Electronic Supplementary Material (ESI) for Nanoscale.

Doping effect of non-metal group in porous ultrathin g-C_3N_4 nanosheets towards synergistically improved photocatalytic hydrogen evolution

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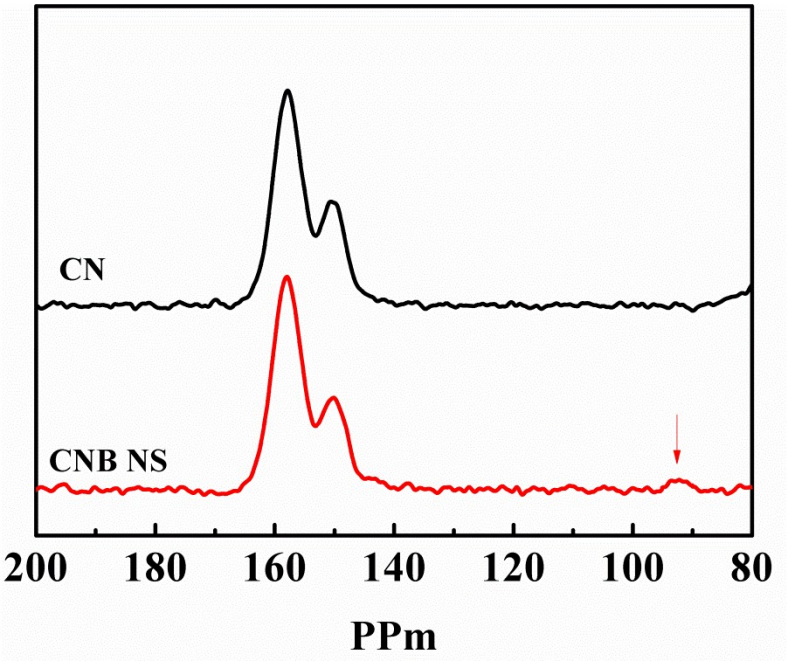

Figure S1. Solid-state ^{13}C NMR spectra of CN and CNB NS.

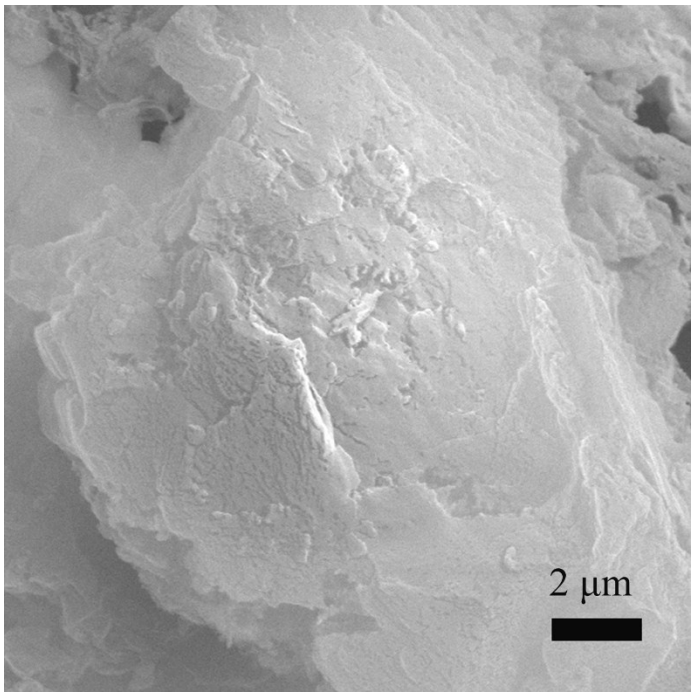

Figure S2. SEM image of CNH

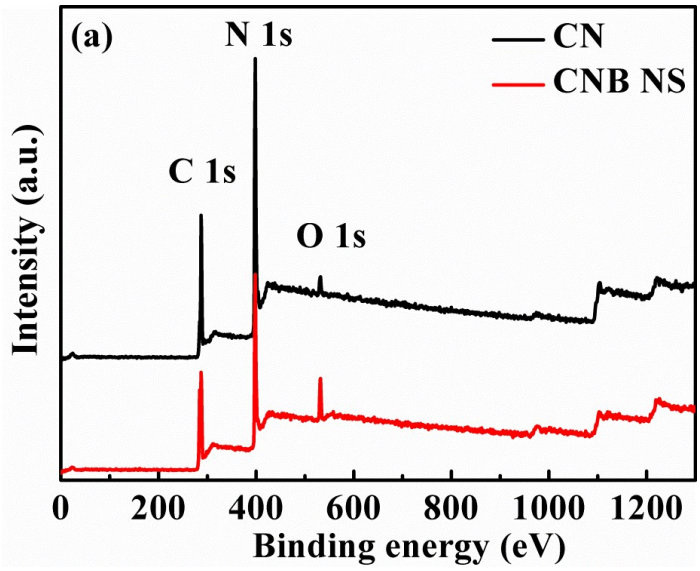

Figure S3. XPS survey spectra of CN and CNB NS.

