Electronic Supplementary Information (ESI)

Solution-phase catalytic synthesis, characterization and growth kinetics of Ag_2S-CdS matchstick-like heteronanostructures

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Supplementary Figures S1-S5

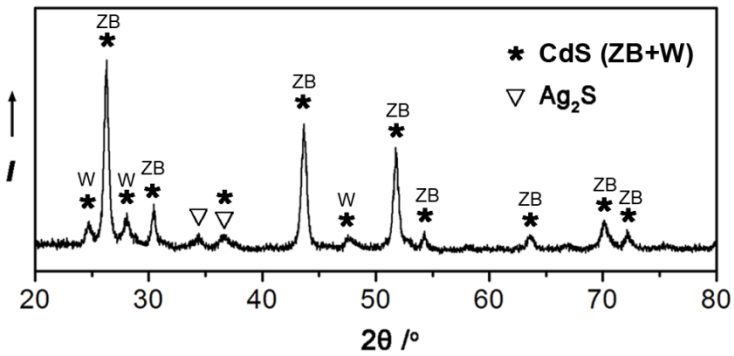

Fig. S1 XRD pattern of Ag_2S-CdS matchstick-shaped heteronanostructures prepared at the 1:4 Ag/Cd molar ratio.

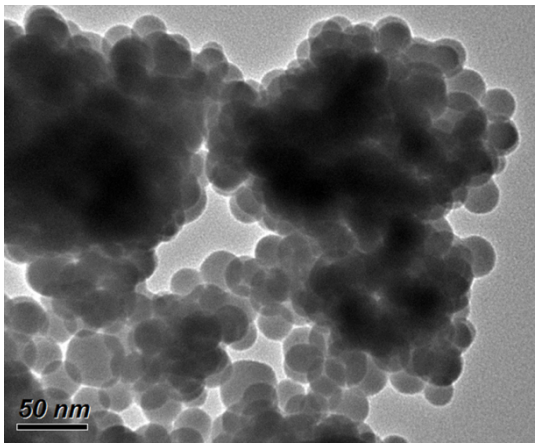

Fig. S2 TEM image of pure Ag_2S nanocrystals prepared from 1 mmol $AgNO_3$ and 2 mmol S powder at 160 ^oC for 60 min.

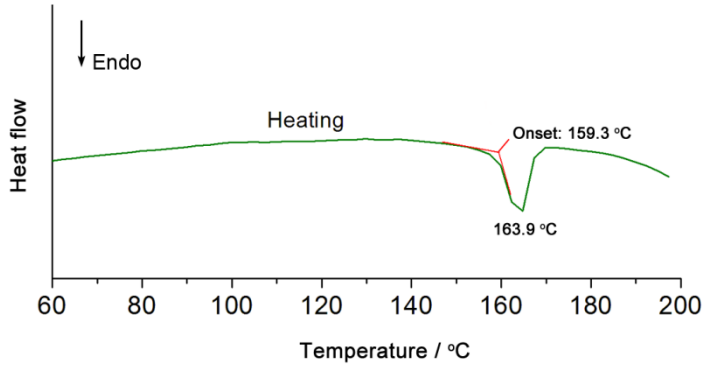

Fig. S3 DSC heating curve of Ag_2S-CdS matchstick-shaped heteronanostructures (prepared at the 1:2 Ag/Cd molar ratio) in the first DSC heating/cooling cycle (20 ^oC → 200 ^oC → 20 ^oC).

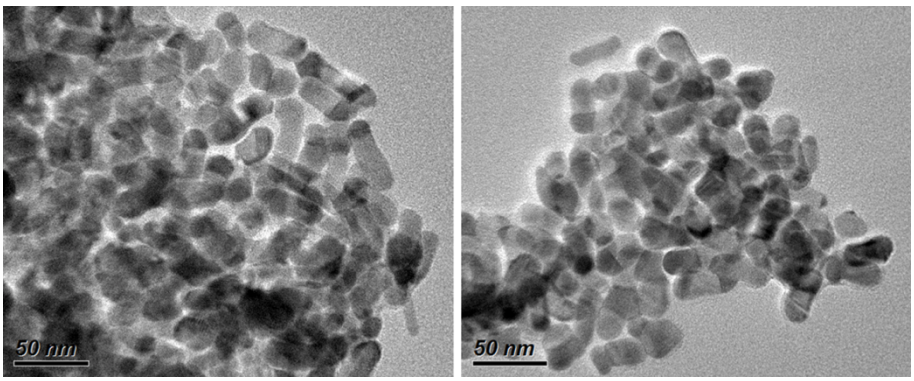

Fig. S4 TEM images of Ag_2S-CdS matchstick-shaped heteronanostructures (prepared at the 1:2 Ag/Cd molar ratio) after the first DSC heating/cooling cycle (20 ^oC → 200 ^oC → 20 ^oC).

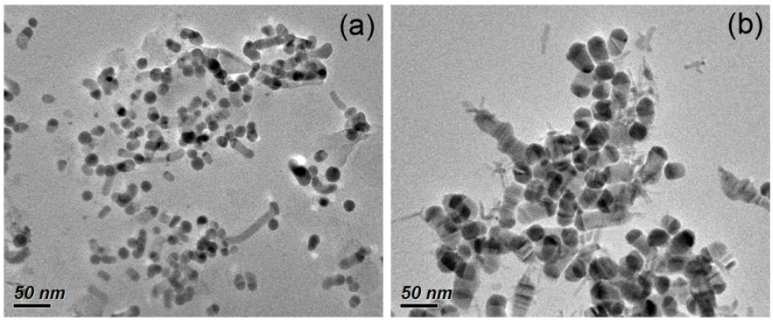

Fig. S5 TEM images of the samples prepared at (a) 140 ^{o}C and (b) 180 ^{o}C from 1:2 molar ratio of Ag/Cd precursors. The isolated Ag_2S nanoparticles and CdS thin nanorods were respectively observed in them.