

Technische Universität Dresden - Faculty of Electrical and Computer Engineering, Institute of Solid State Electronics, Chair of Coating Technologies in Electronics, Cluster of Excellence REC2



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, it is a globally oriented, regionally anchored top university, focusing 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. For TUD, diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who are committed to contributing their achievements and productivity to the success of the entire institution.

Research Associate / PhD Student (m/f/x)

At the Faculty of Electrical and Computer Engineering, Institute of Solid State Electronics, Chair of Coating Technologies in Electronics, the Cluster of Excellence REC² offers, subject to the availability of resources, 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 March 1, 2026. The position is limited to 3 years, with a possible one-year 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 (usually PhD).

City: Dresden; Starting date (earliest): At the earliest possible; Duration: limited to 3 years, with a possible one-year extension; Remuneration: subject to personal qualification employees are remunerated according to salary group E 13 TV-L; Reference number: w25-334; Closing date: 06/01/26

Working field

- The focus of the project is on developing magnetron sputter epitaxy (MSE) – a new sustainable core technology for production of group III-nitride semiconductors for power electronics and other applications, with special focus on strain management (including the development of buffer structures) and AlGaIn growth for AlGaIn/GaN heterostructures.
- 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

- a university degree (master or comparable) in Physics, Material science, or related field
- an independent, target- and solution-driven work attitude
- interest in basic and application-related research
- previous experience with magnetron sputtering, growth of thin films, epitaxy, power electronics, or III-nitride based semiconductor materials and/or devices, as well as material characterization would be beneficial
- basic knowledge of plasma physics, thin-film technology, and semiconductor physics would be an advantage
- fluency in English - written and oral

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 REC2 philosophy to promote aspiring researchers, which includes:

- 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
- possibility of exchange with partner institutions in the Global South
- promotion of gender equality 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

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 (in English only) with a motivation letter, CV, copy of degree certificate, transcript of grades (i.e. the official list of coursework including your grades), and proof of English language skills by January 6, 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 coatingtech.ife@tu-dresden.de or to:

TU Dresden, REC², Prof. Elizabeth von Hauff, 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/199979/TUBS/>
Offer visible until 06/01/26

