent for Wastewater Treatment), *Chemical Engineering Communication*, acceptat spre publicare, **2016**.

Ștefanache, A., Ochiuz, L., **Ignat, M.**, Crețeanu, A., Țântaru, G., Development and validation of a new method by high performance liquid chromatography for the quantitative analysis of magnolol loaded in silica particulate systems, *Farmacia*, 64 (2), pp. 268-273, **2016**.

Humelnicu, D., **Ignat, M.**, Doroftei, F., Agricultural by-products as low-cost sorbents for the removal of heavy metals from dilute wastewaters, *Environmental monitoring and assessment*, 187 (5), p. 222, **2015**.

Humelnicu, D., **Ignat, M.**, Suchea, M., Evaluation of adsorption capacity of montmorillonite and aluminium-pillared clay for Pb²⁺, Cu²⁺ and Zn²⁺, *Acta Chimica Slovenica*, 62 (4), pp. 947-957, **2015**.

Rezlescu, N., Rezlescu, E., Dorin Popa, P., Doroftei, C., **Ignat, M.**, Some nanograined ferrites and perovskites for catalytic combustion of acetone at low temperature, *Ceramics International*, 41 (3), pp. 4430-4437, **2015**.

Coromelci-Pastravanu, C., **Ignat, M.**, Popovici, E., Harabagiu, V., TiO₂-coated mesoporous carbon: Conventional vs. microwave-annealing process, *Journal of Hazardous Materials*, 278, pp. 382-390, **2014**.



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Materials chemistry
Nanomaterials

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