



# Institute for Biophysics Department of Nanobiotechnology



**MSc - Thesis:**

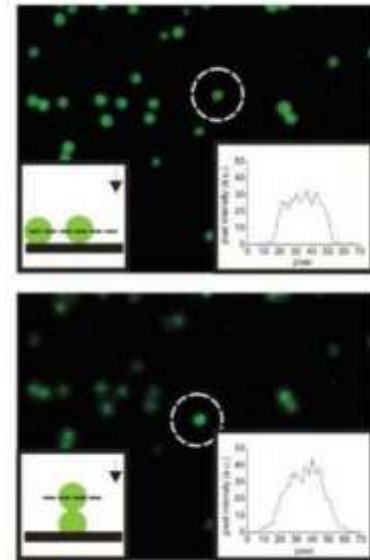
## **SURFACE pH DETERMINATION THROUGH FLUORESCENCE ATOMIC FORCE MICROSCOPY**

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In this project, we would like to study the surface pH by using fluorescent microparticles, (phospho)lipid bilayers and combining fluorescence atomic force microscopy (FAFM).

Recently, we have attached a fluorescent protein particle (diameter: 1.3  $\mu\text{m}$ ) to an AFM cantilever in liquid. This permitted us to quantify differences in the particle fluorescence when the particle is in close proximity to a surface of equal or opposed charge [1]. We would like to expand this methodology to evaluate changes in surface pH on model membranes (e.g. lipid bilayers) together with other physicochemical properties.

If you are curious about science and more important, if you want to learn new concepts and experimental techniques, then you are welcome to join our team!



[1] Microscopy Research and Technique 73 (2010) 746

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