

Chemical spectroscopy for microreactors

Open PhD position in micro-optics

As part of a DFG-funded Research Unit focussing on microreactor processes in established collaboration with the Karlsruhe Institute of Technology, we are working on spectroscopy of organic photochemical reactions in microreactors. We intend to develop highly-integrated spectrometers consisting of two-dimensional tunable filter arrays allowing spatially and spectrally resolved monitoring of reaction chemistry.

To pursue this highly interdisciplinary and collaborative effort, the Gisela and Erwin Sick Chair of Micro-optics is looking for a PhD student for this project. Your responsibilities will include:

- Conceptualization, design and fabrication of filters with high spatial homogeneity;
- Design of thermal illumination and detector array systems;
- Analysis and reduction of thermal noise and improvement of signal-to-noise;
- Development of evaluation electronics for automated signal processing;
- Maintenance of a close collaboration with our project partners in Karlsruhe.

Your profile includes:

- A Master's degree with top grades in microsystems, optics, chemical engineering or chemistry;
- Experience in microfabrication, spectroscopy and/or reaction chemistry;
- Ability to work independently coupled with readiness to collaborate extensively;
- Strong self-motivation, attention to detail, perseverance, willingness to learn, and high standards for success.

We offer:

- A 100% E13 position for three years, with a provisional starting date in July 2019;
- An exciting and diverse work environment with excellent technical infrastructure;
- An established research collaboration with great opportunity for growth.

Interested? Send your CV and a letter of motivation to zappe@imtek.uni-freiburg.de.