Hall effect in CNT doped YBCO high temperature superconductor

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Abstract

In order to study Hall effect in pure and CNT doped YBCO polycrystalline samples, we have measured longitudinal and transverse voltages at the different magnetic field (0-9T) in the vortex state. We found a sign reversal for pure sample near 3T and double sign reversal of the Hall coefficient for CNT doped sample near 3 and 5T. It can be deduced that CNT doping caused strong flux pinning and Hall double sign reversal in this compound.

Keywords: Y- based superconductor, Hall effect, Hall anomaly, carbon nano tube

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