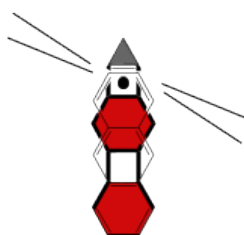


Organisch-Chemisches Kolloquium

und



GRK 1626 – Chemische Photokatalyse

“Fluorescence Vistas on Single-Molecule Structure and Dynamics”

Carey K. Johnson, University of Kansas

Abstract: Single-molecule fluorescence spectroscopy offers a unique outlook onto the conformations and dynamics of proteins. In this talk I will describe three single-molecule fluorescence methods and their application to protein structure and dynamics. (1) Single-molecule Förster resonance energy transfer (FRET) provides a vantage onto protein conformations. I will discuss its application to the calcium signaling protein calmodulin, describe a Bayesian approach to data analysis, and point out potential pitfalls of the method. (2) Fluorescence correlation spectroscopy (FCS) is a sensitive method to detect dynamics. I will describe FCS detection of dynamics in calmodulin. (3) Single-molecule tracking can be used to detect study the translational mobility of molecules. We have applied single-molecule tracking to investigate signaling complexes involving calmodulin inside live cells.

Mittwoch, 15.05.2013

**17-19 Uhr
H46**