

Technopark of ITMO University (company Ltd «NT-SPb»¹) develops and produces scientific and educational equipment for scanning probe microscopy and x-ray analysis of materials since 2004 year. The result of many years of success progress is the creation of an educational laboratory «High School Laboratory for Nanotechnology». This laboratory combines the equipment, hardware, software and methods for student education in the field of nanodiagnostics such as optics, scanning probe microscopy, scanning electron microscopy and X-ray fluorescence analysis.

In addition to the development and production of scientific and educational equipment Technopark of ITMO University is working closely with Saint Petersburg Academic university of Russia academy of science named by Zh.I. Alferov (Alferov university) in the development of the Educational-methodical Guidelines for the organization of educational and scientific work of «High School Laboratory for Nanotechnology». The Educational-methodical Guidelines are based on a project approach in the field of education (project-based learning), and was awarded the first prize of the government of St. Petersburg, as the best innovative development in the field of education and science in 2018.

The equipment and the Educational-methodical Guidelines produced by Technopark and Alferov university are widely recognized and implemented in the educational and scientific centers of Russian Federation. For example, «High School Laboratory for Nanotechnology» is a key part of more than 30 «nano-kvants» of Federal Network of Technoparks Kvantorium². Also, the developed methodology for learning of nanotechnology through a project-based and design approach is using at the Federal Center of gifted education SIRIUS³. It's a big pleasant to note that scanning probe microscopy NanoTutor that are part of the «High School Laboratory for Nanotechnology» are used at the universities of Rome and Padova.

1. <https://nano.ifmo.ru/>
2. <https://roskvantorium.ru/en/>
3. https://sochisirius.ru/uploads/files2/sirius_en.pdf