Supporting information

Selective Synthesis and Magnetic Properties of Uniform CoTe and CoTe₂ Nanotubes

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Figure S1. TEM image (A) of the CoTe nanotubes prepared by using H₂TeO₃ as Te source and with the surfactant SDS (1 mmol) processed at 140 °C for 24 h. Low- and high-magnification SEM images (B-D) of the CoTe nanorods prepared by using Na₂TeO₃ as Te source with the absence of surfactants at 140 °C for 24 h.
Figure S2. The evolution of the XRD patterns of the products obtained by using 0.001 mol Co(NO₃)₂·6H₂O and 0.002 mol H₂TeO₃ with the surfactant SDS (1 mmol) processed at 140 °C for 48 h: (A) without NaOH; (B) 10 mL 1.0 M NaOH.
**Figure S3.** Energy dispersion spectroscopy (EDS) images of CoTe and CoTe$_2$ nanotubes. The characteristic peaks for both Co and Te are observed. The atomic ratios are calculated to be about 1:1 for CoTe and 1:2 for CoTe$_2$, which matched their stoichiometries quite well.