

Research Centre for Advanced Design, Materials and Manufacturing Technologies (RCADMM) Research Seminar

ENHANCEMENT OF MATERIAL PROPERTIES BY PLASMA TREATMENT, NANOMATERIALS & META-STRUCTURES

DATE: 18 June 2021 (Friday)

TIME: 2:00 pm – 4:00 pm

VENUE: ONLINE (Microsoft Teams)

*The seminar is fully supported by a grant from
the Research Grants Council of the HKSAR,
China. (Project No.: UGC/IDS(R)24/19)*

Registration! 



Professor Chi Wai KAN

Professor,
Institute of Textiles and Clothing,
The Hong Kong Polytechnic University

Topic

Application of Plasma in Textiles

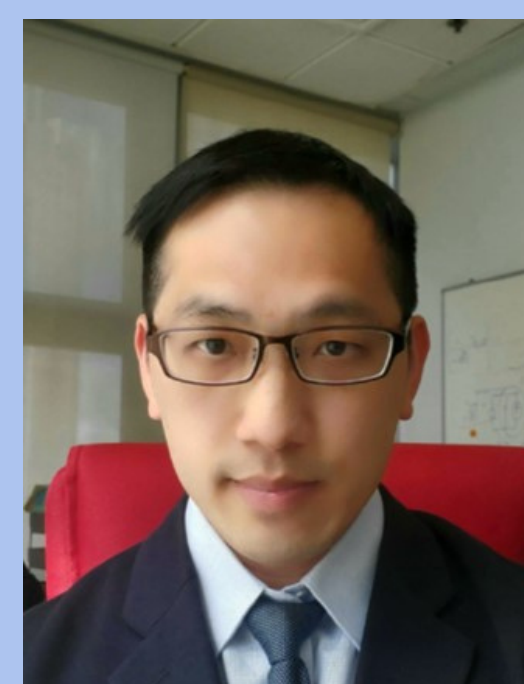
Abstract

Water is extensively using in the textile processing of textile material pretreatment, coloration and finishing. Due to the limited resources of water, industry is looking for “dry” process to replace or as an alternative to conventional water-based “wet” processing. Different technologies had been developed and plasma process is one of the promising technology to be applicable in textile and fashion industry. This presentation will provide information about plasma application in different area of textile and fashion.



Dr Anthony LAM

Lecturer,
Division of Science, Engineering and Health Studies,
School of Professional Education and Executive Development,
College of Professional and Continuing Education,
The Hong Kong Polytechnic University



Topic

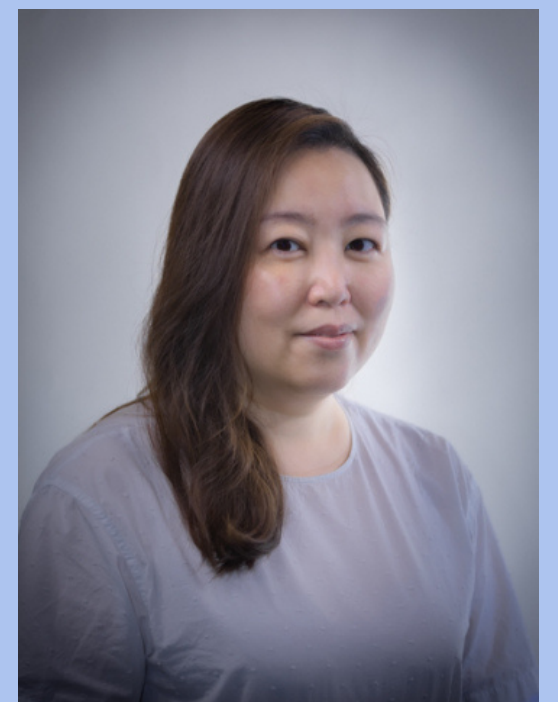
Synthesis of Graphene Nanocomposites in Application of Gas Sensing

Abstract

As a frontier material, graphene is a highly interesting research topic in material science as applications of composites, solar cell and gas sensor due to its superior electrochemical properties. Graphene is a two-dimensional and single-layer sheet of sp² hybridized carbon atoms with zero bandgap energy which demonstrates superior electrical conductance due to large surface area and fast electron transfer rate. However, the pristine form of graphene has low gas sensitivity due to the lack of energetically favourable sites, such as defects or functional groups. Recently, graphene derivative such as graphene oxide (GO) and reduced graphene oxide (RGO) have become an interesting research material with significant potential in applications of sensors, batteries and biomedical engineering due to the oxygen functional groups. This seminar will discuss some methods used in forming graphene nanocomposites with semiconductors and applications in gas sensing.

Dr Coriolanus LAM

Lecturer,
Division of Science, Engineering and Health Studies,
School of Professional Education and Executive Development,
College of Professional and Continuing Education,
The Hong Kong Polytechnic University



Topic

Review of Acoustics Materials for Noise Control in Building

Abstract

Over the past decade, noise has become a major environmental pollution. Due to the outbreak of COVID-19, people redefine their daily lifestyle in a significant manner. The work from home and online teaching practices have been employed widely. The acoustics environment of buildings has more and more attention since both practices require a quiet and dedicated space to perform, which can be a real challenge for those living in urban area. Choosing appropriate materials for sound absorption or sound insulation is one of the most commonly used technical measures in noise control engineering.

Acoustics materials use various materials to reduce the noise generated inside and outside the space through their acoustics properties to increase the comfort and safety of its residents. In order to use materials reasonably and improve the effectiveness of noise control, this seminar will review different types of acoustics materials for noise control in building, and the measures of effectiveness.

All are welcome!

Please scan the QR code for registration



For enquiry, please contact Ms Jenny Li at jenny.li@speed-polyu.edu.hk on or before 16 June 2021.