

# Composite Nanomaterials and Functional Nanosystems

National University of Science and Technology MISIS

Degree or qualification is awarded: **Bachelor's Diploma in Nanomaterials**

Language of study: **Russian**

Mode of study: **full-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **261 000 rubles/year**

Programme webpage at the university website:

<https://misis.ru/applicants/admission/baccalaureate-and-specialty/faculties/nanomaterial/>

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Students acquire knowledge and practical experience in processing of nanomaterials: low-dimensional structures, including biologically active ones, thin films, composites, ceramics, structural materials, catalysts, and other objects. The main focus is on the students work in the world-class laboratories of NUST MISIS and partner organizations, starting from the second year of study. A graduate of the program has a wide range of competencies for solving wide range of tasks in the field of nanotechnology, essential for their professional fulfillment in research centers and high-tech production.

In addition to basic courses of general physics, higher mathematics, and chemistry, students study the structure and properties of solid materials. Special focus is given to various nanosystems, including colloidal systems; the role of the surface in the properties of systems; features of interaction with environment with different biological, physical and chemical properties. Specialization in senior courses allows students to get in-depth training and master fundamental approaches to the construction of nanosystems, creating environments with various optical, magnetic, and mechanical properties, as well as study their properties at the macroscopic and atomic level. In the course of research, students can specialize in the use of nanomaterials in biology, ecology, medicine, energy-efficient devices and equipment.

## Specializations within this programme