

Permanent CEA Research Position

Laboratoire Léon Brillouin (UMR12 CEA-CNRS)

CEA-Saclay (affiliated to Université Paris-Saclay)

In 2024 or early 2025, the Laboratoire Léon Brillouin (LLB) will be opening a position for a permanent CEA researcher to join the NFMQ (*New Frontiers in Quantum Materials*) group. The position will be on one of the following priority themes: **molecular magnetic systems, magnetic nanoparticles, topological magnetic objects**.

Context: Research in condensed matter physics has focused on the exploration and discovery of new quantum states of matter. The study of these complex systems rely on the synergy between sample synthesis capability and the coupling of multiple experimental techniques, among which neutron scattering plays a key role. The LLB's NFMQ group is keen to recruit experimental researchers in its core areas of expertise, such as quantum and functional materials, and materials for energy. In addition, the LLB is the French center for neutron scattering and, as such, is contributing to the upcoming **European Spallation Source** (ESS, Sweden) and plays a central role in the ICONNE project for a **national neutron source** on the Plateau de Saclay.

Missions: You will carry out cutting-edge experimental research in the field of magnetism (**topics concerning molecular magnets and magnetic nanoparticles will be particularly appreciated**), relying on neutron diffraction/diffusion but also proposing other experimental techniques (X-rays, magnetometry, EPR, Raman spectrometry, etc.) in your research project where appropriate. You will be supported by the laboratory's technical groups and equipment (crystal growth, DRX, PPMS, specific heat) to develop your research activities, but you will also be expected to contribute to the design and/or development of part of the instrumentation (e.g. diffraction, spectrometers, SANS) on the future national neutron source.

Candidate profile: You have a PhD in physics or chemistry and up to 5 years of postdoctoral experience or equivalent, in line with the job profile. You will be required to present an **original research project** consistent with the job profile during the selection phase (application files and eventual interview). You must be able to work independently, but also have a taste for teamwork. Practical experience on large-scale research facilities (neutrons, X-rays, high magnetic fields) would be welcome. An excellent level of English is essential for this position.

Contact: For more information on the position and timing, please contact Dr. Grégory Chaboussant (gregory.chaboussant@cea.fr).