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.

Present professional positions:

Vice-Director of the J. Heyrovský Institute and Head of the Department of Biophysical Chemistry.

Chairman of the Board of the J. Heyrovský Institute of Physical Chemistry.

Regional Editor for Europe of Journal of Fluorescence

Awards:

1991 Dissertation awarded by the “Unterfraenkische Gedenkjahresstiftung” as an outstanding bavarian dissertation

1987, 1991, 1993, 1997 Four prestigous 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 corelation spectroscopy, fluorescence lifetime corelation spectroscopy, single molecule spectroscopy; ellipsometry.

Development of fluoresent 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. Humpoličková, 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.