ELECTRONIC SUPPORTING INFORMATION

Heterostructured g-CN/TiO_2 Photocatalysts Prepared by Thermolysis of g-CN/MIL-125(Ti) Composites for Efficient Pollutant Degradation and Hydrogen Production

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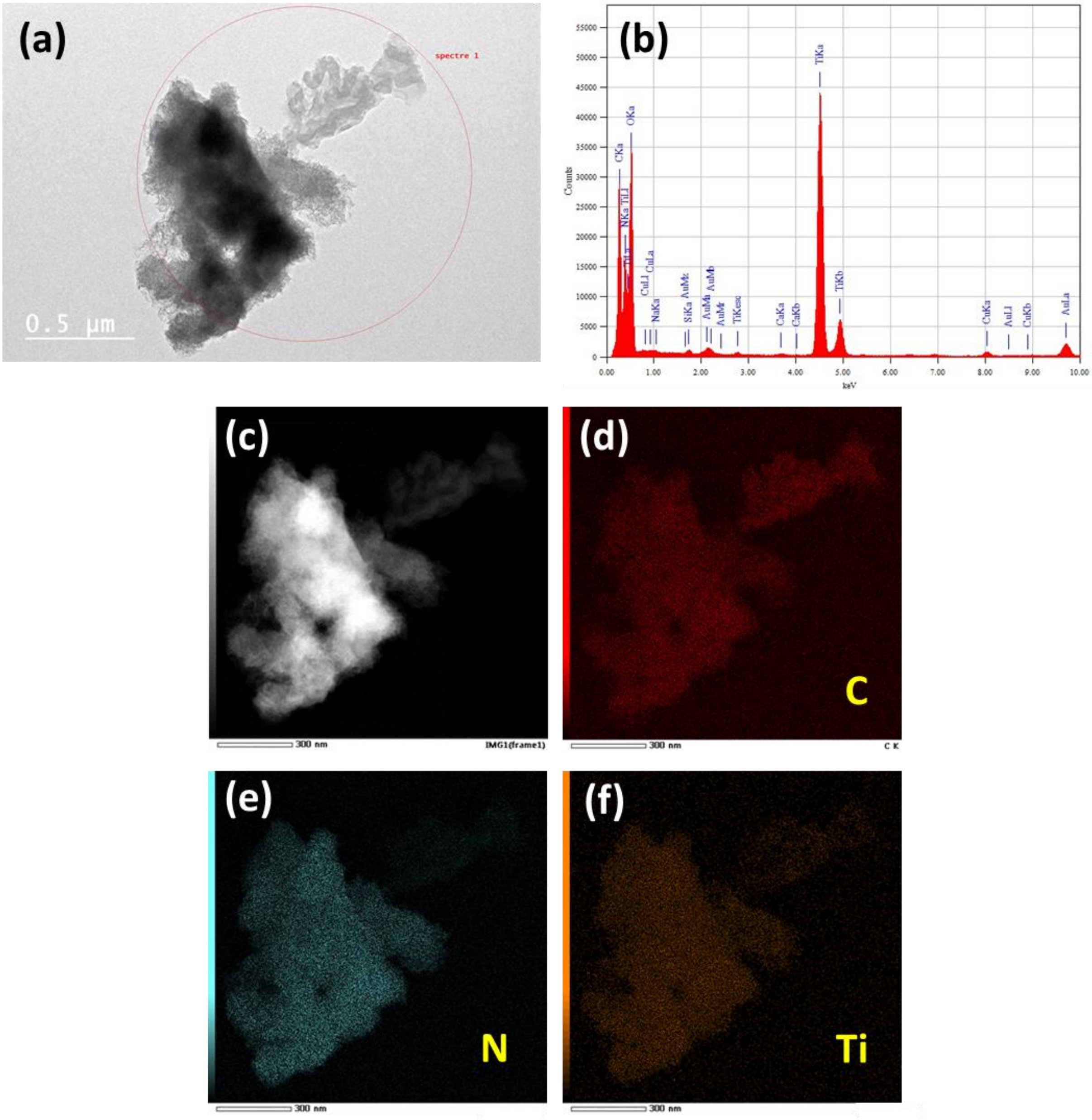

Figure S1. (a) SEM image, (b) EDX analysis and (c-f) EDX mapping of the g-CN/MIL-125(Ti) (3 :2) composite.

