

## Australian Synchrotron Microscopy Workshop - Agenda

31<sup>st</sup> August – 1<sup>st</sup> September 2022

**Terahertz/Far-infrared (THz/Far-IR) | X-ray fluorescence microscopy (XFM)**  
**Infrared microspectroscopy (IRM) | X-ray fluorescence nanoprobe (Nanoprobe)**

### Day 1 (31<sup>st</sup> August 2022)

Time (AEST)	Speaker	Title	Beamline
Session chair: Keith Bambery			
10:00 – 10:25	Keith Bambery	Introduction to the workshop and the Australian Synchrotron	
10:25 – 11:15	David Paterson Daryl Howard Andrew Langendam Michael Jones QUT	Capabilities and future directions of the XFM beamline  Introduction to ptychography	XFM
11:15 – 12:05	Mark Tobin Pimm Vongsvivut	Capabilities and future directions of the IRM beamline	IRM
12:05 – 12:45	Dom Appadoo Ruth Plathe	Introduction to THz beamline condensed phase capabilities and applications	THz/Far-IR
12:45 –	Opportunity for questions		
<b>Lunch Break</b>			
Session chair: Andrew Langendam			
14:00 – 14:25	Bayden Wood Monash Uni	Application of FTIR synchrotron spectroscopy for disease diagnosis	IRM
14:25 – 14:50	Rachel Kirby ANU	Forged in fire: iron meteorites and asteroid impacts	XFM
14:50 – 15:15	Casey Doolette Uni SA	Investigating the behaviour of novel zinc fertilisers in wheat using <sup>65</sup> Zn radiolabelling and X-ray fluorescence microscopy	Multiple
15:15 – 15:40	Katherina Petrou Uni Technol Sydney	When average isn't good enough: Casting light on phytoplankton response diversity to understand ecological change	IRM
15:40 – 16:05	Jingwei Hou Uni Queensland	Metal-organic framework glassy nanocomposites	THz/Far-IR
16:05 – 16:30	Gordon Southam Uni Queensland	Complementary analyses of bacteria-mineral interactions	XFM
16:30 – 16:35	Keith Bambery	Closing remarks	
16:35 –	Question and answer session		

## Day 2 (1<sup>st</sup> September 2022)

Time (AEST)	Speaker	Title	Beamline
Session chair: Annaleise Klein			
10:00 – 10:05	Keith Bambery	Welcome	
10:05 – 10:30	Christoph Schrank Queensland Uni Technol	Cracking the nanoscale frontier and multiphysics coupling in rocks: The power of synchrotron radiation	Multiple
10:30 – 10:55	Mark Hackett Curtin Uni	Integrating synchrotron imaging with traditional microscopy techniques to reveal a more complete “biochemical picture”	Multiple
10:55 – 11:20	Pauline Treble Liza McDonough ANSTO	Using XFM and IRM beamlines to identify past fires recorded in a cave stalagmite	Multiple
11:20 – 11:45	Talitha Santini Grace Scullett-Dean Uni WA	Trace element geochemistry in mining byproducts	Nanoprobe
11:45 – 12:10	Ailar Hajimohammadi Uni NSW	Micro-structural characterization of geopolymers by advanced synchrotron FTIR technique	IRM
12:10 – 12:35	Jieying Liang Uni NSW	Reticular chemistry for improving the activity of biocatalysts	THz/Far-IR
12:35 –	Opportunity for questions		
<b>Lunch Break</b>			
Session chair: Keith Bambery			
14:00 – 14:30	Martin de Jonge Cameron Kewish	Capabilities and progress update on the BRIGHT Nanoprobe beamline	Nanoprobe
14:30 – 15:00	Simon James	The MEX microprobe: Microspectroscopy from S to Se (and everything in between)	MEX
15:00 – 16:00	Annaleise Klein Andrew Langendam	How to apply   User Office Support AINSE   ISAP	
16:00 – 16:05	Keith Bambery	Closing remarks	
16:05 –	Question and answer session		