

Abstract Submitted
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Magneto-optical spectra of topological insulators Bi_2Te_3 , Sb_2Te_3 and Bi_2Se_3 in magnetic fields up to 18 Tesla M.S. WOLF, S.V. DORDEVIC, The University of Akron, N. STOJILOVIC, University of Wisconsin Oshkosh, HECHANG LEI, C. PETROVIC, Brookhaven National Lab, L.C. TUNG, National High Magnetic Field Lab — Topological insulators are a novel class of materials that behave as insulators in the bulk, but have conducting states on the surface. Studies of their behavior in magnetic field is an important avenue towards understanding their complex properties. We will report the results of our magneto-optical measurements of topological insulators Bi_2Te_3 , Sb_2Te_3 and Bi_2Se_3 in magnetic fields up to 18 Tesla. In all three compounds we detect magnetic-field induced changes in optical properties, which are most pronounced around the plasma edge. The induced changes are much bigger in Bi_2Se_3 than in Bi_2Te_3 and Sb_2Te_3 .

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