

Department of the Materials Chemistry and Chemical Technology

Research Internships

Duration: 1-4 months

Supervisor: Professor Alexander Gorokhovskiy

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Language of training: English

Audience: graduate students, undergraduates and young scientists with a PhD degree.

The Department is ready to accept foreign postgraduate students for a short-term practice in the following areas of research:

1. Synthesis and functional properties of heterostructured and nanocomposite inorganic and hybrid materials;
2. Synthesis and investigation of new types of oxide vitreous and glass-ceramic functional materials;
4. Solid state ionics of complex oxide materials;
5. Electrochemical synthesis and modification of nanomaterials;
6. Harvesting of dissipated heat with thermo-electrochemical cells;
7. Complex titanate photocatalysts and photocatalysis;
8. Functional geopolymers;
9. Impedance spectroscopy of piezo- and ferroelectrics (monocrystals and polycrystalline materials).

The laboratories of this department are equipped with the following modern experimental technique:

Well-equipped chemical laboratory; SEM/EDS; IR and optical spectrometry; DSC/DTA; impedance spectrometry; XRD; Laser diffraction; BET; Laboratory technological equipment to produce coatings by spin-coating, sleep-casting, electrochemical and electrophoretic methods; Thermal equipment (furnaces and ovens) to produce glass, ceramic and glass-ceramic materials; Milling equipment; Mixers and homogenizers; Equipment to investigate rheological and friction behavior of different systems, etc.