

DOINA HUMELNICU

Research Areas/Interest

- Synthesis and characterization of transition metals
- Study on the removal of heavy metals ions from wastewaters
- Synthesis and characterization of polyoxometalates of „d” and „f” metals

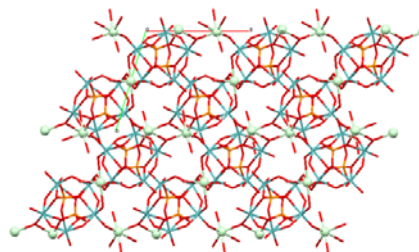
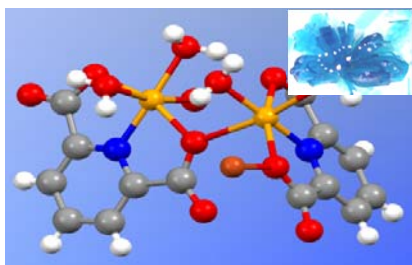
Synthesis of coordination compounds of transition metals with different ligands type.

Characterization of these compounds by UV-Vis and FT-IR spectroscopy, thermal analysis.

Removal of some heavy metals from wastewaters by using different natural and modified sorbents.

Synthesis and physico-chemical characterization of some iso- and heteropolyoxometalates of transitional metals.

Study of some electric and magnetic properties of this compounds.



Publications (selection)

Pui, A., Malutan, Th., Tataru, L., Malutan, C., **Humelnicu, D.**, Carja, G., New complexes of lanthanide Ln(III), (Ln = La, Sm, Gd, Er) with Schiff bases derived from 2-furaldehyde and phenylenediamines, *Polyhedron*, 30, 2127-2131, **2011**.

Popescu, I.C., Filip, P., **Humelnicu, D.**, Humelnicu, I., Scott, T.B., Crane, R.A., Removal of uranium (VI) from aqueous systems by nanoscale zero-valent iron particles suspended in carboxy-methyl cellulose, *J. Nucl. Mater*, 443, 250-255, **2013**.

Humelnicu, D., Blegescu, C., Ganju, D., Removal of uranium (VI) and thorium (IV) ions from aqueous solutions by functionalized silica: kinetic and thermodynamic studies, *J Radioanal Nucl Chem*, 299(3), 1183-1190, **2014**.

Humelnicu, D., Ignat, M., Doroftei, F., Agricultural by-products as low cost sorbents for the removal of heavy metals from dilute wastewaters, *Environ. Monit. Assess.*, 187(5), 187-198, **2015**.

Humelnicu, D., M. Ignat, Sucheana, M., Evaluation of adsorption capacity of montmorillonite-K10 and Al-pillared clay towards Pb^{2+} , Cu^{2+} and Zn^{2+} ions, *Acta Chim. Slov.*, 62, 947-957, **2015**.

Humelnicu, D. Inorganic chemistry of nonmetal and semimetal elements, Tehnopress Publishing House, Iasi, **2015**, ISBN 978-606-687-230-0.



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**Inorganic and
coordination
chemistry**

PhD studies

„Alexandru Ioan Cuza”
from Iași University,
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Research Internships

Alma Mater Studiorum
University, Bologna,
Italy,
Ecole Centrale Lyon,
France