

Abstract Submitted
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Topological phase transitions in a doped Sr_2IrO_4 / metal heterostructure¹ MATS HORS DAL, University of Oslo, TIMO HYART, University of Jyvaskyla — Doped Sr_2IrO_4 is predicted to be a high T_C d -wave superconductor. As opposed to the cuprates, the Cooper pairs are not spin singlets, but rather pseudospin singlets. The pseudospin describes highly entangled spin and orbital degrees of freedom. This difference is not apparent when considering Sr_2IrO_4 as an isolated system. However, when tunnel coupled to a metallic t_{2g} electron system this gives rise to a rich topological phase diagram, which has been mapped out and will be presented.

¹Research Council of Norway

Mats Horsdal
University of Oslo

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