

Research field: Chemistry of complex combinations of metals from the d block;

The research involves several branches of chemistry:

- Synthesis of organic (ligands), inorganic and coordination compounds;
- Molecular and supramolecular characterization;
- Optical, thermal, photophysical characterization;

Purpose: obtaining functional materials with applications in electro-optics and biomedicine.

Methodology:

- The design and development of new ligands with different donor atoms (N, O, S, etc.), functionalized with flexible hydrophobic and/or hydrophilic chains and their complex combinations with block d metals;
- Structural and supramolecular characterization: analytical, spectroscopic and X-ray diffraction studies;
- The study of the properties and the evaluation of the applicative potential of the compounds obtained as materials, either as such or incorporated in inorganic matrices;

Proposed topic for PhD: Supramolecular soft heterometallic systems

References:

- [1] M. Brezeanu, E. Cristurean, A. Antoniu, D. Marinescu, M. Andruh, ***Chimia metalelor***, Editura Academiei române, București, **1990**.
- [2] C. D. Nenitescu, ***Chimie organica***, Ed. Didactica si Pedagogica, Bucuresti, **1980**.
- [3] D. Marinescu, ***Chimie coordinativa. Principii generale***, Editura Universității București, **1995**.