

Application of Nanometer-Multilayer Optics for X-ray Analysis

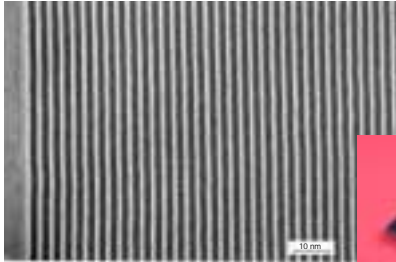
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High performance focusing and parallel beam multilayer X-ray optics



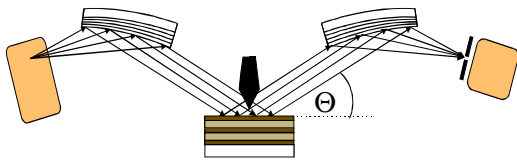
Ni/C multilayer (d=3,2 nm) (TEM cross section)

Glued and prefigured focusing and parallel beam X-ray optics with various focal lengths and parallel beam widths, designed for Mo K α -, Cu K α -, Co K α -radiation

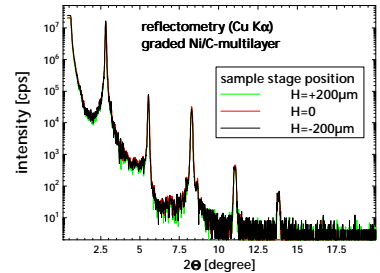


X-ray Pointer – a high brilliance monochromator system

A new quality of in-house X-ray reflectometry - Twin mirror arrangement

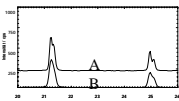
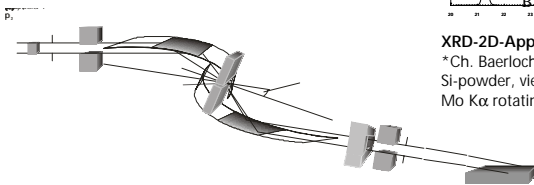


- highest intensity and low divergence
- superior K β - suppression
- sample fluorescence suppression
- no influence of sample surface position errors on peak position for reflectometry and diffractometry
- easy and fast sample alignment

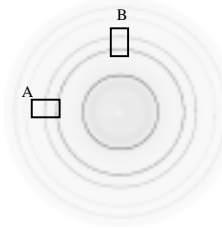


High brilliance collimating monochromator systems for intense sub-mm X-ray spots X-ray Pointer and Beam Compressor

Collimating Monochromator



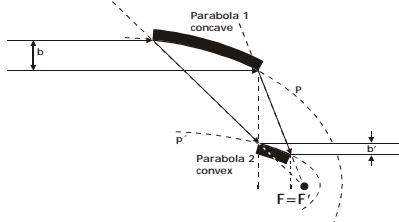
XRD-2D-Application*
*Ch. Baerlocher, ETH Zurich
Si-powder, view rotated 90°,
Mo K α rotating anode



Special features

- infinite primary focal length and improved stability of incident angle
- fixed vertical divergence of 0,03° (0,4 mrad) - display detail A and
- tunable horizontal divergence and sample illumination by a slit (detail B)

Beam Compressor



sub-mm Reflectometry

Thickness Gradient **perpendicular** to beam direction
(Ni/C graded multilayer)
(Beam Compressor spot 0,3mm x 0,6mm (Z x Y);
Twin mirror arrangement)