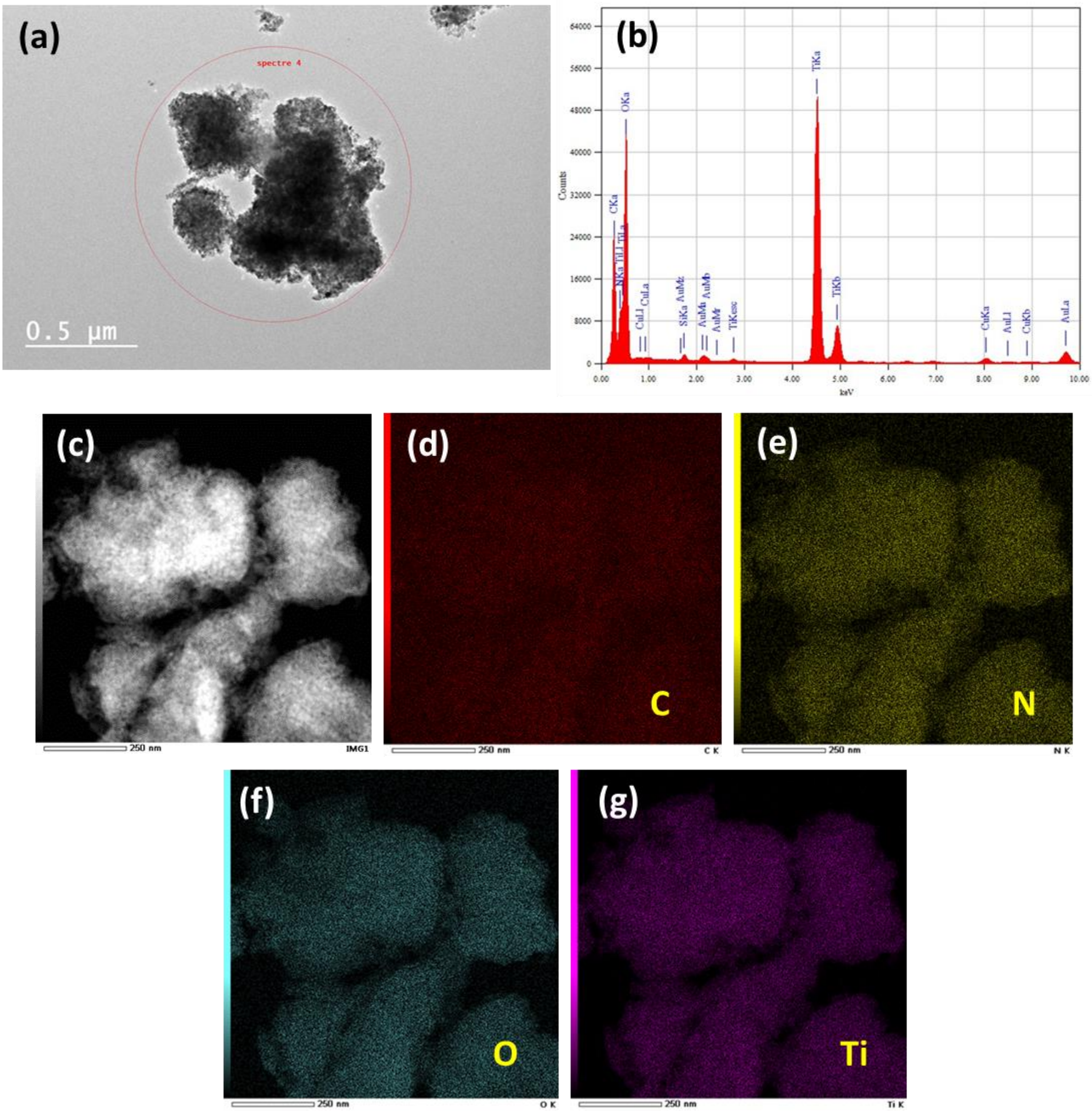

Figure S2. (a) SEM image, (b) EDX analysis and (c-g) EDX mapping of the g-CN/TiO_2 (3:1) composite.

