

Abstract Submitted
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Local and Long-Range High Pressure Structure of Orthorhombic REMnO_3 ¹ H. CHEN, T. WU, T. TYSON, New Jersey Institute of Technology, R. TAPPERO, Brookhaven National Laboratory, L. HUANG, Stony Brook University, S. KIM, S.-W. CHEONG, Rutgers University — Orthorhombic perovskite REMnO_3 multiferroic systems were prepared by high pressure synthesis and solid state reaction. High pressure synchrotron x-ray diffraction and x-ray absorption measurements were performed to explore the structural changes. The influence of the pressure on the electrical polarization is discussed. Theoretical simulations are utilized to predict the stable magnetic phases based on the experimental parameters. This work is supported by DOE Grant DE-FG02-07ER46402.

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