Area of study:

04.04.01 Chemistry Program Innovative Materials Chemistry

Degree: MA

Program length and study mode: 2 years, intramural Language: Russian/ English

Credits: 120

Start date: September 1, 2020 Location: Rostov-on-Don

Entry requirements: bachelor, master or specialist's degree

Program overview:

Program structure:

Module 1. Theoretical and methodological courses and types of activity

Module 2. Scientific and applied courses and activities

Module 3. Actual problems of technologies of innovative materials for electronic devices

Module 4. Practical training and research

Module 5. State final certification

Typical units of study may include:

- History and methodology of science, modern problems of materials science and technologies
- English for chemists
- Types of functional materials in the electronic industry
- Selected Chapters of Inorganic, Organic, Applied Chemistry and Solid State Physics
- Synthesis methods (laboratory technologies) of basic active phases and materials based on them
- Methods of manufacturing samples of functional materials and methods for determining their electrophysical and mechanical properties
- Industrial technology for functional materials production
- Algorithms for development and research of functional materials with a different set of physical and electrophysical properties

Research areas:

- Scientific and methodological seminar "Functional materials and converters"
- Low-temperature technology of functional materials
- Project Activity Module
- Actual problems of chemistry and technology of functional materials

Careers:

Materials science research institutions (Roscosmos, Rosatom, design bureaus, aviation, automobile and other enterprises), various expert and control laboratories, material science and chemical enterprises, educational institutions.

Get in touch:

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