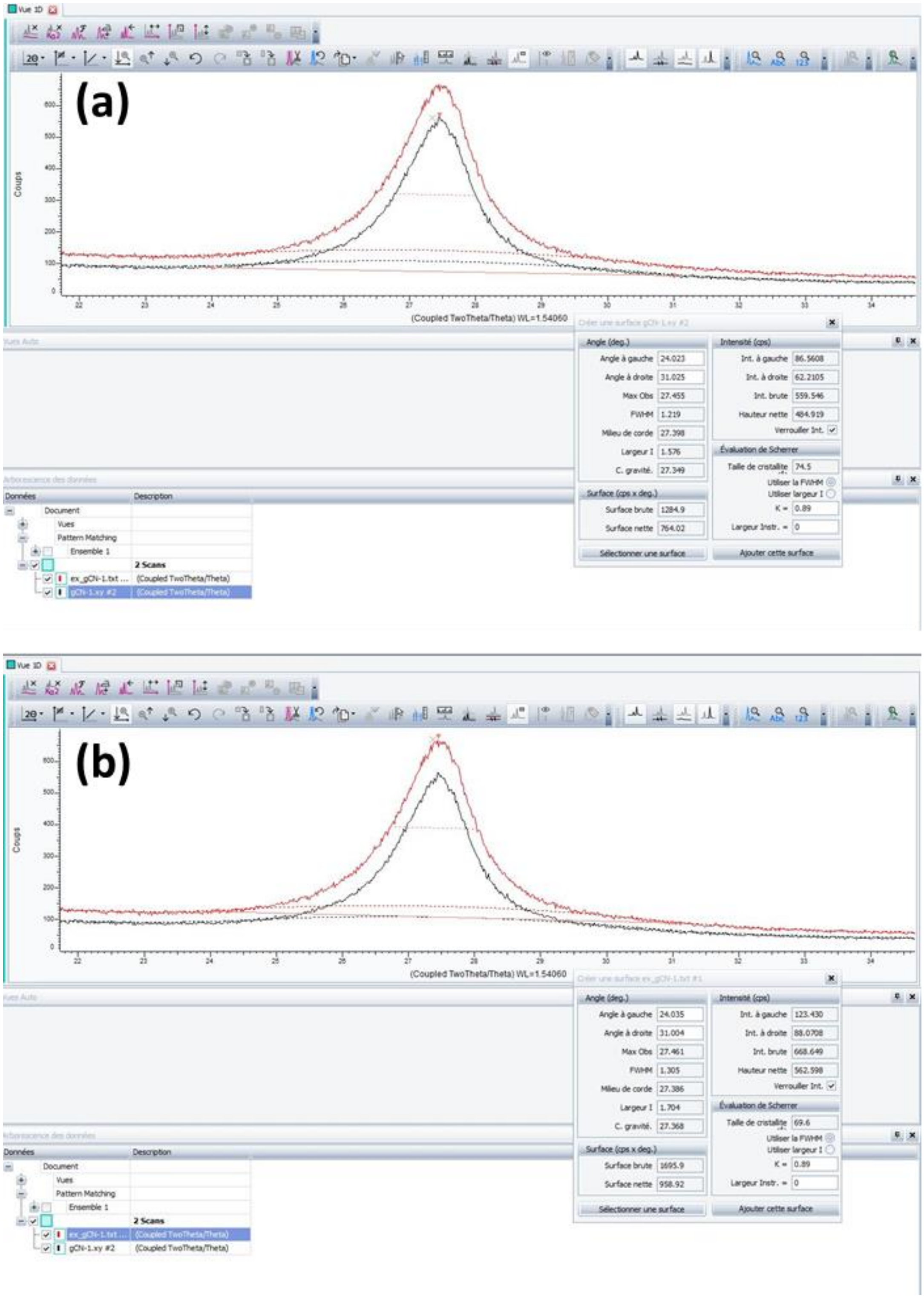

Figure S3. XRD analysis of the (002) peak for (a) bulk g-CN and (b) exfoliated g-CN using the DIFFRAC.EVA software from Bruker.

