

T_CSUH Bi-Weekly Seminar

Texas Center for Superconductivity at the University of Houston



Christy Landes

Department of Chemistry and T_CSUH
at the University of Houston

Single Molecule Studies of Disease-Related Biological Processes

Friday, August 3, 2007

Room 102, University of Houston Science Center

12:00 noon – 1:00 p.m.

Abstract

Biological processes are often heterogeneous. Single molecule spectroscopy allows us to distinguish between multiple pathways in disease progression or drug/pathogen interactions. Thus, it is possible to identify, for example, which steps are most amenable to drug therapy. The experimental technique is especially powerful when combined with simulations in which we model processes such as protein-nucleic acid binding. I will discuss the recent progress in our group using single molecule fluorescence resonance energy transfer (SMFRET) and fluorescence correlation spectroscopy (FCS) to study retroviral chaperone steps and model macular degeneration inhibitor

Bio

Christy received her BS in chemistry from George Mason University, and went on to study semiconductor nanoparticles under the direction of Prof. Mostafa El-Sayed at Georgia Tech. She performed postdoctoral work on nonlinear optical spectroscopy in the lab of Prof. Geraldine Richmond at the University of Oregon, and received an NIH postdoctoral fellowship to study HIV reverse transcription processes with Prof. Paul Barbara at the University of Texas at Austin. She joined the faculty of the University of Houston in July 2006. Her lab's projects involve developing next-generation single molecule techniques to study pathogenesis and drug/pathogen interactions.

Persons with disabilities who require special accommodations in attending this lecture should call (713) 743-8210 as soon as possible.



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