

Electronic Supplementary Information

Novel composite photocatalyst based on *in situ* growth of ultrathin tungsten oxide nanowires on graphene oxide sheets

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Supporting Table

Table S1 Percentages of different bindings calculated from the deconvoluted XPS spectra of C 1s peak.

Binding	GO	W ₁₈ O ₄₉ -rGO
C-C	39.5%	60.9%
C-O	45.5%	26.4%
C=O	11.8%	7%
COOH	3.2%	5.7%

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Supporting Figures

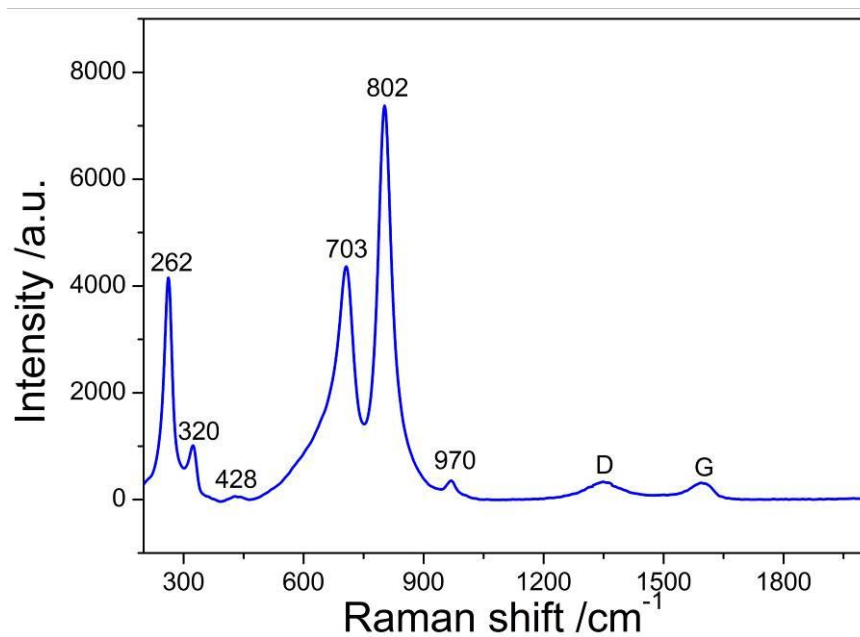


Figure S1 Raman spectrum of $W_{18}O_{49}$ -GO composite.

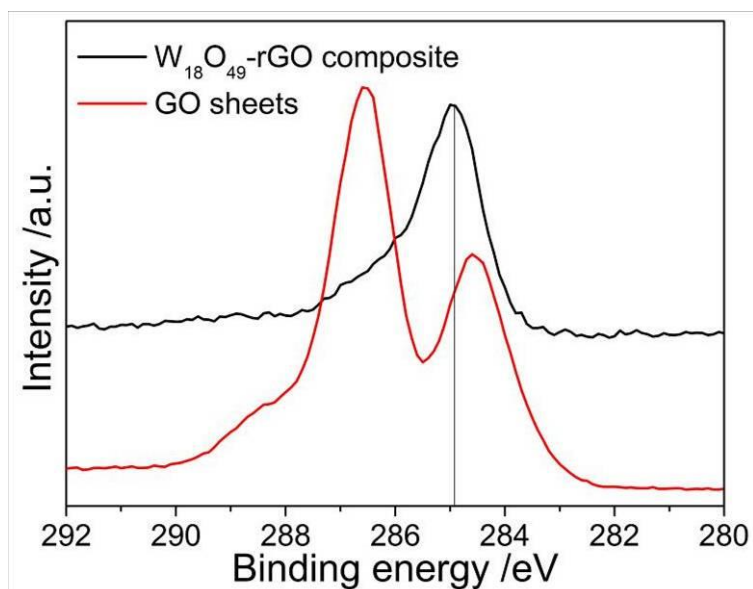


Figure S2 Comparison of core-level spectra of C 1s for GO sheets and $W_{18}O_{49}$ -GO composite.

