

Junior Scientist (PhD candidate) position at NaMLab

RFET Thin-Film-Transistors for Logic-In-Memory Applications

NaMLab is a research organization and associated institute of the Technical University of Dresden, providing industry oriented and basic research in material science for future electronic devices. We are currently looking for a young scientist in the field of **Reconfigurable Field Effect Transistors (RFETs)**, in the **framework of TRR on 3D-microelectronic technology**. RFETs are new emerging devices, that allow a for dynamic reprogramming of their switching functionality. The devices can be combined with a memristive elements to facilitate efficient in-memory-computing. Main tasks will be the fabrication and electrical characterization of thin-film-based RFET devices in the cleanroom environment at NaMLab in Dresden. The results of the work might be used to obtain a PhD in electrical engineering at the TU Dresden.

What we expect from you:

- above-average M.Sc. / M. Eng. degree in Electrical Engineering, Physics, Material science or similar, achieved in short study period,
- 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, creativity,
- an independent, target- and solution-driven work attitude,
- Strong perseverance in experimental work, confidence in dealing with chemicals,
- fluency in English, knowledge of German would be a plus

What you can expect from us: A varied and challenging research task, embedded in a friendly, inclusive and supportive team of the TRR's Principal Investigators (i.e., project leaders and supervisors). We maintain an open and cooperative work attitude with maximum personal responsibility, mutual support with a solution-oriented approach, and flexible working hours where possible. As a doctoral student you will be integrated in the TRR's Graduate School. It will offer tailored educational programs and individual supervision agreements. The salary is based on German research organization standards.

About the TRR404: The TRR404 is a Collaborative Research Center/Transregio between TUD Dresden University of Technology and Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen). It aims at exploring a **completely new approach for microelectronics technology** and therefore teams up materialists, electrical engineers, and computer scientists of TUD, RWTH Aachen and Gesellschaft für Angewandte Mikro- und Optoelektronik mbH ([AMO](#)) in Aachen, Forschungszentrum Jülich ([FZJ](#)), Max Planck Institute of Microstructure Physics Halle ([MPI-MSP](#)), Nanoelectronic Materials Laboratory gGmbH ([NaMLab](#)) in Dresden, and Ruhr-Universität Bochum ([RUB](#)).

For the initial funding phase (April 2025 – December 2028), the TRR404 offers several PhD and Postdoc positions with starting dates from 1 April 2025 onwards. All vacancies can be found here: <https://cfaed.tu-dresden.de/trr-vacancies>. The TRR404 strives to attract more women to microelectronics research. We therefore expressly encourage women to apply. We welcome applications from candidates with disabilities.

By sending us your application documents, you agree to the use of your personal data for the purpose of the application procedure.

For further information please contact:
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