Supporting imformation

Immobilizing CdS nanoparticles and MoS_2/RGO on Zr-based metal-organic framework 12-tungstosilicate@UiO-67 toward enhanced photocatalytic H_2 evolution

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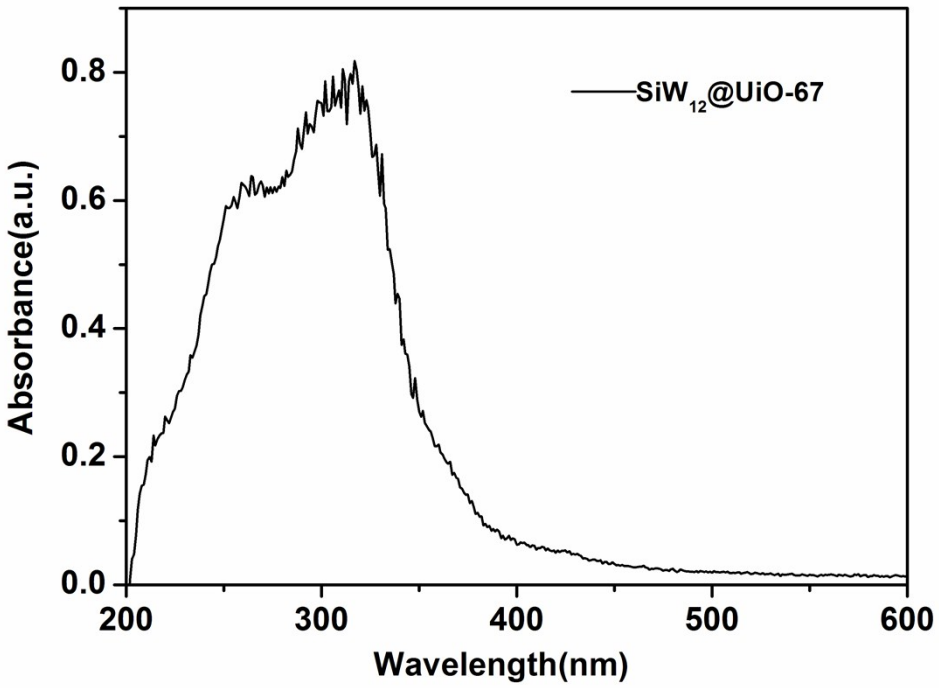

Fig. S1 UV-vis diffuse reflection spectra of SiW_{12}@UiO-67.

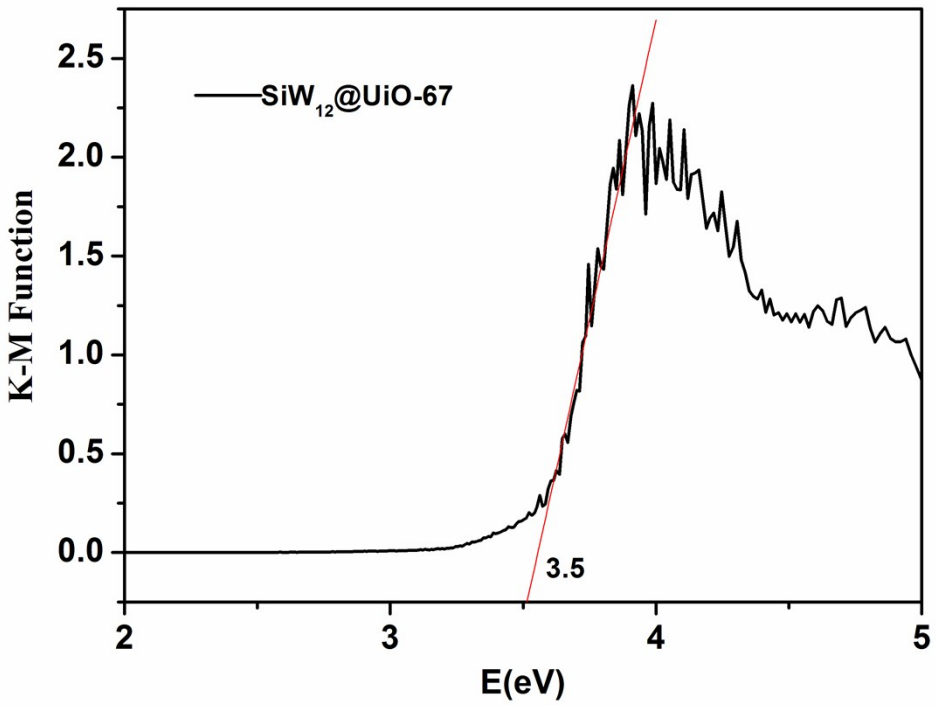

Fig. S2 K-M function versus *E* (eV) of SiW_{12}@UiO-67.

