

## Poster Presentation

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### *Epitaxial $\text{La}_{0.67}\text{Ba}_{0.33}\text{Ti}_{0.02}\text{Mn}_{0.98}\text{O}_3$ oxide thin films*

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Epitaxial  $\text{La}_{0.67}\text{Ba}_{0.33}\text{Ti}_{0.02}\text{Mn}_{0.98}\text{O}_3$  (denoted as LBTMO) thin films of approximately 95 nm thickness were deposited by pulsed laser deposition technique onto  $\text{SrTiO}_3$  (STO) (001) substrates. According to the High Resolution X-Ray Diffraction investigations the films are epilayers with a four-fold symmetry in 001 direction. The results are consistent with the expected slight tetragonal distortion and very small lattice mismatch between LBTMO and STO. The STO substrate induces an in-plane compressive strain of the films which exhibit paramagnetic-to-ferromagnetic phase transitions at a Curie temperature  $T_C$  (286K), close to room temperature. The powder Bulk counterpart crystallises in the cubic structure with space group Pm-3m.

**Keywords:** [Thin films](#) , [High Resolution X-Ray Diffraction](#) , [Perovskite](#)