

## Supporting information

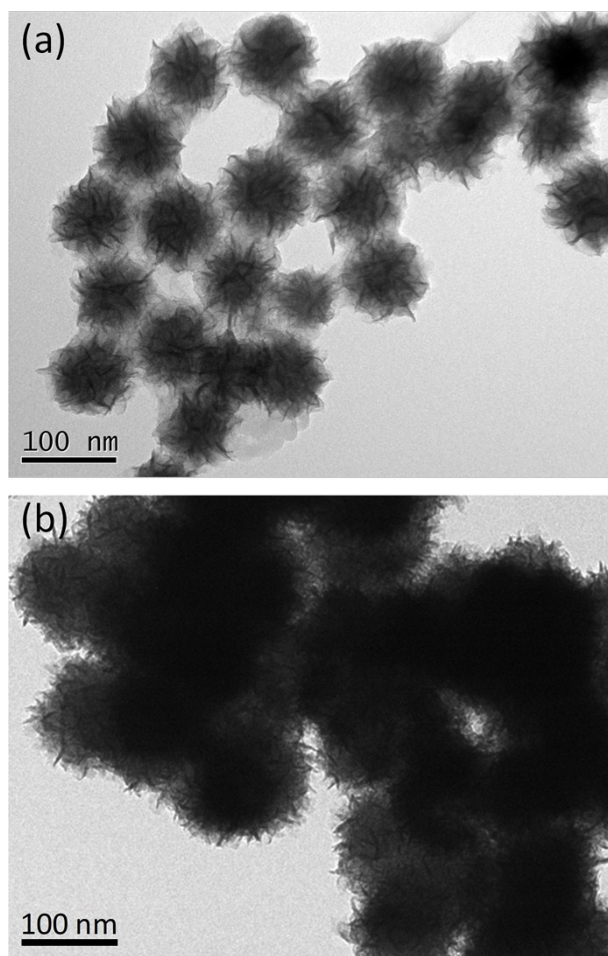
### **Largely Enhanced Photocatalytic Hydrogen Production for CdS/(Au-ReS<sub>2</sub>) Nanospheres by the Dielectric-Plasmon Hybrid Antenna Effect**

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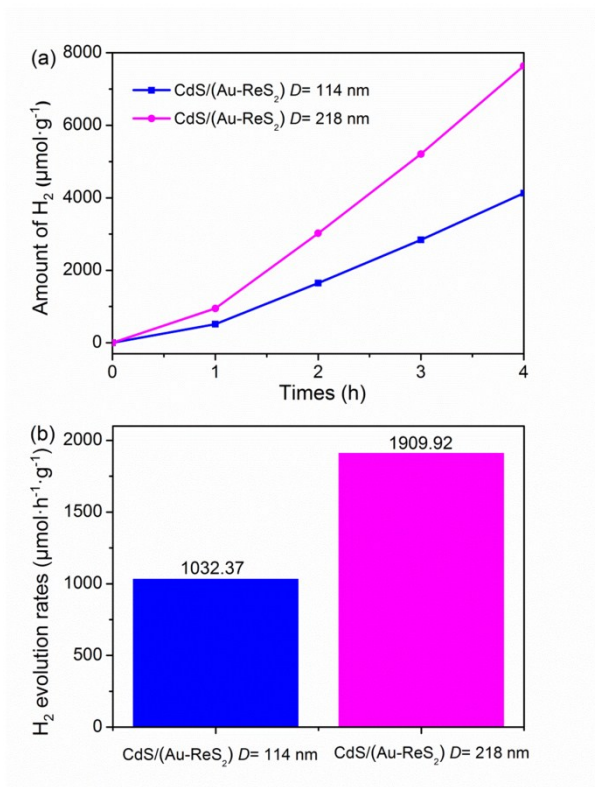
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**Figure S1.** TEM images of ReS<sub>2</sub> nanospheres with an average diameter of  $114 \pm 11$  nm (a) and  $218 \pm 25$  nm (b).



**Figure S2.** (a) Time evolution for photocatalytic generation of the H<sub>2</sub> evolution amount versus irradiation time for CdS/(Au-ReS<sub>2</sub>) complex with  $D = 114 \pm 11$  nm and  $D = 218 \pm 25$  nm. (b) Comparison of the H<sub>2</sub> evolution activities of CdS/(Au-ReS<sub>2</sub>) complex with  $D = 114 \pm 11$  nm and  $D = 218 \pm 25$  nm.