

# MXene as non-metal charge mediator in 2D layered CdS@Ti<sub>3</sub>C<sub>2</sub>@TiO<sub>2</sub> composites with superior Z-scheme visible light-driven photocatalytic activity

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## Supporting Information

**Table S1.** Elemental analysis (weight percentage) of as-prepared samples.

Samples	Ti (at.%)	C (at.%)	O (at.%)	S (at.%)	Cd (at.%)
Ti <sub>3</sub> C <sub>2</sub>	83.78	13.54	2.68	-	-
Ti <sub>3</sub> C <sub>2</sub> @TiO	74.63	8.41	16.96	-	-
2					
1:1CTT	62.54	7.23	13.22	3.81	13.20
2:1CTT	50.06	5.69	10.81	7.35	26.09
3:1CTT	37.52	4.03	8.12	11.39	38.94
4:1CTT	24.19	2.45	5.21	15.37	52.78

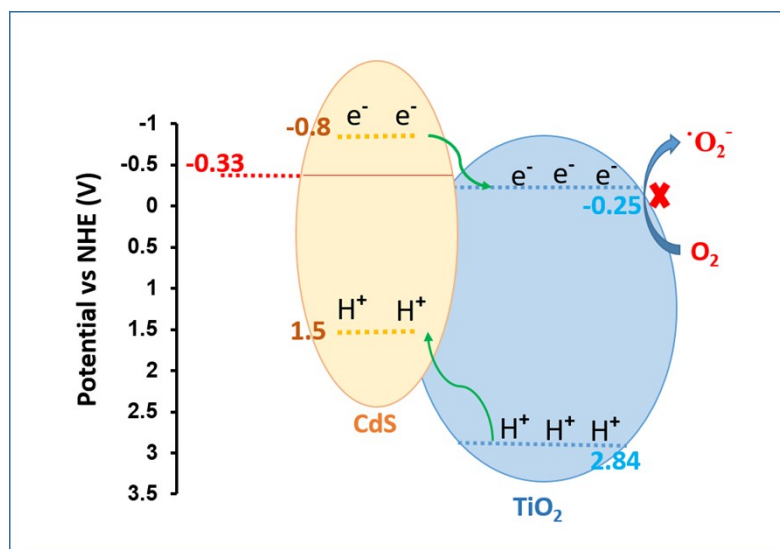


Fig. S1 The photocatalytic mechanism of conventional Type-II CdS@TiO<sub>2</sub> heterojunction.