

Download Chemistry And High Tc Superconductivity In The La Ba Cu

A systematic investigation of the chemistry and superconductivity in the La-Ba-Cu-O system was carried out, using X ray powder diffraction, resistivity and TGA...A systematic investigation of the chemistry and superconductivity in the La-Ba-Cu-O system was carried out, using X ray powder diffraction, resistivity and TGA measurements. Occurrence of high-Tc superconductivity with Tc near 30 K is observed for the single phase of $(\text{La Ba})_2\text{CuO}_{4-y}$ by both magnetic susceptibility and resistivity measurements. This indicates that high-Tc superconductivity in La-Ba-Cu oxide is realized in the K_2NiF_4 -type structure, $(\text{La Ba})_2\text{CuO}_{4-y}$. The discovery of high Tc superconductivity in La-Ba-Cu (- 30 K) and La-Sr-Cu (- 36 K) oxides of K_2NiF_4 structure (Cava et al 1987; Uchida et al 1987) has created widespread interest in this family of copper oxides., Chemistry And High Tc Superconductivity In The La Ba Cu.

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