

Abstract Submitted
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Quantum Phase Transitions in Ultrathin YBCO/LCMO Superlattices¹ BENJAMIN GRAY, M. KAREEV, E.J. MOON, J. LIU, Phys. Dep., Univ. Arkansas Fayetteville, I-C. TUNG, M.J. BEDZYK, Mat. Sci. Eng., Northwestern Univ., M. VEENENDAAL, J.W. FREELAND, APS, Argonne National Lab., J. CHAKHALIAN, Phys. Dep., Univ. of Arkansas Fayetteville — The rational design of complex oxide heterostructures enables the investigation of novel materials with antagonistic order parameters. Our previous work has provided insight into the role of orbital reconstruction and covalent bonding at the interface of such heterostructures. In this talk, we will further address the intriguing interfacial properties and possible coupling between layers in superlattices composed of alternating superconductive YBa₂Cu₃O_{7-x} and ferromagnetic La_{2/3}Ca_{1/3}MnO₃ layers upon approaching the ultra-thin limit.

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Benjamin Gray
University of Arkansas

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