PUBLIC LECTURE ANNOUNCEMENT

MINERALS, METALS AND MATERIALS TECHNOLOGY CENTRE (M3TC)
FACULTY OF ENGINEERING
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We are organizing a series of public lectures that highlight some of the research activities of M3TC

TOPIC	**Synthesis, Characterization and Application of Ag/TiO2 Nanocomposite Materials**
SPEAKER	**Prof Guohua Chen** **Department of Chemical Engineering** **The Hong Kong University of Science and Technology**
CHAIRED BY	**Prof Arun Mujumdar** **(Director M3TC)**
DATE	**5th April 2010**
TIME	**11am to 12.30pm**
VENUE	**EA-06-04, Faculty of Engineering, National University of Singapore** **NUS Campus Map & NUS: Faculty of Engineering**

Please register via email: m3tc@nus.edu.sg

SYNOPSIS

Nanosized noble metal particles are getting increasing attention because of their successes in a wide range of applications. Synthesis of efficient, cost-effective noble metal nanomaterials is therefore of great significance to the advancement of relevant subjects. Small metal particle size and good dispersion are two of the key parameters determining their performances. In this talk, a novel one-pot synthesis method will be described to produce TiO2-supported Ag nanoclusters with excellent Ag size (<5 nm) and dispersion control while maintaining a high Ag loading (>7wt%). XPS investigations reveal that silver exist predominantly in the metallic state (Ag0) in the composite material. The as-synthesized Ag/TiO2 nanoparticles exhibit potent antibacterial activities against E. coli, one of the model gram-negative bacteria. The superior activity is attributed to the small Ag particle size and the anti-aggregation mechanism caused by the TiO2 support. Other catalytic applications of Ag/TiO2 nanocomposite material show also encouraging results. The composite material can also be used to in the preparation of other more expensive noble metals, such as Au, Pd and Pt, on TiO2 surface.

About the Speaker

Prof Guohua Chen completed his Ph.D. in Chemical Engineering in Canada. Now he is employed at The Hong Kong University of Science and Technology, Department of Chemical Engineering as Professor and is the Director for the Center for Green Products and Processing Technologies. He is author or co-author of 138 journal papers, 13 books/book chapters as well as 3 patents. His CV can be viewed through the following link:
Prof Guohua Chen Curriculum Vitae.

All Are Welcome. Admission is Free

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