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## Microfocus tender X-ray beamline utilizing dipole radiation at BESSY II

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A new beamline has been established on a dipole magnet at BESSY II in PTB's own laboratory. The microfocus of the beamline has a typical spot size of  $20\text{ }\mu\text{m} \times 20\text{ }\mu\text{m}$  within the range of 1.5 keV to 10 keV monochromatized dipole radiation. Particularly, the microfocus will make X-ray spectrometric measurements more efficient and accurate, especially for techniques such as micro-X-ray fluorescence spectroscopy and X-ray emission spectroscopy using a von Hamos spectrometer. The core of the beamline is the monochromator that combines two modules: a plane grating monochromator (PGM) equipped with a multilayer-coated blazed grating and a plane mirror for energies up to 3.5 keV, and a double crystal monochromator (DCM) with two Si (111) crystals for energies above 2.45 keV. All the other mirrors are coated with Pt. To suppress higher-order contributions above 4 keV, the toroid M1 has an additional coating stripe of carbon. M1 and cylindrical M2 generate an intermediate focus at the exit slit. The final microfocus is created by a Kirkpatrick-Baez optic with two plane-elliptical mirrors. Initial results will be presented regarding beamline performance as well as from the commissioning phase.

### Footnotes

### Funding Agency

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