Master thesis

Division 1.2 „Biophotonik“ located in
Berlin-Adlershof is currently looking for a

Master Student (w/m)

Topic

The aim of the master thesis is the development of novel fluorescent and multimodal probes, for functional group analysis on nanomaterials utilizing reductively cleavable linkers and chromophores, which can be detected with different analytical methods. Additionally, the linker should be coupled to aminated and carboxylated nanoparticle surface for the quantification of the functionalities.

Objectives

Objectives include the synthesis of the reductively cleavable and fluorescent linkers using different chromophores based upon already existing expertise in division 1.2 and their analytical and spectroscopic characterization as well as systematic studies of the conjugation of these linkers to the surface-functionalized nanomaterials for surface group analysis. The overall goal is the quantification of bioanalytically relevant functionalities like amino and carboxylic acid groups on 3D materials like polymer nanoparticles with optical methods and method validation with established analytical methods.

Qualification

- Bachelor degree in the chemistry, food chemistry or biochemistry and completed Master studies
- Ability to work scientifically independently
- Very good knowledge of preparative organic chemistry
- Experiences with optical spectroscopic methods is desirable
- Interest in interdisciplinary work
- Suited for teamwork
- Good knowledge of the English language

Contact

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