

Supplementary Information

Controllable Growth of Ag₂S-CdS Heteronanostructures

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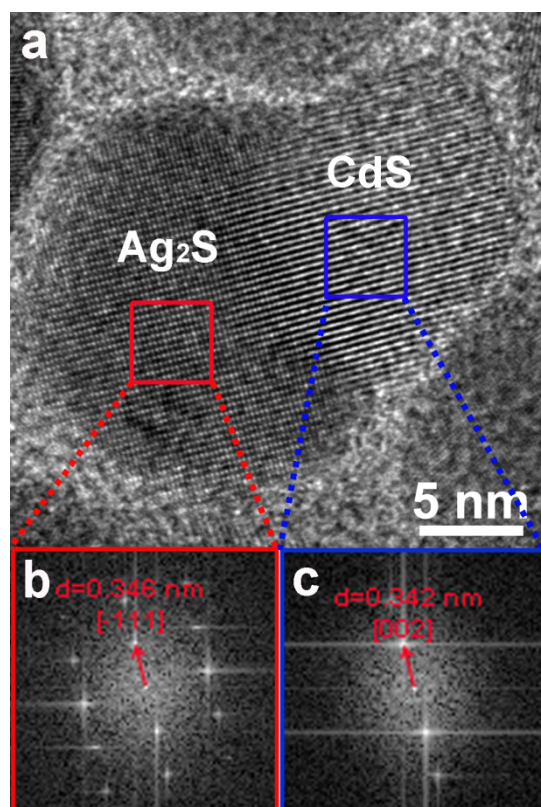


Figure S1. (a) HRTEM image of Ag₂S-CdS HNSs, (b) and (c) corresponding FFT patterns from the selected areas of Ag₂S and CdS in (a), respectively.

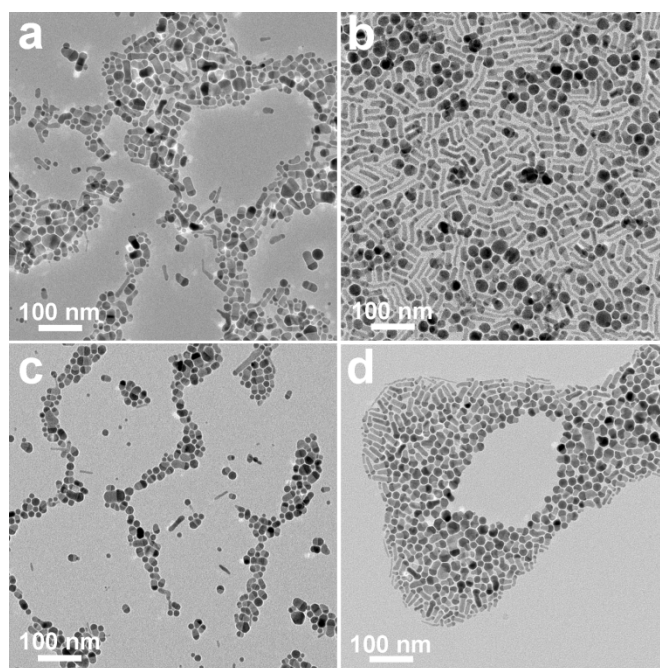


Figure S2. TEM images of Ag_2S -CdS HNSs ($\text{Ag}_2\text{S}/\text{CdS}$ molar ratios: 1/1) at different reaction conditions. (a) 150 °C, 60 min; (b) 190 °C, 60 min; (c) 170 °C, 30 min; (d) 170 °C, 120 min. Irregular Ag_2S -CdS HNSs were obtained under the above reaction conditions. These results suggest that the reaction condition of 170 °C and 60 min is an optimized condition for preparation of uniform Ag_2S -CdS HNSs in this system.

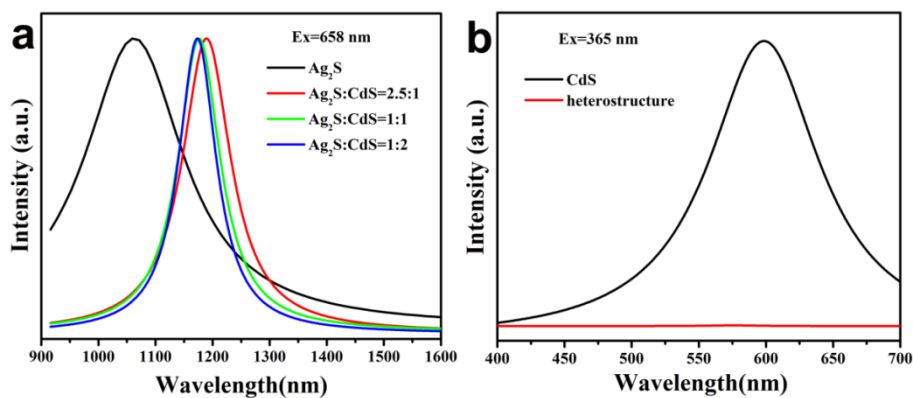


Figure S3. (a) Emission spectra of Ag_2S nanocrystals and Ag_2S -CdS HNSs in near-infrared region. (b) Emission spectra of CdS and Ag_2S -CdS HNSs in the visible region.