



With around 17,000 students and 3,800 employees, the **Technische Universität Braunschweig** is one of Germany's leading institutes of technology. It stands for strategic and performance-oriented thinking and acting, relevant research, committed teaching, and the successful transfer of knowledge and technologies to the economy and society. We consistently advocate for family friendliness and equal opportunities.

Our research focuses are mobility, engineering for health, metrology, and city of the future. Strong engineering and natural sciences are our core disciplines. These are closely interconnected with economics, social and educational sciences and humanities.

Our campus is located in the midst of one of the most research-intensive regions in Europe. We work successfully together with over 20 research institutions in our neighborhood as we do with our international partner universities.

Starting from the earliest possible date the Institute of Semiconductor Technology is looking for a

Research Associate in the field of „Epitaxy of Nitride-based optoelectronic devices for Quantum Technologies“

(TV-L E13, 75%)

The position is to be filled on a fixed-term basis for an initial period of 3 years. The successful applicant will be given the opportunity to pursue a doctorate.

As a PhD student in the group of Andreas Waag, you will be developing epitaxy for laser diodes for applications like e.g. quantum computing. Your work will be mainly experimental, and you will be trained in epitaxy using state-of-the-art equipment in our clean rooms as well as characterization of epitaxial structures in our Research Center Laboratory for Emerging Nanometrology (LENA). Your research will be supported by the excellent infrastructure of the Institute of Semiconductor Technology, of the excellence cluster QuantumFrontiers and the Quantum Valley Lower Saxony (QVLS) consortium.

Make a Difference:

- You conduct research in the field of metalorganic vapour-phase epitaxy (MOVPE) of GaN, InGaN and AlGaN for optoelectronic devices like e.g. laser diodes for various applications in quantum technologies, e.g. quantum computing.
- You perform epitaxy processes, apply several characterisation techniques (like SEM, CL, XRD) and evaluate the results.
- You are integrated in a large team of Nitride researchers in the group of Prof. Andreas Waag and will actively take part in several collaborative projects with external partners.
- You apply for and work on research projects.
- You publish research findings and participate in national and international conferences.
- You are involved in teaching (preparation and implementation of courses as well as supervision of students' work).

Your Qualifications:

- A master degree (or similar) in electrical engineering, physics, nanotechnology or similar.
- Very high proficiency in English, fluency in the German language is preferable.
- First experience with Nitrides or epitaxy would be helpful.
- You are flexible, can perform under pressure and work well in a team.
- You are aiming for a doctorate.

Our Benefits:

- Pay in accordance with the collective agreement TV-L, pay grade E13 with 75%, depending on the assignment of tasks and fulfilment of personal requirements.
- A special payment at the end of the year as well as a supplementary benefit in the form of a company pension, comparable to a company pension in the private sector.
- Interesting and diverse tasks in a pleasant working atmosphere with a friendly and motivated team.
- A workplace that is basically suitable for part-time work, although the position is to be filled full-time, as well as flexible working and part-time options and a family-friendly university culture, awarded the "Family-friendly university" audit since 2007.
- A wide range of continuing education and company health care programmes as well as a vibrant campus life in an international atmosphere.

What's more to know:

We welcome applicants of all nationalities. At the same time, we encourage people with severe disabilities to apply. Applications from severely disabled persons will be given preference if they are equally qualified. Please attach a form of evidence of your handicap to your application. We are also working on the fulfilment of the Central Equality Plan based on the Lower Saxony Equal Rights Act (*Niedersächsisches Gleichberechtigungsgesetz—NGG*) and strive to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from women are particularly welcome in this case.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at <https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen>. Application costs cannot be reimbursed.

Questions and Answers:

For more information, please call Dr. Jana Hartmann on +49 (0) 531 391-3761.

Closing date: June 15, 2024

Are you interested? Please send your application preferably via email to Jana.Hartmann@tu-braunschweig.de

or via mail to

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