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High pressure transport studies on Sb_2Te_3 and $BiSbTe_3$[1]
MATTHEW JACOBSEN, ANDREW CORNELIUS, University of Nevada, Las Vegas — Interest regarding the abilities of thermoelectric materials has produced exciting results regarding their properties in the thin-film form [3]. However, little work has been done regarding the pressure tuning of the thermoelectric figure of merit for these materials materials. Some previous work has suggested that it would be useful to investigate this further using pressure tuning [1],[2]. Based upon this interest, facilities have been developed in our laboratory for the study of the relevant properties under high pressure up to near 20 GPa. Results of this work on Sb_2Te_3 and $BiSbTe_3$ will be presented here from the use of these facilities. [1]Chen, G., Dresselhaus, M.S., Dresselhaus, G., Fleurial, J.-P., and Caillat, T. *Recent developments in themoelectric materials.* International Materials Reviews, **48**, 45-66 (2003). [2]Rowe, D.M. *CRC Handbook of Thermoelectric Materials.* CRC Press, 1995. [3]Venkatasubramanian, R., Silvola, E., Colpitts, T., and O'Quinn, B. *Thin-film thermoelectric devices with high room-temperature figures of merit.* Nature, **413**, 597-602, 2001.

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Matthew Jacobsen
University of Nevada, Las Vegas

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