Supporting information for:

NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 catalyst promoting visible-light photocatalytic H_2 production

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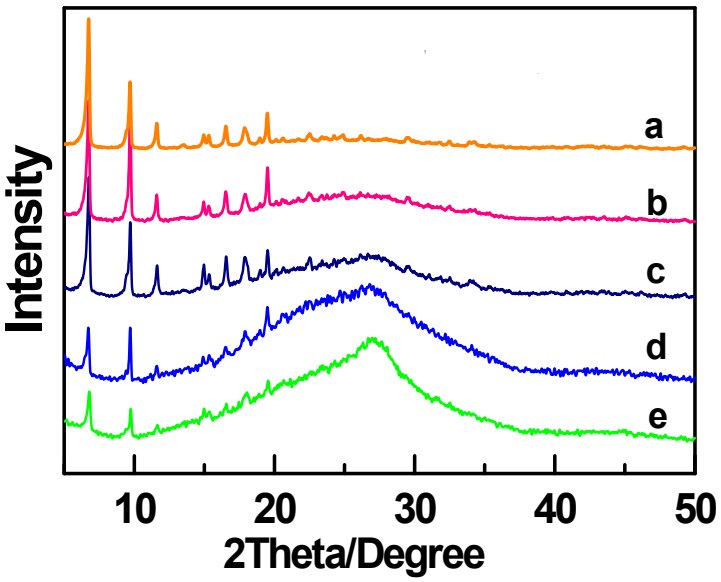

Figure S1. XRD patterns of NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 composites prepared with a mass ratio of NH_2-MIL-125 (Ti) to Pt/g-C_3N_4 of 2:1 (a), 1:1 (b), 1:2 (c), 1:7 (d) and 1:9 (e).

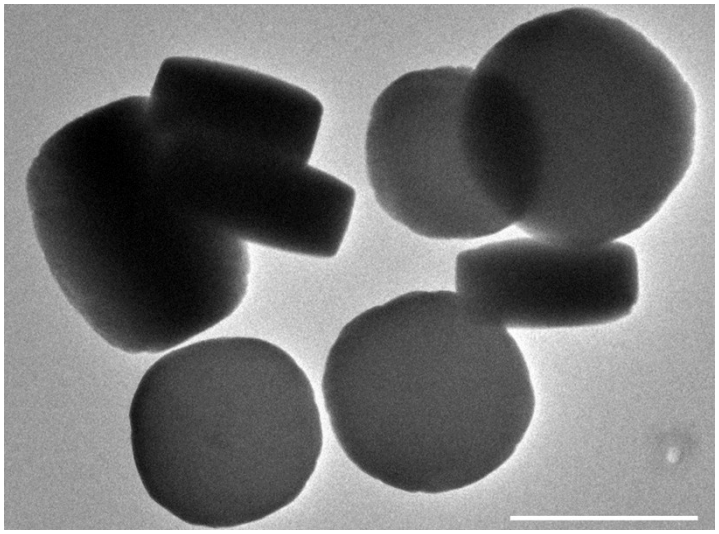

Figure S2. TEM image of NH_2-MIL-125 (Ti). Scale bar, 500 nm.