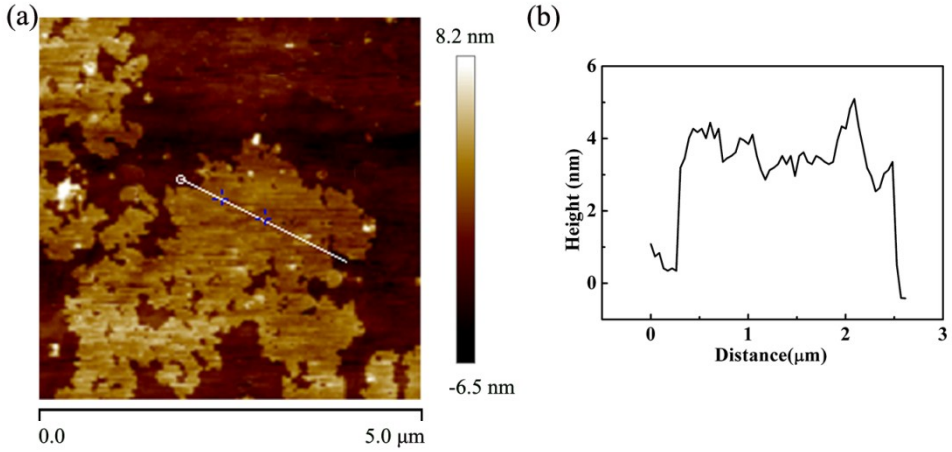

Figure S4. AFM (a) and corresponding height images (b) of CNB NS

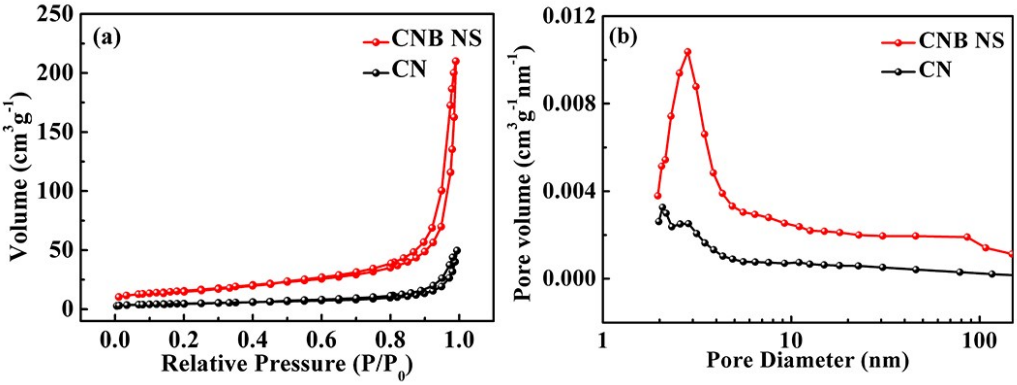

Figure S5. Nitrogen adsorption–desorption isotherms (a) and the corresponding pore size distribution curves (b) of CN and CNB NS.

