

Supporting information

Synthesis of Surfactant-Free SnS Nanoplates In an Aqueous Solution

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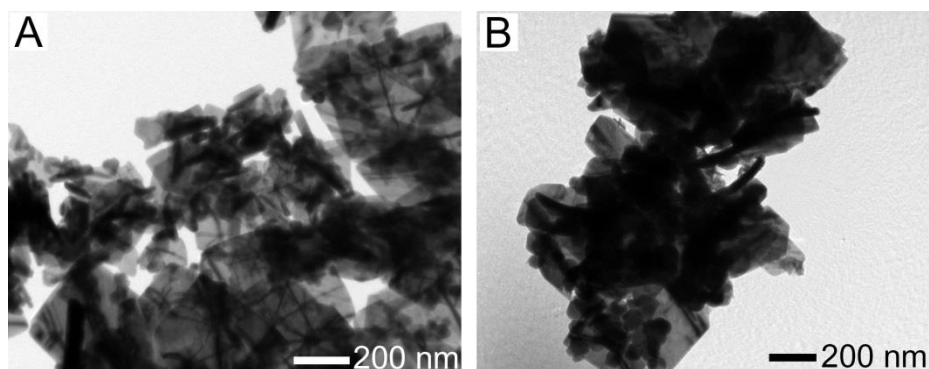


Figure S1. TEM images of SnS nanoplates with reaction times. (A) 20 min and (B) 240 min.

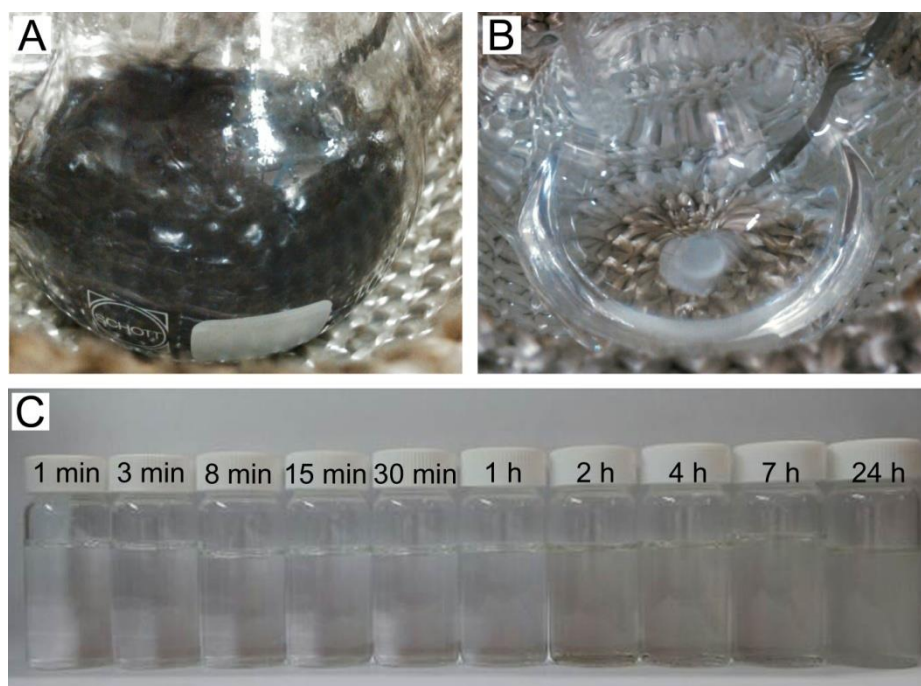


Figure S2. (A, B) Digital photographic images of the reaction mixture at 1 h (A) and after 24 h. (C) Digital images of the decanted supernatant of the reaction mixture after they formed $\text{NaSn}(\text{OH})_3$ salt. The times in the image indicate the reaction times of chemical transformation from $\text{Sn}_6\text{O}_4(\text{OH})_4$ into SnS. The SnS nanoplates were etched out as the chemical transformation reaction was longer, hence the supernatant solution from longer reaction time resulted in more $\text{NaSn}(\text{OH})_3$ salt and look more turbid.

