

Nuclear Technologies Cluster of Skolkovo Foundation

supports innovational projects and search for partnership in directions of:

Technologies based on nuclear science developments:

1. Specific and spin-off of nuclear power and fusion technologies;
2. Processing and storage of radioactive waste;
3. Back-end for nuclear objects;
4. Radiobiological studies
5. Plasma formation and diagnostics for technological applications

Radiation technologies

1. Isotopes and their applications in medicine and industry.
Radiopharmaceuticals
2. Radiation and radioisotope therapy and magnet therapy
3. Laser and terahertz technologies for diagnostics and therapy, cosmetology and biotechnology
4. Technologies of medical and industrial diagnostics utilizing radiation and magnetic fields
5. Sterilization and disinfection technologies;
6. Volume and surface radiation processing of materials. Deposition, sputtering, implantation;
7. Laser, terahertz and plasma technologies for the industrial applications;
8. Separation and filter production technologies based on utilization of ionizing radiation;
9. Security inspection systems;
10. Beam, laser and plasma techniques for mediation and adaption technologies to enhance ecological sustainability ;
11. Electron-beam, radiation-chemical and EM field controlled technologies;
12. Radiation processing of mineral products
13. Radiation technologies in geology and geochemistry

Technologies of properties' modification and characterization of materials

1. Materials for nuclear and thermonuclear energetic;
2. Materials for electro-physical and electro-optical systems and electronics.
Superconductors;
3. New material for medicine;
4. Technologies of creation nanostructures and nano-systems;
5. Equipment and technologies of structure, composition and characteristics control for materials and compounds;
6. Non-destructive testing. Radiography;

7. Methods of extraction of high purity and rare-earth materials

Technologies supplied to mechanical systems, instruments and new microelectronics

1. Particle accelerators and components;
2. Lasers and components;
3. Compact neutron sources;
4. Automated control and anticipatory systems. Robotic inspection and repair;
5. UHF-systems;
6. Detectors, sensors, dosimeters and components;
7. Equipment and technologies based on radiation sources, plasmas or lasers for new materials' development. Lithography. Fast prototyping;
8. Systems of calibration, checking and certification for detectors

Technologies of designing, constructing, modeling and engineering of complicated technological objects and systems

1. Engineering of technological systems based on radiation sources or lasers. Radiation safety aspects;
2. Predictive modelling in power engineering
3. Design, modelling and characterisation of materials structure and properties at extreme conditions;
4. Life-cycle control systems for complicated technological objects;
5. Imaging technologies and data acquisition;
6. Simulations for nano-, bio-, radiation technologies