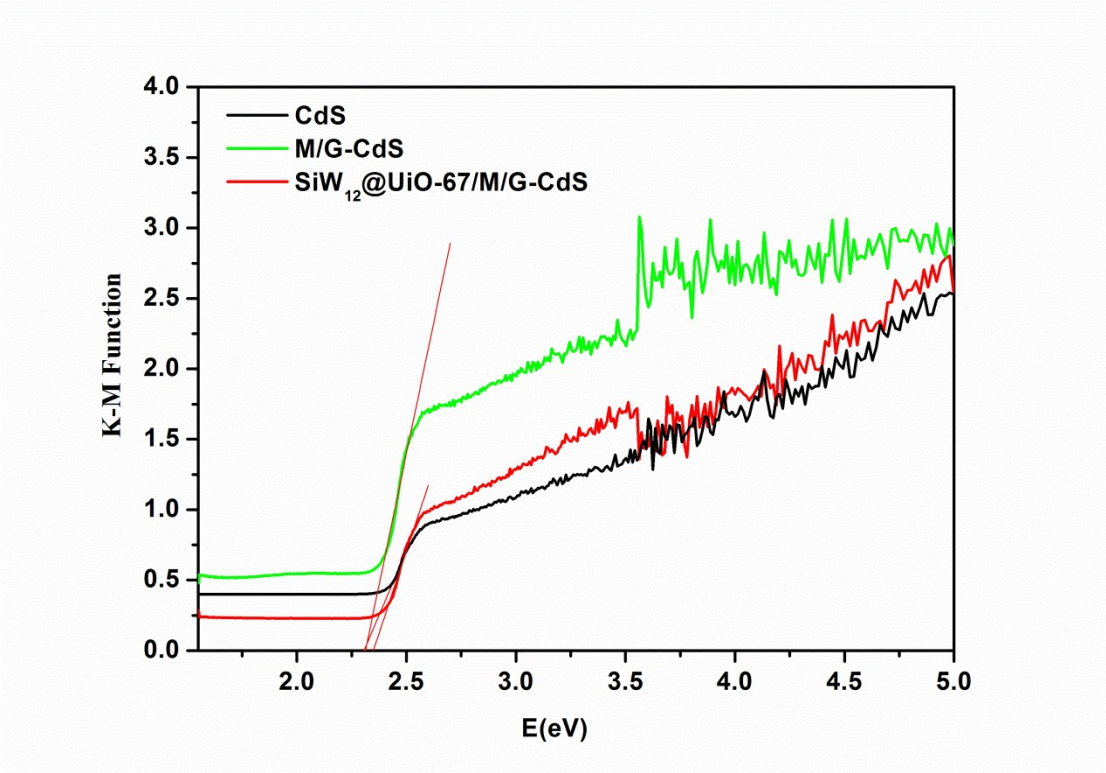

Fig. S3 K-M function versus *E* (eV) of CdS, M/G-CdS, and SiW_{12}@UiO-67/M/G-CdS.