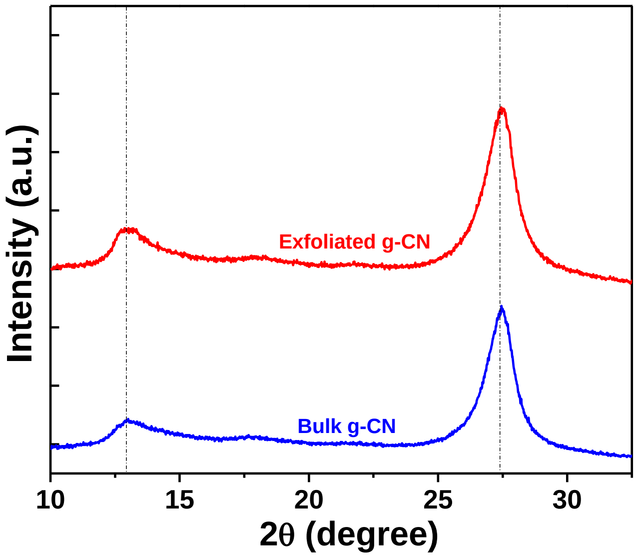

Figure S4. XRD patterns of bulk and exfoliated g-CN.

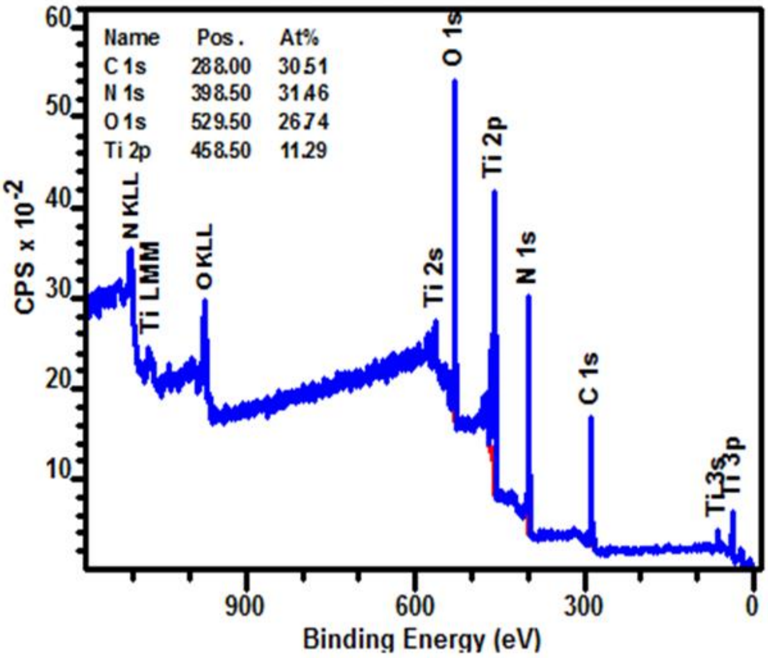

Figure S5. XPS survey spectrum of the g-CN/TiO_2 (3:1) photocatalyst.

