

SFB
1078



Protonation Dynamics
in Protein Function

➤ Colloquium

Mon, May 4, 2015 · 16:15 – 18:30 · Lecture Hall B of the Physics Dept.
at Freie Universität Berlin (Arnimallee 14, 14195 Berlin-Dahlem)

16:15 PD Tilman Kottke, Universität Bielefeld, Germany

Electron and proton transfer in cryptochrome photoreceptors

Cryptochromes are a diverse and ubiquitous family of blue and red light receptors carrying a flavin as a cofactor. Tilman Kottke and his group have studied the light-induced electron and proton transfer processes and the concomitant conformational changes of the receptors. He will give an overview of the current status of their research on different kinds of cryptochromes and present recent results from time-resolved infrared spectroscopy.

17:30 Dr. Mounir Tarek, CNRS-UMR 7565, Université de Lorraine, France

On the activation and modulation of voltage gated ion channels

Excitable cells produce electrochemical impulses mediated by the transport of ions across their membrane through voltage gated ion channels (VGCs). In his talk, Mounir Tarek will show that the atomistic description of VGC activation obtained by molecular dynamics simulations and free energy calculations is consistent with the phenomenological models adopted so far to account for the macroscopic currents measured by electrophysiology. These results pave the way for a deeper understanding of the molecular level factors affecting ion channel activation such as lipid composition, amino acid mutations, and binding of drug molecules or endogenous ligands. [[Link to list of references.](#)]

Coffee and tea are ready at 16:00 and during the break.

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