

SFB
1078



Protonation Dynamics
in Protein Function

➤ Colloquium

Mon, July 4,
2016

16:15 – 18:30

Freie Universität Berlin
Physics Department
Lecture Hall B

(Arnimallee 14, 14195 Berlin-Dahlem)

➤ **Prof. Werner Mäntele** – Goethe-Universität, Frankfurt a.M., Germany

Spectroscopists do it with light: On the development of infrared sensors for medical diagnostics

In his lecture, Werner Mäntele presents biomedical applications of MIR technology for the analysis of body fluids, from the bench to the bedside. Starting from instrumentation based on compact FTIR machines, he will move to most recent developments in QCL applications for the measurement of skin parameters and body fluids in vitro and in vivo in comparison with FT-IR experiments. Photoacoustic detection methods with ultrasound resonance cells and novel photothermal detection methods are described that are optimized for pulse frequencies and pulse energies of QCLs and that open the possibility for the depth-selective analysis of skin layers.

➤ **Prof. Adam Lange** – Leibniz-Institut für Molekulare Pharmakologie (FMP), Berlin, Germany

Structures of bacterial molecular machines by solid-state NMR, EM, and other techniques

Adam Lange and his group use solid-state NMR spectroscopy and a variety of other biophysical methods to study protein structure and dynamics. The systems of interest comprise membrane proteins in the context of a native-like lipid bilayer environment and supramolecular assemblies such as type three secretion needles or cytoskeletal filaments. Adam Lange will focus in his presentation on integrative structural biology approaches that combine results from NMR, EM, and other techniques.

Coffee and tea are ready at 16:00 and during the break from 17:10 – 17:30.

www.sfb1078.de