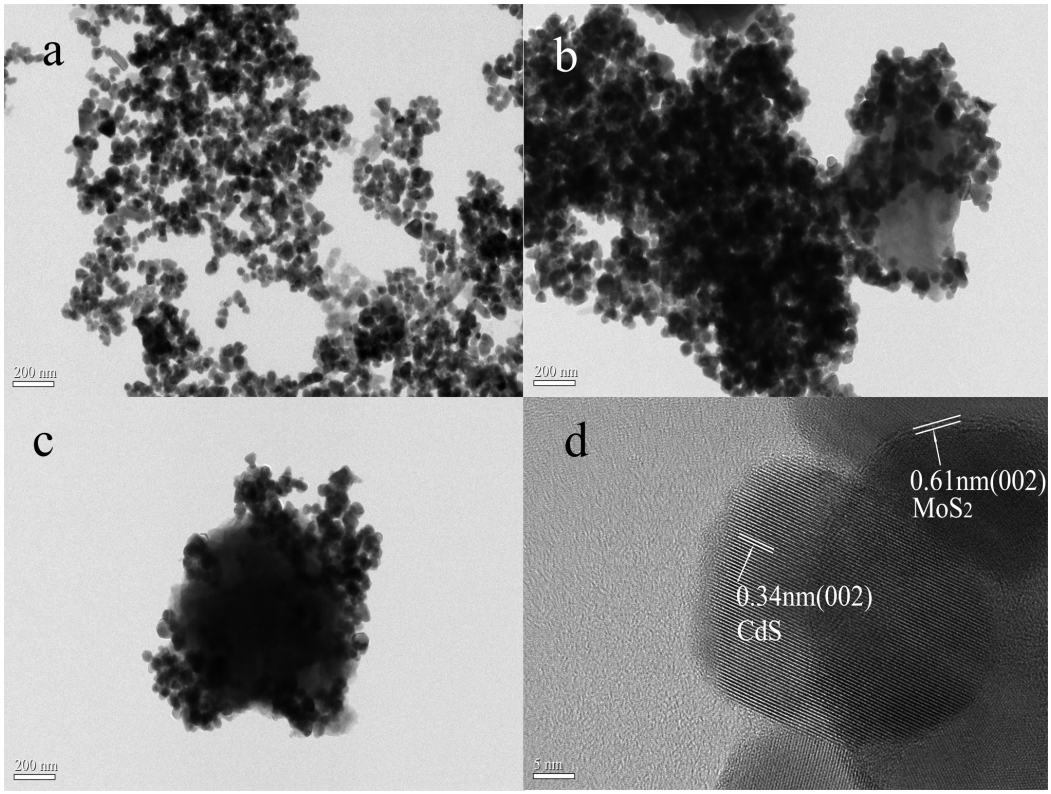

Fig. S4 TEM images of CdS (a), SiW_{12}@UiO-67/M/G-CdS (b, c), and HRTEM images of SiW_{12}@UiO-67/M/G-CdS composites.

