Abstract Submitted
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Shubnikov-de Haas oscillations and electrical transport properties of Bi based topological insulators[1] YUSUKE SUZUKI, MASASHI KOMATSU, KASUMI TASHIMA, FUMIYA KIMIZUKA, University of Tsukuba, TAKASHI MOCHIKU, NIMS, TAKANARI KASHIWAGI, RYOZO YOSHIZAKI, KAZUO KADOWAKI, University of Tsukuba — The discovery of the anomalous superconductivity in $Cu_xBi_2Se_3$ has attracted much attention because of the relation between superconducting state and topological surface state. In this study we present electronic transport properties in $Cu_xBi_2Se_3$. We have grown various kinds of single crystals of topological insulators based on Bi related compounds and the transition metal doped compounds and have studied basic transport phenomenon in order to characterize them. The pronounced quantum oscillations in the magnetoresistance were observed in both doped and non-doped $Cu_xBi_2Se_3$, which provide the precise information about their electronic structures. We will discuss the results as topologically interesting properties.

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