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PHASE beamline at Kurchatov synchrotron light source.

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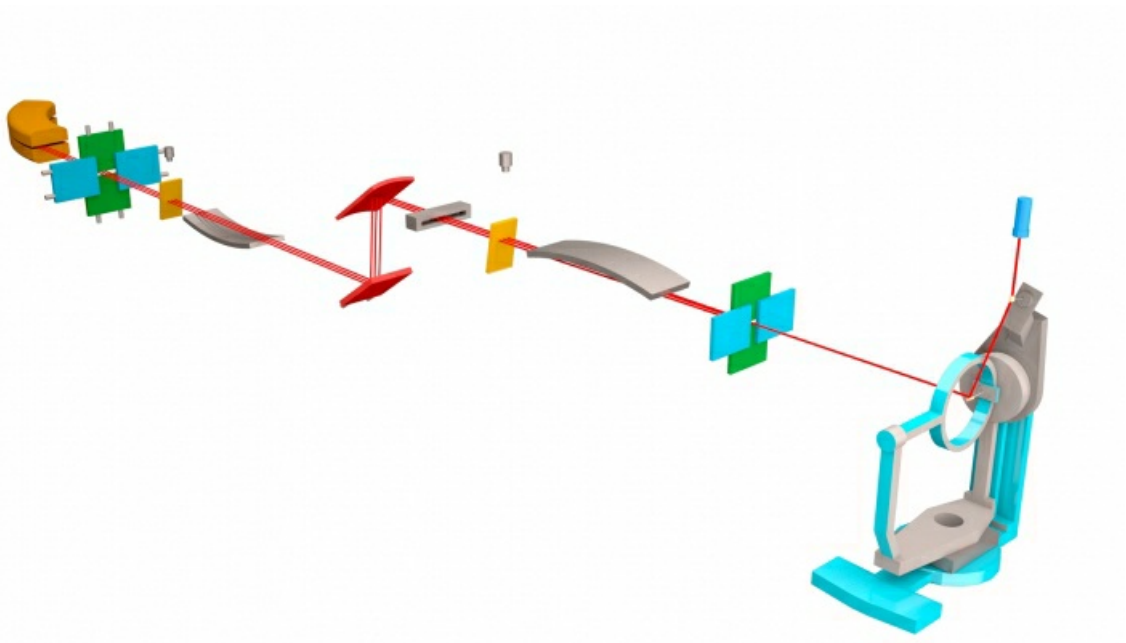
New beamline named “Phase” was built at Kurchatov synchrotron. The beamline is based on bending magnet, it has focusing mirrors and sagittal bended DCM. This beamline is a pilot project in a series of beamlines being built at Kurchatov synchrotron. The main directions of research for the beamline include nanodiagnostic of organic and nonorganic thin films, biomedical applications, defect formation and evolution, study of magnetic structures. Many experimental techniques are implemented at PHASE beamline including x-ray standing waves, fluorescence in total external reflection, resonant diffraction etc. Extended experimental hall of synchrotron building gives a possibility to construct long beamlines (i.e. PHSE is 36 m long), equipped with modern x-ray optics. For PHASE beamline optics positioned in two hutches and in the accelerator tunnel (primary collimating mirror).
Optical scheme of the beamline consists of collimating mirror, DCM with saggital bender and secondary focusing mirror, elliptically curved. The beamline operates in energy range from 3.5 to 40 keV. The specimen under study is located at Huber 5020 6-circle goniometer. Experimental station has a furnace for heating the specimen up to 1100 °C and 4K Cryostat.
The beamline description illustrated with examples of research.



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