Departamento de Física de Materiales

SEMINARIO

Superconducting proximity effect in YBCO/LSMO/YBCO planar devices

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Departamento de Física de Materiales, Sala de Seminarios, UCM

In this talk we will review the superconducting proximity effect in superconductor/metal and superconductor/ferromagnet interfaces, the necessary conditions for the presence of triplet superconducting condensate (we could call this: spin polarized superconductivity), and some of the techniques used to reveal its presence by magneto-transport measurements [1-2].

We will then discuss structural characterization in our YBCO/ LSMO/ YBCO planar devices, and several preliminary measurements evidencing the presence of the triplet superconducting condensate in LSMO.

[1] C. Visani *et al.*, "Equal-spin Andreev reflection and long-range coherent transport in high-temperature superconductor/half-metallic ferromagnet junctions," *Nat. Phys.*, vol. 8, no. 7, pp. 539–543, 2012.

[2] J. Linder and J. W. A. Robinson, "Superconducting spintronics," *Nat. Phys.*, vol. 11, no. 4, pp. 307–315, 2015.