

**RNDr. Radek Macháň, Ph. D. – List of publications:**

*Journal Articles:*

- Klika Z, Čapková P, Horáková P, Valášková M, Malý P, Macháň R, Pospíšil M. *Composition, structure, and luminescence of montmorillonites saturated with different aggregates of methylene blue.* J Colloid Interface Sci (2007) **311**: 14-23.
- Humpolíčková J, Benda A, Sýkora J, Macháň R, Kral T, Gasinska B, Enderlein J, Hof M. *Equilibrium dynamics of spermine-induced plasmid DNA condensation revealed by fluorescence lifetime correlation spectroscopy.* Biophys J (2008) **94**: L17-L19.
- Miszta A, Macháň R, Benda A, Ouellette AJ, Hermens WT, Hof M. *Combination of ellipsometry, laser scanning microscopy and Z-scan fluorescence correlation spectroscopy elucidating interaction of cryptdin-4 with supported phospholipid bilayers.* J Pept Sci (2008) **14**: 503-509.
- Macháň R, Miszta A, Hermens W, Hof M. *Real-time monitoring of melittin induced pore and tubule formation from supported lipid bilayers and its physiological relevance.* Chem Phys Lipids (2010) **163**: 200-206.
- Macháň R, Hof M. *Recent Developments in Fluorescence Correlation Spectroscopy for Diffusion Measurements in Planar Lipid Membranes.* Int J Mol Sci (2010) **11**:427-457.
- Macháň R, Hof M. *Lipid lateral diffusion in planar bilayers investigated by fluorescence correlation spectroscopy.* Biochim Biophys Acta (2010) **1798**: 1377-1391.
- Humpolíčková J., Benda A., Macháň R., Enderlein J., Hof M. *Dynamic saturation optical microscopy: employing dark-state formation kinetics for resolution enhancement.* Phys Chem Chem Phys (2010) **12**: 12457-12465.
- Macháň R, Hof M, Chernovets T, Zhmak MN, Ovchinnikova TV, Sýkora J. *Formation of arenicin-1 microdomains in bilayers and their specific lipid interaction revealed by Z-scan FCS,* Anal. Bioanal. Chem. (2011) **399**: 3547-3554.
- Norris SCP, Humpolíčková J, Amler E, Huranová M, Buzgo M, Macháň R, Lukáš D, Hof M. *Raster image correlation spectroscopy as a novel tool to study interactions of macromolecules with nanofiber scaffolds,* Acta Biomaterialia (2011) **7**: 4195-4203.
- Štefl M, Šachl R, Humpolíčková J, Cebecauer M, Macháň R, Kolářová M, Johansson L B-A, Hof M. *Dynamics and Size of Cross-Linking-Induced Lipid Nanodomains in Model Membranes,* Biophys. J. (2012) **102**: 2104-2113.

*Proceedings articles:*

- R. Macháň, A. Miszta, A.J. Ouellette, W.T. Hermens, M. Hof, *Optical methods elucidating action of antimicrobial peptides*. In J. Šafránková, J. Pavlů (eds.), WDS'07 Proceedings of Contributed Papers, Part III, Matfyzpress, Praha (2007), pp. 95-99.
- T. Steinberger, R. Macháň, *Study of membrane formation by the null ellipsometer*. In: A. Dubničková, S. Dubnička, C. Granja, C. Leroy, I. Stekl (eds.), Nuclear physics methods and accelerators in biology and medicine, vol. 1204, Amer Inst Physics, Melville (2009), pp. 258-259.

*Chapters in Books:*

- Miszta A, Macháň R, Hermens WT, Hof M. *Peptide–membrane interactions studied by ellipsometry, laser scanning microscopy, and Z-scan fluorescence correlation spectroscopy*. In Castanho M (ed.) Membrane-active peptides: methods and results on structure and function, IUL Publishers, La Jolla (2009), pp. 217-245.
- Štefl M, Macháň R, Hof M. *Z-scan fluorescence correlation spectroscopy: A powerful tool for determination of lateral diffusion in biological systems*. In Geddes C (ed.) Reviews in fluorescence 2009, Springer, New York (2011), pp. 321-344.
- Hof M, Macháň R. *Fluorescence spectroscopy*. In Gauglitz G, Vo-Dinh T, Moore DS. (eds.) Handbook of spectroscopy, 2nd edition, Wiley-VCH, Weinheim, in press.
- Macháň R, Hof M. *Fluorescence correlation spectroscopy*. In Roberts GCK. (ed.) Encyclopedia of Biophysics, Springer, New Delhi, in press.

*Edited proceedings:*

- Pospíšilová M, Vrbová M, Macháň R. (eds.) *Instruments and methods for biology and medicine 2011*, CTU Publishing House, Praha (2011).