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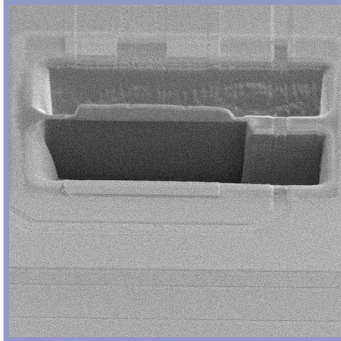
MASER

(S)TEM SERVICE

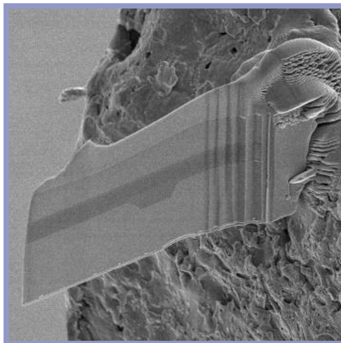
- DUAL-BEAM SAMPLE PREPARATION
- IN-SITU SAMPLE LIFT OUT
- (S)TEM-EDX MATERIAL ANALYSIS
- SUB-NANOMETER RESOLUTION
- PLASMA CLEANING

(S)TEM SERVICES



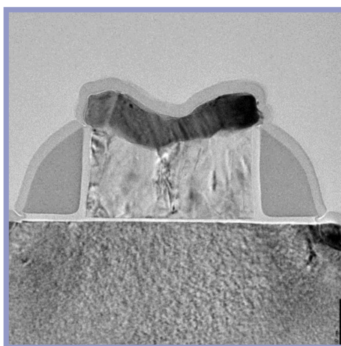
TEM SAMPLE PREPARATION

- Simultaneous milling and SEM imaging with TF Helios G4 PFIB UXe
- EasyLift EX NanoManipulator for in-situ sample lift out
- Grid attachment of sample with 100 nm accuracy
- Platinum deposition to protect the lamella during milling
- Thinned with only 3 nm amorphous layer
- Sample thickness down to 60 nm



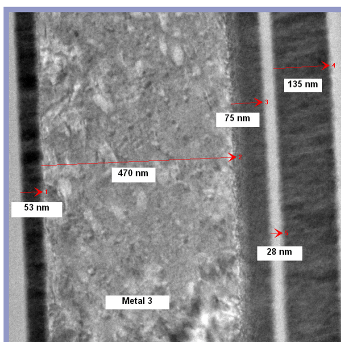
TEM LAMELLA PLASMA CLEANING

- Removes organic contamination
- Oil-free vacuum system
- Storage of specimen holders in a clean vacuum
- Structural characteristics are not changed during the cleaning process



(S)TEM IMAGING

- HR-TEM mode capable of resolution >160 pm
- STEM-HAADF mode capable of resolution >180 pm
- Inspection of crystal structures
- Visualization of dislocations and stacking faults
- Identifying lattice and crystal constants
- Simultaneous BF or ADF imaging with GATAN detectors



(S)TEM-EDX MATERIAL ANALYSIS

- EDAX r-TEM high performance liquid nitrogen cooled EDX detector
- Identifying the atomic composition of a material
- EDX Point scan mode
- EDX Line scan mode
- EDX element mapping

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