

## Electronic Supplementary Information

### Amine-Assisted Solution Approach Synthesis and Growth Mechanism of Super-long Rough-surfaced $\text{Cu}_7\text{Te}_4$ Nanobelts

Qun Wang, Gang Chen<sup>\*</sup>, Dahong Chen

Department of Chemistry, Harbin Institute of Technology, 92 West Dazhi Street, Harbin 150001, P. R.

China

<sup>\*</sup> Corresponding author. E-mail: gchen@hit.edu.cn

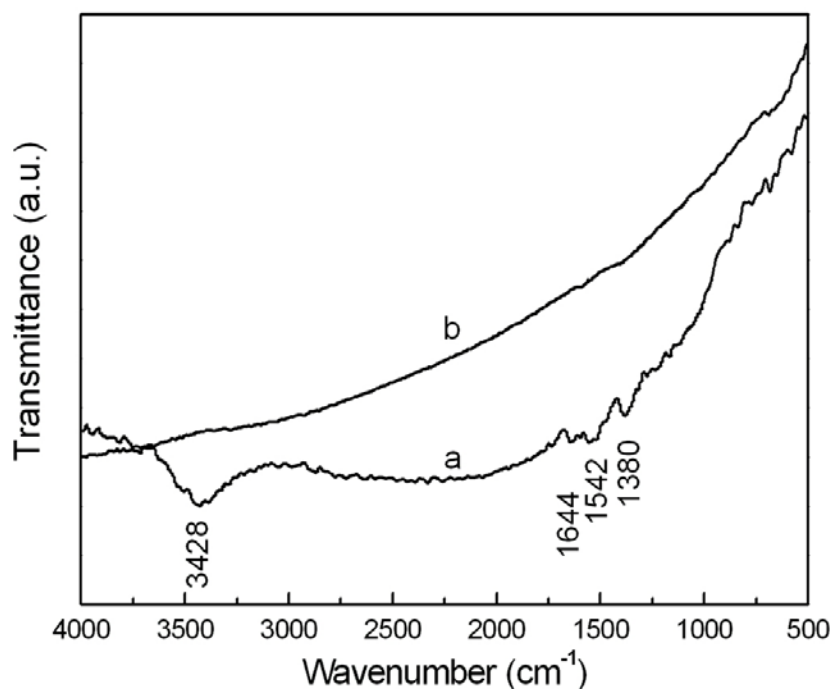


Fig. S1. FT-IR spectra of the products washed three times (a) and the specimen washed eight times (b), respectively

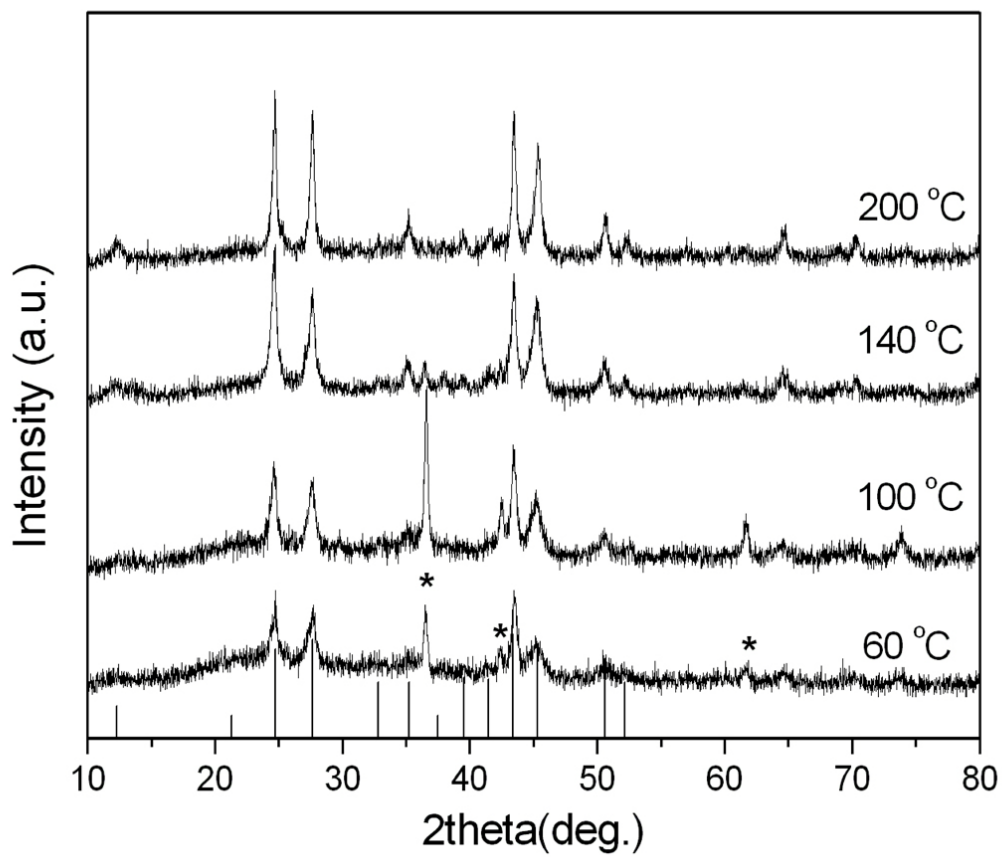


Fig. S2 Powder X-ray diffraction patterns of the samples prepared at different reaction temperatures. \* stand for unknown phase.

