

Supplementary Materials

Construction of a novel $\text{Cu}_2(\text{OH})_3\text{F}/\text{g-C}_3\text{N}_4$ heterojunction as a high-activity Fenton-like photocatalyst driven by visible light

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Table S1. Comparison of the degradation of organic pollutants by other copper-based or and CN-based catalysts using photo-assisted Fenton-like effect.

Catalyst	Dosage (mg)	Target pollutant	C ₀ (mg/L)	V (mL)	Reaction time(min)	Catalytic cycles	Declined activity	Ref.
Fe ₃ O ₄ /C/Cu ₂ O	20	MB	100	50	60	3	3.2%	1
Cu/Fe ₃ O ₄ @CRC	50	MB	200	50	60	5	5%	2
CuFe ₂ O ₄ /Fe ₂ O ₃	250	MB	50	250	270	4	little	3
CuCr ₂ O ₄ /CeO ₂	50	RhB	20	60	16	3	7%	4
Cu-C-CN	20	MB	10	50	150	5	little	5
CuO/LaFeO ₃	15	RhB	6	100	180	5	little	6
BW/BF/g-C ₃ N ₄	10	RhB	10	100	90	4	little	7
LFO-15Cu	100	MO	10	100	60	4	4.4%	8
g-C ₃ N ₄ /NH ₂ -Iron	50	MB	30	50	120	4	little	9
Cu-CNK-OH	20	RhB	10	50	20	5	6.3%	10
Cu ₂ (OH)PO ₄ /g-C ₃ N ₄	20	RhB	10	50	40	5	little	11
ZnFe ₂ O ₄ /g-C ₃ N ₄	25	MB	20	50	60	5	≈5%	12
CuS/g-C ₃ N ₄	40	RhB	30	100	60	3	little	13
Fe-doped g-C ₃ N ₄	20	RhB	10	100	45	5	5.7%	14
Cu ₂ (OH) ₃ F/g-C ₃ N ₄	10	RhB	20	50	25	5	≈1%	Our work

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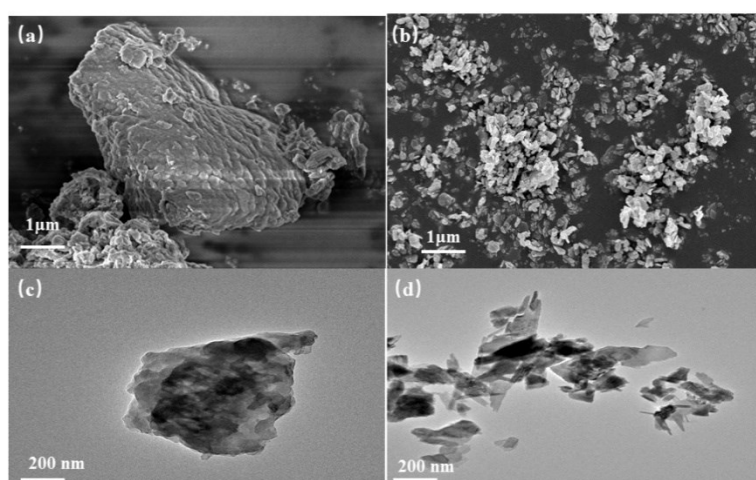


Fig. S1. SEM images of (a) pure g-C₃N₄, (b) pure Cu₂(OH)₃F. TEM images of (a) pure g-C₃N₄, (b) pure Cu₂(OH)₃F.

