

Multi-domain Bulk Y-Ba-Cu-O with Artificial Holes for Non-contact Torque Transfer Applications

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Abstract - Bulk Y-Ba-Cu-O multi-domain superconductors have been fabricated with the aim of potential superconducting torque transferring applications. Cold top-seeded melt growth process has been employed for producing multi-domain bulk superconductors in that artificial holes were mechanically introduced into the precursor added with PVA liquid binder. Four-domain bulk Y-Ba-Cu-O superconductors with artificial holes could be obtained at the maximum temperature of 1058°C when MgO-doped Nd123 seed crystal was used.

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