

### **03.06.01 Physics and Astronomy**

#### **Thermophysics and Theoretical Thermal Engineering**

*Graduation department:* Chemical Physics Department (№4).

The Department was found in 1951. Nikolay N. Semenov, the Nobel Prize laureate, became its founder and first Head. The department has more than 50 years of experience in educational and research activities with the participation of employees of leading research organizations.

#### **Program objective**

Training of highly qualified specialists for the State Corporation "Rosatom" and other Russian research centers and organizations for creation and operation of machines and plants that produce and transform thermal and nuclear energy.

#### **Research areas**

- thermal and nuclear power plants, fusion power plants, alternative energy sources;
- hydrogen energy installation, hydrogen safety;
- heat and mass transfer devices for different purposes;
- facilities of direct energy conversion;
- environmental monitoring;
- system diagnostics and automated process control in thermal and electric power;
- wide-range equations of state for fluid mixtures, condensed and nanodispersed matter and materials.

#### **Future research career opportunities**

- Leading Institutes of the Russian Academy of Sciences (Institute of Chemical Physics, Joint Institute of High Temperatures, Institute of Problems of Chemical Physics, Institute of Applied Mechanics, Merzhanov Institute of Structural Macrokinetics and Materials Science),
- Institutes of the State Corporation "Rosatom"