SFB 1078

Protonation Dynamics in Protein Function

Colloquium of the SFB 1078

Special topic: Photoreceptors

Fri, **Sept. 20**, 2013 · **14:30 – 17:10** · Lecture Hall A of the Physics Dept. at Freie Universität Berlin (Arnimallee 14, 14195 Berlin-Dahlem)

14:30 **Prof. Ute Hochgeschwender**, Duke University, Durham, USA

Bioluminescence activation of photoreceptors

U. Hochgeschwender will present their most recent results on using bioluminescence to activate channelrhodopsins. Rather than by laser light, channel opening is induced by photons emitted from the oxidation of the substrate coelenterazine by a luciferase, a process itself involving protonation.

15:15 **Prof. Masahiko Ikeuchi**, University of Tokyo, Japan

Structure and color development mechanism of cyanobacteriochromes

M. Ikeuchi will talk about crystal structures of AnPixJ/TePixJ with some discussion and the protochromic photocycle of RcaE/CcaS. He will discuss the diversity and common features of cyanobacteriochromes.

16:00 Coffee break

16:20 **Prof. J. Clark Lagarias**, University of California, Davis, USA

Color responses of an intrinsically protochromic chromophore in CBCRs

J.C. Lagarias will present their recent progress on understanding the mechanisms of spectral tuning in bilin-based light sensors from cyanobacteria.

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