



Permanent Researcher in Ultra-Wide-Bandgap Semiconductors at CEA-IRIG, Grenoble

The Laboratory for Quantum Photonics, Electronics, and Engineering (PHELIQS, <https://www.pheliqs.fr/en>), a joint research unit of the French Commission for Atomic Energies and Alternative Energies (CEA), Université Grenoble Alpes and Grenoble INP, is currently accepting applications for a **CEA permanent position** for an outstanding early-career researcher in **of ultra-wide-bandgap semiconductors**, with a specific focus on nitride and oxide compounds.

PHELIQS is a fundamental research laboratory with around 50 permanent researchers working in condensed matter physics, nanophysics, and quantum phenomena. Within PHELIQS, the “NanoPhysics and SemiConductors” (NPSC) team has a recognized expertise in optoelectronic materials, nanostructures, and semiconductor devices. Research spans quantum photonics and transport, innovative approaches for UV-visible-IR optoelectronics, and power electronics. The team develops a wide range of materials (III-nitrides, arsenides, selenides, tellurides, oxides) and benefits from advanced growth systems, extensive electrical and optical characterization setups, and access to platforms for atomic-scale material characterization and to fully equipped cleanroom facilities (<https://pta-grenoble.com>).

Position Overview

The position will strengthen research in wide bandgap semiconductors and is closely linked to the recent installation of a dual MBE cluster dedicated to III-nitride and III-oxide growth.

Applicants must propose an innovative research project in strong synergy with this new cluster, as well as with the laboratory’s platforms and expertise, and which will strengthen the links between materials synthesis and applications. Priority will be given to research involving the MBE synthesis of new materials and heterostructures, such as gallium/aluminum/nickel/germanium oxides and their heterostructures, nitrides containing scandium, niobium, or yttrium, as well as nitride/oxide heterostructures, with application prospects, for example in the fields of power electronics, low-power electronics, photonics, detection, or energy conversion.

Key responsibilities include:

- Generating high-level scientific results and ensuring their dissemination through publications, conferences, and technology transfer initiatives.
- Supervising and mentoring students (interns, PhD candidates) and postdoctoral researchers.
- Actively contributing to the scientific life, visibility, and strategic development of the team, laboratory, and broader research community.
- Initiating and coordinating new scientific projects, and securing competitive funding at local, national, and international levels.

Location and Environment

Grenoble, located in the French Alps, offers an exceptional scientific ecosystem in semiconductors, gathering CEA, CNRS, Université Grenoble Alpes, major European facilities (ESRF, ILL), and high-tech companies such as Lynred, Aledia, Soitec, and STMicroelectronics.

CEA is a public research organization at the interface of fundamental and applied research. PHELIQS is one of the ten laboratories of CEA-IRIG, which brings together 1,200 staff in physics, chemistry, biology, health, and cryotechnologies (<https://www.cea.fr/df/irig/english>).

Qualifications

Applicants should hold a PhD degree in physics, electrical engineering, materials engineering, or related field, along with at least 2 years of postdoctoral experience. International experience in semiconductor physics (ideally epitaxy), a strong publication record, and the ability to lead an independent research program are required.

How to apply

Candidates should send a cover letter indicating their interest and fit with the position, detailed CV including major achievements and publication list, and a 2-page research statement to pheliqs.UWBG@cea.fr. In addition, 3 letters of recommendation must be sent directly to the same address. To ensure consideration, applications must be received by **April 30th, 2026**.

Selected candidates will be interviewed by a committee of experts in June 2026.

For more information, please contact edith.bellet-amalric@cea.fr and eva.monroy@cea.fr.