The institute for experimental physics of the Freie Universität Berlin is seeking applications for a

Ph.D. studentship position

(based on german 2/3 BAT-IIa fare) for three years. The position is integrated in a new DFG-funded research project "Preparation and investigation of laterally nanostructured single-crystalline multilayers containing ferromagnetic and antiferromagnetic materials". The experimental PhD work will involve the preparation of laterally nanostructured multilayers of ferromagnetic and antiferromagnetic films on single crystal surfaces under ultra-high vacuum conditions, and the in situ investigation of their magnetic properties by magneto-optical Kerr effect measurements.

Systems in which ferromagnetic and antiferromagnetic materials interact across a common interface play an important role in several applications of magneto-resistive effects such as magnetic read head sensors or future magnetic random access memories (MRAM). They are consequently a subject of high current interest for fundamental investigations.

In collaboration with K. Nielsch of the Max-Planck-Institute in Halle we will explore new ways for the in situ preparation of laterally nanostructured samples on single-crystal surfaces. Magnetic measurements of nanostructured single-crystalline double or triple layers of ferromagnetic and antiferromagnetic materials will reveal the influence of laterally reduced dimension on the coupling between ferromagnets and antiferromagnets at well-defined interfaces, and are expected to offer new insight into the microscopic origin of unidirectional magnetic anisotropy and the exchange bias phenomenon.

A master's degree in experimental physics or equivalent is required, obtained not more than two years ago. We are seeking a motivated candidate with team spirit and ability for independent work. Experience in one or more of the following is of advantage: Ultra-high vacuum, surface science, thin film magnetism. We provide excellent conditions for motivated experimentalists. Extensive equipment including state-of-the-art surface science analysis tools can be used. Applications must include the completed downloadable application form (http://www.physik.fu-berlin.de/~ag-kuch/applicationform.doc), a CV with photograph, short abstract of diploma thesis or master's degree project, list of publications (if applicable), and names and addresses (postal and e-mail) of two or three references.

The Freie Universität is an affirmative action/equal opportunity employer. Women, minorities and persons with a disability are encouraged to apply.

More information can be obtained from: Prof. Dr. Wolfgang Kuch, Tel.: +49-30-838-52098, http://www.physik.fu-berlin.de/~ag-kuch, nanoAF@physik.fu-berlin.de.

Send your applications by e-mail or postal mail not later than July 9, 2006 to:

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