

Supporting Information

Phosphorus-doped molybdenum disulfide facilitating the photocatalytic hydrogen production of CdS nanorod

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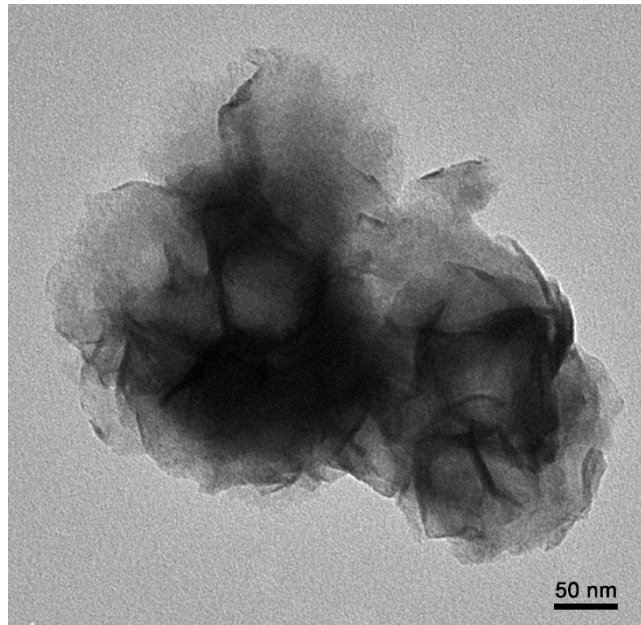


Fig. S1 TEM images of MoS₂ sample.

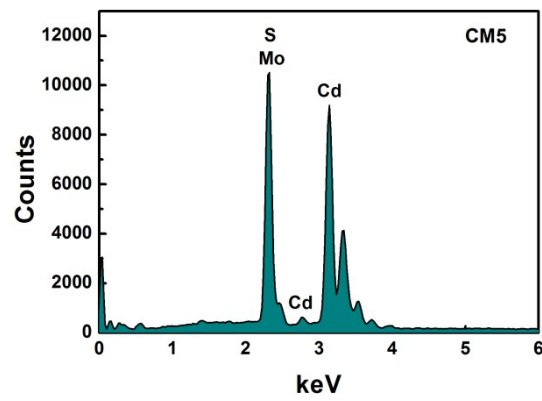


Fig. S2 EDS spectra of CM5.

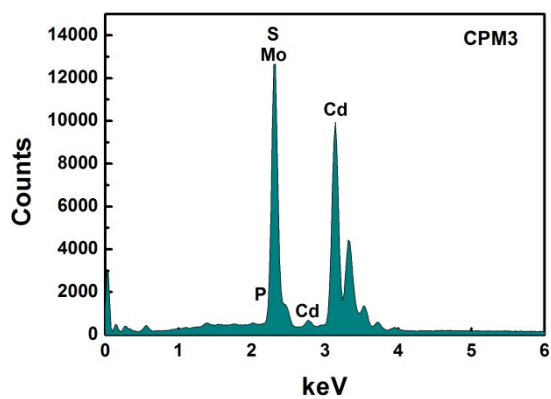


Fig. S3 EDS spectra of CPM3.

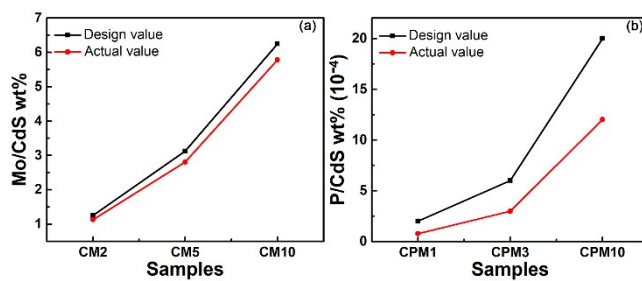


Fig. S4 Comparison of the design value and the actual value mass ratio of (a) Mo/CdS in CM2, CM5, and CM10 samples, (b) P/CdS in CPM1, CPM3, and CPM10 samples.

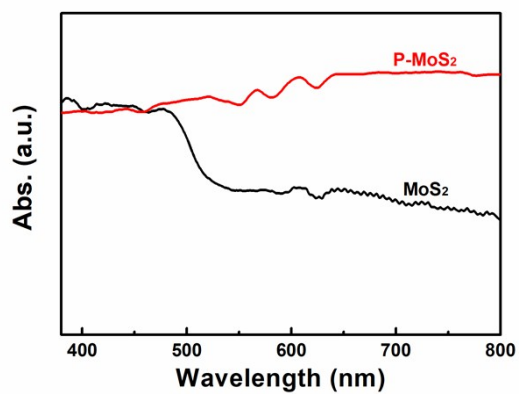


Fig. S5 UV-vis diffuse reflection spectra of MoS₂ and P-MoS₂.

