

**Visible-light driven Tetracycline hydrochloride degradation by $\text{La}(\text{OH})_3$
modified g- C_3N_4 : performance, mechanism, and application in real wastewater
treatment**

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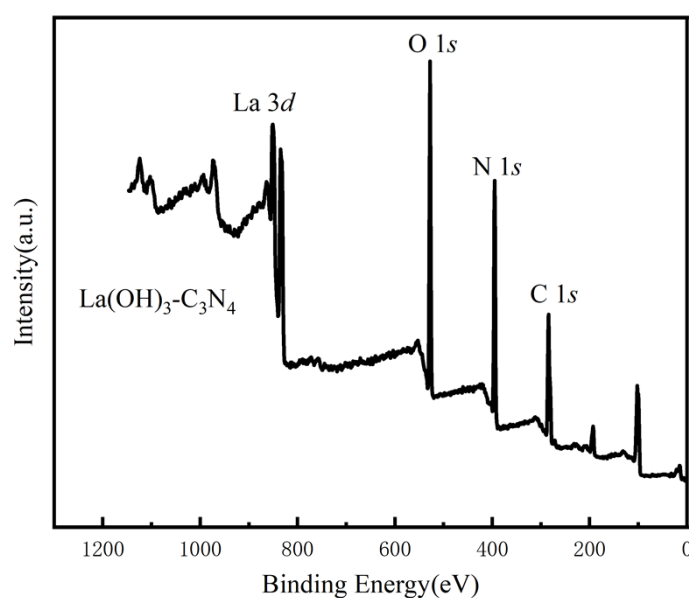


Figure S1. XPS spectra of $\text{La}(\text{OH})_3/\text{g-C}_3\text{N}_4$

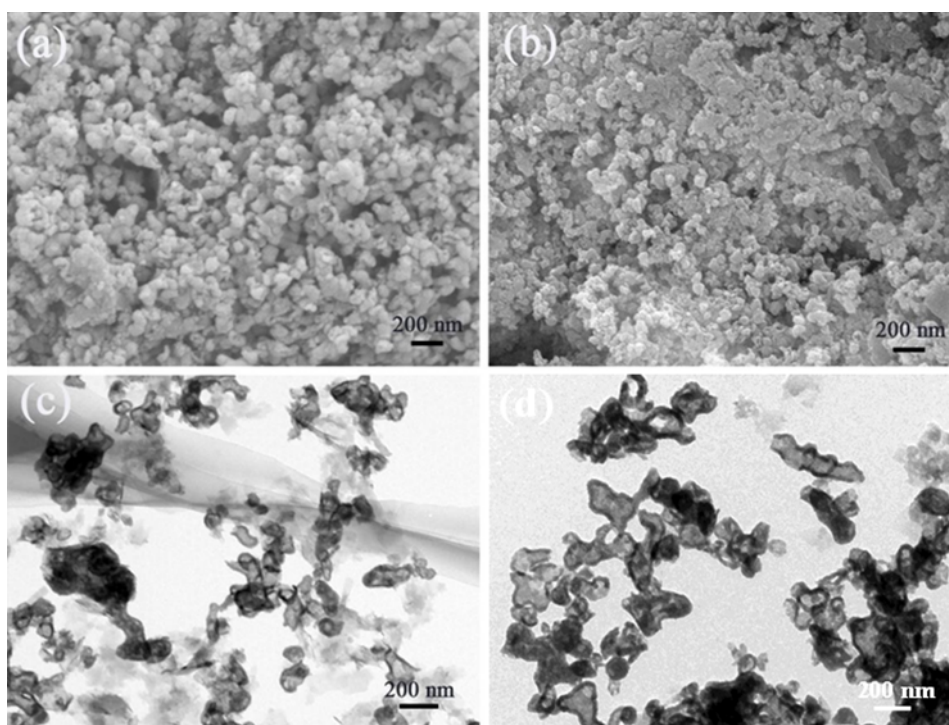


Figure S2. SEM and TEM images of La(OH)₃/g-C₃N₄ before (a and b) and after (c and d) TCH degradation