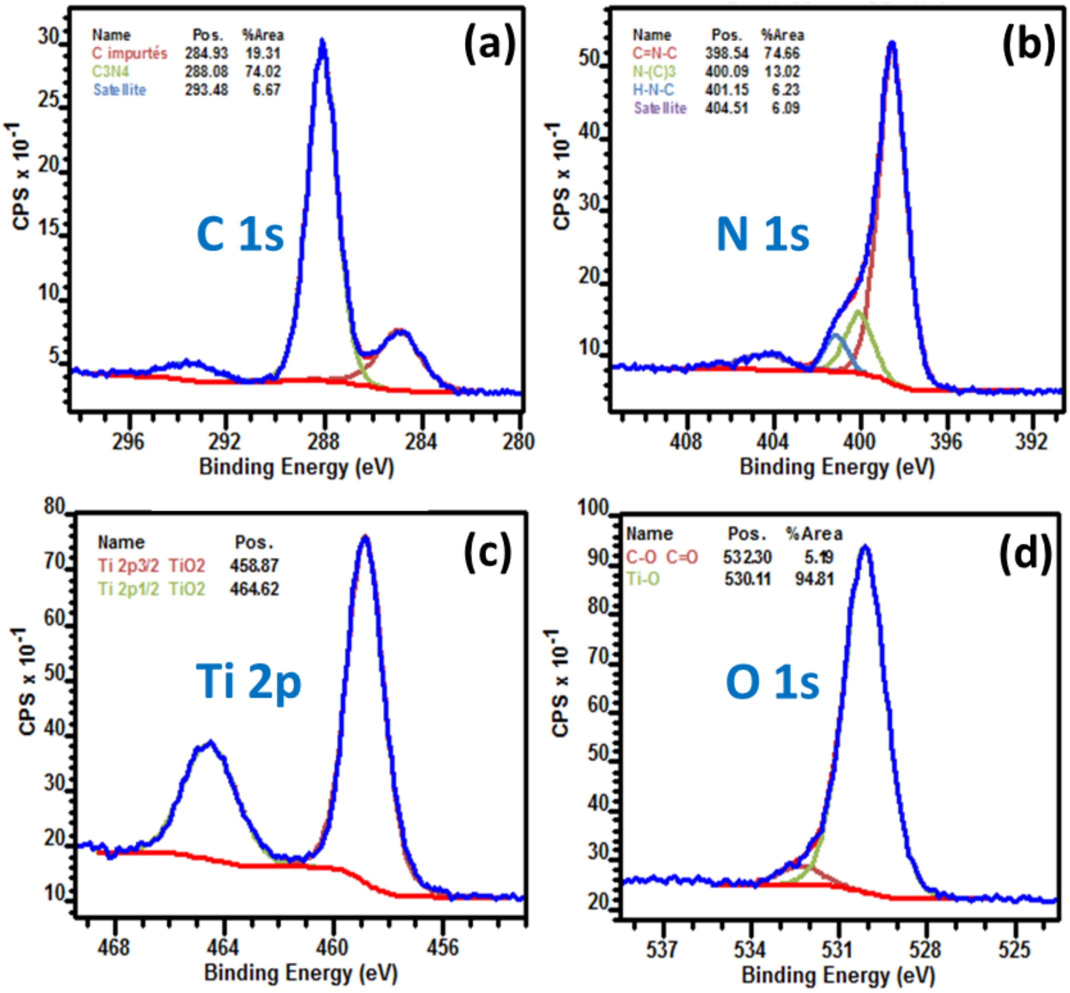

Figure S6. High resolution XPS spectra of (a) C 1s, (b) N 1s, (c) Ti 2p and (d) O 1s for the g-CN/TiO2 (3:1) photocatalyst.

