

Zeiss Amplified Materials Imaging Workshop

January 25, 2018 | 9:30 am - 2:00 pm
Ryan Hall, Room 4003

9:30 am

Coffee social and opening remarks

Hosted by Karl Hagglund, NUANCE SEM manager. Light refreshments served.



Karl Hagglund
EPIC SEM facility manager

10:00 am

Laser Scanning Microscopy for Materials Research

This talk will address different imaging challenges faced by materials research investigators. In addition to better visualization of a material's microstructure, the goal of materials research sometimes hinges on the development and refinement of mathematical models for material interaction and makeup, so that the behavior of a mechanical system may be predicted and better understood during periods of stress, strain, and/or failure. Such goals are common within a wide variety of materials science disciplines. Join us as we share an interesting variety of applications and techniques for materials light microscopy.



Michael O'Relley
3D Imaging Specialist, Materials
Carl Zeiss Microscopy, LLC

11:00 am

Advances in Ion Beam Technology

This presentation will focus on the latest application examples and new developments in Focused Ion Beam (FIB) technology. We will introduce a correlative microscopy workflow that allows you to move your data and sample seamlessly from one instrument to the other, relocate your region of interest and acquire high resolution 3D datasets using innovative auto functions and ion beam milling strategies. We will also explore nanofabrication on length scales beyond what traditional gallium ion beams can achieve and show sub-10nm structures created with helium and neon focused ion beams.



Soeren Eyhusen, Ph.D.
ORION NanoFab Business
Development Manager
Carl Zeiss Microscopy, LLC

12:00 pm

Lunch – pita and kebab



1:00 pm

Materials 3D Analysis Via X-Ray Microscopy

In this session we'll explore the emerging research applications, along with underlying technology and methodology, stemming from 3D X-ray microscopy (XRM). As a nondestructive characterization method, XRM allows us to uniquely evaluate the internal structures of our samples and specimens at sub-micron resolution, covering multiple contrast mechanisms and length scales. Moreover, 4D investigation of structures via in situ or ex situ repeated imaging provides new opportunities for understanding materials evolution/degradation processes, and correlative workflows linking XRM with other modalities such as EM or FIB-SEM offer the chance to easily span across a range of length scales. Several examples will be presented, with an emphasis on the latest developments and an outlook toward the future.

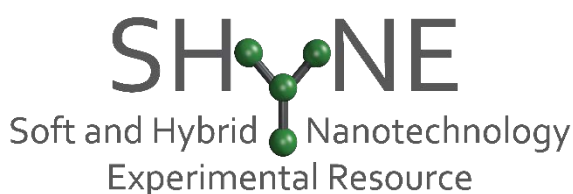


Mark Riccio
XRM Product Marketing Manager
Carl Zeiss Microscopy, LLC

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