Revised

THE UNIVERSITY OF HONG KONG

DEPARTMENT OF MECHANICAL ENGINEERING

SEMINAR

Online

Title: **Controlled synthesis of semiconducting 2D transition metal dichalcogenides for electronics**

Speaker: **Mr. Lin Ci (PhD candidate)**
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The University of Hong Kong
Hong Kong

Date: **4 May, 2022 (Wednesday)**

Time: **2:45 p.m. (Hong Kong Time)**

Zoom meeting: **1) Link to join the meeting:**

https://hku.zoom.us/j/7883027461?pwd=dWcyQkozbE1jLzdEU2tzdHZGc0xLZz09

2) Meeting ID: 788 302 7461

3) Password: 3h3RBE

Abstract:
The continuation of Moore's law in electronic industry requires further downscaling of semiconductor devices, in which silicon based devices are about to face a theoretical bottleneck in performance when the channel length is further shrunk down. Two-dimensional (2D) semiconductors, in particular transition metal dichalcogenides (TMDs), displaying superior characteristics at the atomic limit, are promising alternatives to silicon for future electronics. However, to meet the grades for electronics, synthetic control of TMDs requires further efforts. Here, I introduce the basics of 2D TMDs and the exemplary methods of production. Recent advancements in the controlled synthesis of 2D TMDs via chemical vapour deposition is summarised, with key factors in tuning the growth parameters and novel strategies with specially designed substrates that pave the way to the formation of grain boundary free TMDs being highlighted.

ALL INTERESTED ARE WELCOME
For further information, please contact Prof. L.L. Li at 3910 2657.

Research area: Advanced Materials