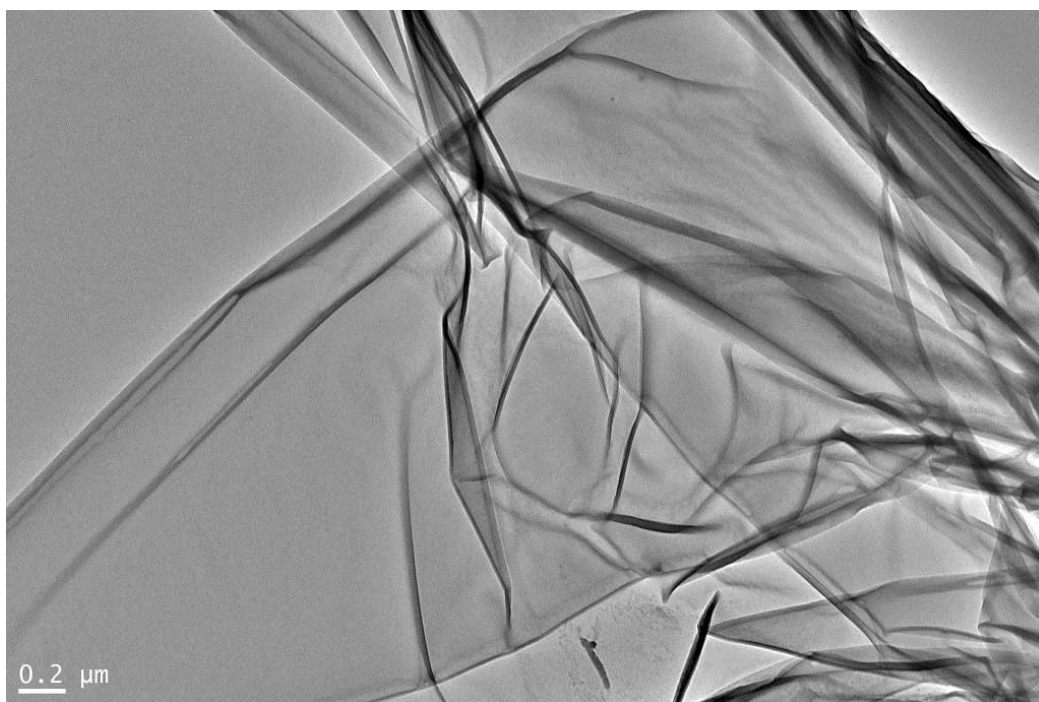


Figure S3 TEM image of GO sheets.

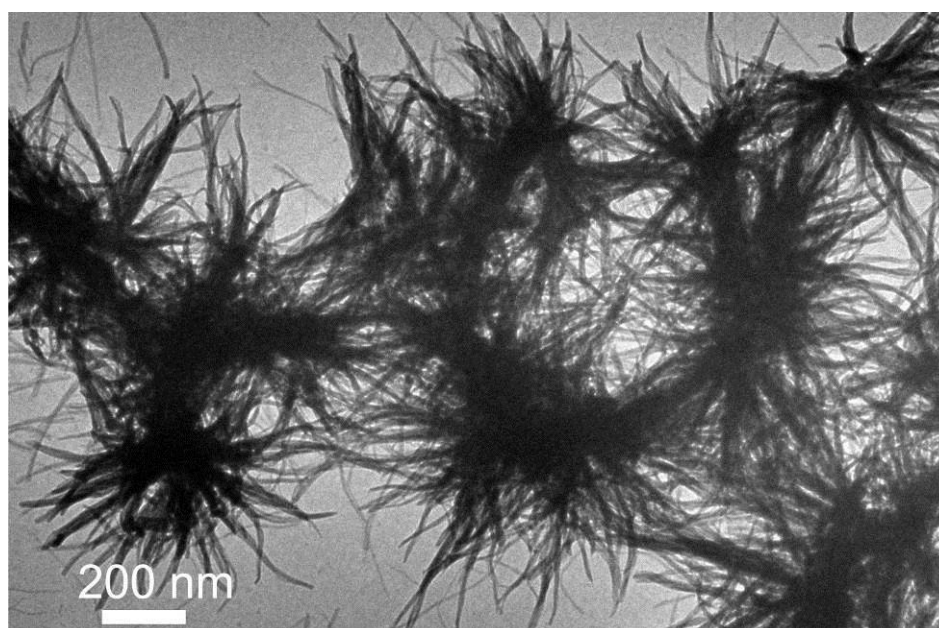


Figure S4 TEM image of $W_{18}O_{49}$ nanoflowers prepared in the absence of GO sheets.

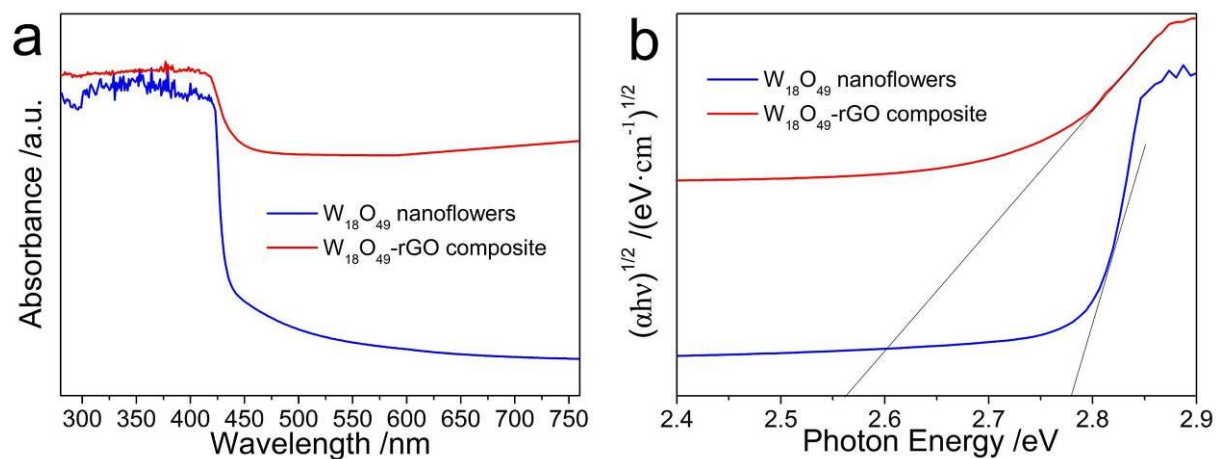


Fig. S5 (a) UV-vis adsorption spectra and (b) plots of $(\alpha h\nu)^{1/2}$ vs $h\nu$ of W₁₈O₄₉ nanoflowers and W₁₈O₄₉-rGO composite. From the linear extrapolation of the plots of $(\alpha h\nu)^{1/2}$ vs $h\nu$, the bandgaps of the W₁₈O₄₉ nanoflowers and the W₁₈O₄₉-rGO composite were measured to be 2.78 and 2.56 eV, respectively.