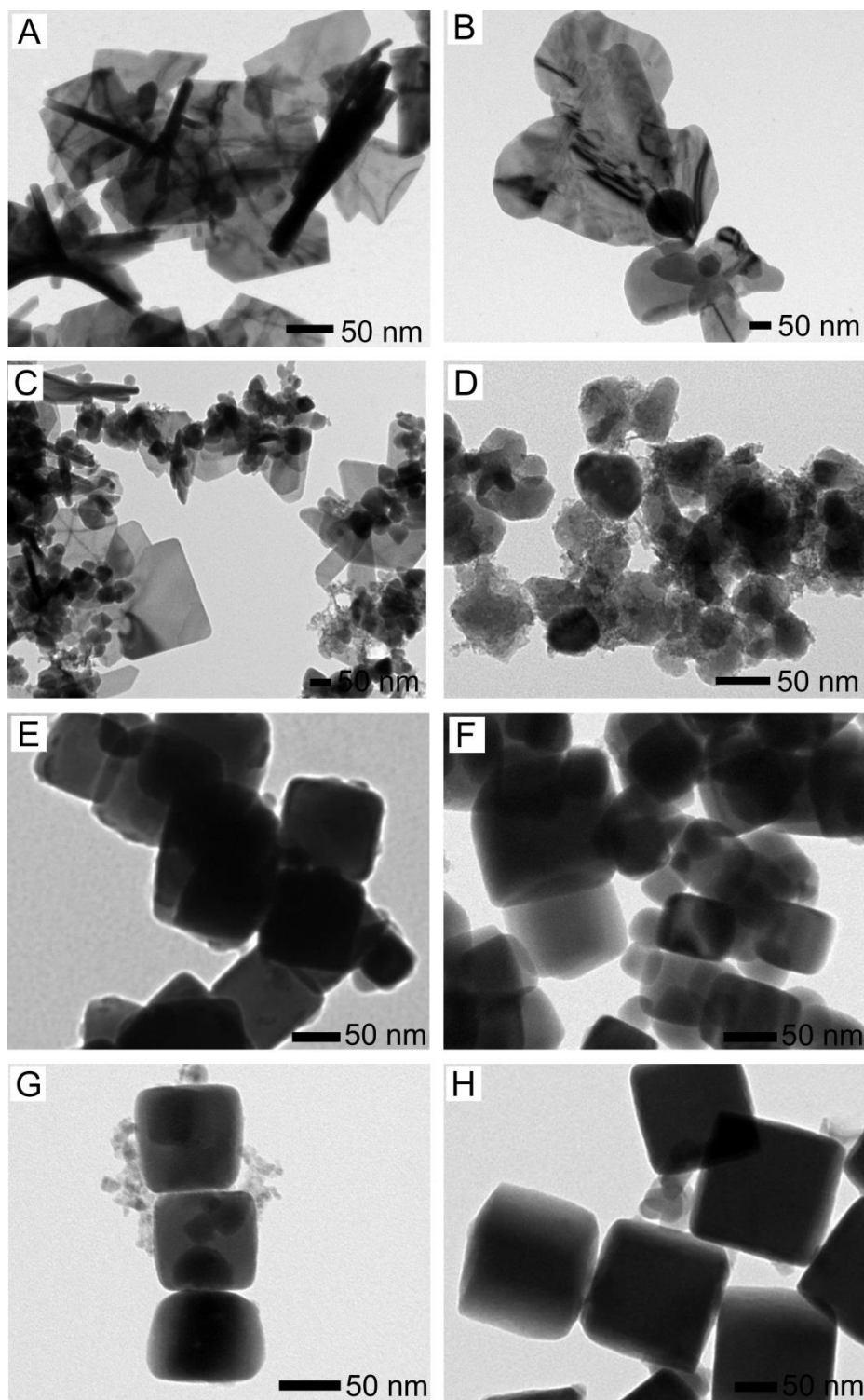


Figure S3. TEM images as different amount of PVP condition effect with same reaction time for 1 hour. (A) 0.005 wt %, (B) 0.01 wt %, (C) 0.03 wt %, (D) 0.05 wt %, (E) 0.1 wt %, (F) 0.3 wt %, (G) 0.5 wt %, and (H) 1.0 wt % of PVP solution, respectively.

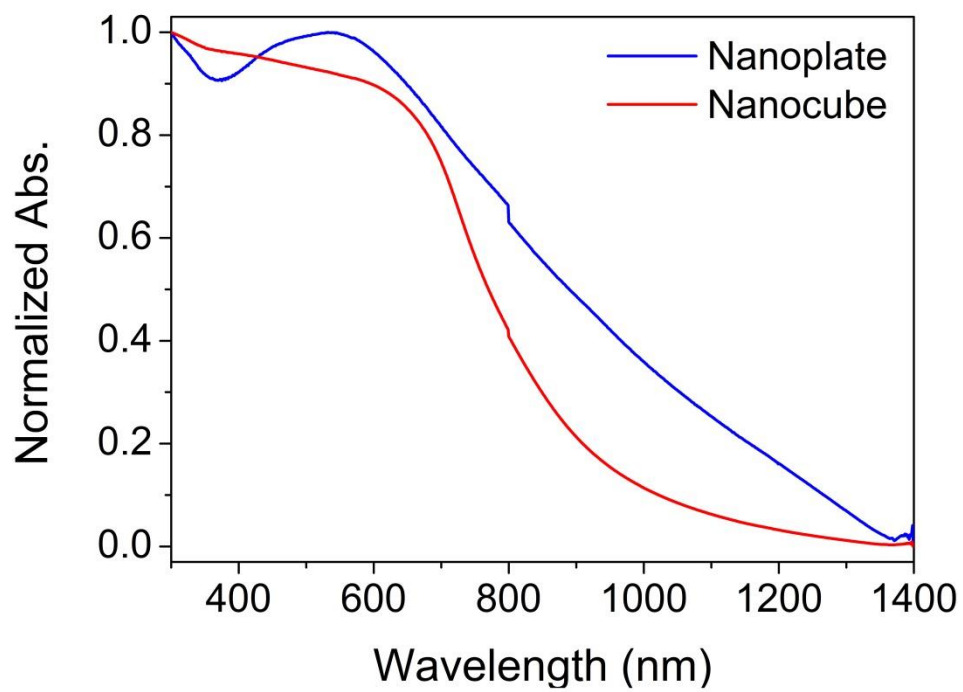


Figure S4. UV-vis-NIR absorption spectra of the nanocubes and nanoplates of SnS.