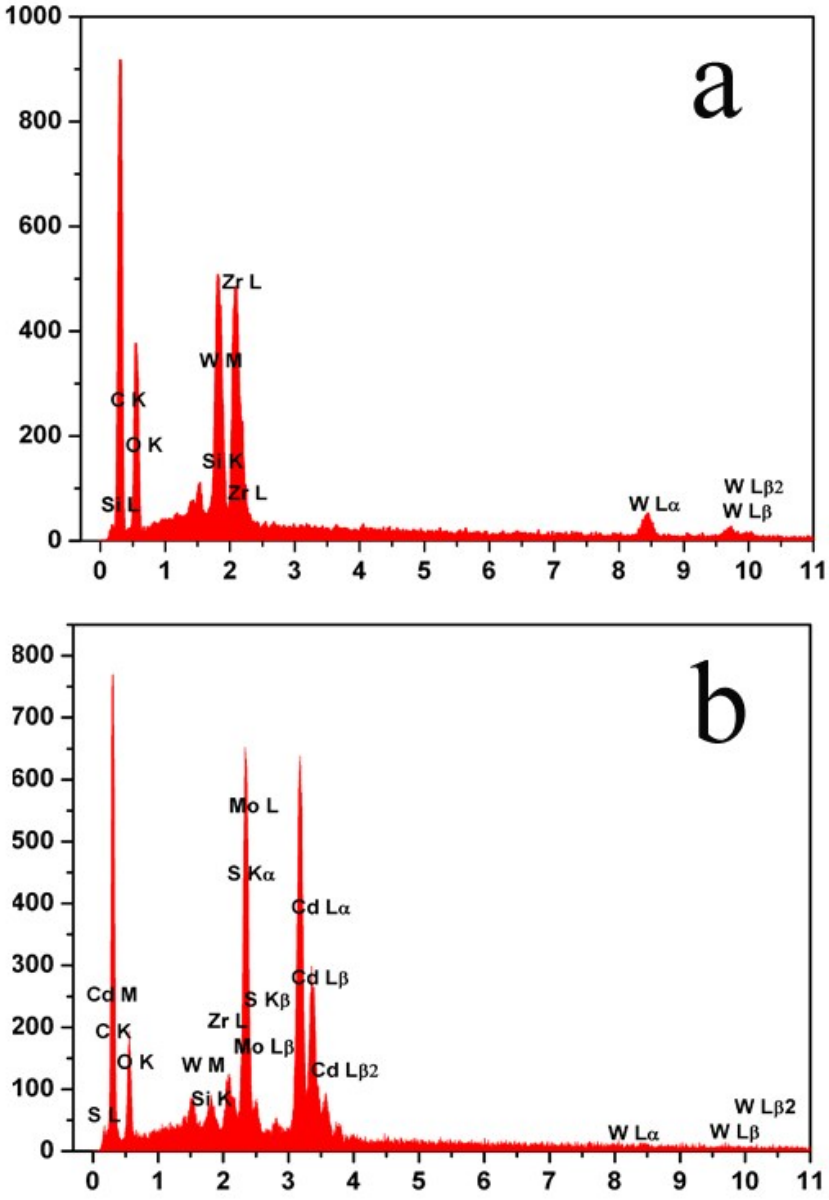

Fig. S5 EDX of SiW_{12}@UiO-67 (a) and SiW_{12}@UiO-67/M/G-CdS (b).

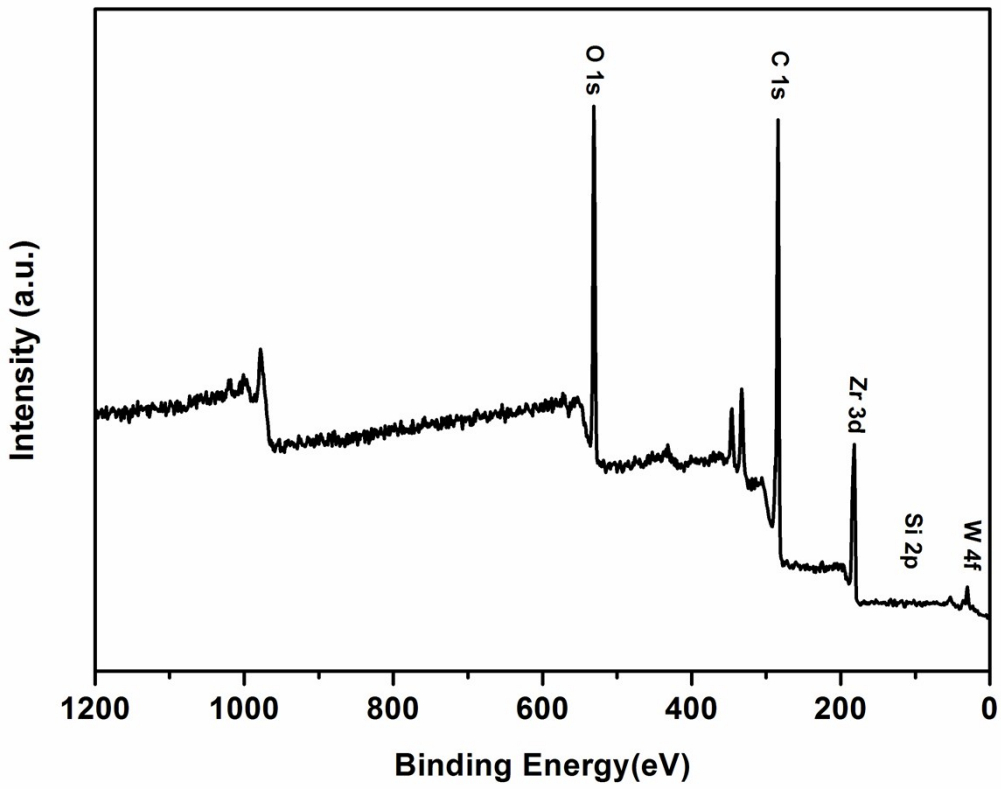

Fig. S6 XPS survey spectrum of SiW_{12}@UiO-67.

