



Postdoctoral Position in Quantum Nanoelectronics

NEEL Institute, CNRS Grenoble, France

We are seeking a highly motivated postdoctoral researcher to join our team at the NEEL Institute (CNRS Grenoble) as part of two cutting-edge European research programs:

- The **EIC Pathfinder project ELEQUANT** (elequant.eu)
- The **ERC project UltraWave** (cordis.europa.eu/project/id/101201077)

Research Context:

The projects aim to develop a new quantum nanoelectronics platform based on **germanium heterostructures**, enabling controlled propagation and detection of single electronic wavepackets.

Recent advances in Ge-based devices have demonstrated exceptional quantum coherence, opening the way toward a **single-charge detector for flying electrons**, a key milestone for quantum electronics and quantum information science.

In parallel, we are developing a unique platform combining **THz excitation** with **ultra-low temperature environments**, enabling real-time control and detection of ultrafast charge dynamics.

Role and Responsibilities

The successful candidate will:

- Participate actively in ongoing experimental research projects
- Develop new research directions within the consortium
- Contribute to the supervision and training of PhD students
- Collaborate closely with national and international partners

Profile

We are looking for a candidate with a background in experimental condensed matter physics, quantum electronics, or nanofabrication. Experience in low-temperature transport, semiconductor heterostructures, or RF/THz techniques is an advantage.

Opportunities

This position offers a unique opportunity to work at the interface of **fundamental quantum physics and emerging quantum technologies**, within a highly collaborative European research environment.

Practical Information

Salary: 2500-3500 € gross salary depending on experience

Starting date: flexible

Contact:

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