

# Sub-micron IR O-PTIR workshop

Hosted by Photothermal Spectroscopy Corp

Tuesday, January 23, 2024 10:30AM - 12:00PM

## Submicron IR and simultaneous Raman microscopy with co-located Fluorescence imaging: O-PTIR technology, recent advances and applications overview

### Please join Asst. Professor Caitlin Davis, Dr. Mustafa Kansiz, and Jay Anderson

Yale University and Photothermal Spectroscopy Corp are pleased to invite you to a dedicated workshop on Optical Photothermal Infrared (O-PTIR) spectroscopy and its applications in life science and materials science research.

O-PTIR is used in a wide range of application areas and has led to large number of publications in high impact factor journals for life and materials science research.

### O-PTIR application examples include

Life science research (live cells, tissues, neurodegenerative diseases, bacteria, bone), materials science, microplastics, industrial failure analysis and more.

### O-PTIR overcomes many limitations of IR and Raman microscopes:

<500nm IR spatial resolution, over 30x better IR spatial resolution than FTIR

FTIR Transmission-like spectra in reflection mode and no distortions, artifacts or interference fringes

Non-contact technique, suitable for thin (10's of nm) to thick (many nm's)

Live cell imaging in water

Simultaneous IR and Raman

Combined widefield Fluorescence imaging for co-located O-PTIR measurements



REGISTER HERE

Tuesday, January 23, 2024 10:30-12:00,  
CRB 125, Chemical Research Building,  
275 Prospect Street, New Haven CT  
Parking: See Map or on street parking if available  
Lunch available for pickup at 12:00



mlRage system demos available on Monday and Tuesday afternoon - contact Jay Anderson [jay@photothermal.com](mailto:jay@photothermal.com)



Asst. Prof. Caitlin Davis **BIOGRAPHY** ▶  
Department of Chemistry,  
Yale University

**30 minutes**  
Live cell imaging by sub-micron IR: Tracking de novo lipogenesis in single cells with stable isotope probes



Jay Anderson **BIOGRAPHY** ▶  
Director of Sales for the Americas  
Photothermal Spectroscopy Corp

**30 minutes**  
Introduction to submicron IR (O-PTIR) with a review of current IR and Raman limitations and new O-PTIR advances with question and answer period.



Dr Mustafa Kansiz **BIOGRAPHY** ▶  
Director of Product Management  
and Marketing

**30 minutes**  
Review of O-PTIR applications and emerging applications with question and answer period.

