Electronic Supplementary Material (ESI) for Catalysis Science & Technology.
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Supporting Information for

Synergetic polarization effect of protonation and Fe-doping toward g-C_3N_4 with enhanced photocatalytic activity

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Additional figures and tables.

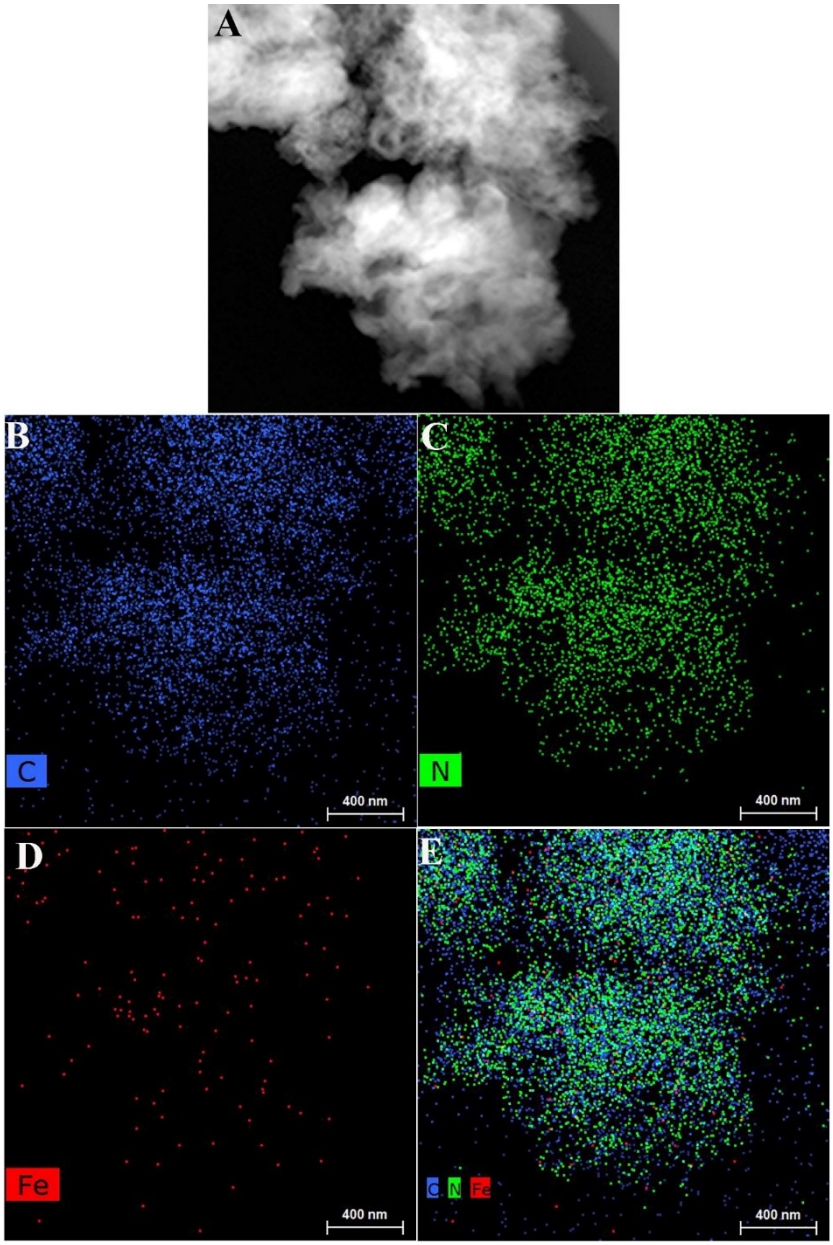

Figure S1. (A) The morphology and EDX-mapping images of C (B), N (C), Fe (D) and C, N , Fe elements for the as-prepared H-CN@Fe photocatalyst.

