

Ferroelectric control of ferromagnetic/organic spinterface

Subject: This Post-doc candidate will study the properties of hybrid ferromagnetic metal/organic interface, as known as “spinterface”, by magneto-transport measurement. The “spinterface” can exhibit highly efficient spin-filtering properties and presents a promising class of materials for future spintronic devices. Our recent achievement demonstrates that the spin-polarization at poly(vinylidene fluoride) (PVDF)/Co spinterface can be actively modulated (even change the sign) by switching the ferroelectric (FE) polarization of PVDF [Adv. Mater. doi: 10.1002/adma.201603638 (2016)]. In this proposition, we wish to expand our knowledge on ferroelectric control of spin polarization at different FE-organic/ferromagnetic spinterface by taking advantage of our organic MBE and in-situ characterization tools in TUBE in Institut Jean Lamour (Nancy, France). The candidate will fabricate spin-valve structures based on organic materials with organic MBE, and then characterize the samples with magneto-transport measurements.

Candidate Profile: This post-doc work is for a period of 12 months (renewable for 6 or 12 months) with a net salary around 2000 euros/month (depending on the experience of candidate). It requires a good background in solid state physics. The experience in organic materials and magneto-transport will be highly appreciated. Creativity, serious and taste for teamwork are qualities that will be highly appreciated. Good communication skills (English or French) are also required.

Work environment: CNRS, Institut Jean Lamour (<http://ijl.univ-lorraine.fr/>), team of “Nanomaterials for optics”.

Application deadline: **31 August, 2019**

Documents required: CV with publication list, 2 recommendation letters from previous supervisors.

Information supplementary: Once the candidate is chosen, we need to submit all information of the candidate (CV, passport, research subject) for French security control procedure. Concerning the variation of delay time of the procedure, the post-doc could start the work in IJL after two months.

Contact:

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