



**Department of  
Mechanical Engineering  
The University of Hong Kong**



## **SEMINAR**

**Title:** Central Fabrication Laboratory- Technical sharing session - Ion Beam Etching (IBE) and Ion Beam Deposition (IBD) System

**Speaker:** Mr. Men Yong 门永  
Veeco Instruments Inc  
Service Leader

**Date:** 31 October, 2024 (Thursday)

**Time:** 2:45 p.m.

**Venue:** Room 7-34/35  
Haking Wong Building  
HKU

**Language:** Mandarin

**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.

As IBD (Ionized Beam Deposition) offers precise control down to the atomic scale, it holds tremendous promise in the front end semiconductor industry, as well as in energy, optics, electronics, nanostructures, biomedical applications, and more. It extends applications in 7nm technology and beyond, replacing traditional PVD technology due to its precise thickness control and excellent defect performance. In the optical communication industry, IBD maintains advantages with its stable thickness uniformity and low particle baseline.

IBE (Ionized Beam Etch) is commonly used when ICP/CCP cannot work well with certain materials, such as Au/Pt metals, and in applications requiring special profiles like waveguides. IBE utilizes argon ions to sputter the substrate at different angles and optimized energy levels to achieve an optimal etch rate and designated profile. IBE is beneficial in the semiconductor industry, particularly for treating special magnetic materials.

The principles of IBD and IBE are similar, as both utilize ionization technology to process films. The ionization source is a key component, providing a stable ion source after argon is ionized.



**Biography:**

Mr. Men Yong , Service leader for Veeco Instruments Inc.

Mr. Men Yong has worked at Veeco for more than 10 years and has been in the IBE/IBD product sector for over 5 years. He is the product expert in IBE/IBD/PEALD/MOCVD and MBE, specializing in both hardware and process tuning.

**ALL INTERESTED ARE WELCOME**

**For further information, please contact Mr. YIP P.S. (3910 2637, [psanyip@hku.hk](mailto:psanyip@hku.hk))  
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