

Cryogenic Preparation and Imaging Strategies for Soft Matter in Materials Science: Focus Lecture Series

Queen Mary University of London, February 24th 2017

Talk	Presenter
<b>Water and hydration:</b> properties of water; free, bound and structural water; effects of hydration on materials bulk and surface properties.	Martin Chaplin (LSBU)
<b>Cryo-immobilization</b> of aqueous samples for EM - water phase diagram, heat transfer and vitrification techniques.	Eyal Shimoni (WIS)
<b>EM for advanced materials:</b> efficient phase contrast imaging in the scanning transmission electron microscope.	Peter Nellist (UO)
<b>CryoSTEM tomography</b> of vitrified cells and soft materials: providing 3D morphology and chemical analysis simultaneously.	Sharon Wolf (WIS)
<b>CryoSEM/EDS/BSE:</b> freeze-fracture SEM, topographic and materials contrast, EDS mapping and correlation with fluorescent microscopy using an example of biomineralization in foraminifera.	Gal Mor Khalifa (WIS)
Charting cellular landscapes in molecular detail: <b>cryo-FIB</b> preparations aimed at <b>in situ</b> cryo-electron tomography.	Julia Mahamid (MPG)
The development of <b>cryo-FIB lift-out</b> for soft matter and Biological imaging.	Christopher Parmenter (UNott)
Seeing single metal atoms on protein structures by <b>cryo-STEM</b> . <b>Concluding remarks</b>	Michael Elbaum (WIS)