

SLTEM and sample preparation laboratory

(transmission electron microscopy and sample preparation)

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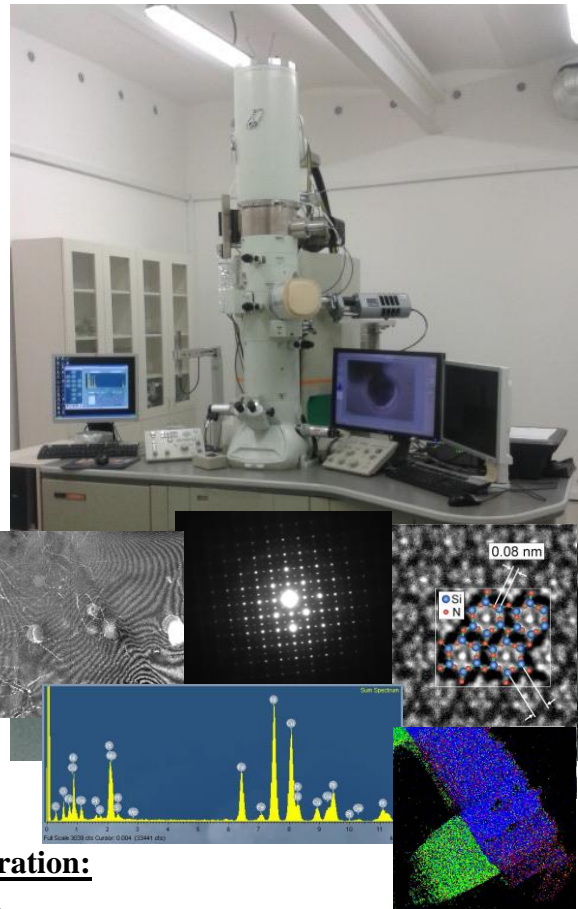
Transmission electron microscope JEOL JEM-2100F UHR:

Ultra-high-resolution transmission electron microscope with excellent analytical capabilities. The performance of microscope is tuned to atomic resolution observations in both, bright and dark field mode.

- point resolution 0.19 nm
- coefficient of spherical aberration of objective lens 0.5mm
- Schottky FEG electron gun
- STEM bright field detector
- STEM dark field detector/HAADF mode
- EDS detector Oxford instruments X-MAX 80mm²
- digital camera Gatan Orius SC1000A
- High-tilt holder +/- 60° JEOL
- Specimen rotation holder JEOL
- Electromagnetic field compensation systems ETS-LINDGREN EMFC-MK IV

Applications:

- conventional and HR-TEM observations
- tomographic analysis
- analysis of materials in diffraction modes SAED/CBED/NBD
- STEM observations in bright and dark field mode
- EDS analysis of materials – point/line/area and mapping



Sample preparation:

Ion Slicer JEOL:

Instrument dedicated to final thinning of specimen by means of accelerated ion beam.

- preparation of thin foils from bulk specimen
- preparation of transparent areas on cross-sectioned samples



Dual Sputtering and Evaporation System Quorum Q150R ES:

- making of covering and electrically conductive films on samples dedicated for electron microscopy

Plasma Cleaner Fischione M1020:

Cleaner of transmission electron microscopy samples mounted in holder by means of plasma.

- removing of hydrocarbon contamination layers, removing of solution residuum from prepared samples
- vacuum storage of samples

Automatic electrolytic thinner Struers Tenupol 5

Disc Grinder M623 Gatan

Ultrasonic Cutter M601 Gatan

Dimple Grinder M656 Gatan

Disc Punch M659 Gatan

