

# NANO HOUR

Wednesday, September 13, 2006

**3:00 PM**

Beckman Institute - Room 3269

## Optical Methods For 3D Nanofabrication With Applications in Photonics, Fluidics and Laser Fusion

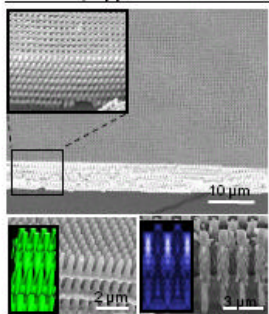
Seokwoo Jeon

Graduate Student in Materials Science and Engineering  
University of Illinois

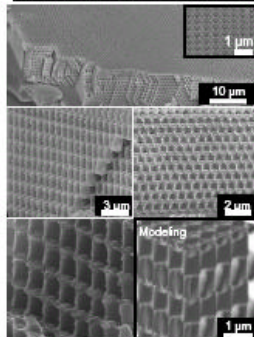
Conformable phase masks and transparent photopolymers provide the basis for a simple optical technique that can form complex, but well defined three dimensional (3D) nanostructures in a single exposure step. This talk describes the method, presents and range of examples of its

### Three Dimensional Nanostructures

1 Photon: Apps in Microfluidics



2 Photon: Apps in Photonics



ability to form 3D nanostructures (including free standing particles with controlled shapes) and rigorous coupled-wave analysis of the associated optics. Single step, large area 3D pattern definition, sub-wavelength resolution and experimental simplicity represent features that make this method attractive for applications in

photonics, biotechnology and other areas. We provide examples in passive mixers in microfluidics, bandgap structures in photonics, and reservoir targets in shockless laser compression.

**Coffee and cookies will be served.**

<http://nanohour.beckman.uiuc.edu>