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## **Supporting Information**

Ternary photocatalysts based on MOF-derived  $TiO_2$  co-decorated with  $ZnIn_2S_4$  nanosheets and CdS nanoparticles for effective visible light degradation of organic pollutants

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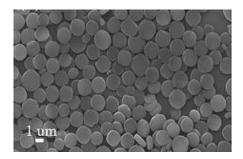
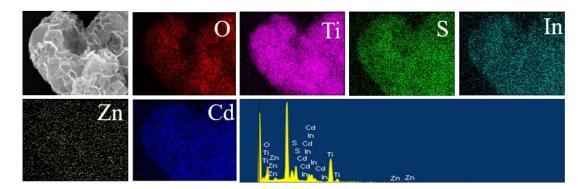


Fig. S1 SEM image of MIL-125.



 $\textbf{Fig. S2} \ EDS \ mapping \ of \ CdS/ZnIn_2S_4/TiO_2\text{-II}.$ 

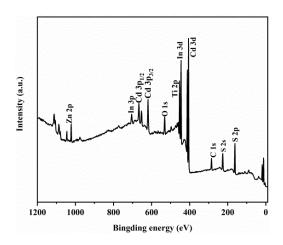


Fig. S3 XPS survey scan spectrum of CdS/ZnIn<sub>2</sub>S<sub>4</sub>/TiO<sub>2</sub>-II.

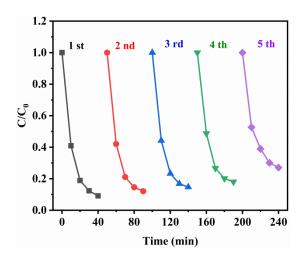
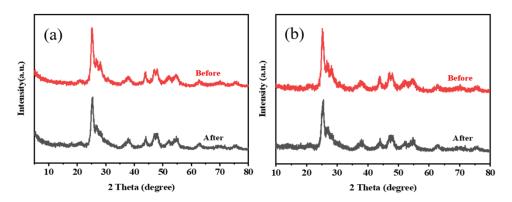
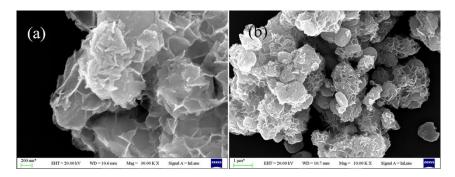


Fig. S4 Recycling experiments of photocatalytic TC degradation.



**Fig. S5** XRD patterns of CdS/ZnIn<sub>2</sub>S<sub>4</sub>/TiO<sub>2</sub>-II before and after 5-cycle test in the photodegradation of RhB (a) and TC (b).



 $\label{eq:Fig.S6} \textbf{Fig. S6} \ \text{SEM} \ \text{images of CdS/ZnIn}_2S_4/\text{TiO}_2\text{-II} \ \text{after 5-cycle test in the photodegradation of RhB (a)}$  and TC (b).