

2006 Miller-Breit Lecture

"Breaking the Nanometer Barrier: Recent Progress in Biological Nanoscience"

Friday, October 27, 2006

4:00 p.m. in Sloane Physics Lab 59

Work in the Block lab is in the new area of "single molecule biophysics." Block and coworkers have recently developed a new generation of apparatus employing laser-based optical traps that can exert carefully controlled, piconewton-scale forces on individual macromolecules while measuring their displacements with unprecedented accuracy -- right down to the atomic level. Using the apparatus, they've been able to measure, for example, single base-pair steps taken by RNA polymerase during gene transcription, folding and unfolding transitions of secondary structure in nucleic acids, and the nanomechanics of motion driven by kinesin motors walking on microtubules. This talk will highlight recent progress in the field.

Professor Steven Block
Stanford University

Tea will be served at 3:30 P.M. in the third floor lounge, SPL

