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STUDY ON THE SUPERCONDUCTING PROPERTIES OF Mn SUBSTITUTED YBCO

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ABSTRACT

We have performed a study on the superconducting properties of $Y_{1-x}Mn_xBa_2Cu_3O_{7-\delta}$ with various Mn doping (x = 0.00, 0.25, 0.30, 0.35, 0.40 and 0.45). All of the samples displayed significant Meissner effect. XRD patterns indicate the existence of unknown peaks belonging to the impurities. A decrease in grain size as the concentration of Mn increases was observed from the SEM micrographs. The resistivity results showed the shifting in $T_{C(R=0)}$ towards low temperature as the Mn concentration increases.

http://journal.masshp.net/wp-content/uploads/Journal/2003/M.%20M.%20Dihom%2059-65.pdf

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