EDS 分层图像 1

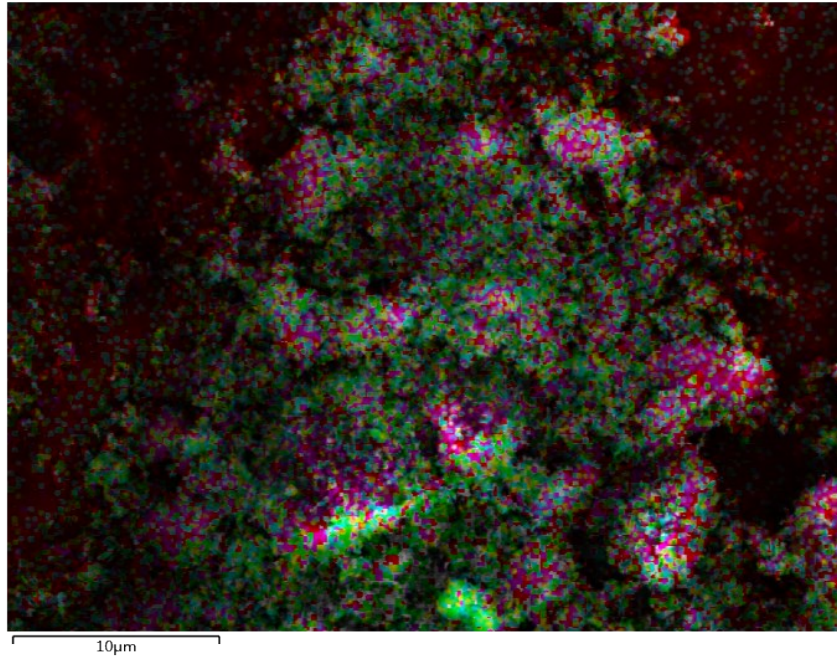


Fig.S2. element mappings of CFO/CN-40

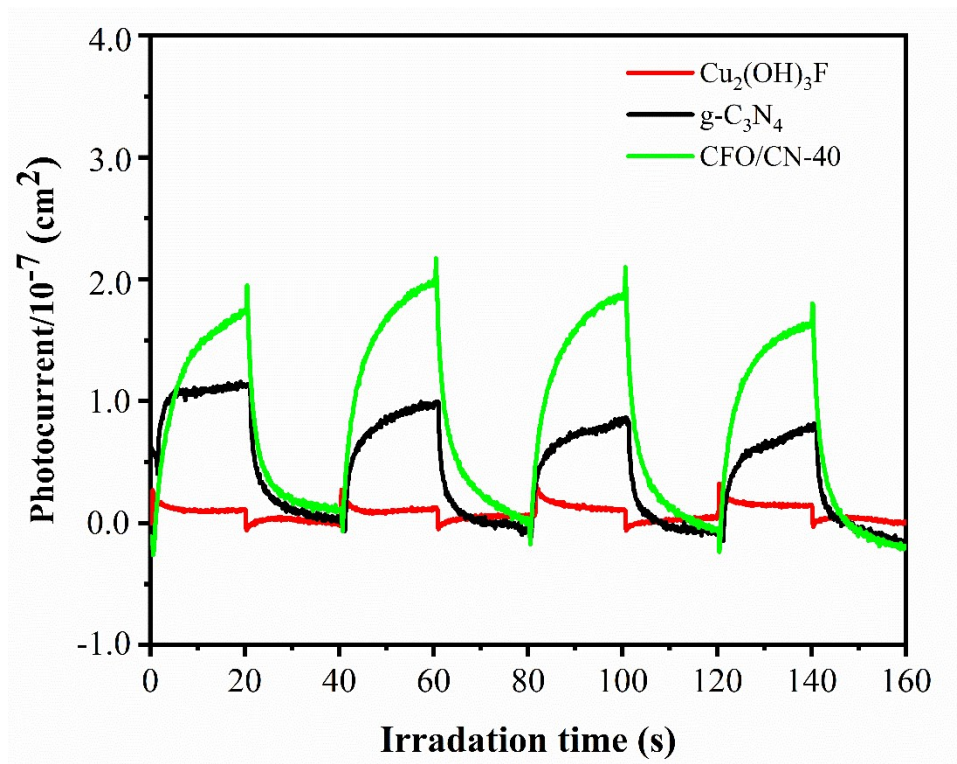


Fig.S3. Transient photocurrent response of the $\text{Cu}_2(\text{OH})_3\text{F}$, $\text{g-C}_3\text{N}_4$ and CFO/CN-40.

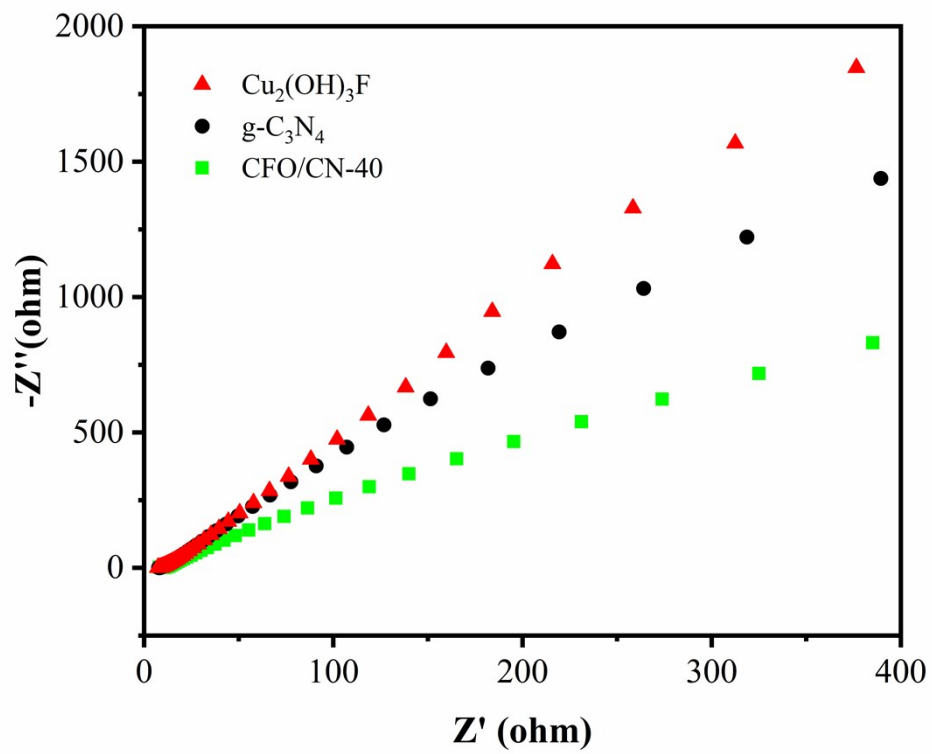


Fig.S4. EIS Nyquist plots of the Cu₂(OH)₃F, g-C₃N₄ and CFO/CN-40.