

## **Sr<sub>2</sub>YSbO<sub>6</sub> as a buffer layer for YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> superconducting films**

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We report growth and structural characterization of Sr<sub>2</sub>YSbO<sub>6</sub> films over MgO singlecrystal by magnetron sputtering. This film has been used as a buffer layer for growth of epitaxial superconducting YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> (YBCO) films with good superconducting properties such as, T<sub>c</sub> = 90 K and critical current density in self-field at 77 K of 0.8 MA/cm<sup>2</sup>. These results and good lattice matching and chemical stability between Sr<sub>2</sub>YSbO<sub>6</sub> and YBCO (reported elsewhere [1]) make to Sr<sub>2</sub>YSbO<sub>6</sub> an ideal choice as the buffer layer for higperformance superconductor coatings. For instance, Sr<sub>2</sub>YSbO<sub>6</sub> could be used in coated conductor tapes with IBAD–MgO template.

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[1] O. Ortiz Diaz et al. *Mod. Phys. Lett. B* **18** (2004) 1035–1042.