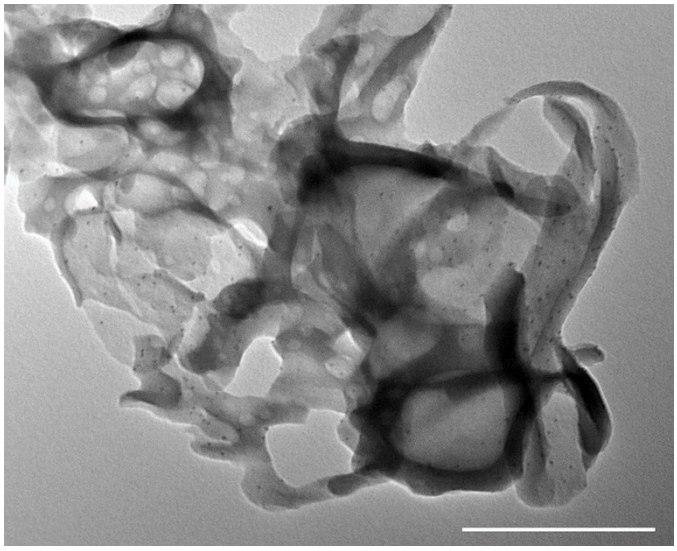

Figure S3. TEM image of Pt/g-C_3N_4. Scale bars, 200 nm.

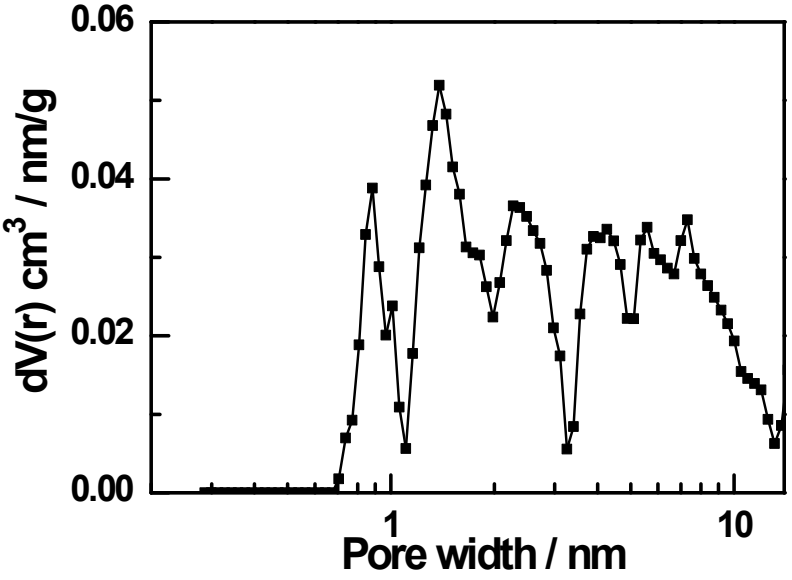

Figure S4. Pore diameter distribution of NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 composite prepared with a mass ratio of NH_2-MIL-125(Ti) to Pt/g-C_3N_4 of 1:5.

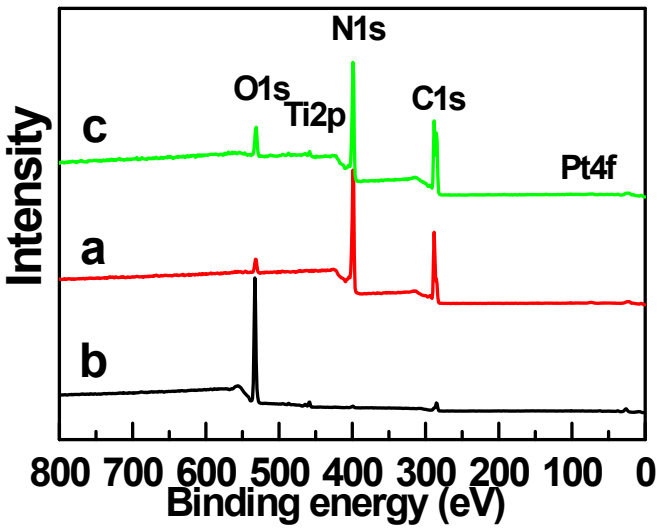

Figure S5. Wide-scan XPS spectra of NH_2-MIL-125 (Ti) (a), Pt/g-C_3N_4 (b) and NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 composite prepared with a mass ratio of NH_2-MIL-125(Ti) to Pt/g-C_3N_4 of 1:5 (c).