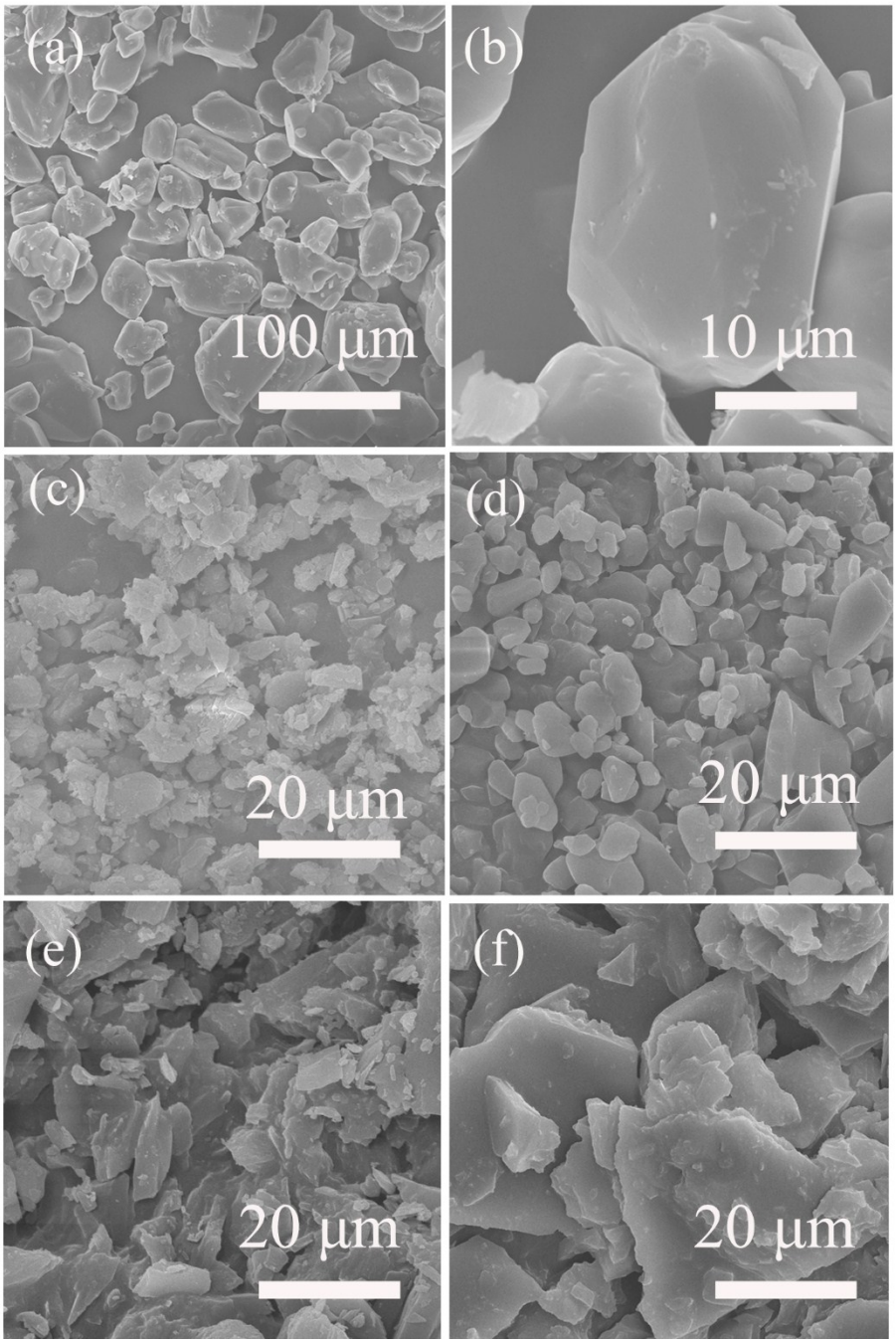

Figure S6. SEM images of melamine (a and b), melamine and BA before the pretreated with a hydrothermal process (c), melamine and BA after the pretreated with 2 hours hydrothermal process (d), melamine and BA after the pretreated with 6 hours hydrothermal process (e), melamine and BA after the pretreated with 10 hours hydrothermal process (f)

Table S1 The contribution ratio of different peaks in C 1s for CN and CNB according to XPS analysis

Sample	284.6 eV	286.3 eV	288.0 eV	293.5 eV
CN	13.98%	2.42%	79.72%	3.88%
CNB NS	28.75%	12.92%	56.55%	1.79%

Table S2 The contribution ratio of different peaks in N 1s for CN and CNB according to XPS analysis

Sample	398.4 eV	399.9 eV	401.1 eV	404.3 eV
CN	75.18%	16.26%	4.96%	3.60%
CNB NS	68.53%	19.85%	4.16%	7.46%

Table S3 Comparison of photocatalytic H_2 evolution of photocatalyst from recent publications.

Ref.	Photocatalyst	Sacrificial agent	The volume of the reaction solution (mL)	The wavelength	AQE (%)
This work	CNB NS	TEOA	300	420 nm	7.45
1	P-doped g-C_3N_4 nanosheets	TEOA	-	420 nm	3.56
2	HCN	TEOA	100	420 nm	5.0
3	g-C_3N_4 mesoporous nanomesh	TEOA	100	420 nm	5.1
4	P-g-C_3N_4 tubes	methanol	100	420 nm	5.68
5	CN–KCl/ 0.1 g NH_4Cl	TEOA	270	420 nm	5.7
6	Carbon-Rich g-C_3N_4	TEOA	50	400 nm	4.52
7	Copolymer g-C_3N_4	TEOA	100	420 nm	3.95

References

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