SEMINAR

Title: Central Fabrication Laboratory- Technical sharing session – Inductively coupled plasma etching and the latest applications

Date: 3 February, 2026 (Tuesday)
Time: 2:00pm - 3:30pm
Venue: 7-34, Haking Wong Building, HKU

Speaker: Mr. Jianmin Zhou
SENTECH Instruments GmbH
China

Language: Mandarin

Limited seats available on a first-come first-served basis

Abstract:

The Central Fabrication Laboratory (CFL) is a cutting-edge cleanroom facility located at the University of Hong Kong. Its primary mission is to provide advanced fabrication facilities and expertise to enhance teaching and research activities in micro/nano fabrication. As a leading research laboratory, CFL offers open access not only to University of Hong Kong members but also to local and international institutions, researchers, and companies, with collaborations from the private sector always encouraged. The technical sharing sessions offered by CFL are designed to keep participants updated on the latest micro/nano fabrication techniques and provide valuable networking opportunities with experts from around the world.

This seminar first introduces plasma etching principles, focusing on Inductively Coupled Plasma (ICP) etching-an advanced technology in microfabrication and semiconductors. We will briefly explain plasma generation, plasma-material interaction, ICP's unique configuration (inductive coil for high-density plasma) and its low substrate damage advantage.

Next, we discuss ICP etching's key benefits (high plasma density, anisotropy, selectivity, low ion energy) and influencing factors (chamber pressure, RF power, gas composition, temperature, time), along with their optimization.

Subsequently, we elaborate on typical ICP applications: DRIE (for high-aspect-ratio silicon structures), ALE (atomic precision), and low-damage etching (for sensitive materials like III-V semiconductors).

These applications are enabled by the ICP system's advanced features: PTSA-ICP source (high density/low ion energy), dynamic temperature control, and versatile sample handling.

Biography:

Mr. Jianmin Zhou, General Manager of SENTECH China. He has 20+ years' experience on semiconductor equipment and applications. He graduated from Shanghai JiaoTong University (SJTU), after that he worked at CETC research institute, one public company on test and measurement instruments, and then SENTECH.

ALL INTERESTED ARE WELCOME

For further information, please contact
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