



Česká společnost chemická  
Czech Chemical Society  
Novotného lávka 5, CZ-116 68 Praha 1  
tel. 221 082 383, fax 222 220 184 E-mail chem.spol@csvts.cz



Přírodovědecká fakulta Univerzity Karlovy v Praze  
ve spolupráci s Českou společností chemickou  
si Vás dovoluje pozvat na přednášku

## Prof. Martin Hof, Dr. rer. nat. DSc.

Ústav fyzikální chemie Jaroslava Heyrovského AV ČR, v.v.i.

### Lipid hydration, mobility, and aggregation in model membranes characterized by fluorescence techniques

Přednáška se bude konat pod záštitou děkana fakulty

Prof. RNDr. Bohuslava Gaše, CSc.

v rámci seriálu přednášek

## Quo Vadis Chemie

v pondělí 13.května 2013 ve 14,00 hod.

posluchárna CH 2, Chemický ústav PřF UK na Albertově, Hlavova 8, Praha 2

Prof. RNDr. Jiří Barek, CSc.

předseda odborné skupiny analytické chemie ČSCH



## Prof. Martin Hof

21. 09. 1962 born in Friedberg / Germany

Employer: J. Heyrovský Institute of Physical Chemistry; Academy of Sciences of the Czech Republic

Education :

1987 "Diplom-Chemicker" at the "Julius-Maximilians-Universität Würzburg";

1990 Dissertation in Physical Chemistry at the "Julius-Maximilians-Universität Würzburg";

1999 Habilitation at the "Faculty for Chemistry and Pharmacy" of the "Julius-Maximilians-Universität Würzburg";

2006 Defense of the Doctor of Science (DSc.) thesis, Academy of Sciences of the Czech Republic;

2009 Full Professor for Physical Chemistry named by the President of the Czech R.

Regional Editor for Europe of Journal of Fluorescence

Awards :

1991 Dissertation awarded by the "Unterfränkische Gedenkjahresstiftung" as an outstanding bavarian dissertation

1987, 1991, 1993, 1997 Four prestigious PhD, Post-Doc, and Habilitation Stipends

Publishing activities:

Author or co-author of 110 original publications, 16 chapters in books, 1 patent, editor of 2 books; > 1100 citations; h-index: 19

Most cited original paper:

A. Benda, M. Benes, V. Marecek, A. Lhotsky, W.T. Hermens, and M. Hof. *How to determine diffusion coefficients in planar phospholipid systems by confocal fluorescence correlation spectroscopy.* (2003), **Langmuir** 19(10): p. 4120-4126. > 80 citations

Scientific interests :

Fluorescence spectroscopy, picosecond time-resolved fluorescence spectroscopy, fluorescence correlation spectroscopy, fluorescence lifetime correlation spectroscopy, single molecule spectroscopy; ellipsometry.

Development of fluorescent dyes, structure-function relationship of proteins, bio- and model membranes, solvent relaxation in biomembranes, DNA condensation, targeted drug delivery, self-organized block polymers, in vivo imaging.

Pedagogical activities:

In 2010 teaching courses „fluorescence spectroscopy“ and „spectroscopical methods“.

Adviser of "Magister"-work of 8 students; PhD adviser of 13 students.

Selected recent publications:

- 1) M. Przybylo, J. Sýkora, J. Humpolíčková, A. Benda, A. Zan, M. Hof. *The lipid diffusion in giant unilamellar vesicles is more than two times faster than in supported phospholipid bilayers under identical conditions.* (2006), **Langmuir** 22: 9096-9099.
- 2) J. Humpolíčková, A. Benda, J. Sýkora, R. Macháň, T. Kral, B. Gasinska, J. Enderlein, M. Hof. *Equilibrium Dynamics of Spermine-induced Plasmid DNA Condensation Revealed by Fluorescence Lifetime Correlation Spectroscopy.* (2008), **Biophysical Journal** 94: L17-L19.
- 3) J. Humpolíčková, L. Beranová, M. Štěpánek, A. Benda, K. Procházka, M. Hof. *Fluorescence Lifetime Correlation Spectroscopy Reveals Compaction Mechanism of 10 and 49 kbp DNA and Differences between Polycation and Cationic Surfactant.* (2008), **Journal of Physical Chemistry B** 112, 51, 16823-16829.
- 4) A. Jesenská, J. Sýkora, A. Olzynska, J. Brezovský, Z. Zdráhal, J. Damborský, M. Hof. *Nanosecond Time-Dependent Stokes Shift at the Tunnel Mouth of Haloalkane Dehalogenases.* (2009), **Journal of the American Chemical Society** 131 (2), 494-501.
- 5) M. Stefl, A. Kulakowska, and M. Hof. *Simultaneous Characterization of Lateral Lipid and Prothrombin Diffusion Coefficients by Z-Scan Fluorescence Correlation Spectroscopy.* (2009), **Biophysical Journal** 97(3): p. L1-L3.