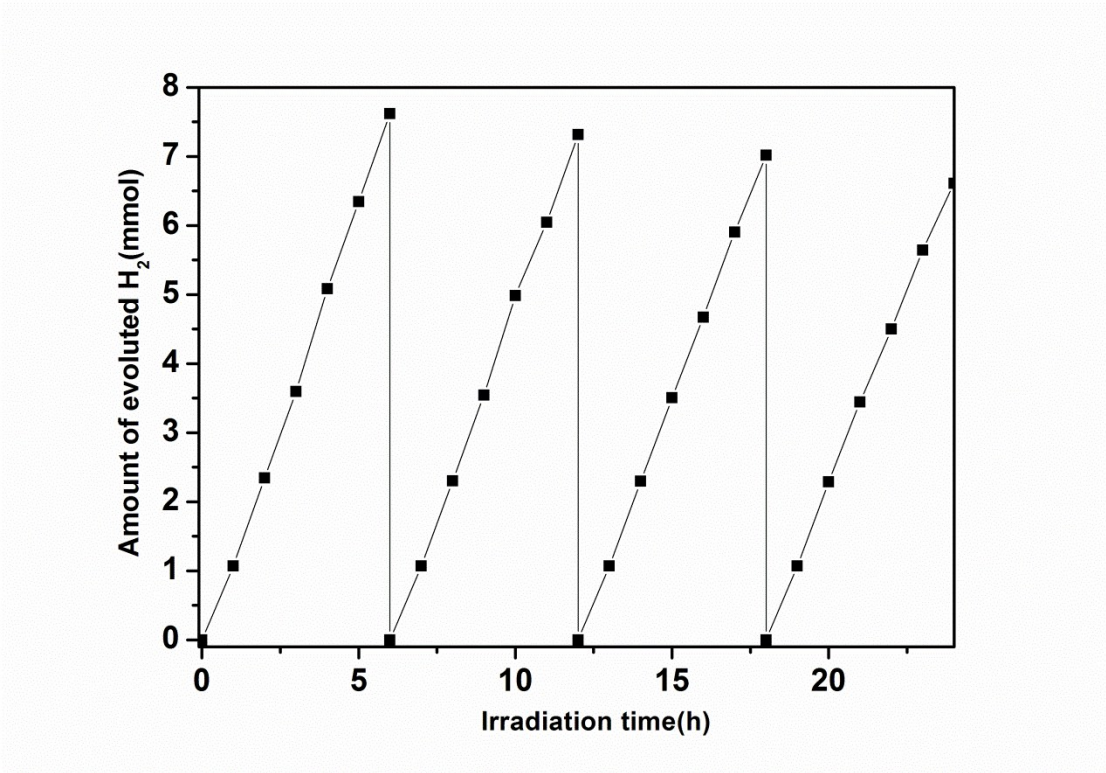

Fig. S7 Time course of H_2 evolution for repeated cycles of photocatalytic experiments over SiW_{12}@UiO-67/M/G-CdS composite.

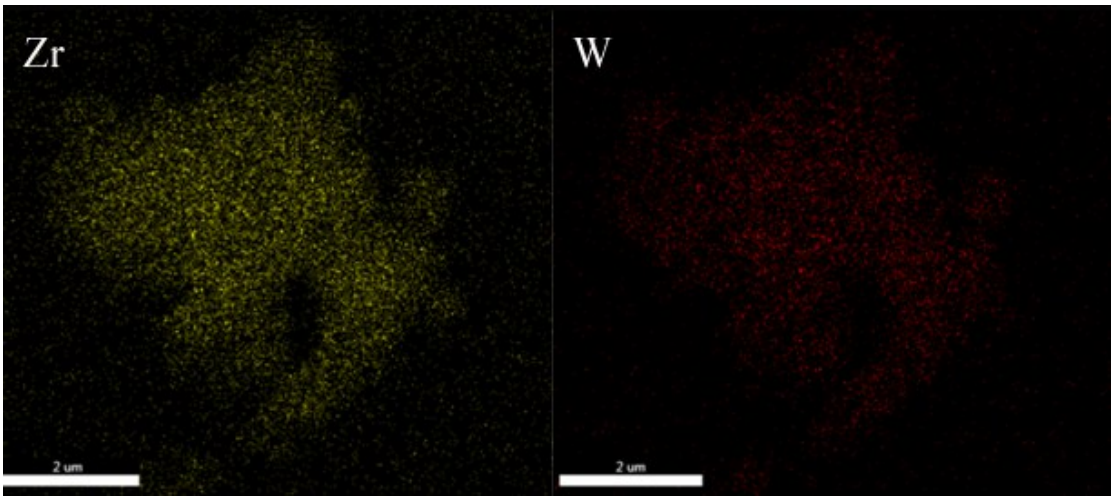

Fig. S8 The element mappings of Zr and W in SiW_{12}@UiO-67. From the observation of the element mappings of Zr and W, SiW_{12} are uniformly distributed in the SiW_{12}@UiO-67 sample.

Table S1. Specific surface area, pore volume and H_2 evolution rate of different photocatalysts.

Sample	S_{BET} (m^2/g)	Pore volume (m^3/g)	R (mmol)
UiO-67	1410.9	0.68	0
SiW_{12}@UiO-67	540.4	0.28	0.004
M/G-CdS	18.3	0.028	0.63
SiW_{12}@UiO-67/M/G-CdS	31.5	0.022	1.27