Postdoctoral Researcher Position for the study of strongly correlated systems under extreme conditions

Job description

The Condensed Matter Department of the Néel Institute/Grenoble together with the Physics of Quantum Materials Department of the Max Planck Institute (MPI-CPfS)/Dresden have an opening for a **postdoctoral associate** to work on **strongly correlated electrons physics** in the context of funded ANR-DFG projects. The successful candidate will work on bulk compounds with unconventional electronic, magnetic or structural properties, mainly related to strong electronic correlations and particularly in Rare-Earth based systems. He/she will addressed longstanding opened questions on historical compounds as well as new questions on recently discovered ones (by the MPI-Dresden).

At the Néel Institute, the postdoctoral scientist will conduct research on Rare Earth based compounds using **Raman spectroscopy under extreme conditions**, at low temperature and under high pressure, mainly using diamond anvils cell, on a unique set-up. The successful candidate will be involved in the improvement of the present set-up to reach unprecedented range of conditions. At the MPI-CPfS, the successful candidate will participate to the high quality single crystal growths and to characterizations.

**Our offer**

You will be appointed on a fulltime position for one year with possible extension on a recently funded Consolidator ERC project at the Néel Institute. The post-doctoral researcher will be mainly based at the Neel Institute in Grenoble with long stays (few weeks up to 3 months) at the Max Planck Institute in Dresden. Both laboratories offer a dynamic ecosystem with enthusiastic colleagues in a stimulating scientific environment. The whole project is encompassed in a large French-German joint project which includes many groups of research in France (LOMA, LNCMI, CSNSM, Institut Néel) and in Germany (Max Planck Institute MPI-CPfS, HLD, TU-Braunschweig, Institute of Solid State Physics TU-Dresden) with relevant theoretical collaborations and with joint meetings and Schools.

The **post-doc salary** is between € 2.648 and € 3.768 gross per month depending on experience and qualifications.

**Initial contract**: 12 months (with the possibility of an extension of 2 more years on ERC funding, for a total of 3 years)

**Place and Infrastructure**

**The Néel Institute**: The Néel Institute is one of the largest French national research institutes for fundamental research in condensed matter physics enriched by interdisciplinary activities at the interfaces with chemistry, engineering and biology. It consists of 450 employees, including 175
researchers. It is located in the heart of a unique scientific, industrial and cultural environment, right next to the French Alpes. The research will be conducted in the experimental group of Dr. Marie-Aude Méasson, part of a large team “MagSup” (Magnetism and Superconductivity – 50 members) which is focused on fundamental questions in Condensed Matter systems thanks to state-of-the-art experiments.

Max Planck Institute for Chemical Physics of Solids: The MPI-CPfS is one of the leading research Institute in Germany in the field of strongly correlated electronic systems. The discovery of compounds with new, unexpected physical properties which challenge established theoretical concepts is an essential driving force in this field. The aim of the “Material design and synthesis” group led by Pr. Chistoph Geibel is to search for such new systems as well as to grow very high quality single crystals for deep studies. The project will be conducted in the experimental group of Pr. Geibel.

Your profile

The candidate must have the ability to conduct self-directed research, mentor graduate students and support PhD students, and work collaboratively with academic team members in related fields. He/she has strong interest in enabling science through the development of state-of-the-art instrumentation.

Requirements:
A promising candidate possesses a Ph. D. degree in condensed matter physics with a sound background of strongly correlated physics. Advanced skills in Raman/optics spectroscopy and/or high pressure techniques are requested. Skills in cryogenic techniques will be an asset. The ability to perform innovative and effective research in condensed matter evidenced by a strong publication record (commensurate with stage in career) in peer-reviewed journals or pre-prints. Evidence of outstanding ability to work independently, and as an active collaborative member of a research team, who is well organized and self-motivated, while working cooperatively at all levels. He or she is expected to communicate project results in conferences and write scientific manuscripts. Good command of English (both verbal and written) and demonstrated ability to disseminate scientific results are mandatory requirements for the position.

Information and Application
The CNRS is an equal opportunity and affirmative action employer and encourages applications from women.

To apply, please send the following documents as PDF file (all document in English):
(1) Letter of motivation including relevance for the post-doctoral project
(2) CV including full list of publications and communications
(3) Contact details of at least two referees (or letters of recommendation, if already available)
The deadline for applications is 31st of December 2020, but the position will be filled as soon as a suitable candidate is identified. For additional information, kindly contact Dr. Marie-Aude Méasson (marie-aude.measson@neel.cnrs.fr) and Pr. Christoph Geibel (Christoph.Geibel@cpfs.mpg.de). The application is to be submitted directly on the website: link.