

DOINA LUTIC

Research Areas/Interest

- Microporous and Mesoporous Materials, synthesis and characterization. BET adsorption performance and interpretation;
- Porous Oxidic Materials for Adsorption Processes;
- Catalytic and Photocatalytic Materials. Photocatalytic reactions.

Solid Micro- and Mesoporous

Materials: synthesis by precipitation-coprecipitation, ionic exchange, sol-gel method, hydrothermal reactions, ultrasound-assisted synthesis. Structural characterization by XRD, IR and UV spectroscopy, Thermal analysis, BET adsorption, SEM, EDAX.

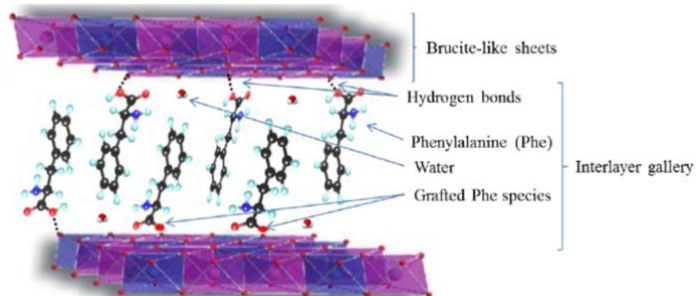
Porous Oxidic Materials for

Adsorption Processes: applications in environment protection, by the uptake of persistent organic pollutants (POP) on solids or in the sensing elements of chemical sensors.

Use of porous materials in conditioning of the biologically active compounds with controlled release

Catalytic and Photocatalytic Materials: use of semiconductive oxides in the photo-assisted decomposition of POPs and other Green Chemistry applications (chemical sensor formulae)

Keywords: Nanoporous Oxides, semiconductive oxides, synthesis, characterization, adsorption, catalysis, photo-oxidation, green chemistry, controlled release.



Publications (selection)

Lutic, D., Coromelci-Pastravanu, C., Cretescu, I., Poulios, I., Stan, C.-D., Rhodamine 6G Removal from Wastewaters using Photoactive ZnO – a Parametric Study, *International Journal of Photoenergy*, 8 pages, doi:10.1155/2012/475131, **2012**.

E.M., Seftel, Cool, P., Lloyd-Spetz, A., Lutic, D., Synthesis and characterization of catalytic metal semiconductor-doped siliceous materials with ordered structure for chemical sensing, *Journal of Porous Materials*, vol. 20, Issue 5, p. 1119-1128, **2013**.

Seftel, E.M., Cool, P., Lutic D., Mg–Al and Zn–Fe layered double hydroxides used for organic species storage and controlled release, *Mat. Sci. Eng. C* 33 p. 5071–5078, **2013**.

Seftel, E.M., Cool, P., Lloyd Spetz, A., Lutic, D., Pt-doped Semiconductive Oxides Loaded on Mesoporous SBA-15 for Gas Sensing, *Comptes Rendus Chimie* 17, 717–724, **2014**.

Airimioaei, M., Stanculescu, R., Preutu, V., Ciomaga, C., Horchidan, N., Tascu, S., Lutic, D., Pui, A., Mitoseriu, L., Effect of particle size and volume fraction of BaTiO₃ powders on the functional properties of BaTiO₃/poly(ϵ -caprolactone) composites, *Materials Chemistry and Physics*, 182, 246-255, **2016**.

Visser, J., Jozsa, P., Lutic, D., Lloyd-Spetz, A., Sanati, M., Method and arrangement for detecting particles, *International Patent WO 2009/108091 A1*, **2009**.



(n.1964)

Assoc. Prof. PhD

e-mail:

doilub@uaic.ro,
doilub@yahoo.com

**Chemistry of
Materials
Heterogeneous
Catalysis
Photocatalysis**

PhD – specialization
Catalysis of Organic
Reactions, Technical
University „Gheorghe
Asachi” from Iasi,
1997.

Post-doctorate fellow
– Laval University,
Quebec, Canada
(1999)

– Montpellier II
University, Montpellier,
France

– Univ. Växjö și
Linköping, Suedia