

Micro- and Nanoanalytics Core Facility (MNaF)



The Core Facility for Micro- and Nanoanalytics (MNaF) at the University of Siegen brings together the modern equipment and expertise of various research groups for advanced micro- and nanoanalytics and making these resources available to a broad user base.

The MNaF also houses extensive materials science expertise across a wide range of material classes.

Accordingly, the MNaF sees itself as an interface between fundamental scientific research and the application-oriented development of new materials and components.



REM & FIB School 2024

Micro- and Nanoanalytics
Core Facility MNaF



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01.-04.07.2024

registration by email @ Dr. Sakalli
registration deadline 14.06.2024

uni-siegen.de

What is the REM & FIB School?

The REM & FIB School is an educational program focused on teaching the methodological fundamentals of advanced Scanning Electron Microscopy (SEM) and Focused Ion Beam Microscopy (FIB), as well as their applications.

In the workshop, participants are introduced to both the theoretical and practical aspects of these technologies. The emphasis is on specific introductory lectures covering the key methodological areas, as well as on hands-on learning of various characterization techniques directly on the equipment at the MNaF (Micro and Nanoanalytics Core Facility).

The program is aimed at staff and researchers, enabling them to independently apply these essential techniques in their future research. In addition to theoretical training, the workshop offers extensive practical exercises, giving participants the opportunity to immediately apply and deepen the techniques they have learned.

This combination of theory and practice ensures that the REM & FIB School thoroughly prepares participants to effectively utilize advanced microscopy techniques in their scientific work.

Lecture and Labcourses Program

01.07.2024

MORNING SESSIONS

- Lecture: REM/FIB introduction & applications
- Lecture: Electron-matter interaction

LUNCH BREAK

- Labrotory Tour

AFTERNOON SESSION

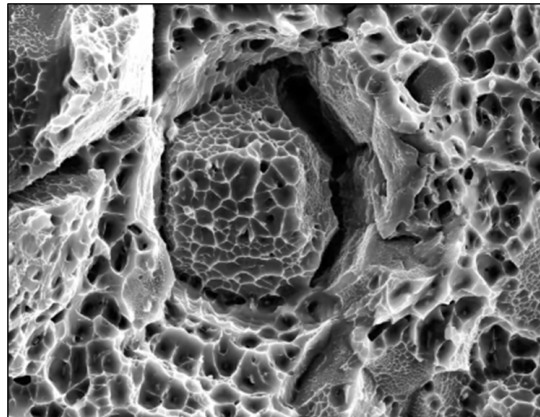
- Lecture: Most important imaging modes
- Lecture: X-Ray spectroscopy (EDX)

02.07.2024

- Lecture: Ion beam microscopy (FIB)

02.-04.07.2024-Labcourses

- LAB Topographic/chemical SEM imaging
- LAB Chemical & crystallographic analysis
- LAB FIB: imaging, structuring, manipulation



SEM image of a ductile fracture surface

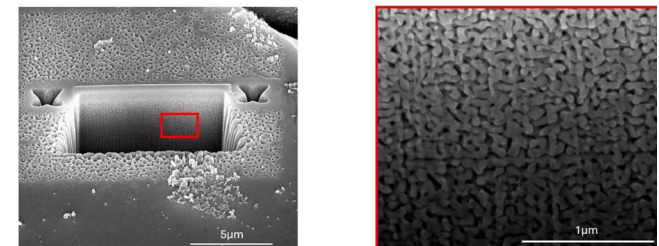
Registration

The workshop is dedicated to PhD students, Post-Docs, and technical staff. We kindly ask you to register by sending an informal email (subject REM & FIB School 2024) to Dr. Yilmaz Sakalli until 14th of June 2024

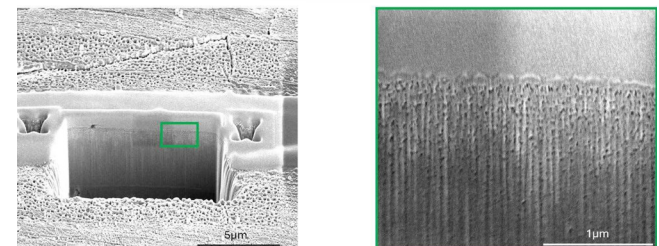
Own samples and question

The analysis of your own SEM samples as part of the workshop is explicitly desired. In order to clarify the feasibility in advance, please contact us in good time.

Copper - Manganese



Copper - Manganese - Platinum



FIB cross sections (left) SEM images of the cross section (right)