

# Fabrication of Noble-Metal-Free Mo<sub>2</sub>C/CdIn<sub>2</sub>S<sub>4</sub> Heterojunction Composites With Elevated Carrier Separation for Photocatalytic Hydrogen Production

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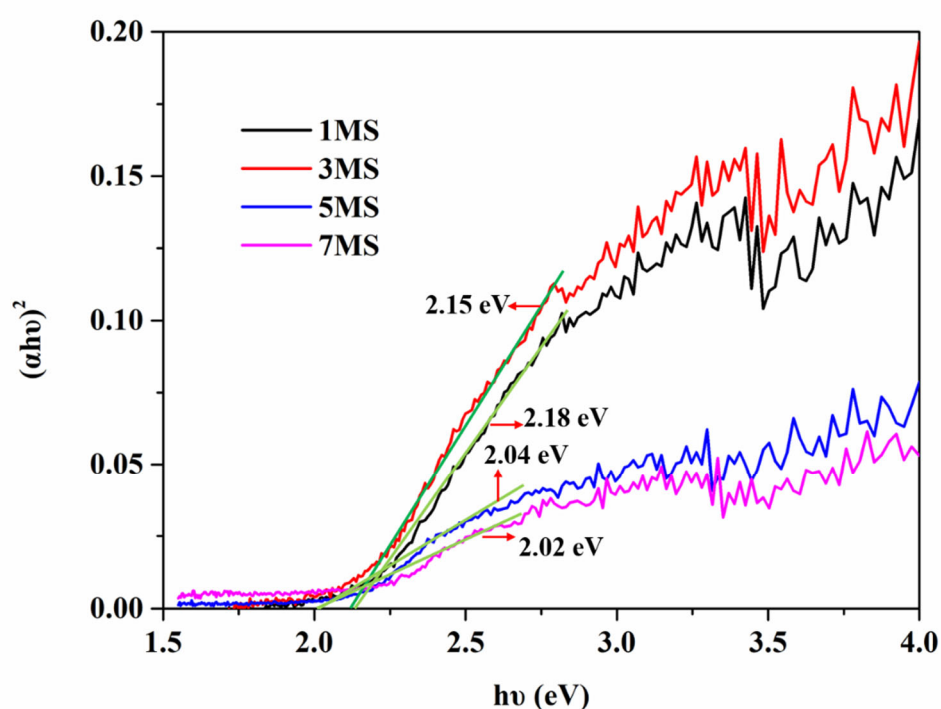


Fig. S1 Tauc's curve of MS heterojunction composites.

**Table S1. The incident radiation intensity entering the photoreactor is shown in the table below.**

	1	2	3	4	5	6	7	8	9
Optical power density (mW/cm <sup>2</sup> )	146.5	45.4	56.7	63.6	40.6	53.3	34.8	53.7	50.4

Average value (mW/cm <sup>2</sup> )	60.6
Reactor area (cm <sup>2</sup> )	19.6
Incident radiation intensity (mW)	1186.9

We measured the intensity of the incident radiation entering the photoreactor by an optical power meter (CEL-2000-2, China). Calculate the intensity of incident radiation by measuring the optical power density at ten different positions of the photoreactor according to the following formula:

$$E = P_{\text{Average}} * A$$

Where E,  $P_{\text{Average}}$  and A stand for the intensity of the incident radiation, the power density of light and the irradiation area, respectively.

**Table S2. Comparison of hydrogen evolution data of Mo<sub>2</sub>C/CdIn<sub>2</sub>S<sub>4</sub> composites compared with other literature reports.**

Photocatalysts	Noble metal	H <sub>2</sub> evolution	Ref.
Mo <sub>2</sub> C/CdIn <sub>2</sub> S <sub>4</sub>	No	1178.32 $\mu\text{mol g}^{-1} \text{h}^{-1}$	This work
MoP/CdIn <sub>2</sub> S <sub>4</sub>	No	286.10 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[1]
Co <sub>2</sub> P/CdIn <sub>2</sub> S <sub>4</sub>	No	471.87 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[2]
Co <sub>9</sub> S <sub>8</sub> /CdIn <sub>2</sub> S <sub>4</sub>	No	1083.6 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[3]
CdIn <sub>2</sub> S <sub>4</sub> /CNFs/Co <sub>4</sub> S <sub>3</sub>	No	25.87 mmol $\text{g}^{-1} \text{h}^{-1}$	[4]
ZnIn <sub>2</sub> S <sub>4</sub> /CdIn <sub>2</sub> S <sub>4</sub>	0.75 wt% PdS	780 $\mu\text{mol h}^{-1}$	[5]
MoS <sub>2</sub> /CdIn <sub>2</sub> S <sub>4</sub>	No	1868.19 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[6]
MoS <sub>x</sub> /CdIn <sub>2</sub> S <sub>4</sub>	No	2846.73 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[7]
In <sub>2</sub> S <sub>3</sub> /CdIn <sub>2</sub> S <sub>4</sub> /In <sub>2</sub> O <sub>3</sub>	Pt	2004 $\mu\text{mol g}^{-1} \text{h}^{-1}$	[8]

## References

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