

**UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of ELECTRICAL AND ELECTRONICS
ENGINEERING**

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**“Stories of Graphene and How it May
Change Our Life”**

by

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**Date : 2 June 2011 (Thu)
Time : J206
Venue : 11:00-12:30**

Abstract

Graphene is one single layer of carbon atoms and the building block of other carbon materials including graphite, nanotubes and buckyballs. In the past few years, graphene has emerged as one of the most versatile and remarkable nanomaterials ever studied. Everyone can make graphene at home, by peeling off tiny graphene flakes from graphite using the simple “scotch tape” method (pioneered by Geim and Novoselov, who used it in 2004 to unlock the novel

properties of graphene and were later awarded the physics Nobel in 2010). Nowadays, people can use chemical vapor deposition (CVD) to produce meter-scale graphene that is transferrable, flexible, transparent, highly-conducting, and one-atom thick. Such large-scale synthetic graphene will facilitate a wide range of practical applications in electronics, renewable energy, sensing and material engineering. Examples may include high speed transistors for future computers and cell phones, transparent-flexible electronics and solar cells, protective coating to prevent materials corrosion, and sensors to detect chemical and radiation pollution.

Biography

Dr. Yong P. Chen received his BSc and MSc in mathematics from Xi'an Jiaotong University (1996) and MIT (1999) respectively, and his PhD in electrical engineering from Princeton University (2005). He is currently the Miller Family Assistant Professor of Nanoscience and Physics and Courtesy Electrical and Computer Engineering at Purdue University (2007-). He is a recipient of NSF CAREER Award, DOD DTRA Young Investigator Award and IBM Faculty Award. His research interests include novel quantum matter and devices involving systems such as graphene, topological insulators and trapped atoms (<http://www.physics.purdue.edu/qmd>). He is internationally recognized as an expert in large-scale synthetic graphene and related scientific and technological applications.

ALL ARE WELCOME!