

EFFECT OF NANO Cr₂O₃ ADDITION ON (Bi-Pb)-Sr-Ca-Cu-O SUPERCONDUCTOR

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ABSTRACT

The effect of nano Cr₂O₃ addition on (B, Pb)-Sr-Ca-Cu-O superconductor has been studied. The samples were prepared from the co-precipitation method in the bulk form. Both the critical temperature (T_c) and critical current density (J_c) were determined by the four point-probe technique. Phases analyses of the samples by XRD, microstructures determination by SEM and distribution of nano Cr₂O₃ by EDAX have been carried out. The maximum T_c and J_c were observed for 0.1 wt% nano Cr₂O₃ in the initial sample. The increase in the J_c of all the samples can be explained due to the effective flux pinning of nano Cr₂O₃ to the samples.

<http://journal.masshp.net/wp-content/uploads/Journal/2007/Jilid%201/Kong%20Wei%201-5.pdf>

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