



SEMINAR

Title: Central Fabrication Laboratory- Technical sharing session – Nano-scale Fabrication: ALD and ALE

Date: 17 March, 2026 (Tuesday)

Time: 2:00pm - 3:30pm

Venue: Room 7-34, Haking Wong Building, HKU

**Speaker: Dr. Benjamin Freyer
SENTECH Instruments GmbH**

Language: English

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.

Nano scale fabrication increasingly relies on highly controlled surface processes such as Atomic Layer Deposition (ALD) and Atomic Layer Etching (ALE). Both techniques benefit significantly from plasma assistance, which enables precise surface activation and modification. In this seminar, we introduce and compare three plasma technologies used in nano-scale fabrication: Capacitively Coupled Plasma (CCP), Inductively Coupled Plasma (ICP), and True Remote CCP.

CCP offers a compact and efficient plasma source but with relatively higher ion energies. ICP provides high plasma density and independent control of ion energy and flux, making it ideal for advanced, selective processes. True Remote CCP, by fully separating plasma generation from the substrate zone, delivers extremely low damage conditions—especially advantageous for sensitive materials and ultra thin films.

By highlighting the distinct strengths of each plasma concept, we demonstrate how SENTECH's plasma solutions enable high precision nano fabrication with our ALD and ALE tools.

Biography:



Dr. Benjamin Freyer, International sales manager of SENTECH Instruments GmbH. He studied Physics at the University of Potsdam and received his PhD from the Faculty of Mathematics and Natural Sciences at Humboldt University of Berlin. He has 10+ years' experience at SENTECH.

ALL INTERESTED ARE WELCOME

**For further information, please contact
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