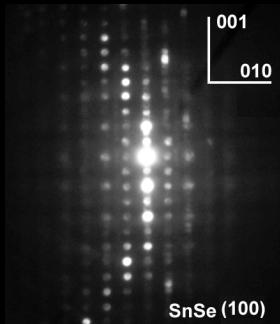




CAMCOR

Summer Workshop

Electron Crystallography in Materials Science



August 3, 2011

Sponsored by:

For Information and Registration please visit:
<http://camcor.uoregon.edu>

Lokey Labs, University of Oregon, Eugene



Electron Crystallography in Materials Science

This workshop presents the fundamentals of crystallography, electron crystallography, and advanced electron microscopy as their application in materials science.

Electron crystallography includes all the methods and their applications that use electron scattering to study the structure of matter.

The methods of electron crystallography are especially powerful to identify the crystallographic structures of nanocrystalline materials where the X-ray synchrotron-based methods fail due to the limited size of the crystals.

New developments of aberration corrected electron microscopes and methodical developments of quantitative transmission electron diffraction such as precession electron diffraction (PED), nanobeam electron diffraction (NBD) and scanning NBD (SNBD) create new possibilities for structural investigations of complex materials and materials systems.

A special thank you from CAMCOR, University of Oregon, Portland State University, and the State of Oregon to FEI Company for their support with this workshop.

Electron Crystallography in Materials Science

Organized jointly by University of Oregon and Portland State University for: students, faculty, academic, and industrial researchers.

“Electron Crystallography in Materials Science”

09:00 – 09:15	Opening (David C. Johnson, University of Oregon)
09:15 – 12:15	Introduction to Electron Crystallography (Wolfgang Neumann, University of Oregon, Eugene)
09:15 - 10:45	<i>Part I: Fundamentals of Crystallography</i>
10:45 – 11:15	Coffee break
11:15 - 12: 15	<i>Part II: Fundamentals of Electron Crystallography</i>
12:30 - 14:00	Lunch break*
14:00 -15:00	Aberration Corrected High Resolution Electron Microscopy (Sergei Rouvimov, Portland State University)
15:00 – 16:00	Electron Diffraction – a method for structure analysis (Peter Moeck, Portland State University)
16:00 – 16:30	Coffee break
16:30 - 17:15	Application of Advanced Electron Diffraction Techniques for Analysis of Modern Materials (Ines Häusler, Humboldt University Berlin)
17:15 - 17:30	Closing remarks

After the scientific program a guided tour of the Electron Microscopy Facilities at CAMCOR by Kurt Langworthy.

*The workshop is free, but advanced registration is encouraged to assure attendance (*please visit <http://camcor.uoregon.edu> for details; or Melodi Jayne: mjayne@uoregon.edu with subject line: “WORKSHOP REGISTRATION”).*

To Get Here

Train or Bus: For information, contact [Amtrak, Eugene](#) (800) 872-7245, [Greyhound-Trailways](#), Eugene 541-344-6265, or [Lane Transit District](#) (Eugene's bus system) 541-687-5555.

Driving Directions:

From the Eugene Airport: Follow Highway 99 until it becomes West Seventh Avenue. Get in the right lane and follow West Seventh Avenue until it becomes Franklin Boulevard. Get in the right lane and follow Franklin Boulevard to Agate Street. Turn right onto Agate and right again onto East Thirteenth Avenue. Proceed to the Information Kiosk.

- **From Portland and the North:** From I-5 South, take Exit 194B onto I-105 West. Take Exit 2, keep left and follow the signs to the UO. Proceed in the left lane over the Ferry Street Bridge, exiting onto Broadway, which becomes Franklin Boulevard. Follow Franklin Boulevard to Agate Street. Turn right onto Agate and right again onto East Thirteenth Avenue. Proceed to the Information Kiosk.
- **From Ashland and the South:** From I-5 North, take Exit 192. Merge onto Franklin Boulevard. After merging, get in the left lane and follow Franklin Boulevard through three lights. (Look for a "UO Next Left" sign as you drive west on Franklin Boulevard.) At the fourth light, turn left onto East Thirteenth Avenue. Proceed two blocks to the four-way stop sign at Agate Street. Continue straight ahead to the Information Kiosk.
- **From the Oregon Coast:** Take Highway 126 East until it becomes West Eleventh Avenue. Follow West Eleventh Avenue to Garfield Street and turn left. Take Garfield to West Seventh Avenue and turn right. Get in the right lane and follow West Seventh Avenue until it becomes Franklin Boulevard. Get in the right lane and follow Franklin Boulevard to Agate Street. Turn right onto Agate and right again onto East Thirteenth Avenue. Proceed to the Information Kiosk.
- **From Bend and the east:** Take Highway 126 West through Springfield which becomes I-105 in Eugene after you cross over I-5. Take Exit 2, the Coburg Road exit ramp; keep left at the fork in the ramp. Go straight onto southbound Coburg Road, which becomes the Ferry Street Bridge. Stay in the left lane on the bridge, exiting onto Broadway, which becomes Franklin Boulevard. Follow Franklin Boulevard to Agate Street. Turn right onto Agate and right again onto East Thirteenth Avenue. Proceed to the Information Kiosk.

The Lokey Labs/CAMCOR are located below ground, between Huestis and Deschutes Hall. (Spot the new construction of ISC 2 just outside.) For wheelchair access, please use the elevator located just inside Huestis Hall.

Parking:

\$10 day permit available at kiosk on 13th Ave. for parking on the UO campus. Parking meters available around campus as well. Most hotels offer free parking for customers. - Or- *Park for free* and walk from Autzen Stadium (it's a really nice walk; literally "over the river and thru the woods!" ~0.5 miles)

Hotels:

Since this is a one-day event, no hotels have been reserved. Please ask Kurt Langworthy (klangwor@uoregon.edu) for recommendations if needed.

Lunch:

Catering for the event may be provided. Please notify mjayne@uoregon.edu if you have a dietary preference.