WORKSHOP #13

WORKSHOP TITLE: Recent Advances in Simultaneous Infrared and Raman Spectromicroscopy

Organizers: Samuel A. Tenney, Sabine Neal, Jay Anderson, Frank Weston, Mustafa Kansiz

This workshop will discuss recent advances in simultaneous infrared and Raman spectroscopy and microscopy with sub-500nm spatial resolution. Areas of discussion will include the implementation of anvil cells, environmental cells with temperature and gas control and the addition of fluorescence microscopy. The application of the techniques towards the study of biological systems, crystals, 2D materials, energetics and organic films will be presented.

Start Time (ET)	Title	Speaker (Affiliation)
9:00	Introduction	Samuel A. Tenney (Brookhaven National Laboratory)
9:05	Introduction to O-PTIR Instrument & Capabilities	Mustafa Kansiz (Photothermal Spectroscopy Corp.)
9:30	Correlative imaging to resolve molecular structures in individual cells	Oxana Klementieva (Lund University)
9:55	Break	
10:05	Shining light on the submicron world with simultaneous Raman and infrared spectroscopy: applications of O-PTIR system to study nanoplastics and single microbial cells	Cassio Lima (University of Liverpool)
10:30	Analysis of fixed and live single cells using optical photothermal infrared with concomitant Raman spectroscopy	Peter Gardner (University of Manchester)
10:55	Break	
11:05	PTIR for Assessing Structural Damage in MOFs	Andrea Kraetz (Johns Hopkins University)
11:30	O-PTIR spectroscopy and imaging of bone composition at submicron spatial resolution	William Querido (Temple University)
11:55	Break	
12:05	Extending O-PTIR + Raman: Pressure studies of organic and inorganic materials	Sabine Neal (Brookhaven National Laboratory)
12:30	Conclusion/Wrap-Up	Samuel A. Tenney (Brookhaven National Laboratory)