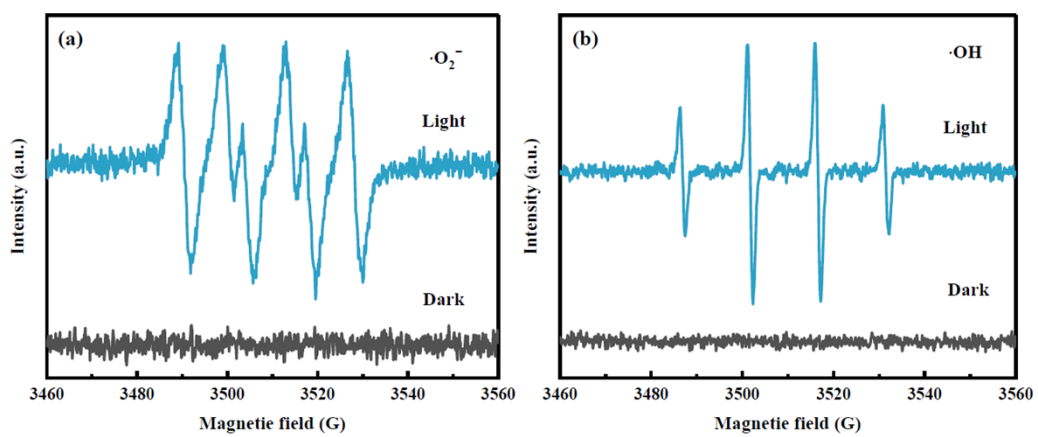


Figure S3. EPR spectra of La(OH)₃/g-C₃N₄ photocatalyst



Figure S4. Image from the indoor trial simulation

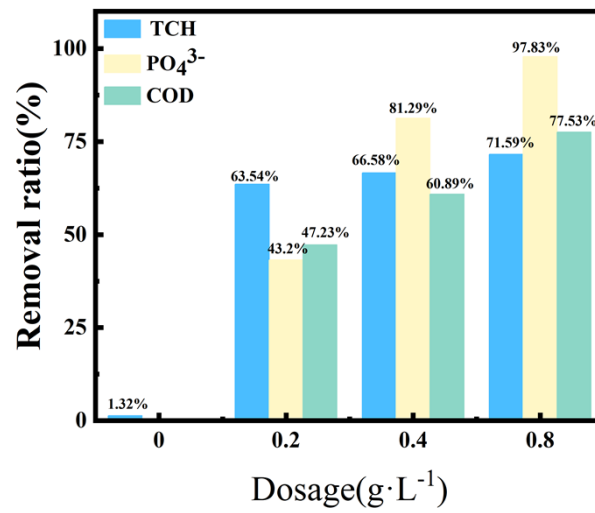


Figure S5. TCH, COD and PO₄³⁻ removal efficiencies under indoor conditions

Table S1 First-order kinetic constants of different samples

Samples	k (h ⁻¹)	R ²
Blank	0.0303	0.9919
g-C ₃ N ₄	0.0657	0.9546
La(OH) ₃	0.0621	0.9703
La(OH) ₃ -C ₃ N ₄	0.2633	0.9945

Table S2 First-order kinetic constants of different doses

Doses (g·L ⁻¹)	k (h ⁻¹)	R ²
0.2	0.2202	0.9859
0.4	0.2632	0.9920
0.8	0.3892	0.9895

Table S3 First-order kinetic constants of different concentrations

Concentration (mg·L ⁻¹)	k (h ⁻¹)	R ²
20	0.3582	0.9963
40	0.2632	0.9920
100	0.1033	0.9911

Table S4 First-order kinetic constants of different temperatures

Temperature (°C)	k (h ⁻¹)	R ²
5	0.1437	0.9936
20	0.2632	0.9989
30	0.2376	0.9911

Table S5 Radical scavenger information sheet

Number	Active substance	Radical scavenger	Concentration (mmol·L ⁻¹)
1	·OH	TPA	1
2	·O ₂ ⁻	BQ	1
3	h ⁺	EDTA-2Na	1

Table S6 Initial concentrations of TCH, PO₄³⁻, COD in actual wastewater

	TCH	PO ₄ ³⁻	COD
Concentration (mg/L)	175	288.45	750

Table S7 Weather information

Address	Temperature (°C)	Time (h)	UV index
Nanjing	28	PM 12:00- 14:00	7