

Abstract Submitted  
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**Chalcogenide Cobalt telluride nanotubes**<sup>1</sup> 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  $\text{Co}_{58}\text{Te}_{42}$ . Both CoTe and  $\text{Co}_{58}\text{Te}_{42}$  display magnetic properties, but with totally different characteristics. The Curie temperature of CoTe is higher than 400 K. However, the  $T_c$  of  $\text{Co}_{58}\text{Te}_{42}$  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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Bishnu Dahal  
The Catholic University of America

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