Technische Universität Dresden (TUD), 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.

At the Faculty of Physics, Institute of Applied Physics, the Chair of Emerging Electronic Technologies (Prof. Yana Vaynzof) affiliated with the Center for Advancing Electronics Dresden (cfaed) offers a position as

**Research Associate / PhD Student (m/f/x)**
(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting as soon as possible. The position comprises 50% of the fulltime weekly hours for the first year and 62,5% for second and third year. The position is limited until August 31, 2025 with the option of extension. 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 (e.g. PhD).

The research activities of the Chair of Emerging Electronic Technologies are focused on the development, analysis and optimization of novel solar cell technologies. Recent developments in the field of perovskite solar cells have led to their power conversion efficiencies surpassing 25%. We focus on investigating the physical processes governing the performance of perovskite materials, including interfacial processes, role of defects, microstructure and device energetics. We also investigate the degradation mechanisms of perovskite materials and devices and develop mitigation strategies for enhancing the device stability. Research work on perovskite materials and devices at TU Dresden takes place in the Dresden Integrated Center for Applied Physics and Photonic Materials (DC-IAPP), which is one of the world’s leading research institutions in the field of optoelectronic devices based on emerging semiconductors.

**Tasks:** Research on perovskite photovoltaic devices, including their processing and fabrication, advanced spectroscopic and microscopic characterization, optimization and analysis. Focus will be placed on the development of a new and unexplored laser printing technique for the fabrication of perovskite thin film solar cells on flexible substrates. The work includes collaboration with national and international research partners.

**Requirements:** university degree (master or comparable) in physics; interest in basic and application-related research; high self-motivation; experimental skills; excellent command of English language; excellent computer skills; ready-to-use and up-to-date knowledge of emerging electronics and photovoltaics.

For more information please visit the web page of the institute [https://tu-dresden.de/mn/physik/iap](https://tu-dresden.de/mn/physik/iap) or contact Prof. Yana Vaynzof (e-mail: yana.vaynzof@tu-dresden.de).
What we offer: You will join a team of enthusiastic scientists who pursue creatively their individual research agenda inspired by the cluster's innovative approach and support. Your research will be fostered by the iapp/cfaed philosophy to promote young researchers, which includes:

- access to state of the art research of leading academic institutes.
- International doctoral program
- promotion of gender equality and family-friendly work environment.

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 and offers a Dual Career Service. 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 comprehensive application including the usual documents (motivation letter, CV, copy of degree certificate, transcript of grades, proof of English language skills etc.) by November 29, 2022 (stamped arrival date of the university central mail service applies) to: TU Dresden, Fakultät Physik, Institut für Angewandte Physik, Professur für Neuartige Elektronik-Technologien, Frau Prof. Yana Vaynzof, Helmholtzstr. 10, 01069 Dresden, Germany or via the TU Dresden Secure-Mail Portal https://securemail.tu-dresden.de by sending it as a single pdf-document quoting the reference number PhD2301_Phandastic in the subject header to recruiting.cfaed@tu-dresden.de. 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.