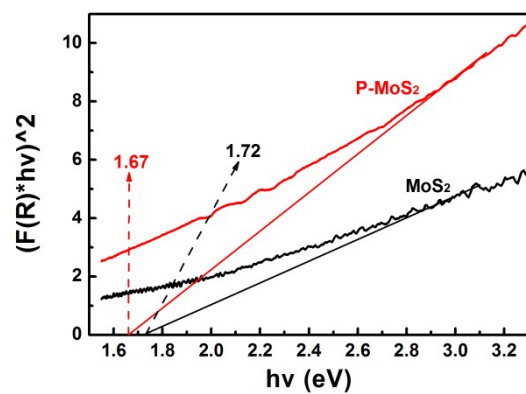


Fig. S7 The plot of transformed Kubeka-Munk function vs. the energy of MoS₂, and P-MoS₂.

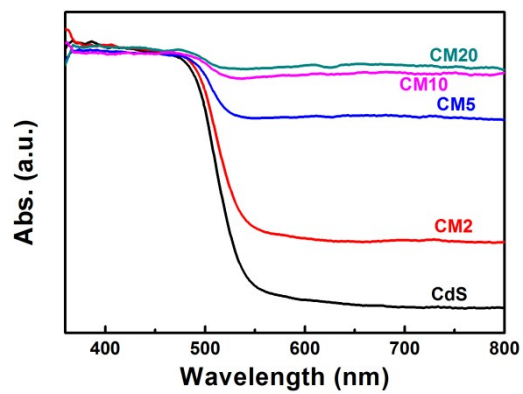


Fig. S6 UV-vis diffuse reflection spectra of CdS, CM2, CM5, CM10 and CM20.

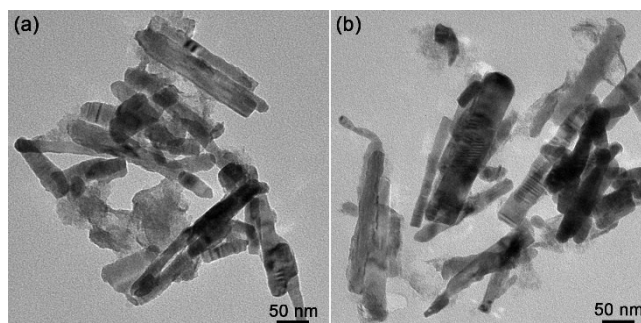


Fig. S8 TEM images of CM5 and CPM3 after the photocatalytic reaction.

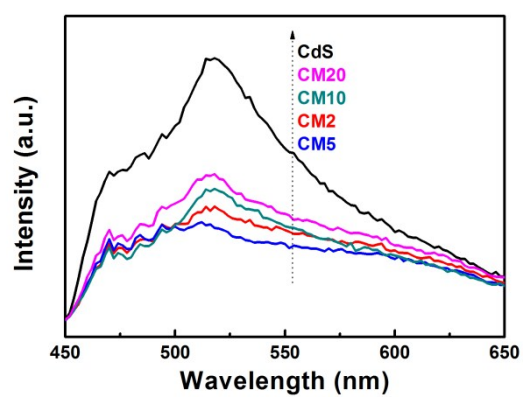


Fig. S9 PL spectra of CdS, CM2, CM5, CM10 and CM20.

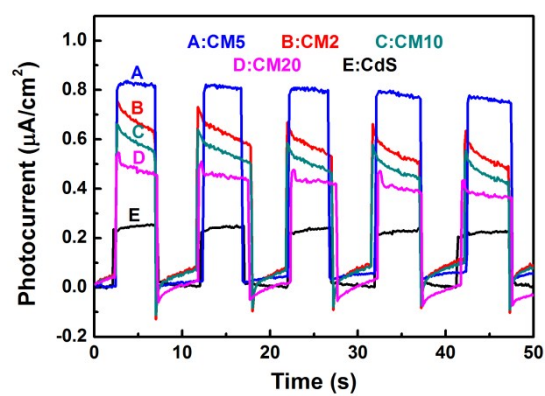


Fig. S10 Photocurrent responses of CdS, CM2, CM5, CM10 and CM20 electrodes.

Table S1 The overpotentials of CdS, CM5, CPM1, CPM3 and CPM10 at a current density of 10 mA cm^{-2} .

Samples	CdS	CM5	CPM1	CPM3	CPM10
The overpotential value (mV)	756	663	497	453	581