

SFB
1078



Protonation Dynamics
in Protein Function

Mon, Dec. 12,
2016

16:15 – 19:30

Freie Universität Berlin
Physics Department
Lecture Hall B

(Arnimallee 14, 14195 Berlin-Dahlem)

➤ Colloquium

16:15 **Prof. Aba Losi** – University of Parma, Italy

Novel photosensors for visible light: from biological functions to biophysical applications

In this lecture Prof. Losi will speak about her recent research work on blue light photoreceptors, focusing on the fate of absorbed energy in engineered and natural systems. She will illustrate in particular the generation and spectroscopic characterization of a chimeric proteins built from two different photosensing modules, designed for FRET experiments. She will further show novel data obtained for channelrhodopsins with a time-resolved photocalorimetric method, suited to describe early energetics and structural changes triggered by light in photosensors.

17:30 **Prof. Lars-Oliver Essen** – Philipps-Universität Marburg, Germany

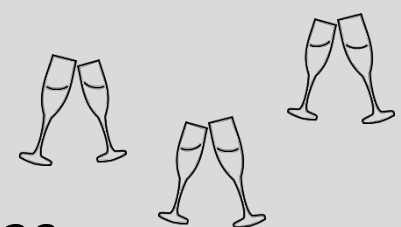
Light-driven electron (and proton) transfer by cryptochromes and photolyases: common structures, common mechanisms?

Prof. Essen and his group found (6-4) photolyase activity for the animal-like cryptochrome of the green algae *Chlamydomonas reinhardtii* (CraCRY) that otherwise shows blue- and red-light signalling activity in vivo. Its 1.9 Å structure reveals the common bilobal architecture with a chromophore-containing antenna. The co-crystal structure with DNA proves that CraCRY is a fully-fledged (6-4) photolyase, but also challenges previous mechanistic proposals due to distinct structural differences in the active site. Investigation of the conserved tryptophan triad provided new insight in the photoactivation of CraCRY.

18:30 **Reception** on the occasion of

The Extension of Funding for the SFB 1078 from 2017 – 2020

Everybody is invited for a snack and drinks!!!



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