

Junior Scientist (PhD candidate) / PostDoc position at NaMLab

Design, Fabrication, and Characterization of Novel Vertical Tunnel Field Effect Transistors in Silicon

NaMLab is a research organization and associated institute of the Technical University Dresden. NaMLab provides industry-oriented and basic research in material science for future electronic devices. We are looking for a scientist in the field of Emerging Electronic Devices. The main tasks of the position will be the fabrication and electrical characterization of Tunnel Field Effect Transistors (TFETs) in a cleanroom environment. TFETs are characterized by their use of quantum mechanical tunnelling for carrier transport, enabling lower subthreshold swing and reduced power consumption compared to conventional transistors. A new substrate material providing a double-layer SOI channel will be employed. Together with partners, conceptual circuit designs with the devices should be explored. The work will be performed in close collaboration with our project partners. In the case of a PhD contract, the results of the work might be used to obtain a PhD in electrical engineering at the TU Dresden.

Your Profile:

- Outstanding M.Sc. / M. Eng. in Electrical Engineering, Physics, Material science, or similar
- Interest in device physics and clean room fabrication methods
- Good technical comprehension, professional English communication and writing skills,
- Strong perseverance in experimental work, confidence in dealing with chemicals
- Ability to work in an international team environment

In case of a PostDoc Application, the following skills are expected in addition:

- PhD degree in Electrical Engineering or similar
- Practical experience with clean room processes, and/or electron beam lithography
- Willingness to contribute to organization tasks in the institution, like technical management of tools and facilities or similar

We offer:

- Individual supervision
- Contribution to cutting-edge nano-electronic research
- Access to various high-end fabrication and characterization tools
- Possibility to adjust work focus according to individual preferences
- Knowledge transfer from experts in the field
- The salary is based on German research organization standards

Period:

- Application Deadline: Nov 7
- Planned starting date: as soon as possible
- Duration: 24 months (open to extension)

For further information please contact:

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