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Induced magnetism at complex oxide interfaces JACOBO SANTAMARIA, J. TORNOS, F.A. CUELLAR, J. GARCIA-BARRIOCANAL, Z. SEFRIOUI, A. RIVERA, C. LEON, GFMC. Depto. Fisica Aplicada III. U. Complutense. 28040 Madrid, M. BIBES, A. BARTHÉLÉMY, Unite Mixté de Physique CNRS/Thales, Campus de Polytechnique, 1, Avenue A. Fresnel, 91767 Palaiseau and Université Paris-Sud, 91045 Orsay, France, M.R. FITZSIMMONS, Los Alamos National Laboratory, Los Alamos NM 87545 USA, Y.H. LIU, S.G.E. TE VELTHUIS, Materials Science Division, Argonne National Laboratory, Argonne, Illinois 60439, USA, M. VARELA, S.J. PENNYCOOK, Condensed Matter Sciences Division Oak Ridge National Laboratory, Tennessee 37831-6031, USA, N.M. NEMES, M. GARCIA HERNANDEZ, Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC). 28049 Cantoblanco. Madrid — Modified bonding at complex oxide interfaces may be at the bottom of the appearance of interesting novel behaviours not appearing in the bulk constituents. The possibility of tailoring the electronic structure of interfaces has driven an important effort towards the design of interfaces with specific functionalities. We have examined novel interfacial magnetic states originating at the modification of the orbital occupancy resulting from the modified bonding at the interface. We discuss the effect of these low dimensional magnetic states in determining the macroscopic magnetic response and in tailoring specific functionalities of heterostructures.

[X] Prefer Oral Session
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