

Abstract Submitted
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Microstructural and transport properties of highly epitaxial (LaBa)Co₂O_{5+δ} thin films on (001) SrTiO₃ CHUNRUI MA, MING LIU, JIAN LIU, GREG COLLINS, CHONGLIN CHEN, University of Texas at San Antonio, JIE HE, JIECHAO JIANG, EFSTATHIOS MELETIS, University of Texas at Arlington, ALLAN JACOBSON, University of Houston, UNIVERSITY OF TEXAS AT SAN ANTONIO TEAM, UNIVERSITY OF TEXAS AT ARLINGTON TEAM, UNIVERSITY OF HOUSTON COLLABORATION — The (LaBa)Co₂O_{5+δ} thin films were epitaxially deposited on (001) SrTiO₃ single crystal substrates by pulsed laser deposition. Microstructure investigations from x-ray diffraction and transmission electron microscopy reveal that the films are *a*-axis orientation with a sharp atomic interface. Transport property and isothermal magnetoresistance measurements have been used to understand the physical properties of the films with anomalous magnetic phenomena and the largest reported MR value, for LBCO, of 19% at 40 K.

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