

Abstract Submitted
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Possible topological insulating state in bismuth doped with arsenic: magneto-optical study G.M. FOSTER, S.V. DORDEVIC, The University of Akron, N. STOJILOVIC, University of Wisconsin Oshkosh, M.V. NIKOLIC, Institute for Multidisciplinary Research, University of Belgrade, S.S. VUJATOVIC, Z.Z. DJURIC, P.M. NIKOLIC, Serbian Academy of Sciences and Arts, Z. CHEN, Z.Q. LI, National High Magnetic Field Laboratory, Tallahassee — Bismuth and its alloys with antimony have attracted attention in recent years due to possible realization of topological insulating state. In this study we have used infrared and magneto-optical spectroscopies to probe the electrodynamic response of bismuth doped with 1.0 % of arsenic. The spectra will be presented for temperatures down to 5 K, and in magnetic fields as high as 18 Tesla. The results reveal strong magneto-optical activity, especially around the plasma minimum in reflectance. These findings will be compared and contrasted with magneto-optical results on topological insulator $\text{Bi}_{1-x}\text{Sb}_x$.

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