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## Irreversibility Lines for $\text{HgBa}_2\text{CuO}_{4+\delta}$ with Different Oxygen Contents

Usami, R. ; kubota, H. ; Puzniak, R. ; Liu, Chia-Jyi; Yamauchi, H.

### Abstract

Single phase  $\text{HgBa}_2\text{CuO}_{4+\delta}$  samples were annealed in flowing oxygen gas or in flowing argon gas. Oxygen contents of both samples determined by iodometric titrations indicate that the samples annealed in oxygen gas and in argon gas were respectively in over-doped and in under-doped region. Both samples were respectively grain-aligned in magnetic fields. Hysteresis loops for grain-aligned over-doped and under-doped samples were measured in applied fields parallel and perpendicular to the c-axis. Region where irreversibility lines of over-doped sample was located was found to be higher than that of under-doped sample. Irreversibility line of over-doped sample was found to be higher than that of  $\text{YBa}_2\text{Cu}_3\text{O}_{6.6}$ . Anisotropy of irreversibility lines of both samples were found to be smaller than that of Y-123 superconductors.