

Department of Mechanical Engineering The University of Hong Kong



## SEMINAR

## White Light Emitting Diodes (WLED)

Date:	23 April, 2025 (Wednesday)
Time:	10:30 a.m.
Venue:	Room 7-34 and 7-35, Haking Wong Building, HKU
Speaker:	Mr Gao Han (PhD candidate) Department of Mechanical Engineering The University of Hong Kong

## **Abstract:**

White light-emitting diodes (LED) have transformed the lighting industry by providing energyefficient alternatives to traditional bulbs. This presentation explores the evolution of white LED, highlighting advancements in materials that enhance performance. Initially, white LEDs combined blue LED with yellow phosphors, which limited colour quality. However, organic materials, particularly organic light-emitting diodes (OLED), offer flexibility and high colour purity, improving efficiency and lifespan. Quantum dot materials have gained attention for their unique optical properties, enabling precise colour tuning and enhanced brightness, making them ideal for advanced displays. Additionally, perovskite materials have emerged as a groundbreaking development, known for excellent light absorption and emission characteristics. Recent advancements in their stability suggest promising integration into commercial products, paving the way for low-cost, high-efficiency light sources. In summary, the development of white light LED showcases significant progress in materials science, with organic materials, quantum dots, and perovskites driving innovation in sustainable lighting solutions.

## ALL INTERESTED ARE WELCOME

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