

Details

transmission electron microscopy - center of the Faculty of Engineering Kiel (TEM)

The TEM Center of the Faculty of Engineering at the Christian-Albrechts-University in Kiel provides the opportunity to study the chemical, morphological and structural properties of micro and nanomaterials at two Transmission Electron Microscopes (TEM). Besides of established techniques like high resolution (HRTEM), selected area electron diffraction (SAED), energy dispersive X-ray spectroscopy (EDX), electron energy loss spectroscopy (EELS), and Lorentz microscopy (LTEM), also more special and upcoming techniques like precession electron diffraction (PED) and automated crystal orientation mapping (ACOM) can be used. Additionally to the microscopy itself, various possibilities for sophisticated preparation of samples are available. The scientific director of the TEM Center is at the same time the leader of the group "Synthesis and Real Structures", at the moment Prof. Dr. Lorenz Kienle. A TEM coordinator is responsible for the organization of the current projects including accounting. A technician is in charge of the preparation laboratories. A controlled and transparent access is assured for all scientists at the university.

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Host Institution

Technische Fakultät, Christian-Albrechts-Universität Kiel Kaiserstr. 2 24143 Kiel Schleswig-Holstein Deutschland http://www.uni-kiel.de

Scientific Domain

Primary Subjects:

- Chemistry
- Materials Science and Engineering
- Secondary Subjects:
- Medicine
- Physics
- Computer Science, Electrical and System Engineering

Category

Analytical Facilities

Scientific Services

The services offered are composed by sample preparation, measurements at the transmission electron microscope, as well as the analysis of the collected data. measurements at the TEM include: common bright field microscopy High resolution (HRTEM) High Angle Annular Dark Field - Scanning TEM (HAADF-STEM) Selected area electron diffraction (SAED) Lorentz microscopy (LTEM) Electron holography electron energy loss spectroscopy (EELS) Energy filtered TEM (EFTEM) Tomography Precession electron diffraction (PED) Automated crystal orientation mapping (ACOM)

Scientific Equipment

- TEM: FEI Tecnai F30 G2 STwin
- TEM: JEOL JEM-2100
- Ion polishing system

- Ultramicrotom
- ٠ Electrolytic thinning
- Dimpling device
 Grinding and polishing system
 Diamond belt saw
- Ultrasonic Disc Cutter
- Stereomicroscope
- Drying oven
- Vacuum cabinet
- Ultrasonic bath
- Plasma Cleaner

Keywords

Transmission Eelectron Microscopy

Networks

Users per annum

Internal Users: ca. 80 External Users in total: 30 External Users: 20 External Users in the EU: 5 External Users outside of EU: 5

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