

Proposed Training Plan for PHD student

The training plan of the students of the ICMM-CSIC is associated with the Doctorate Program related to Nanomagnetism, in "Condensed Matter Physics, Nanoscience, and Biophysics" offered jointly by the University Autònoma of Madrid, University of Murcia and University of Oviedo. It is a highly multidisciplinary program and includes also theoretical studies. For that reason, this is the doctorate program preferred for this project where both theoretical and experimental tasks are proposed. The research program of the student will be related to the project "Novel magnetic textures in planar curvilinear and three-dimensional nanostructures" and will have an experimental and theoretical supervisor. He/she will then understand materials properties from different points of view.

The training plan for PhD student will be centered on the understanding of magnetism of 3D magnetic structures, including their fabrication using 3D printing. This implies his/her formation in the preparation of the non-magnetic scaffolds, the use of techniques like electrodeposition or sputtering, the training in magnetic techniques like VSM, SQUID or MFM and the magnetic modelling with the aim to understand the observed behavior. The PhD student will be trained also in XMCD and STXM imaging and participate in the ALBA synchrotron campaigns for all samples fabricated in this proposal.

In addition, the PhD students will participate in the training activities organized by different entities i.e. Postgraduate Courses offered by the ICMM-CSIC (specially the interesting Course "Frontiers in Materials Science" with the participation of the two PIs), "Summer School of Magnetism" organized by the CEMAG (Club Español de Magnetismo), "European School of Magnetism" organized by the European Magnetism Association, and "IEEE Magnetics Society" Summer Schools and the Intermag Conference Tutorials. The ICMM also organizes Young Scientist Seminars and the students will practice their presentation at the regular group meetings. The ICMM subproject plans to offer different short stays to the PhD student: at the partners group at UniOvi, group of O. Fruchard in Spintec (Grenoble-France) for current induced effects, group of O. Kazakova in NPL (London-UK) for the multi-scanning Probe Microscopy studies and D. Wolf IFW-Dresden for Electron Holographic Tomography.

Besides, he/she will participate at least in two international conferences per year and will publish scientific articles resulting from his/her research.

