

Abstract Submitted
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Infrared studies of topological insulators Bi_2Te_3 , Sb_2Te_3 and Bi_2Se_3 S.V. DORDEVIC, M.S. WOLF, The University of Akron, N. STOJILOVIC, University of Wisconsin Oshkosh, HECHANG LEI, C. PETROVIC, Brookhaven National Laboratory, L.C. TUNG, National High Magnetic Field Lab — Topological insulators are currently at the center of condensed matter physics research. These unusual materials are insulators in the bulk, but have conducting states on the surface. In this project we have used infrared spectroscopy to study the optical properties of topological insulators Bi_2Te_3 , Sb_2Te_3 and Bi_2Se_3 . In addition, we will report the results of magneto-optical measurements in magnetic fields up to 18 Tesla. Our results reveal unconventional charge dynamics and demonstrate the potential of infrared spectroscopy to provide insight into the unique properties of these novel materials.

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