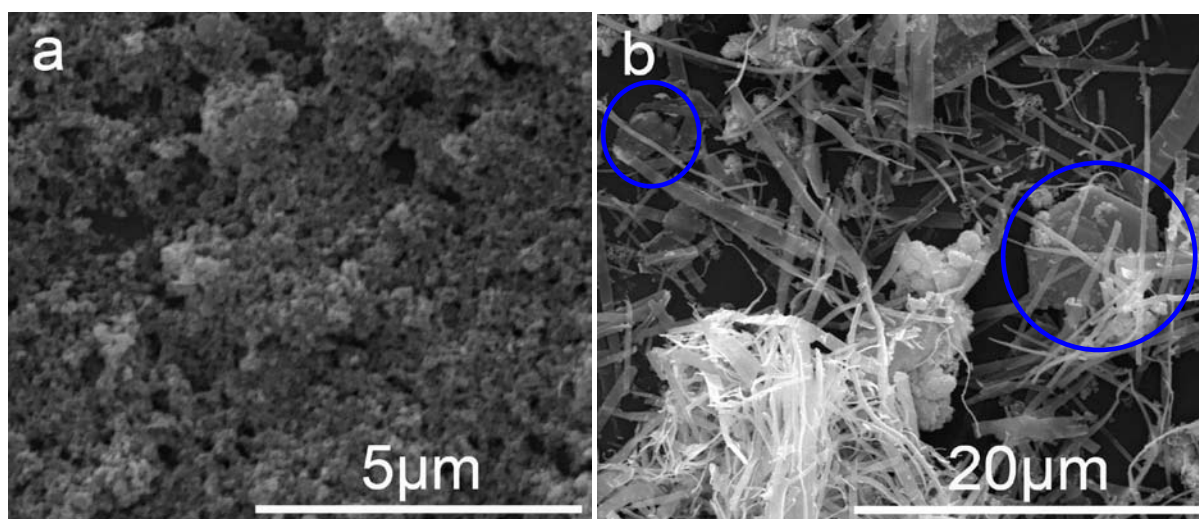


Fig. S3 SEM images of the samples prepared at 180°C for 20 h utilizing different types of hydroxides (a)  $\text{NH}_3 \cdot \text{H}_2\text{O}$ ; (b)  $\text{NaOH}$ .

