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The Endstation "NanoPES" at the Kurchatov synchrotron radiation source

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The End-station “NanoPES”, currently under construction, is intended for the implementation of techniques for angle-resolved photoemission spectroscopy (ARPES), NEXAFS, LEED, SPM microscopy and spectroscopy. The station was projected for fundamental researches in solid state physics, surface science and for processing technological operations in the course of creation devices for micro- and nanoelectronics. The station is located at the bending magnet beamline 6.5 and covers the region of excitation energies between 25 eV and 1500 eV due to a plane grating monochromator. The electron energy analyzer used, is a hemispherical analyser PHOIBOS 225 with an energy resolution of 1 meV and an angular resolution of 0.1°. The station is provided with a complete set of accessories for in-situ sample preparation, sputtering and deposition of monolayer and submonolayer thin films, as well as AFM and STM microscope for in-situ topography and electronic structure studies of samples. The report shows the optical design, the specifications, the first spectra and discussed prospects of development of the station.

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