MatPAC

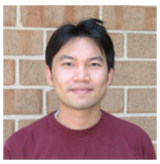
Nanotechnology and Advanced Materials Graduate Student Talent Series

Date: Thursday, June 30, 2011
Location: 4th Floor Whitaker Lab, Room 451
Lehigh University, 5 E. Packer Ave., Bethlehem, PA 18015
Time: Noon-2:30 p.m.
Cost: Free
Registration: http://www.lehigh.edu/lnn/events.shtml
or email jdsj@lehigh.edu

AGENDA:

Noon-12:10 p.m. ***Welcome***

12:10-12:40 p.m. *Dr. Pisist Kumnorkaew* => **Self Assembly of Micro-Nano Particles for Dye Sensitized Solar Cell**



Education:

Ph.D., Chemical Engineering, Lehigh University, Pa., 2010
M.S., Chemical Engineering, King Mongkut's University of Technology Thonburi, Bangkok, Thailand, 2002
B.S., Chemical Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand, 2000

Research activities, consulting, patents, etc.:

Particle self assembly of micro and nanoparticles. Nanoscale particle synthesis of silica and titania. Microlens arrays fabrication for quantum wells LEDs via rapid convective deposition of colloidal suspension. Micro and nano scale characterization via electron microscopy (SEM and TEM) and confocal microscopy with image analysis techniques. Current research interests include efficiency enhancement in dye sensitized solar cell (DSSC) with microlens arrays.

12:40-1:10 p.m. *Dr. Donghui Zhao* => **Atomistic mechanisms and kinetics of photosensitivity in chalcogenide glasses of large interest in photonic applications**

Education:

Ph.D., Materials Science and Engineering, Lehigh University, 2011
M.S., Materials Science, East China University of Science and Technology, 2006
B.E., Inorganic Materials Science and Engineering, East China University of Science and Technology, 2003

Research activities, consulting, patents, etc.:

Extensive research in glass, glass-ceramics, and thin films, especially in infrared (IR) transmitting glasses and glass-ceramics, IR-emission glasses, photonic applications of photosensitive chalcogenide glasses and thin films, and amorphous semiconductors. Specialize in spectroscopy characterizations of materials, especially synchrotron x-ray techniques, e.g. x-ray absorption spectroscopy (EXAFS/XANES).

1:10-1:40 p.m. *Raj Patel* => **The Fabrication of Carbon Nanopipettes with Multiple Nanoscopic Tips**

Education:

B.S., Materials Science and Engineering, Drexel University

Research activities, consulting, patents, etc.:

Development of carbon nanopipettes and nanotube-based probes with single and multiple tips <100nm in diameter using template synthesis processes. Characterization of template-formed nanostructures using optical microscopy and SEM. Development of multifunctional tools for single cell and other biological applications.

1:40-2:30 p.m. ***Question and Answer Session followed by Life Science Focus Group Meeting***