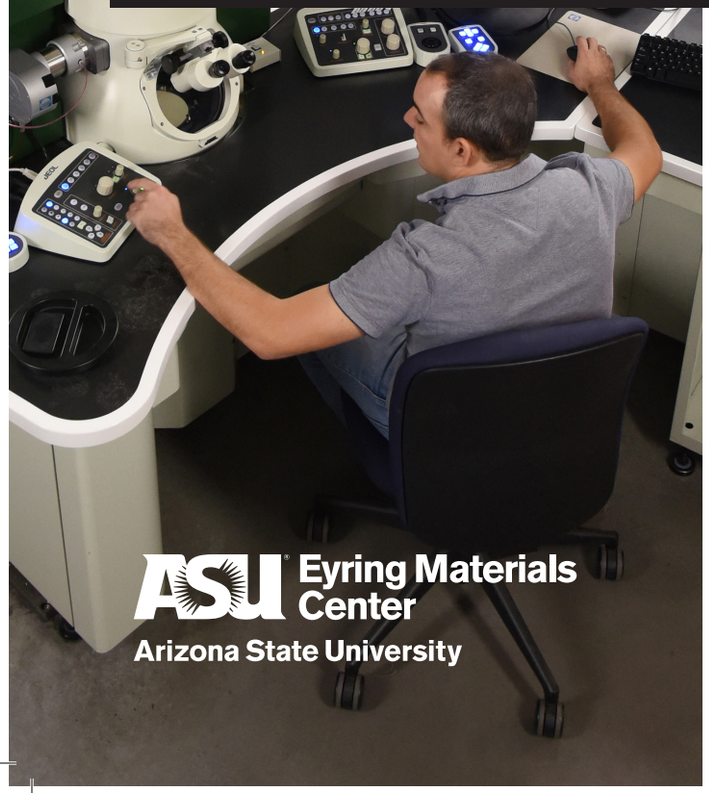
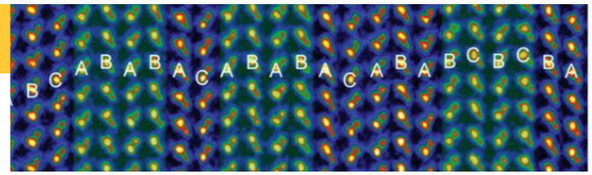
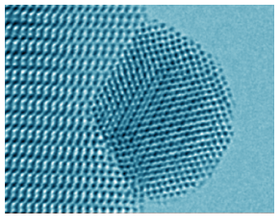
2023 Winter School on High Resolution Electron Microscopy

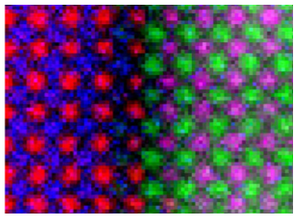
at Arizona State University

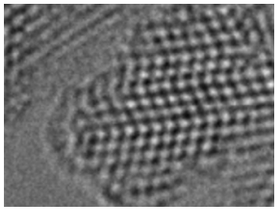
Jan. 9–13, 2023

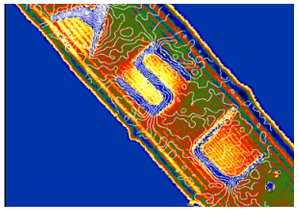












Organized by

John M. Cowley Center for
High Resolution Electron Microscopy

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About Eyring Materials Center

The Eyring Materials Center at Arizona State University provides advanced capabilities for materials characterization and high resolution imaging. Our facilities are supported by a dedicated staff with a strong commitment to client engagement.

The center instruments are available to the entire ASU research community and to university, government and industrial users across the country.

The center is located on ASU's Tempe campus. Our facilities include an ultra-stable building for aberration corrected electron microscopy.

Contact

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cores.research.asu.edu/materials/hrem-winter-school

Purpose

The purpose of the Winter School is to introduce the theory and practice of high resolution electron microscopy to scientists currently using transmission electron microscopes for materials science studies. People taking the course should have some familiarity with basic crystallography, diffraction contrast and routine microscope operation.

The Winter School course features extended practical sessions using a variety of FEI, JEOL and Nion transmission electron microscopes, where specific operating techniques will be taught.

There will be sessions on image processing and simulations using advanced digital image processing programs. Lectures and laboratory demonstrations will be given by ASU faculty and EMC/CHREM staff, as well as international experts.

Topics will include

Fundamentals of HREM
Imaging theory
Aberration correction
Fundamentals of STEM
4D STEM
Practical HREM/STEM operation
Techniques for image simulation
Image processing
Electron energy-loss spectroscopy
Monochromated EELS
Energy dispersive X-ray spectroscopy
Focused Ion Beam (FIB) methods
In situ techniques

Registration fees

Fee	Deadlines
Early $1,000	Oct. 15, 2022
Standard $1,200	Dec. 15, 2022

Participants may register and find accommodation information at:

cores.research.asu.edu/materials/hrem-winter-school

Winter School will run Jan. 9–13, 2023.
School participants are responsible for their own lodging arrangements. Because January is a popular month for visiting the Phoenix area, it is advisable to reserve accommodations by early November.

Scholarships

Our sponsors provide a limited number of scholarships to support graduate students who might not otherwise be able to attend. To apply for a scholarship, please send:

1. **Letter explaining why support is needed.**
2. **Letter of recommendation from an immediate supervisor.**
3. **Resume and a brief description of related research and microscopes used.**

Scholarship applications must be received by
Oct. 15, 2022