

Abstract Submitted
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Bulk properties and quantum oscillations in Bi_2Se_3 topological insulator crystals NICHOLAS BUTCH, KEVIN KIRSHENBAUM, JOHN-PIERRE PAGLIONE, Center for Nanophysics and Advanced Materials, Department of Physics, University of Maryland, College Park, MD 20742 — The compound Bi_2Se_3 , a member of the recently heralded class of topological insulators, possesses a spin polarized metallic surface state and is theoretically expected to be a bulk insulator. In practice, stoichiometric Bi_2Se_3 is metallic, with carriers believed to arise from intrinsic doping by defects. The synthesis of undoped Bi_2Se_3 will be presented, along with measurements of electrical resistivity, Hall effect, and angle-dependent quantum oscillations.

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