

Large-Area Nanoimprinting and Nanodevices for Energy Harvesting & Biosensing

By Prof. Stephen Y. Chou

Dept. of Electrical Engineering, Princeton University

ABSTRACT

This talk will present (1) the technology advances and applications of nanoimprinting, a revolutionary nanofabrication method that not only allows the fabrication of nanostructures that could not be fabricated before, but also offers a viable way to mass manufacturing of nanostructures and hence commercialization [1]; and (2) new nanodevices for high efficiency of solar cells and LEDs and ultrasensitive biosensing that are based on innovative nanoplasmonic structures and have unprecedented properties and performances.

1] S. Y. Chou, P. R. Krauss, and P. J. Renstrom, *Appl. Phys. Lett.*, 67 (21), 3114 (1995); and S.Y. Chou, US. Patent No. 5,772,905.

BIOGRAPHY

Stephen Y. Chou, Joseph C. Elgin Professor of Engineering, head of the NanoStructure Laboratory at Princeton University, PhD from MIT (1986), a member of US National Academy of Engineering, and a recipient of other 30 awards. Dr. Chou's work and inventions over 30 years have shaped new paths and opened up new fields in nanofabrication, nanoscale devices and materials (electrical, optical, magnetic, biological), and have significantly impacted both academia and industry. Among many of Dr. Chou's inventions, the most well-known one is nanoimprint (a paradigm-shift method for nanofabrication, which has become a large industry and a key corner-stone in today's nanomanufacturing in many industries). His other inventions include various other new nanofabrication technologies, new nanotransistors/memories, patterned medium (a new paradigm for data storage), new subwavelength optical elements, ultra-sensitive nanobiosensors and nanoplasmonic LEDs and solar cells. As an entrepreneurship, Prof. Chou is the Founder of Nanonex Co., NanoOpto Co. and Essenlix Co. and Co-Founder of BioNanoGemonics Inc.



EVENT DETAILS

DATE:

Wednesday,
February 4, 2015

TIME:

11:00 AM

LOCATION:

Babbio 122
Stevens Institute of Technology

ATTENDANCE:

Public