

NewSUBARU

The NewSUBARU synchrotron radiation facility is operated by the Laboratory of Advanced Science and Technology for Industry (LASTI), University of Hyogo. This facility consists of an electron storage ring and nine beamlines. Electron injection is supplied from a 1 GeV linac of the SPring-8 facility. The conceptual layout of the NewSUBARU facility is illustrated below.

Topics of the NewSUBARU facility in fiscal year 2012 are as follows.

- (1) An LSI mask pattern observation system for extreme ultraviolet lithography using a lensless scatterometry microscope was developed.
- (2) The beam current was enhanced from 220 mA to 300 mA. This was achieved by the precise tuning of magnetic optics and improvement of beam lifetime.
- (3) A new irradiation hutch for a γ -ray beam was added in collaboration with Konan University. The γ -ray beam of photon energy up to 76.3 MeV was started for the users. The maximum γ -ray power generated was 0.33 mW.
- (4) LEENA, a small linear electron accelerator at NewSUBARU, was reconstructed, and the generation of THz Smith-Purcell radiation was started.

Furthermore, all NewSUBARU beamlines are open for industry use. Promotion of user operation and technical assistance for users are supported by the "Open advanced research facility initiative" of MEXT.

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