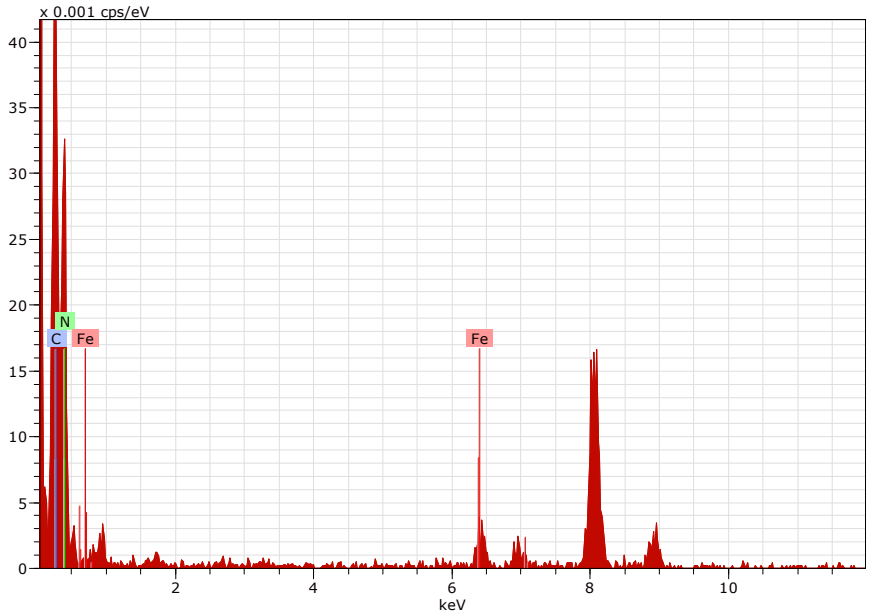

Figure S2. EDX patterns of as-prepared H-CN@Fe

Table S1. EDX element composition of as-prepared H-CN@Fe

Element	wt.%	at.%	Error
C-K	53.12	58.09	2.56
N-K	43.96	41.22	2.27
Fe-K	2.92	0.69	0.34

Table S2. The fitting results of EIS curves for CN, CN@Fe, H-CN, H-CN@Fe. Rs and Rct represents the solution resistance and the charge transfer resistance across the electrode-solution interface.

Sample	Rs (Ω)	Rct (Ω)
CN	4.39	6.22×10^4
CN@Fe	3.92	5.08×10^4
H-CN	3.79	4.58×10^4
H-CN@Fe	3.63	4.55×10^4

