

The Effect of Annealing Temperature and Solvent on the Fabrication of YBCO Thin Films by MOD-TFA Process

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$\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ (YBCO) thin films were fabricated by MOD-TFA process via dipping method on LaAlO_3 (LAO) single crystalline substrates. In this study, we investigated effect of annealing temperature and solvent on the microstructure and crystallinity of YBCO thin films. The precursor films were annealed at various temperature to improve surface morphologies and phase purities. It was shown that the films annealed at relatively lower and higher temperature exhibit low phase purity and crystallinity. The effect of various solvents on surface morphologies and second phase has been investigated.

keywords : YBCO, MOD-TFA, thin film, annealing temperature, solvent