Université de Liège

POSTDOCTORAL POSITION

Domain of experimental superconductivity

The group ‘Experimental physics of nanostructured materials’ has an open postdoc position on visualization of superconducting flux by magneto-optical technique.

Project

The macroscopic quantum effect of superconductivity allowing dissipationless transport of electrical current envisions ‘a way out’ in a world where energy dissipation has become a top priority problem. Regretfully, it is a well established fact that technologically useful superconductors subjected to an electrical current give rise to energy losses as a consequence of the motion of quantum units of flux (fluxons). This effect breaks down the resistance-less property of superconductors and seems to threaten their utility. We plan to develop a magneto-optical technique for visualizing the penetration of fluxons in nanostructured superconducting films.

Group

The ‘Experimental physics of nanostructured materials’ is a young research group in the department of physics at the University of Liege leaded by Prof. A. Silhanek. The research activities cover mainly superconductivity, plasmonics, and magnetism. The group belongs to the research unit FUNMAT Physics of Functional Materials, Nanostructures and Bio systems.

Requirements

The candidate for the positions must have a PhD in physics with background in condensed matter physics or optics and solid experience in experimental physics. The researcher is expected to be open to discussions and collaborate with the other members of the group. The candidate will have to conduct high quality and independent research, be creative, self-motivated, and has the ability and interest to pursue challenging, interdisciplinary problems. Good experience and background knowledge in microscope optics and data acquisition, imaging, cryogenics, or superconductivity is not required but will be considered as a plus.

In addition, the candidate should have obtained the Ph.D. no more than 10 years ago and lived in Belgium less than 24 months during the last 3 years.

Contract

Initial appointment is for one year, with possible renewal for an additional year, based on performance and availability of funding.

Additional information

Additional information on the job opening can be obtained from Prof. Dr. A. Silhanek, asilhanek@ulg.ac.be. With the application you will provide a curriculum vitae and contact information of at least two references.

Deadline : Open until filled