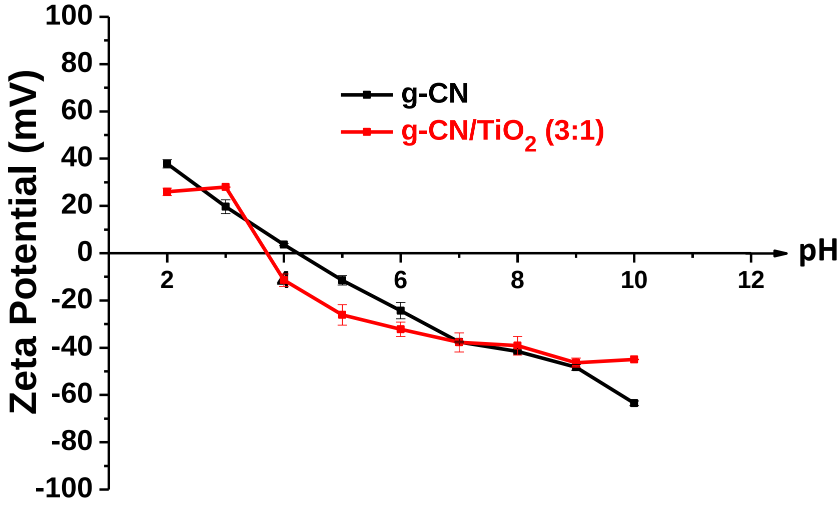

Figure S7. Zeta potentials of g-CN and g-CN/TiO_2 (3:1) photocatalysts as a function of pH.

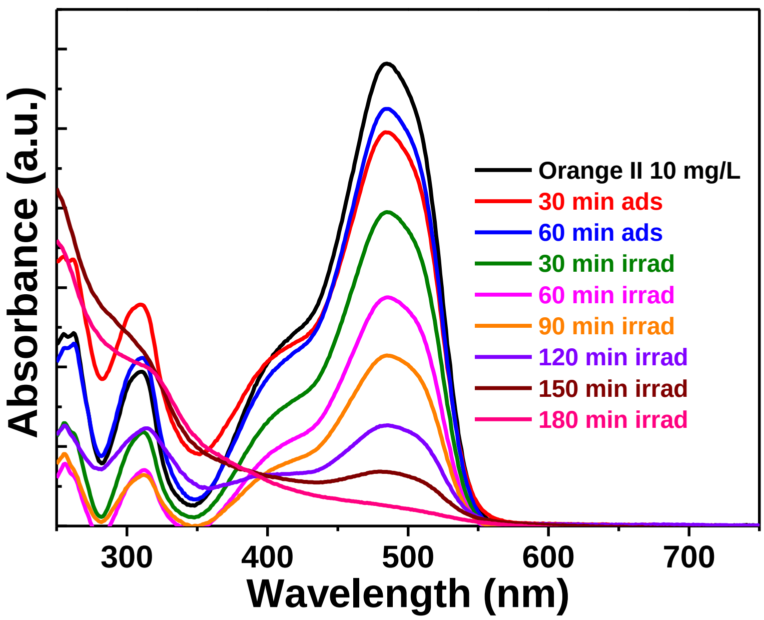

Figure S8. UV-vis spectrum changes of Orange II during its photodegradation by the g-CN/TiO_2 (3:1) composite.

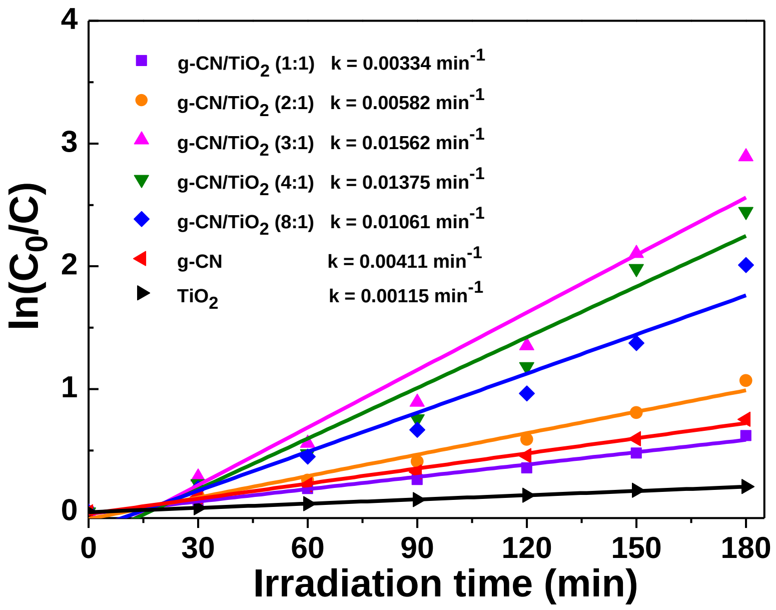

Figure S9. Pseudo-first-order kinetics fitted curves of Orange II degradation over TiO_2, g-CN and g-CN/TiO_2 composites under visible light irradiation.

