Junior Scientist (PhD candidate) position at NaMLab, Dresden (Germany) and at University of Bordeaux (France)

Vertical Reconfigurable Nanowire Field Effect Transistors Development

NaMLab (NL) 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. At University of Bordeaux (UB), the IMS laboratory is a joint research unit for the CNRS, UB and Bordeaux INP. IMS brings together fundamental research, engineering and technology, emphasizing an integrative systems approach in the disciplines of Information Technologies. Jointly, we are looking for a scientist in the field of Reconfigurable Field Effect Transistor design (Fig. 1). The main tasks will be:

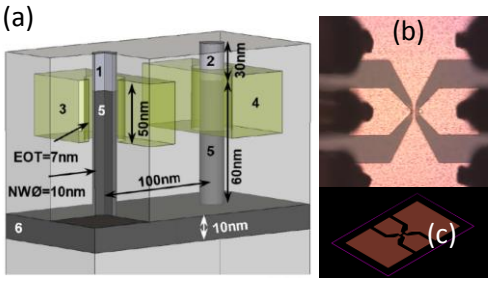

Fig. 1: (a) Schematic of vertical reconfigurable nanowire device built from a silicon-on-insulator base layer (b) Measured and (c) EM simulated test-structure with RF GSG pads

1. Test structure design of Ferro Vertical Nanowire FETs (UB)
2. Transistor fabrication of a vertical nanowire-based technology in a cleanroom environment (NL)
3. Extensive electrical on-wafer characterization and modelling of Ferro Vertical NWFET (UB)

Further, conceptual circuit design of the new device for neural network applications would be explored. The PhD degree in electronics engineering will be awarded by the University of Bordeaux.

Your Profile:

- Outstanding M.Sc. / M. Eng. in Electrical Engineering, Physics, Material science or similar
- Interest in device physics and 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

The following Skills are a plus:

- Experience with clean room processes and/or with on-wafer measurements
- German or French communication skills

We offer:

- Individual supervision
- Contribution to cutting-edge nano-electronic research within an interdisciplinary international team
- Access to various high-end fabrication and characterization tools
- Knowledge transfer from experts in the field
- The salary is based on French and German research organization standards

Period:

- Planned starting date: March 2021
- Duration: 3 years (18 months at NL and 18 months at UB)

For further information please contact:
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