catalysts

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Supplementary Information

Embedding Thiophene-Amide into g-C_3N_4 Skeleton With Induction and Delocalization Effects for High Photocatalytic H_2 Evolution

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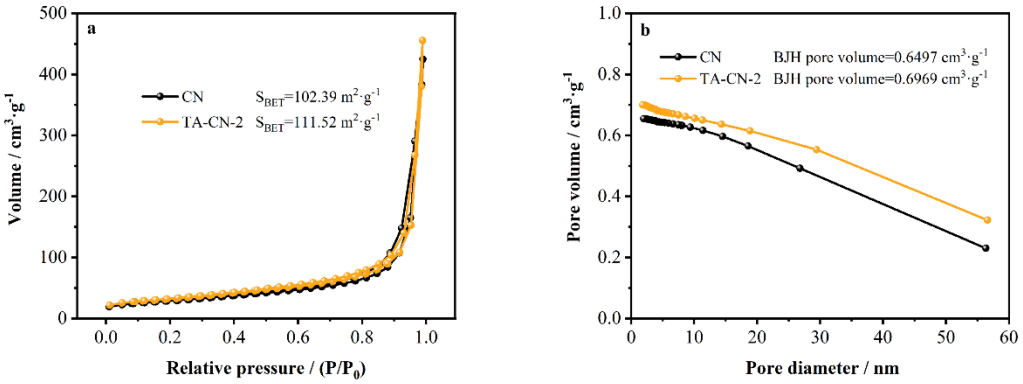

Figure S1. N_2 adsorption-desorption isotherms (**a**) and pore diameter distributions (**b**) of CN and TACN-2.

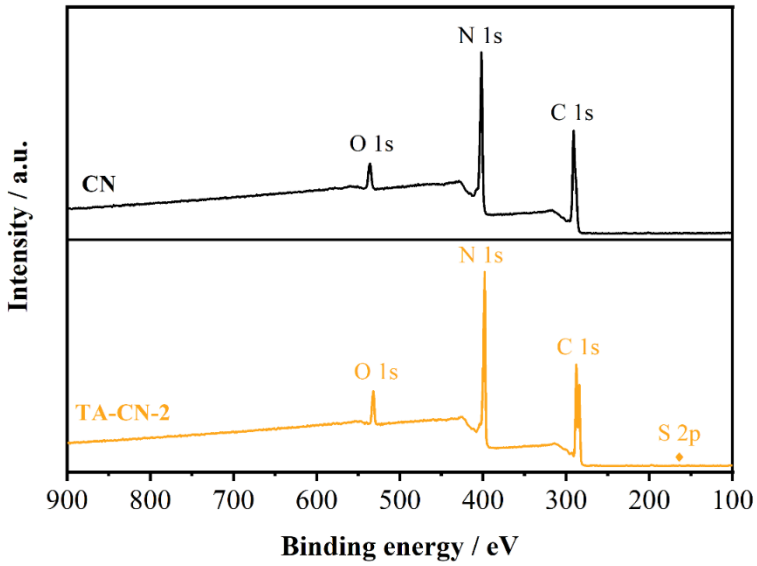

Figure S2. XPS survey spectra of CN and TA-CN-2.

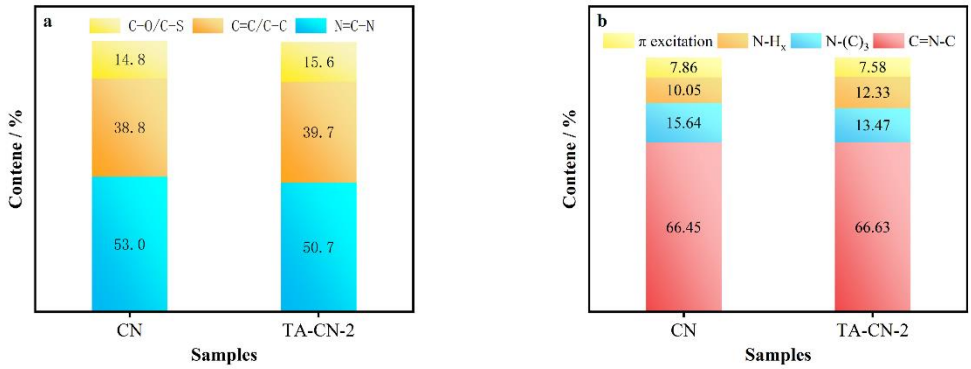

Figure S3. Percentages of (**a**) carbon species and (**b**) nitrogen species of CN and TA-CN-2.

