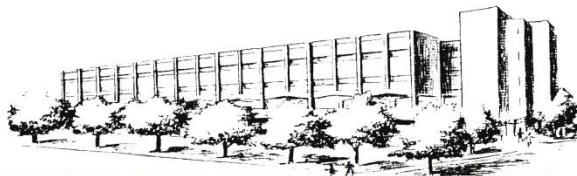


UNIVERSITY OF CONNECTICUT



INSTITUTE OF MATERIALS SCIENCE

POLYMER PROGRAM SEMINAR

“Carbon Nanomaterials for Quantitative Biology and Medicine”

Dr. Daniel A. Heller
Memorial Sloan Kettering Cancer Center &
Weill Cornell Medical College, Cornell University

Friday, February 17, 2017
11:00 AM, IMS Room 20

ABSTRACT

The real-time and spatially-resolved detection and identification of analytes in biological media present important goals for next-generation nanoscale probes and sensors. To this end, we employ the intrinsic near-infrared fluorescence of single-walled carbon nanotubes which is photostable yet sensitive to the immediate environment. To build biomedical technologies that employ carbon nanotube photoluminescence, a better understanding of the optical response, as well as new methods to measure it in biological systems, are needed. We have developed new imaging platforms to quantify nanotube emission, including a method to conduct photoluminescence excitation/emission spectroscopy on living samples. We synthesized carbon nanotube-based photoluminescent sensors to interrogate analytes and processes in living specimens, including mammalian cells, 3D tumor spheroids, and whole organisms.

**For further information, please contact YoungHee Chudy at younghee.chudy@uconn.edu or 860 486 3582.*

