

Abstract Submitted
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Superconductivity suppression by ferromagnetism in bi- and trilayers of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ ferromagnets and high- T_c $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ NORBERT M. NEMES, FLAVIO Y. BRUNO, MAR GARCIA-HERNANDEZ, Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC). 28049 Cantoblanco. Madrid, Spain, AXEL HOFFMANN, SUZANNE G. E. TE VELTHUIS, Materials Science Division, Argonne National Laboratory, Argonne, Illinois 60439, CRISTINA VISANI, CARLOS LEON, ZOUHAIR SEFRIQUI, JACOBO SANTAMARIA, GFMC, Departamento de Fisica Aplicada III, Universidad Complutense de Madrid, 28040 Madrid, Spain — Large magnetoresistance occurs in F/S/F trilayers of highly spin-polarised $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ ferromagnet and high- T_c superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ for antiferromagnetic (AF) alignment of the manganite layers. We discuss the relative importance of spin diffusion across the superconductor, proximity effect at the F/S interface and stray fields due to domain walls of the ferromagnet based on magnetoresistance and magnetisation measurements of bilayers and trilayers of various thickness of superconductor and ferromagnet.

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