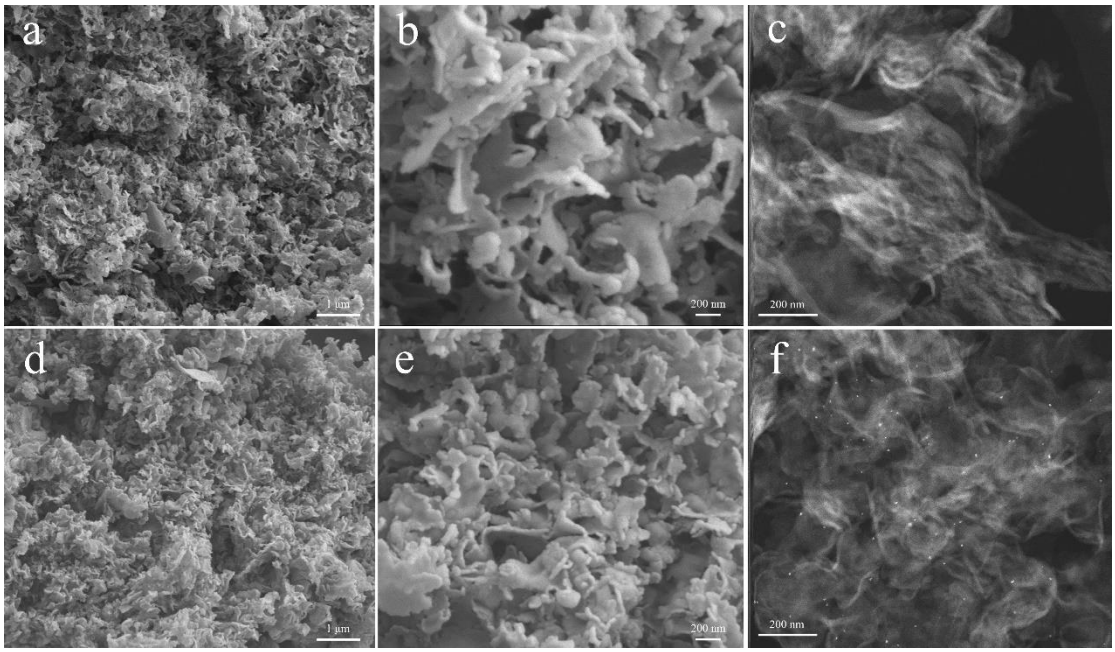

Figure S4. SEM images (**a**,**b**) and HAADF image (**c**) of the fresh TA-CN-2 (before the stability test); SEM images (**c**,**d**) and HAADF image (**e**) of the used TA-CN-2 (after the stability test).

Table S1. Comparison of photocatalytic performance over conjugated structure embedded g-C_3N_4 catalysts reported.

Photocatalysts	Light Source	Sacrificial Reagent	Rate	Rate Times (than pure g-C_3N_4 in each work)	Ref.
SCN-BTH	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	3.9 mmol·h^{-1}·g^{-1}	13.3	[S1]
PYM_{100}-CN	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	5.4 mmol·h^{-1}·g^{-1}	11.6	[S2]
g-C_3N_4-$4AAP_{15}$	Xe lamp, > 420 nm, 300W	20 vol% TEOA aqueous	248.2 μmol·h^{-1}	9.0	[37]
TA-CN-2	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	245.4 μmol·h^{-1}	8.4	This work
$NP\text{-}CN_{0.2}$	Xe lamp, > 420 nm, 300W	20 vol% TEOA aqueous	139.6 μmol·h^{-1}	8.2	[S3]
CHD-g-C_3N_4-1.5	Xe lamp, > 420 nm, 300W	20 vol% TEOA aqueous	522.0 μmol·h^{-1}·g^{-1}	6.3	[S4]
$CN\text{-}DAP_{36}$	white-light-emitting diode (LED), 5 W	10 vol% TEOA aqueous	2.8 mmol·h^{-1}·g^{-1}	6.1	[67]
10DAPCN	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	6.56 mmol·h^{-1}·g^{-1}	4.5	[S5]
2AP-CN-15	Xe lamp, > 420 nm, 300W	20 vol% TEOA aqueous	6.3 mmol·h^{-1}·g^{-1}	3.9	[35]
$GCN\text{-}NA_{100}$	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	102.1 μmol·h^{-1}	3.5	[39]
$CN\text{-}TA_{20}$	Xe lamp, > 420 nm, 300W	10 vol% TEOA aqueous	8.9 μmol·h^{-1}	3.4	[S6]

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