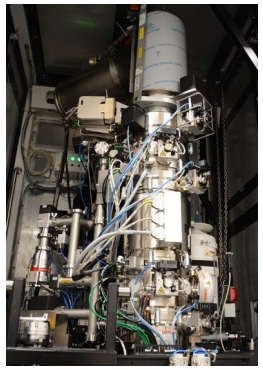
MAPEX-CF Workshop Electron Microscopy

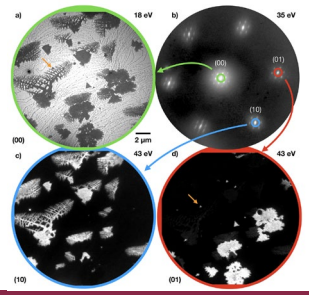
This event aims to foster exchange and collaboration among researchers who are using different electron microscopy methods.
In a condensed format, the workshop will provide a comprehensive overview of electron microscopy techniques available at the University of Bremen and our guest speaker's institutions.

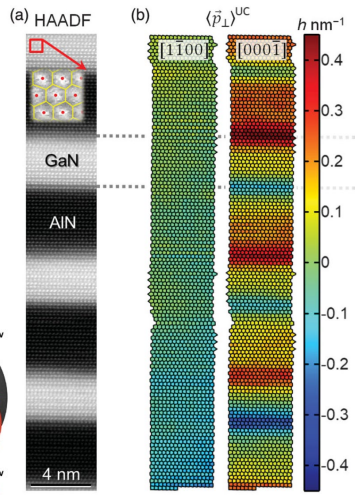
Aims and scope

This workshop brings together scientists from several different institutions who use electron microscopy to expand their network and discuss the latest scientific advances.
At the same time, it offers an opportunity to early career researchers, to present themselves and their work in the poster session.
Key topics covered include:

- Transmission electron microscopy and methods based on it for the analysis of nanostructures
- Low-energy electron microscopy
- Scanning electron microscopy methods





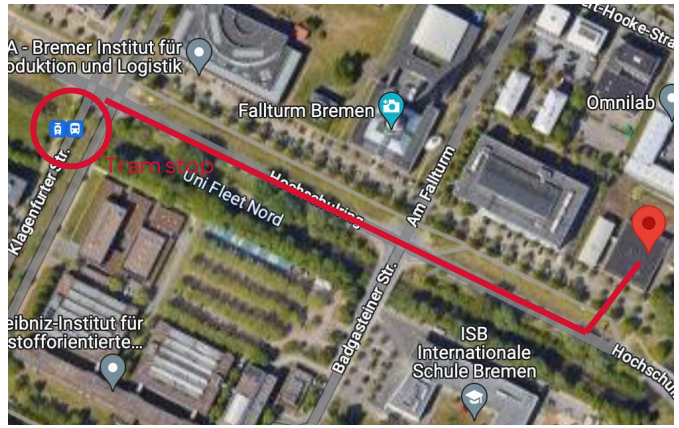


Venue

The event will take place in the AIB building at the University of Bremen.

Complete address:
Hochschulring 40, 28359 Bremen
1st floor.

Getting there by public transport:
From Bremen central station take Tram 6 towards Universität Nord.
Tram stop: Universität Nord (final stop)
The building is within walking distance from the Tram stop.



Universität Bremen

Programme

MAPEX-CF Workshop on Electron Microscopy

September 25-27, 2024

University of Bremen
MAPEX Center for Materials and Processes
MAPEX Core Facility for Materials Analytics
www.uni-bremen.de/mapex
www.uni-bremen.de/mapex-cf

MAPEX Core Facility
for Materials Analytics

Programme

Wednesday, September 25th, 2024

12:30	Arrival and Registration
12:45	Welcome and Introduction
13:00	Introduction to TEM Dr. Marco Schowalter University of Bremen
13:30	Simulation methods Prof. Dr. Andreas Rosenauer University of Bremen
14:00	Quantitative HAADF-STEM Dr. Thorsten Mehrtens University of Bremen
14:30	Electric Fields from 4D-STEM Dr. Florian Krause University of Bremen
15:00	Coffee break and discussion
15:30	Strain – Nano beam electron diffraction Dr. Tim Grieb University of Bremen
16:00	Detection of particles using neural networks Dr. Florian Krause University of Bremen
16:30	Poster session

Thursday, September 26th, 2024

9:00	Coloring atoms in tomography Dr. Nathalie Claes University of Antwerp
10:00	Crystal structure determination using 3D electron diffraction Dr. Paul Klar University of Bremen
10:30	Coffee break and discussion
11:00	Analysis of structural and functional properties by in situ and ex situ 4D-STEM Prof. Dr. Christian Kübel KIT & TU Darmstadt
12:00	Correlative TEM-APT Dr. Lisa Belkacemi University of Bremen
12:30	Lunch
14:00	Time-Resolved TEM Prof. Dr. Sascha Schäfer University of Regensburg
15:00	Low-energy electron microscopy (LEEM) – A versatile surface tool Dr. Jon-Olaf Krisponeit University of Bremen
15:30	Coffee break and discussion
16:00	The oxidation of Pt_3Sn in the view of LEEM Prof. Dr. Jens Falta University of Bremen
18:00	Dinner at Ratskeller (at your own expense)

Friday, September 27th, 2024

9:00	Introduction to Environmental SEM Dr. Jendrian Riedel University of Applied Sciences Bremen
9:30	Core Facility for Multidisciplinary Structural Analysis @ HSB Prof. Dr. Dorothea Brüggemann University of Applied Sciences Bremen
10:00	Coffee break and discussion
10:30	Electron lithography Eva Meyer University of Bremen
11:00	3D elemental and orientation mappings in a plasma FIB Dr. Kerstin Hantzsche Leibniz IWT Bremen
12:00	Lunch
13:00	Lab tour

Lunch options

There are three main options for lunch (at your own expense) during the days of the event.

Uni Bremen Mensa

The Mensa is open from 11:30 to 14:30. Usually three lunch options are available, plus salad and pasta bars. Vegan and vegetarian options available.

Walking distance from the workshop venue. Payment with 'Mensa-card' or cash.

https://www.stw-bremen.de/de/mensa/uni-mensa

Café Central

Just annex to the Uni Bremen Mensa. Serves sandwiches, burgers and hot snacks. Open from 8:00 to 17:00.

https://www.stw-bremen.de/de/mensa/cafe-central

Café Unique

Offers a variety of daily dishes. Payment with cash or card. Within walking distance from the workshop venue.

https://unique-hb.de

Organising committee

- Prof. Dr. Andreas Rosenauer (FB01, Physics)
- Dr. Marco Schowalter (FB01, Physics)
- Dr. Thorsten Mehrtens (FB01, Physics)
- Dr. Tim Grieb (FB01, Physics)
- Dr. Florian F. Krause (FB01, Physics)
- Dr. Wilken Seemann (MAPEX-CF)

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