

# Infiltration Growth of Single Domain YBCO Superconductors

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Large single crystal  $\text{YBa}_2\text{Cu}_3\text{O}_y$  (Y123) superconducting bulks have fabricated by infiltration-seed growth (IG) method. We used Y123 and Ba-Cu-O liquid composition as liquid source for infiltration in Y211 compact and  $\text{SmBa}_2\text{Cu}_3\text{O}_y$  (Sm123) as seed for single domain growth. Sample shrinkage and porosity of single domain prepared by this method was low than samples fabricated by conventional seeded melt texturing process. Also fine  $\text{Y}_2\text{BaCuO}_x$  (Y211) particles were observed in Y123 matrix. Trapped field of IG samples were measured by using NdBCo magnet and hall probe.

Keywords : infiltration, single domain, low porosity,  $\text{YBa}_2\text{Cu}_3\text{O}_y$