

# Solution-Processed Organic Opto-electronic Devices

## Professor Thuc-Quyen Nguyen

University of California, Santa Barbara

**Date & Time: September 8th (Tue), 2015 13:00 - 14:00**

**Place: Meeting Room 2 (33B2), 3<sup>rd</sup> Floor, Engineering Bldg #2, The University of Tokyo**

**Abstract:** Organic semiconductors have potential applications in various low cost, large area, flexible, light-weight devices ranging from sensors, light-emitting diodes (LEDs), displays, transistors, solar cells, photodetectors, and ratchets. In this talk, I will give an overview of research going on in my group at UCSB. Then, I will discuss recent progress and challenges on organic solar cells, ratchets, and high performance thin film transistors.



**Biography:** Thuc-Quyen Nguyen is a professor in the Center for Polymers and Organic Solids (CPOS) and Chemistry & Biochemistry Department at University of California, Santa Barbara (UCSB). Thuc-Quyen Nguyen received her B.S., M.S., and Ph.D. degrees in physical chemistry from the University of California, Los Angeles, in 1997, 1998, and 2001, respectively. Her thesis research focused on processing and photophysics of conducting polymers using ultrafast spectroscopy under the supervision of Professor Benjamin Schwartz. She was a research associate in the Department of Chemistry and the Nanocenter at Columbia University working with Professors Louis Brus and Colin Nuckolls on molecular self-assembly, nanoscale characterization and devices. She also spent time at IBM Research Center at T. J. Watson (Yorktown Heights, NY) working with Richard Martel and Phaedon Avouris on molecular electronics. She joined the faculty of the Chemistry and Biochemistry Department at UCSB in July 2004. Her current research interests are electronic properties of conjugated polyelectrolytes, interfaces in optoelectronic devices, charge transport in organic

semiconductors and across membranes, nanoscale characterization of organic solar cells, and device physics. She is co-authored 165+ publications that received over 10,000 citations and gave over 180 invited talks/keynote/plenary lectures. Recognition for her research includes the 2005 Office of Naval Research Young Investigator Award, the 2006 NSF CAREER Award, the 2007 Harold Plous Award (one of the UCSB's two most prestigious faculty honors), the 2008 Camille Dreyfus Teacher Scholar Award, the 2009 Alfred Sloan Research Fellows, and the 2010 NSF American Competitiveness and Innovation Fellows.

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