Abstract Submitted
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Thermoelectric and electronic properties of $AgSbSe_2$[1] MAKRAM QAUDER, Department of Electrical Engineering, University of Nevada Las Vegas, RAVHI KUMAR, Department of Physics and HiPSEC, University of Nevada Las Vegas, RAMA VENKAT, Department of Electrical Engineering, University of Nevada Las Vegas, ANDREW CORNELIUS, Department of Physics and HiPSEC, University of Nevada Las Vegas — Cubic I-II-VI_2 semiconductors have been studied widely for potential thermoelectric applications by several groups [1]. Recent investigations show minimal thermal conductivity for $AgBiSe_2$ and $AgSbTe_2$ resulting from intrinsic phonon scattering process due to strong anharmonicity in bonding [2]. $AgSbSe_2$is structurally similar to chalcogenides and crystallizes in the cubic structure at ambient conditions [3]. The thermoelectric figure of merit, Seebeck co-efficient and thermal conductivity were measured as a function of temperature from 10 K to 350 K. We have also measured the conductivity type, Hall co-efficient and carrier concentration at ambient conditions. We compare our results with its ternary analogues. [1]. C. Wood et al., Prog. Phys. 51 (1988) 459 [2]. D.T. Morielli et al., Phys.Rev.Lett., 101 (2008) 035901 [3]. Ravhi S. Kumar et al., J.Alloys and Compds., 285 (1999) 48

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