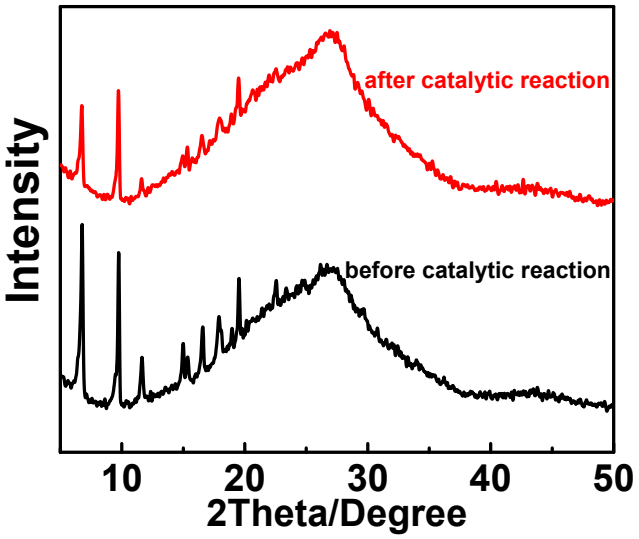

Figure S6. XRD patterns of the pristine NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 composite prepared with a mass ratio of NH_2-MIL-125(Ti) to Pt/g-C_3N_4 of 1:5 and the NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 photocatalyst after use.

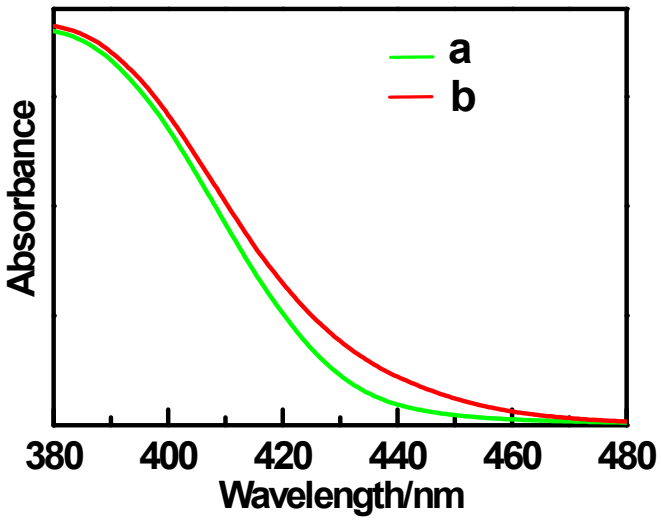

Figure S7. UV–vis absorption spectra of Pt/g-C_3N_4 (a) and NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 composite prepared with a mass ratio of NH_2-MIL-125(Ti) to Pt/g-C_3N_4 of 1:5 (b).

Table S1. Comparison of NH_2-MIL-125 (Ti)/Pt/g-C_3N_4 photocatalyst with other photocatalysts reported in literatures.

Photocatalytic systems	**Light source**	**Sacrificial agent**	**H_2 evolution ($umol \cdot g^{-1} \cdot h^{-1}$)**	**Ref.**
g-C_3N_4/NH_2-MIL-125/Ni/Pd	visible-light	TEOA	8700	S1
g-C_3N_4/Pt/GO	visible-light	TEOA	3820	S2
Pt@MIL-125/Au	>380 nm	TEOA	1743	S3
TCPP1/Pt/g-C_3N_4	>380 nm	TEOA	1208	S4
g-C_3N_4/NH_2-MIL-125	>320 nm	TEOA	1123	S5
Pt@O-g-C_3N_4	>420 nm	TEOA	732	S6
Pt/NH_2-MIL-125	>420 nm	TEOA	516	S7
Pt/NH_2-MIL-125	>420 nm	TEOA	333	S8
Nax-C_3N_4/Pt@UiO-66	>380 nm	TEA	471	S9
NH_2-MIL-125 (Ti)/Pt/g-C_3N_4	>380 nm	TEOA	3986	This work

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