PhD position on Emergent Quantum Materials

Position type: PhD position in Condensed Matter Physics (FPI fellowship).

Location: Materials Science Institute of Madrid (ICMM-CSIC).

Topic: Emergent Quantum Materials

Duration: 4 years.

Requirements: Graduate in Physics that have completed a Master in Condensed Matter Physics or related areas.

Deadline for application: **29 October (2018).**

How to apply:

via sede electronica del Ministerio Ciencia, Innovacion y Universidades: click here.

More information about the positions here.

Approximate starting date: February 2019.

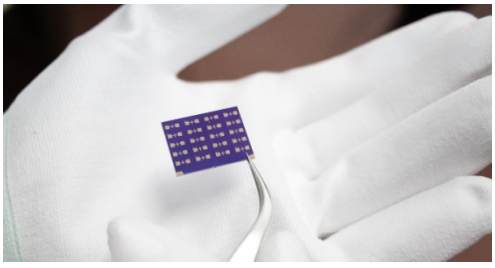
Description of the project (contract MAT2017-87134-C2-2-R):

Oxide interfaces is a rapidly expanding field fuelled by the possibility of nucleating emergent electronic states which cannot be simply reduced to the properties of the constituent materials (A+B≠AB). This project works on the merging between oxide materials with strong spin orbit interaction (metallic $SrIrO_3$) and oxides with correlated electrons ($La_{2/3}Sr_{1/3}MnO_3$ or $YBa_2Cu_3O_7$) at an epitaxial interface to stabilize externally tunable novel quantum phases.

The main goal of the project is to tailor a whole new family of two-dimensional materials by isolating freely suspended membranes of these oxide heterostructures. The extreme reduction in dimensionality will open un new possibilities to manipulate their properties by the interaction with external electric fields, strain or with light.

More info: contact me via email: cmunuera@icmm.csic.es, andres.castellanos@csic.es and marmar@icmm.csic.es

Group site: https://wp.icmm.csic.es/2dfoundry/



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