PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

Open PhD position for CSC scholarship candidates 2015

Please note: the PhD position is only offered to Chinese PhD candidates for application in the framework of the FU-CSC Program.

Department/Institute: Institute of Experimental Physics
Subject area: Surface Physics, Magnetism
Name of Supervisor: Prof. Dr. Paul Fumagalli
Number of open positions: 1
Project title: Ultrathin Multilayered Magnetic Films

Project description:

Full time position (4 years), no sandwich scholarship possible.
Ultrathin films show a different behavior than bulk films. As an example, a noble price was given for the discovery of giant magnetoresistance in coupled thin magnetic films or, most recently, for the discovery of graphene, a hexagonally ordered monolayer of carbon atoms with unusual electronic properties.
Using scanning tunneling and atomic force microscopy, electron diffraction as well as optical and magneto-optic spectroscopy, the physical properties of ultrathin multilayered magnetic films for spinelectronic applications will be investigated.

Language requirements:

Good level of English, oral and in writing.
Ability to read and understand scientific English literature
German Language is expected to be learnt by the candidates during their stay

Academic requirements:

Knowledge of scanning probe techniques or optical spectroscopy or magnetism is helpful.
Experience with ultra-high vacuum equipment would be beneficial.
Bachelor Degree is not sufficient for these projects, only Master Degree.

Link to professor and further information:

Web address: http://www.physik.fu-berlin.de/en/einrichtungen/ag/ag-fumagalli/index.html

Direct evidence for significant spin-polarization of EuS in Co/EuS multilayers at room temperature", S.D. Pappas, P. Poulopoulos, B. Lewitz, A. Straub, A. Goschew, V. Kapaklis, F. Wilhelm, A. Rogalev, and P. Fumagalli, Scientific Reports **3**, 1333-1-5 (2013).

Induced spin-polarization of EuS at room temperature in Ni/EuS multilayers, P. Poulopoulos, A. Goschew, V. Kapaklis, M. Wolff, A. Delimitis, F. Wilhelm, A. Rogalev, S.D. Pappas, A. Straub, and P. Fumagalli, Appl. Phys.Lett. **104**, 112411-1-4 (2014).

Please note:

In a first step the complete application should submit to the Beijing Office for evaluation by January 4th. Please don't contact the professor before. He will get in contact with you after having received the complete application in January.