

Open Position: PhD researcher

Topic: Biomedical Imaging



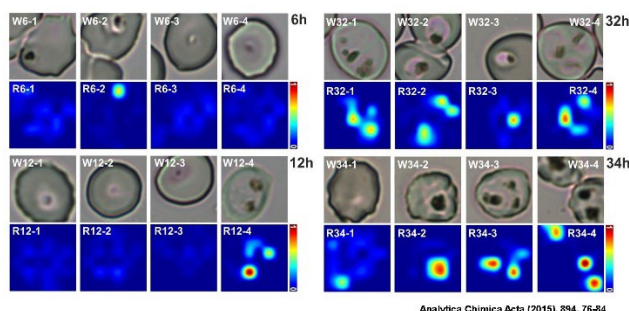
TECHNISCHE
UNIVERSITÄT
DARMSTADT

The [Biophotonics](#) research group at TU Darmstadt, Germany, is currently looking for a PhD-researcher for the topic Biomedical Imaging.

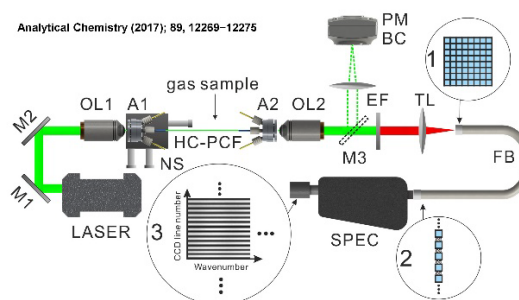


The [PhD position](#) is **fully funded** (100% E13 salary, approx. 5000 EUR per month). The researcher will benefit from a **structured doctoral training** with excellent opportunities for **interdisciplinary research**, **skills development** and **building a scientific network**.

The project investigates **new parallelized techniques for rapid chemical imaging of biomedical processes**. We are building on our work on fiber-based Raman spectroscopic imaging to generate high-resolution molecule-specific images of biomedical samples. These images can **provide valuable insights into the molecular mechanisms of disease, the diagnosis of pathologies, and the evaluation of therapies**. Raman spectroscopy is a non-invasive, non-contact, label-free and quantitative method that can be used in physiological, aqueous environments and is therefore excellently suited for biomedical applications.



Analytica Chimica Acta (2015), 894, 76-84



Your knowledge and skills:

- Solid knowledge of optics, photonics, and optical spectroscopy
- Excellent experimental skills in the development and application of new instruments and setups
- Interest in Raman spectroscopy, imaging and fiber sensing
- Interest in data analysis and programming
- Interest in interdisciplinary research
- Highly motivated and creative with scientific ambition
- Excellent English communication skills, both written and spoken

We offer an attractive research environment with a friendly and active team, excellent instrumentation, and diverse interdisciplinary cooperation opportunities.



We expect the candidate to have a Master's degree or equivalent (physics, photonics, engineering, physical chemistry, analytical chemistry or comparable) with very good academic results, to be self-motivated and to work independently on the research tasks.

The candidate must not have lived or worked in Germany for more than 12 months in the past 3 years.

Please send your detailed application as one pdf-file by e-mail to: Prof. Dr. Torsten Frosch, **E-Mail:** application@biophotonics.tu-darmstadt.de



Literature:

[Analytica Chimica Acta \(2015\), 894, 76-84](#); [Sensors and Actuators B: Chemical \(2023\); 375, 132949, 1-6](#); [Analytical Chemistry \(2022\); 94, 10346–10354](#); [Molecules \(2019\); 24, 3229, 1-14](#); [Analytical Chemistry \(2017\); 89, 12269–12275](#); [Molecules \(2019\); 24, 4381, 1-15](#)