SEMINAR

Advanced FT-IR Spectroscopy: Research Applications, Microscopic Imaging, and In-Situ Characterization

Date: 29 July, 2026 (Wednesday)
Time: 2:00 p.m. - 4:00 p.m.
Venue: Room 734 & 735
Haking Wong Building
HKU

Speaker: Mr. Haodong Lei
Senior Application Engineer (Molecular Spectroscopy) at Bruker

(The Seminar will be delivered in Mandarin)

Abstract:

2:00-2:45 pm

1. Introduction to the Principle and Research Applications of Conventional and Vacuum FT-IR, and the Microscopic Spectral Imaging System
傅里叶变换红外光谱及显微成像系统原理及科研应用(包含常规FTIR及真空FTIR介绍)

   This session will introduce the principles and research applications of conventional and vacuum FT-IR spectroscopy, with discussion on how vacuum FT-IR improves spectral reliability by reducing atmospheric interference. It will also cover the HYPERION FT-IR microscope and ILIM technology for micro-analysis, chemical imaging, and rapid infrared imaging in materials, semiconductor, polymer, and related research fields.

Break and Discussion (30 minutes)

3:15-4:00 pm

2. FT-IR Spectroscopy Technology for in-situ Characterization and Its Common Applications
傅里叶变换红外光谱原位表征方案及其应用

In-situ FT-IR characterization enables real-time monitoring of molecular changes under controlled or near-operating conditions, offering insight into reaction mechanisms, surface interactions, phase transitions, and material stability. This session will briefly introduce the background of in-situ FT-IR technology and its common applications, including catalysis, electrochemistry, gas/liquid-solid reactions, polymer curing, and process monitoring.

Biography:

Haodong Lei is a Senior Application Engineer for Molecular Spectroscopy at Bruker with over 10 years of experience in molecular spectroscopy, instrumentation, and method development. He specializes in Bruker's research-grade FTIR systems and has extensive expertise in the characterization of semiconductors, low-dimensional materials, catalytic materials, and other advanced materials.
雷浩东，布鲁克分子光谱高级应用工程师，拥有十余年分子光谱仪器、配套附件及检测方法开发经验。精通布鲁克研究级傅里叶变换红外光谱仪，深耕半导体、低维材料、凝聚态物理、催化材料等表征领域。

ALL INTERESTED ARE WELCOME

For further information, please contact Prof. Philip Chow at 3917 7905.