

Abstract Submitted
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High pressure structure and Thermal properties of Gallium and Indium Telluride compounds¹ MATTHEW JACOBSEN, RAVHI KUMAR, ANDREW CORNELIUS, University of Nevada, Las Vegas — III-V compounds of In and Ga are promising materials for optoelectronic, thermoelectric and nuclear power engineering applications. Pressure induced structural changes have been reported previously for InTe, In₂Te₃, GaTe, and Ga₂Te₃ at ambient temperature at lower pressure ranges. We have synthesized and investigated these compounds extensively under pressure up to a limit of 20 GPa and report the pressure induced structural sequences for the previously mentioned compounds and solid solutions of them. The transition pressure and bulk modulus are obtained for all compositions. Further we also present specific heat measurements carried out at ambient pressure to assist in the understanding of the electrical and structural properties.

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Matthew Jacobsen
University of Nevada, Las Vegas

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