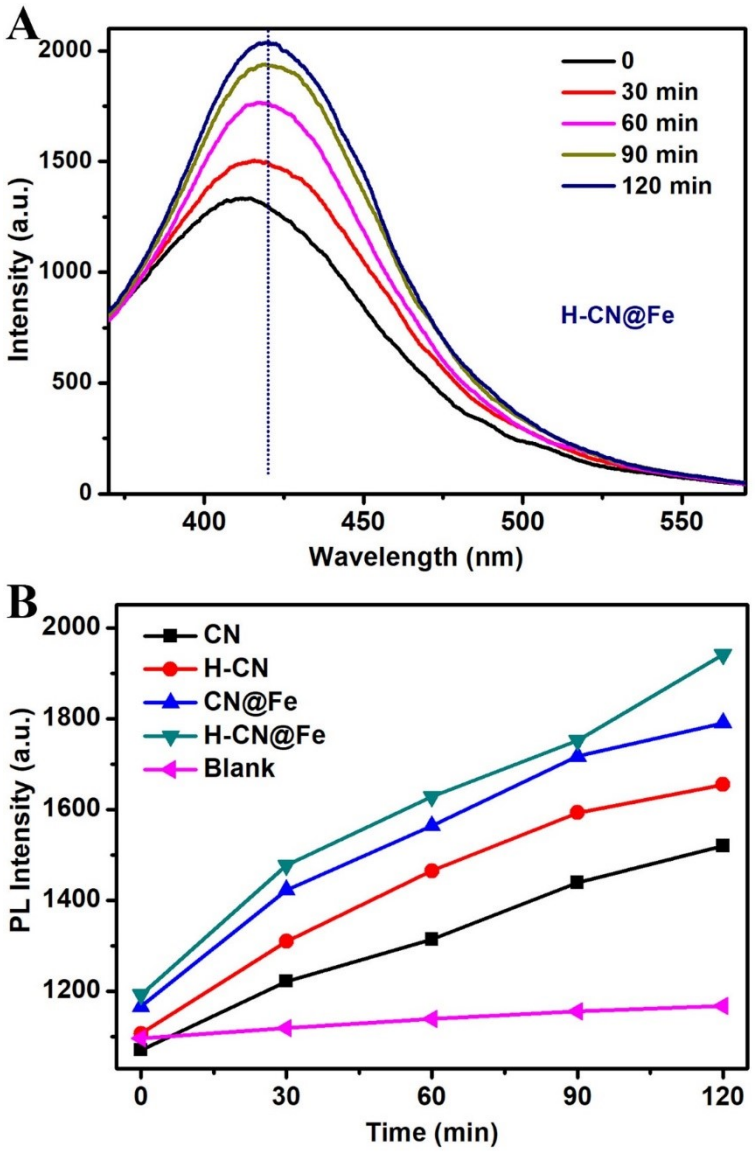

Figure S3. (A) Fluorescence spectra of TAOH solution over H-CN@Fe; (B) the PL intensity versus reaction time over CN, H-CN, CN@Fe and H-CN@Fe.

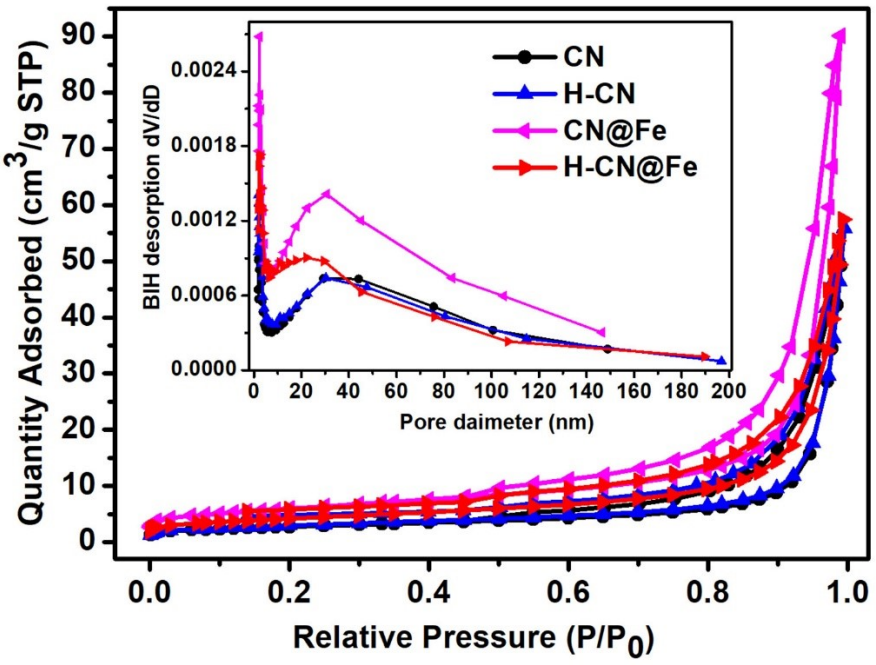

Figure S4. N_2 adsorption-desorption curves of CN, H-CN, CN@Fe and H-CN@Fe catalysts (inset: Barrett-Joyner-Halenda (BJH) based pore distribution analyses).

Table S3. The texture characteristics of prepared CN, H-CN, CN@Fe and H-CN@Fe catalysts.

Catalyst	S_{BET} (m^2/g)	V_p (cm^3/g)	D_p (nm)
CN	9.74	0.078	30.62
H-CN	10.44	0.088	30.97
CN@Fe	21.10	0.14	26.26
H-CN@Fe	14.75	0.090	23.22