Technische Universität Dresden - Faculty of Physics, Institute of Applied Physics, Chair of Ultrafast Microscopy and Photonics

Technische Universität Dresden

TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

Research Associate / PhD Student (m/f/x)
Ultrafast detection of THz-controlled light emitters in quantum matter

At the Faculty of Physics, Institute of Applied Physics, the Chair of Ultrafast Microscopy and Photonics offers a position as Research Associate / PhD Student (m/f/x) Ultrafast detection of THz-controlled light emitters in quantum matter (subject to personal qualification employees are remunerated according to salary group E 13 TV-L) starting February 1, 2026. The position is initially limited until June 30, 2028 with the option of extension and entails 75% of the full-time weekly hours. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification which is highly recommended. The position is funded by the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung - BMBF). The research activities of the Chair of Ultrafast Microscopy and Photonics concentrate on many-particle effects and interaction with light in solid matter for basic research and applications in future technologies. They take place at the TUD, one the world's leading research institutions in the field of optoelectronics and novel semiconductors, as part of the research projects focused on propagation dynamics of exciton-electron complexes in atomically-thin semiconductors and quantum gases in moiré-ordered and reconstructed heterostructures. We offer you a varied and demanding employment with an excellent working atmosphere in a highly motivated, international team.

City: Dresden; Starting date (earliest): 01/02/26; Duration: The position is initially limited until June 30, 2028 with the option of extension.; Remuneration: subject to personal qualification employees are remunerated according to salary group E 13 TV-L; Reference number: BMBF; Closing date: 26/11/25

Working field

scientific research on optical properties of excitonic many-particle states in novel two-dimensional materials coupled to THz radiation: spectroscopic investigations of two-dimensional semiconductors, measurements and analysis using linear and non-linear microscopy combining optical and THz excitation using streak camera detectors. The scientific work further includes collaborations with national and international research partners as well as communication of the results in peer reviewed journals and at international conferences.

Requirements

— university degree (master or comparable) in physics
— interest in basic and application-related research; high self-motivation
— experimental skills in optics and material preparation
— familiarity with the broader field of low-dimensional van der Waals materials
— ready-to-use and up-to-date knowledge of spectroscopy and microscopy
— experience with strain engineering and hybrid heterostructures
— excellent command of English language

Application

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.
Please submit your detailed application with the usual documents quoting the by November 26, 2025 (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to alexey.chernikov@tu-dresden.de with the subject line BMBF or to:
TU Dresden, Chair of Ultrafast Microscopy and Photonics, Prof. Alexey Chernikov, 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.

TUD is a founding partner in the DRESDEN-concept alliance.
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

More information at https://stellenticket.de/199343/TUBS/
Offer visible until 26/11/25