

## Nanostructured Surface for Enhanced Fluorescence Cell Imaging

**Austin Hsiao, M-CNTC Trainee**

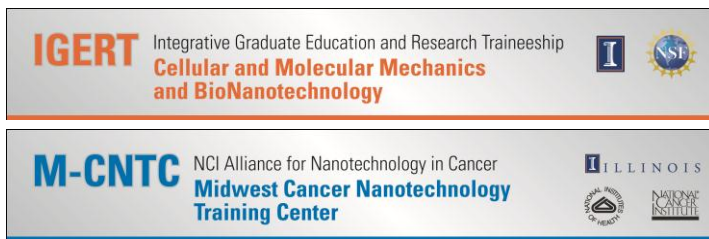
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**Date:** Tuesday, April 17, 2012  
**Time:** 12:30 – 1:00 p.m. CST (10:30 – 11:00 a.m. PST)  
**Location:** 1000 MNTL at Illinois (SSM 150 at UC Merced)

### Abstract:

We have created a nanostructure substrate on which three-dimensional confocal fluorescence cell-imaging sensitivity is amplified for cell membrane and cytoplasm. The nanostructure substrate was fabricated using a plasma etching technique to create a randomized array of nano-pillars. Confocal fluorescence imaging of Chinese Hamster Ovarian cells showed at least 10x enhancement of fluorescence signal from labeled cell membrane and cell cytoplasm compared to traditional glass slide. The observed enhancement may be due to enhanced scattering from the nanostructures and the excitation of localized surface plasmon. Additional fluorescence labels and cell types are under investigation for fluorescence enhancement.

### Seminar Presented by:



**CNST** University of Illinois Center for Nanoscale Science and Technology