

**FLUX PINNING MECHANISM IN BI-2223 SUPERCONDUCTOR
WITH ADDITION OF BARIUM**

ANIS ZAFIRAH BINTI MOHD ISMAIL

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ABSTRACT

FLUX PINNING MECHANISM IN BI-2223 SUPERCONDUCTOR WITH ADDITION OF BARIUM

The effect of Barium addition of flux pinning properties have been studied. The samples were prepared by solid state reaction method. The characterizations was carried out using four-point probe and X-ray powder diffraction (XRD). XRD pattern show a lot of improvement of the peak since the low-peak (2212) has decreased with the increase of Barium content. The effect of addition of Barium element in the calcium site can be deducted that the T_c and J_c gradually increased as x which dopant concentration is increased. The crystallographic structure underwent transition to tetragonal ($a=b \neq c$) from orthorhombic ($a \neq b \neq c$) as doping concentration of Ba was increased due to contraction of c -lattice.

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