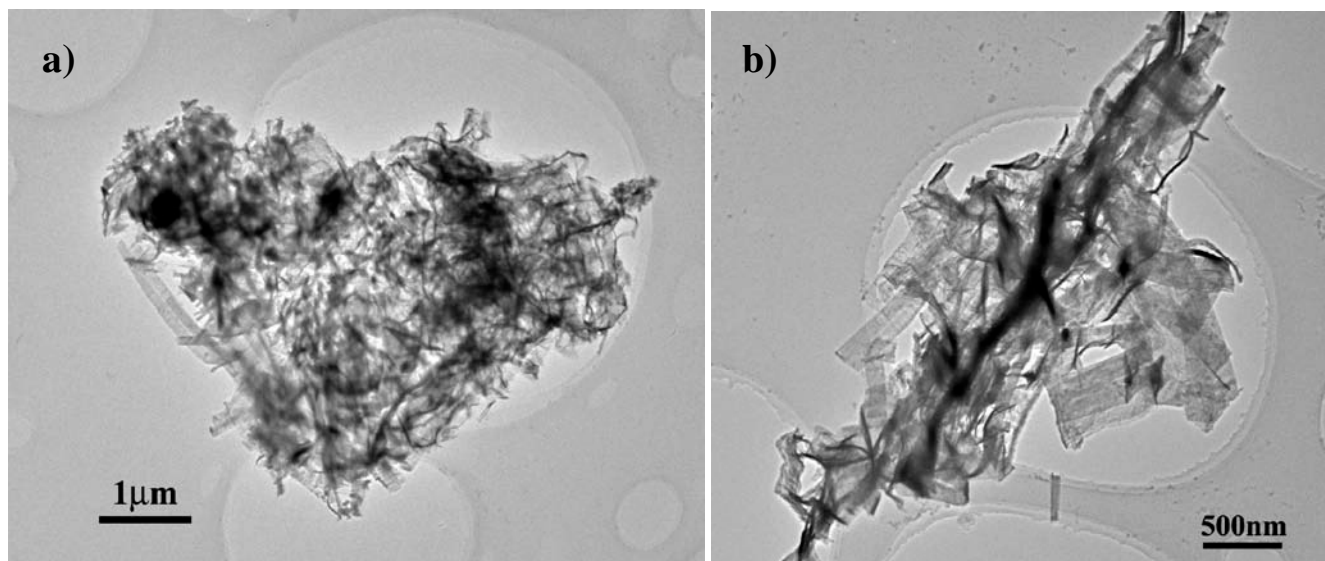


Fig. S4. (a, b) TEM image of the  $\text{Cu}_7\text{Te}_4$  product prepared at  $180^\circ\text{C}$  for 0.5h, demonstrating that the ultrathin nanowires and nanobelts coexist in these prepared product.

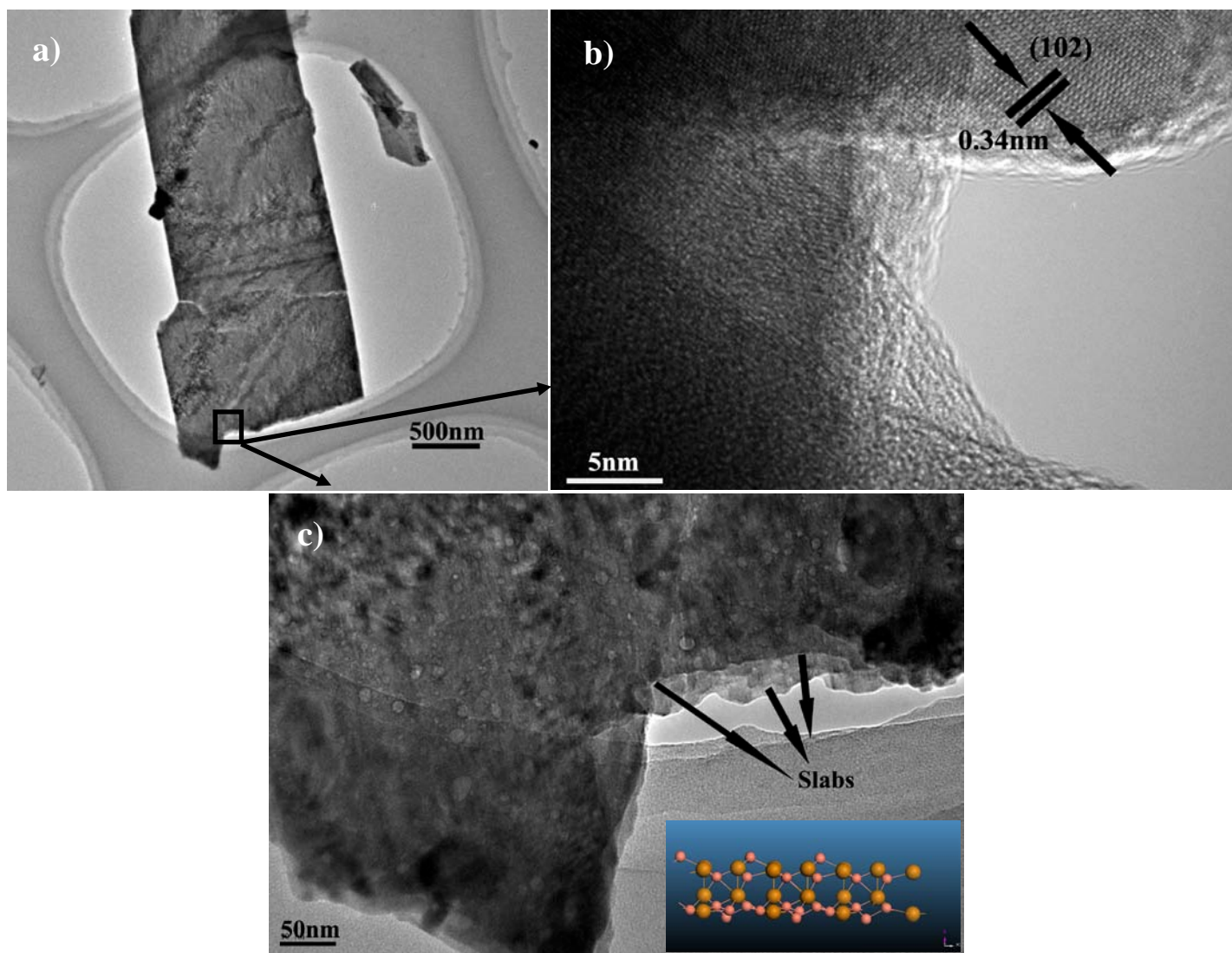


Fig. S5. (a) TEM image of an individual  $\text{Cu}_7\text{Te}_4$  nanobelt obtained at  $180^\circ\text{C}$  for 2h, (b, c) HRTEM and magnified TEM image taken in a selected area. The details of structural slab are shown in (c).