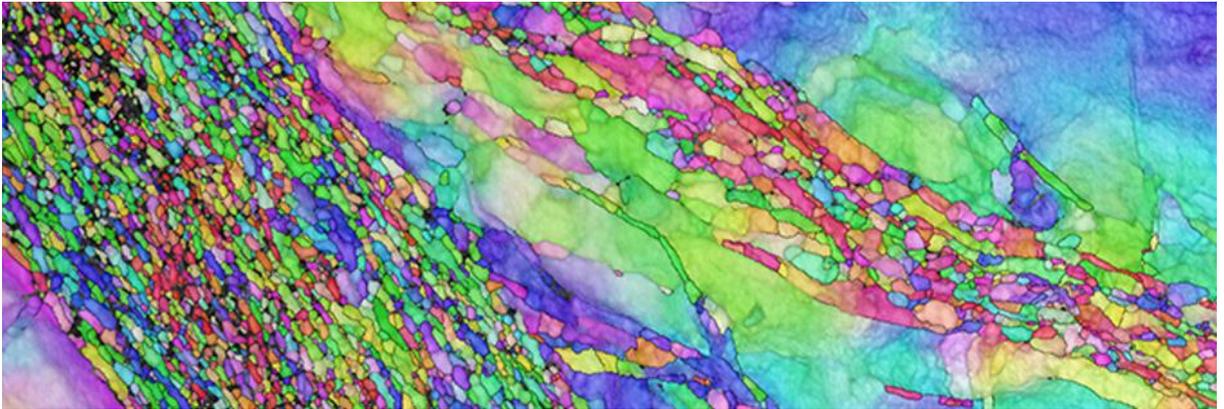




THE UNIVERSITY OF
SYDNEY

Materials Specimen Preparation Seminar

Sydney Microscopy and Microanalysis



Materials Specimen Preparation Seminar

Sydney Microscopy and Microanalysis (SMM) is offering a two day seminar series exploring key techniques in materials specimen preparation (MSP). The seminars will cover the broad range of concepts and workflows offered by SMM to prepare successful specimens for scanning electron microscopy (SEM), transmission electron microscopy (TEM) and atom probe tomography. The content covered is suitable for all skill levels, and is highly recommended for those new to materials sample preparation. A tour and introduction to the materials specimen preparation laboratory will also be given.

Topics

- Basics of electron microscopy and specimen requirements
- Sectioning of bulk samples, including abrasive cutting and laser ablation
- Specimen Coating
- Sample embedding
- Grinding and polishing of bulk samples for scanning electron microscopy
- Precision polishing for atom probe tomography
- Tripod polishing
- Electropolishing
- Broad beam ion milling and an introduction to focused ion beam
- Sample cleaning and storage
- Example workflows for SEM and TEM specimen preparation

To register email your name, email address and faculty to jacob.byrnese@sydney.edu.au. The seminars are free, but space is limited so please register early. A waitlist will be generated once all spots are filled.

Seminar Series Agenda

Please come to Madsen Building (F09) located on Fisher Rd, next to the Administration Building (F23). The seminars will take place in Lecture Room 236, adjacent to the SMM front office. Morning tea will be provided.

Thursday April 4

Time	
9:15 am - 10 am	General concepts for sample preparation SEM basics and specimen requirements (SEI/EDS/EBSD) TEM basics and specimen requirements
10 am - 10:30 am	Short tour and overview of MSP lab and equipment
10:30 am - 11:15 am	Sectioning Cutting concepts and overview of relevant equipment Laser ablation
11:15 am - 11:30 am	Morning tea
11:30 am - 11:45 am	Coating
11:45 am - 12 pm	Embedding Hot and cold mounting discussion
12 pm - 1 pm	Grinding and Polishing Bulk grinding and polishing Precision grinding and polishing (including APT sample requirements) Tripod polishing

Friday April 5

Time	
9:15am-9:45am	Electropolishing
9:45am-10:30am	Ion Milling Concepts and overview of PIPS/PECS Basics of FIB
10:30am-10:45am	Morning Tea
10:45-11:45am	Example workflows combining the discussed techniques
11:45-12pm	Sample cleaning and storage
12pm-1pm	Closing remarks and questions

For more information

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