

Faculty of Physics

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

Research Associate (m/f/x)

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

Research area: Perovskite photovoltaics

Terms: 3- year appointment starting **as soon as possible**

50 % of the fulltime weekly hours for first year, 62,5 % from second year on

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> 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 PhD research will be fostered by the cfaed philosophy to promote 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.

Applications from women are particularly welcome. The same applies to persons with disabilities.

Application Procedure: Your application (**in English only**) should include: motivation letter, CV, copy of degree certificate, transcript of grades (e.g. the official list of coursework including your grades) and proof of English language skills. Complete applications should be submitted preferably via the TU Dresden Secure-Mail Portal <https://securemail.tu-dresden.de> by sending it as a single pdf-document quoting the reference number **PhD2206_SuperLaser** in the subject header to recruiting.cfaed@tu-dresden.de or to: **TU Dresden, Fakultät Physik, Institut für Angewandte Physik, Professur für Neuartige Elektronik-Technologien, Frau Prof. Yana Vaynzof, Helmholtzstr. 10, 01069 Dresden.** The closing date for applications is **September 05, 2022** (stamped arrival date of the university central mail service applies). 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>.