Dresden University of Technology

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.

The Cluster of Excellence "Responsible Electronics in the Climate Change Era (REC²)" addresses the key challenge posed by the ubiquitous use of electronics, which leads to an enormous resource and energy consumption and the generation of electronic waste. REC² establishes the scientific foundation for the electronics of the future, including new material platforms, component concepts, and integrated systems that enable the realization of responsible electronics in an ecologically, economically, and socially sustainable manner. In a range of research and academic programs, REC² unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, not only of the Cluster, but also of TUD, facilitating interdisciplinarity and transfer of science to society.

As a modern employer, TUD 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.

The **Cluster of Excellence REC²** offers (subject to the availability of resources) at the **Faculty of Electrical and Computer Engineering, Institute of Semiconductors and Microsystem (IHM), Chair of Nanoelectronics** a full-time 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 offers the chance to obtain further academic qualification (usually PhD). The position is limited to 36 months, with a possible one-year extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz/WissZeitVG).

Tasks:

- inventing novel and improving existing semiconductor technology processes and their integration to enable a more sustainable and responsible fabrication of semiconductor devices and integrated electronic circuits
- monitor processes in situ to understand and optimize them, modify process parameters and conditions or replace conventional approaches with greener solutions
- adapt microelectronics processes to REC² materials, functionalities, and applications, and evaluate and optimize them for sustainability
- research direct fabrication of sensors and devices on novel substrate materials, and develop novel active materials and fabrication methods to integrate all functionalities into these substrates
- create a database for passports and life cycle assessments of fabricated devices and involved processes
- exchange and collaboration with a diverse team of scientists from the REC² Cluster, in particular with those from the fields of sustainability and social sciences

Requirements:

- excellent university degree (master or comparable) in engineering or natural sciences
- willingness and ability to think beyond the boundaries of your field, to act in an international and diverse environment and to live an open and constructive communication
- strong analytic and problem-solving skills and creativity
- an independent, target- and solution-driven work attitude
- fluency in English, knowledge of German would be a plus

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 REC² philosophy to promote young researchers, which includes:

- the opportunity for engaging and independent work within a flat hierarchy, in an open-minded team and supportive atmosphere
- access to state-of-the-art research of leading academic institutes
- possibility to apply for GreenRiskFunds to pursue your own high-risk/high-gain research ideas
- flexible arrangements for work hours to support a good work-life balance and a family-friendly work environment
- supervision via a dual supervision concept, including a structured PhD project plan, international exchange, and a dedicated Thesis Advisory Committee (TAC)
- mentorship via the REC² mentoring board
- 30 days of vacation per year (based on a 5-day workweek)
- extensive opportunities for professional development and continuing education
- health care and sports programs offered by TUD
- a discounted job ticket (also available as a Deutschlandticket)
- participation in the supplementary pension scheme for employees in the public sector via VBL (Federal and State Government Employees Retirement Fund)

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a 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.

Application: Please submit your detailed application (in English only) with the usual documents by **April 10, 2026** (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 **ne-bewerbungen@tu-dresden.de** or to:

TU Dresden, Chair of Nanoelectronics, Prof. Mikolajick, 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.

REC² RESPONSIBLE ELECTRONICS

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

DRESDEN concept

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.