

Abstract Submitted
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Attempt of MgB₂ Powder Alignment in Magnetic Field MOOHEE

LEE, KIHYEOK KANG, B.J. MEAN, SUNG HOON KIM, Konkuk University, Seoul 143-701, Korea, B.K. CHO, Gwangju Institute of Technology, Gwangju 500-712, Korea — We have attempted magnetic alignment of MgB₂ powder grains in an epoxy resin under the magnetic field of 8 T. Since we do not know of direction and magnitude of a magnetic anisotropy tensor in the normal state, we devise difference alignment schemes assuming two cases; Case I for the easy along the *c*-axis and Case II for the easy axis perpendicular to the *c*-axis. For each case, we have built different devices. For example, for Case II, we have to apply rotation perpendicular to the magnetic field. Also, the device is designed to get rid of gravitational sedimentation by rotating the powder in an epoxy resin. For assessment of the *c*-axis alignment, XRD measurements are utilized. However, the three XRD data for the unaligned powder, the Case I and the Case II are same and show no evidence of alignment. Possible reasons for the results will be discussed in detail.

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