Faculty of Physics

At the Institute of Applied Physics, the Chair of Experimental Physics/Photophysics (Prof. Dr. habil. Lukas M. Eng) offers a position as

**Research Associate**
in the area of
Terahertz-Near-field Optical Microscopy / Spectroscopy
(Subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **as soon as possible** and first fix termed until 30.06.2022 with the option to be extended subject to granted funds. The period of employment is governed by the Fixed Term Research Contracts Act (WissZeitVG). The position offers the chance to obtain further academic qualification. Balancing family and career is an important issue. The post is basically suitable for candidates seeking part-time employment.

**Tasks:** Within our international research team, the goal of this research associate is to investigate THz-induced dynamic processes on the femtosecond-timescale with a nanometer-sized spatial resolution in order to disentangle various fundamental phenomena such as lattice vibrations, spin waves, and electronic states e.g. within magnetic thin films, nanostructures, and Topological Insulators (TIs). This is achieved by applying our versatile scattering-type near-field optical nanoscope for both the temporal and spatial analysis at mid-IR to THz light-field-driven processes. The set-up is implemented into the large-scale facility **ELBE** at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) and particularly utilizes the **Super-radiant THz-sources facility TELBE** and the **free-electron laser FELBE**. Corroborating research activities are also funded within the research target project **SFB-1143** and the **Cluster of Excellence ct.qmat** between TU Dresden and JMU Würzburg. Alongside with advancing this unique THz near-field techniques, the candidate is expected to run piloting and own outstanding experiments using the above-mentioned sample systems. Moreover, the applicant shall create and conduct a vigorous research program within and with the support of both the Institute of Applied Physics (IAP) at TU Dresden and the HZDR. The position also includes supervising doctoral, diploma, Masters and Bachelor students.

**Requirements:** university degree and PhD or higher in physics, materials science & engineering, or a related and relevant discipline. Suitable applicants are clearly asked to prove their experience and skills in at least one of the following fields: non-contact-AFM-based nanoscopy, time-resolved (pump-probe) techniques, and/or THz spectroscopy. Additionally, complementary skills on TIs especially in sample preparation and data analysis are highly wanted. Moreover, the work in our international team requires excellent English skills. Peer-reviewed publication activities, patenting and participation in proposals on the above-mentioned topics are all expected. Applicants are sought with a solid record of achievement in these areas.

Applications from women are particularly welcome. The same applies to people with disabilities. We ask all applicants to send their full documents (including cover letter, CV, scientific achievements and positions, full list of publication with highlighting the 5 most important ones, a reference list including e-mail addresses and phone numbers, teaching courses (if applicable), research grants allocated, etc.) until **12.11.2019** (stamped arrival date of the university central mail service applies), preferably via the TU Dresden SecureMail Portal [https://securemail.tu-dresden.de](https://securemail.tu-dresden.de) as a single pdf document to susanne.kehr@tu-dresden.de or by mail to: TU Dresden, Fakultät Physik, Institut für Angewandte Physik, Professur für Experimentalphysik/Photophysik, z.H. Frau Dr. Susanne Kehr, Helmholtzstr. 10, 01069.
Dresden, Germany. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis