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Supporting information

Cocatalyst-Free CdS nanorods/ZnS nanoparticles Composite for High-Performance Visible-Light-Driven Hydrogen Production from Water

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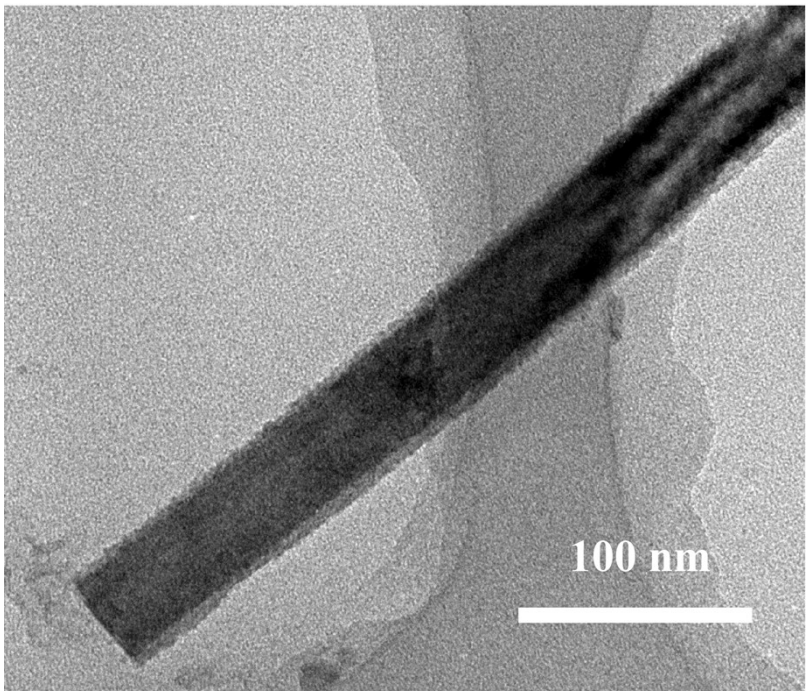

Figure 1. TEM image of CdS/ZnS-0.5 NRs photocatalyst.

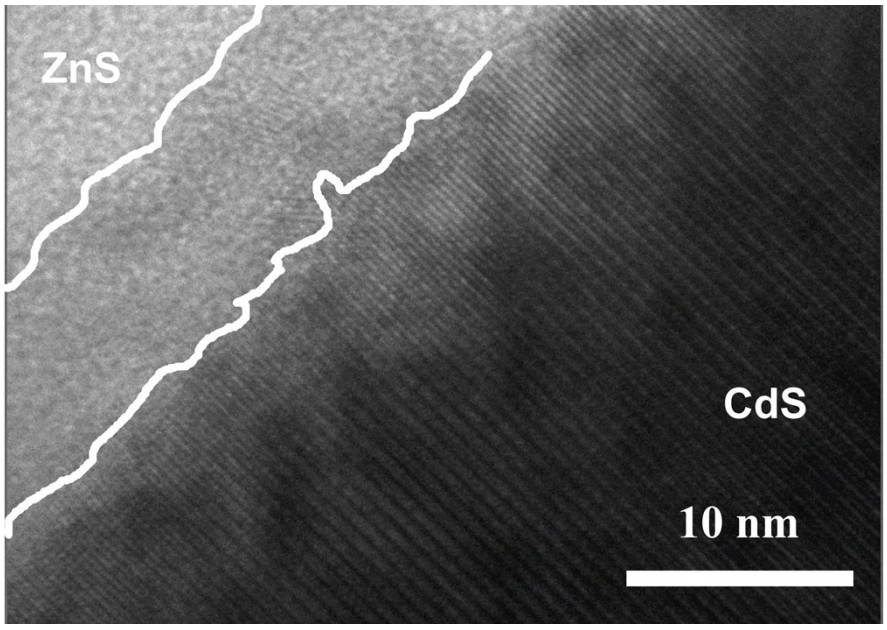

Figure S2. HRTEM image of CdS/ZnS-0.5 photocatalyst.

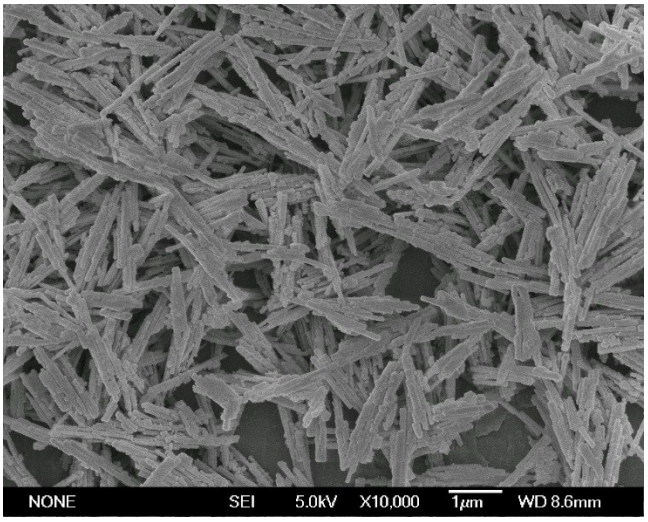

Figure S3. SEM image of CdS/ZnS-0.5 sample after photocatalysis.

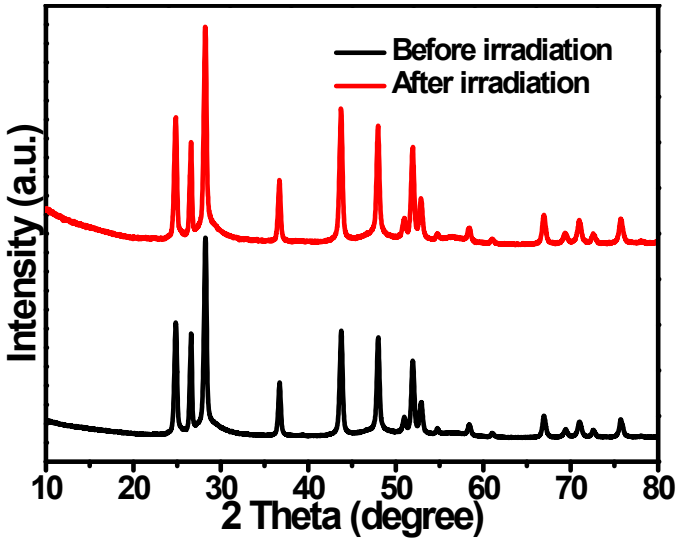

Figure S4. Powder XRD spectrum of CdS/ZnS-0.5 sample after photocatalysis.

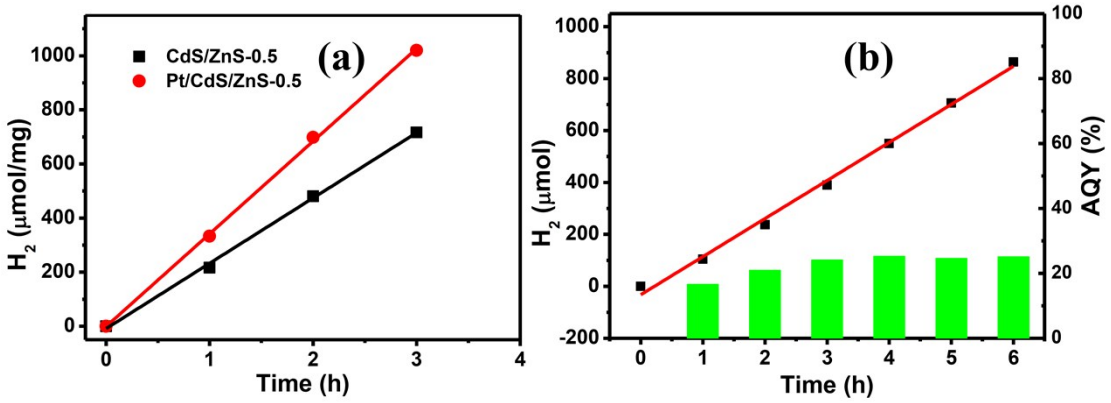

Figure S5. (a) Photocatalytic H_2 evolution over CdS/ZnS-0.5 (black line) and 1 wt% Pt/CdS/ZnS-0.5 (red line) at room temperature under visible light ($\lambda > 420$ nm). (b) The time courses of H_2 production and apparent quantum yield (AQY) over 1.0 wt% Pt modified CdS/ZnS-0.5 NRs photocatalyst under monochromatic 420 nm light irradiation. The system contains 1.0 mg photocatalyst, 0.75 M Na_2S and 1.05 M Na_2SO_3 in 20 mL aqueous solution. The bars represent the apparent quantum yields.

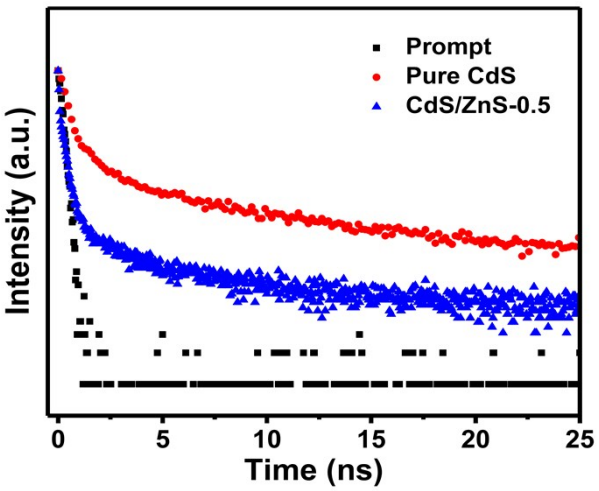

Figure S6. Time-resolved photoluminescence (TRPL) decay spectra of pure CdS (red) and CdS/ZnS-0.5 (blue) excited at a wavelength of 405 nm.