

Abstract Submitted
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**Large magnetoresistance in ferromagnet / superconductor
 $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ / $\text{YBa}_2\text{Cu}_3\text{O}_7$ trilayers** JACOBO SANTAMARIA, V. PEÑA,
Z. SEFRIQUI, D. ARIAS¹, C. LEON², J.L. MARTINEZ, Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC). 28049 Cantoblanco. Madrid., S. TE VELTHUIS, A. HOFFMANN, Materials Science Division, Argonne National Laboratory, Argonne, Illinois 60439, USA — We show magnetoresistance in excess of 1000% in trilayers containing highly spin polarized $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ manganite and high T_c superconducting $\text{YBa}_2\text{Cu}_3\text{O}_7$. This large magnetoresistance is reminiscent of the giant magnetoresistance (GMR) in metallic superlattices but with much larger values, and originates at spin imbalance due to the injection of spin polarized carriers. This result, aside from its fundamental importance, may be of interest for the design of novel spintronic devices based on F/S structures.

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