IAP-SEMINAR

EINLADUNG

Termin: **Montag, 14.6.2010 um 14:00 Uhr**
Ort: **Technische Universität Wien,**
Freihaus Hörsaal 1, Turm C (rote Leitfarbe), 1.u.2. OG
1040 Wien, Wiedner Hauptstraße 8-10

Vortragende: **Dr. Katrin Heinze**
Research Institute of Molecular Pathology (IMP), Wien

Thema: **Monitoring and manipulating fast dynamics of biomolecules in situ**

Kurzfassung

We are currently developing a surface imaging technique that has the potential for being both extremely fast whilst providing a spatial resolution far better than that achievable by conventional microscopy. Our approach is based on the idea of a near-field planar lens – a so-called superlens − that is brought in contact with the sample and capable of resolving features much smaller than the diffraction limit at optical frequencies. One superlens design which we are currently developing consists of stacked metallic and dielectric films, which we are able to fabricate with sufficient quality and biocompatibility.

In addition to pushing optical imaging techniques beyond the classic spatial and temporal resolution limits, we are also working on understanding the inevitable interaction of light with (labeled) biomolecules and its impact on imaging data interpretation. In particular, over the last few years we have studied a phenomenon called photounbinding where moderate light intensities can reversibly dissociate biomolecular binding partners. We have obtained insight into the photophysical pathways involved, and are now seeing how they can be harnessed and manipulated for biomedical applications.

_____

*Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar
im Rahmen des Berufungsverfahrens Biophysik
herzlich eingeladen.*

H. Störi e.h.
(LVA-Leiter)