

Supplementary information

Hydrothermal construction of $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}/\text{g-C}_3\text{N}_4$ nanocomposites with enhanced adsorption and photocatalytic activity

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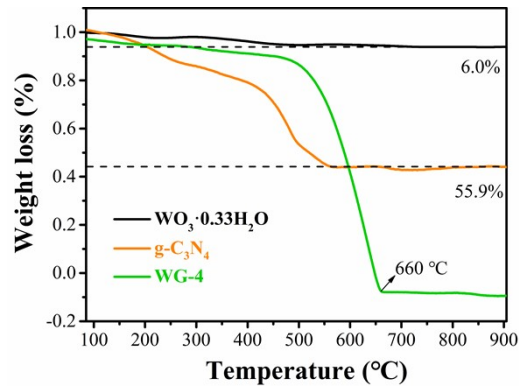


Fig. S1 TG curves of WO₃·0.33H₂O, g-C₃N₄ and WG-4 nanocomposite.

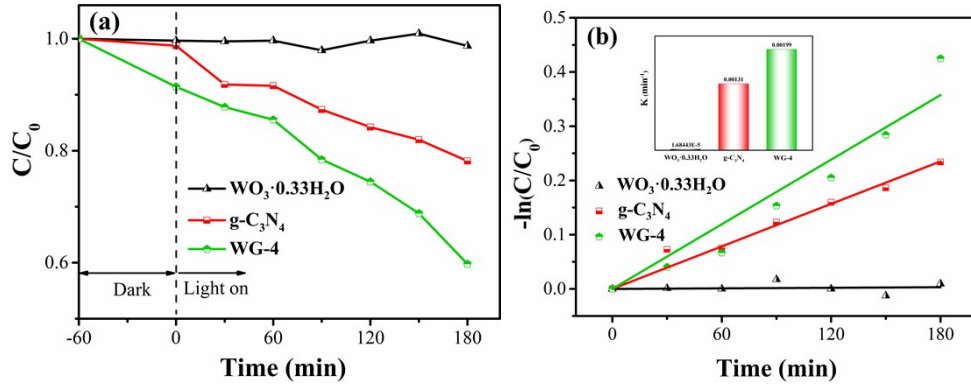


Fig. S2 Adsorption and photocatalytic degradation of RhB (a), plot of $-\ln(C/C_0)$ versus time t and k values (b) of WO₃·0.33H₂O, g-C₃N₄ and WG-4.

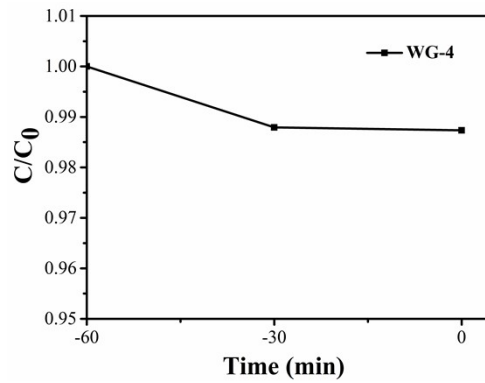


Fig. S3 Adsorption rate of MO (25 mg/L) by WG-4 nanocomposite.

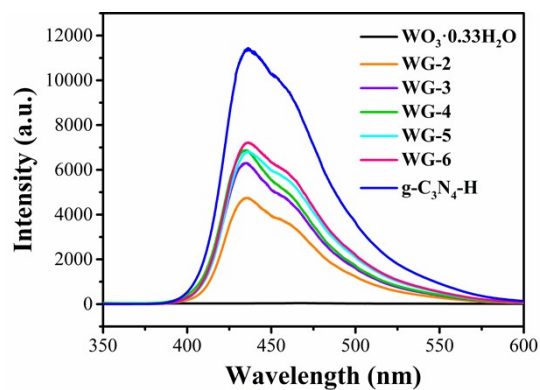


Fig. S4 PL spectra of $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$, $\text{g-C}_3\text{N}_4\text{-H}$ and $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}/\text{g-C}_3\text{N}_4$ nanocomposites.

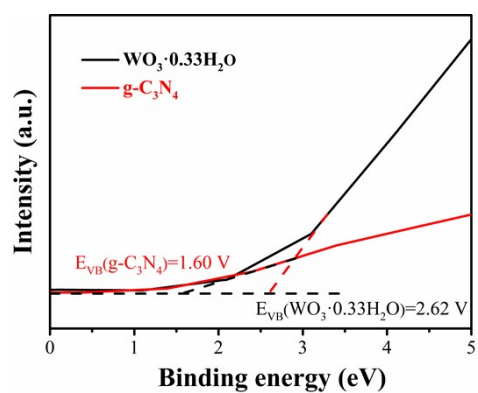


Fig. S5 XPS valence band edge spectra of $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ and $\text{g-C}_3\text{N}_4$.

Table S1 Specific surface area, pore volume, zeta potential and TRPL lifetime values of $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$, $\text{g-C}_3\text{N}_4$ and WG-4 nanocomposite.

Sample	Specific surface areas/ $\text{m}^2 \text{g}^{-1}$	Pore volume/ $\text{cm}^3 \text{g}^{-1}$	Zeta potential/mV	τ_1/ns	τ_2/ns
$\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$	2.50	0.01	-46.6	1.51	9.17
$\text{g-C}_3\text{N}_4$	31.65	0.20	-14.0	1.83	7.91
WG-4	73.69	0.40	-40.4	7.87	2.24