Supporting information

TiO\textsubscript{2}-graphene composites with exposed \{001\} facets produced by a one-pot solvothermal approach for high performance photocatalyst

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Supporting information:

Figure S1. FTIR spectra of GO, graphene, TiO$_2$ and TOG$_{20}$ composites

Figure S2. High-resolution XPS spectra of C 1s (a: TOG$_1$, b: TOG$_5$, c: TOG$_{10}$, d: TOG$_{15}$, e: TOG$_{20}$, f: GO)
Figure S3. TEM image of bare TiO$_2$

Figure S4. TEM image of GO from Hummer’s method

Figure S5. HRTEM images of TOG composites (a) TOG$_{10}$, (b, c) TOG$_{15}$, (d) TOG$_{20}$
Figure S6. TEM images of TOG_{20}-C composites (a) low magnification, (b) high magnification.
Figure S7. Time profile of MO absorbance spectrum observed during photodegradation under UV light irradiation by (a) No catalyst, (b) TiO$_2$, and (c) TOG$_{20}$.

Figure S8. Photocatalysis of methyl orange (MO) under UV light irradiation over $\{001\}$ facets exposed TOG$_{20}$ and normal TOG$_{20}$-C composites.