

Australian Nanoscale Analytics Workshop

Sydney, Nov 7th – 8th 2019



Workshop venue:

Sydney Nanoscience Hub
Physics Road,
The University of Sydney NSW 2006

Program at a glance:

Thursday, Nov 7th 2019

09:00 – 10:00	Registration & coffee
10:00 – 10:15	Dr. Daniel Day – Product Manager, Warsash Scientific <i>Opening Remarks</i>
10:15 – 10:40	Dr. Michelle Wood – Senior Technical Officer, Sydney Analytical <i>Material characterization at Sydney Analytical Core Research Facility</i>
10:40 – 11:25	Dr. Adrian Cernescu – Senior Application Engineer, neaspec GmbH, Germany <i>Basics of s-SNOM: nanoscale imaging and spectroscopy tutorial</i>
11:25 – 11:55	Prof. Saulius Juodkazis – Swinburne University of Technology, Melbourne <i>IR and nano-FTIR orientation spectroscopy in biomaterials applications</i>
12:00 – 13:15	Lunch
13:15 – 14:00	Dr. Sergiu Amarie – Senior Application Engineer, neaspec GmbH, Germany <i>neaSNOM applications and configurations</i>
14:00 – 14:30	Dr. Qingdong Ou – Monash University, Clayton Melbourne <i>Polaritonics and optoelectronics of 2D materials with infrared nano-imaging</i>
14:30 – 15:00	Prof. Stefano Palomba – The University of Sydney, Nano Institute <i>Ultimate performance of Kerr nonlinear plasmonics nanostructures</i>
15:00 – 15:30	Coffee break
15:30 – 17:00	Equipment demonstration <i>Introduction to s-SNOM operation</i>
Evening Program	
19:00	Dinner at Duck Inn Pub and Kitchen Meeting point: 74 Rose St, Chippendale NSW 2008

Friday, Nov 8th 2019

08:30 – 09:00

Coffee

09:00 – 12:30

neaSNOM imaging and spectroscopy - Equipment demonstration

Session 1: Applications on biological materials & polymers:

- AFM, IR Imaging and nano-FTIR spectroscopy of hair sample
- Nano-FTIR spectroscopy and imaging of cellulose nanocrystals
- Resolving secondary structure in single protein fibers using nano-FTIR spectroscopy
- Nano-chemistry of 10nm thick polymer monolayer

Coffee break

Session 2: Applications on inorganics, 2D materials and semiconductors:

- Mapping nanoscale distribution of H-Apatite nanocrystals in human bone
- Polariton mapping in 2D materials - hBN & graphene
- Nano-IR imaging of free carriers in doped semiconductors

12:30 – 13:45

Lunch

13:45 – 14:00

Dr. Adrian Cernescu & Dr. Daniel Day – neaspec GmbH and Warsash Scientific
Closing Remarks

Workshop location:

Sydney Nanoscience Hub
Physics Road, The University of Sydney NSW 2006
Seminar Room 3024
<https://cce.sydney.edu.au/site/1220>



Dinner location (7th Nov @ 7pm):

[Duck Inn Pub and Kitchen](#)
74 Rose St, Chippendale NSW 2008

