Chalcogenide Cobalt telluride nanotubes\textsuperscript{1} BISHNU DAHAL, RAJENDRA DULAL, IAN L. PEGG, JOHN PHILIP, The Catholic University of America — Cobalt telluride nanotubes are grown using wet chemical and hydrothermal syntheses. Wet chemical synthesized nanotubes display nearly 1:1 Co to Te ratio. On the other hand, CoTe nanotubes synthesized using hydrothermal method show excess Co content leading to the compound Co\textsubscript{58}Te\textsubscript{42}. Both CoTe and Co\textsubscript{58}Te\textsubscript{42} display magnetic properties, but with totally different characteristics. The Curie temperature of CoTe is higher than 400 K. However, the $T_c$ of Co\textsubscript{58}Te\textsubscript{42} is below 50 K. Transport properties of cobalt telluride (CoTe) nanotube devices show that they exhibit p-type semiconducting behavior. The magnetoresistance measured at 10 K show a magnetoresistance of 54\%.

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