Focused Ion Beam (FIB)

Technical Parameters

FIB-SEM System:
NVision 40
Primary beam:
SEM (Gemini Zeiss): e^- 1 - 30 kV
FIB (Seiko Zeta): Ga^+-Ions 5 - 30 kV
Lateral resolution: REM: 1.1 nm @ 20 kV
2.5 nm @ 1 kV
FIB: 4.0 nm @ 0.1 pA
Signal Detected:
Secondary electrons
(SE, In lens, EsB, STEM Detectors)

EDX-System:
SDD-Detector Bruker Xflash 4010
Elements Detected: B – U
Lateral Resolution (EDX): ≥ 1 µm
Depth resolution (EDX): 0.5 – 3 µm
Energy resolution (EDX): 125 eV
Detection Limits (EDX): 0.1 – 1 at%

Application areas

- High resolution cross-section images of small sample features
- SEM Imaging
- TEM sample preparation
- „on-chip“ circuit modification (FIB Cuts, W, C and SiO_2 deposition)
- In-situ STEM Imaging
- Chemical Microanalysis by EDX (point analysis, line scans, mapping)

Contact person

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