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Emergent multiferroic phase in Barium Hexaferrite nanopowders[1] RICHARD MBATANG, New Mexico State Univ, E ENRIQUEZ, A CHEN, CINT lanl, E FOHTUNG, New Mexico State Univ, Lanl — A subset of multiferroic materials known as magnetoelectrics, where multiferroic ordering is achieved due to proximity effects from magnetic and ferroelectric ordered phases, have attracted a great amount of interest in the last decade. The ability to modulate electric properties by a magnetic field and magnetic properties by an electric field could be crucial in the fabrication of new memory devices with low power consumption. A lot of effort is being put in the design of new single phase magnetoelectric materials with optimum magnetoelectric coupling and high temperature. This talk will focus on the connections between structural, electrical and magnetic properties of Barium Hexaferite nanopowders. The magnetoelectric coupling of these materials has been explored by studying magnetic-field control of electric polarization, which may be important for low-power electronics.

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