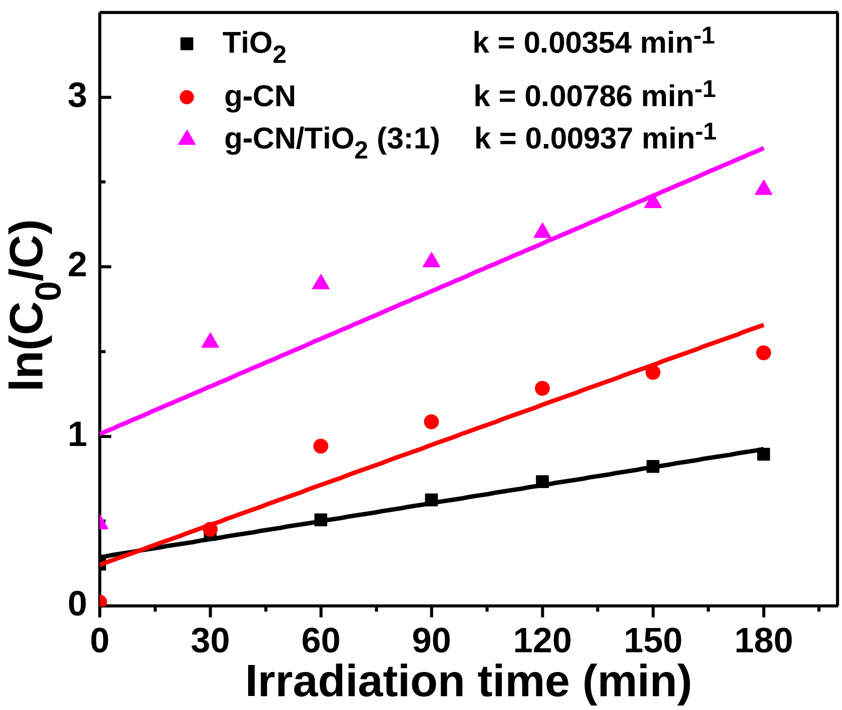

Figure S10. Pseudo-first-order kinetics fitted curves of tetracycline degradation over TiO_2, g-CN and the g-CN/TiO_2 (3:1) composite under visible light irradiation.

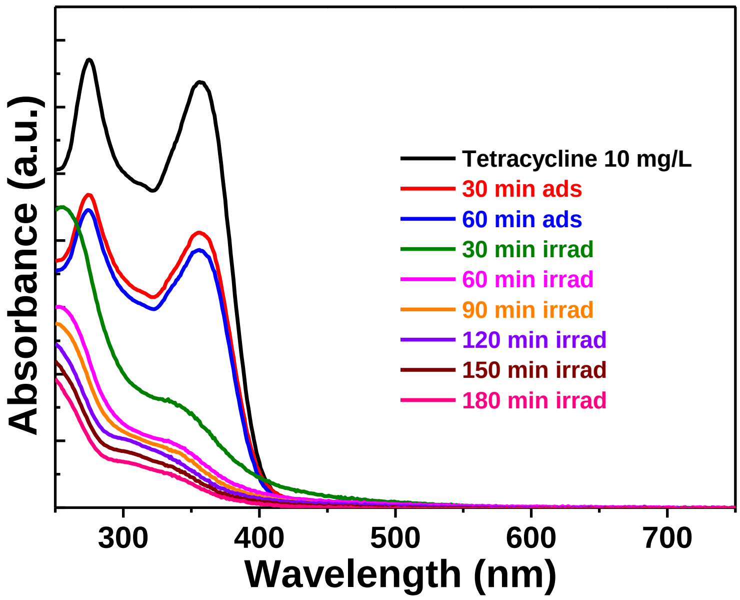

Figure S11. UV-vis spectrum changes of tetracycline during its photodegradation by the g-CN/TiO_2 (3:1) composite.

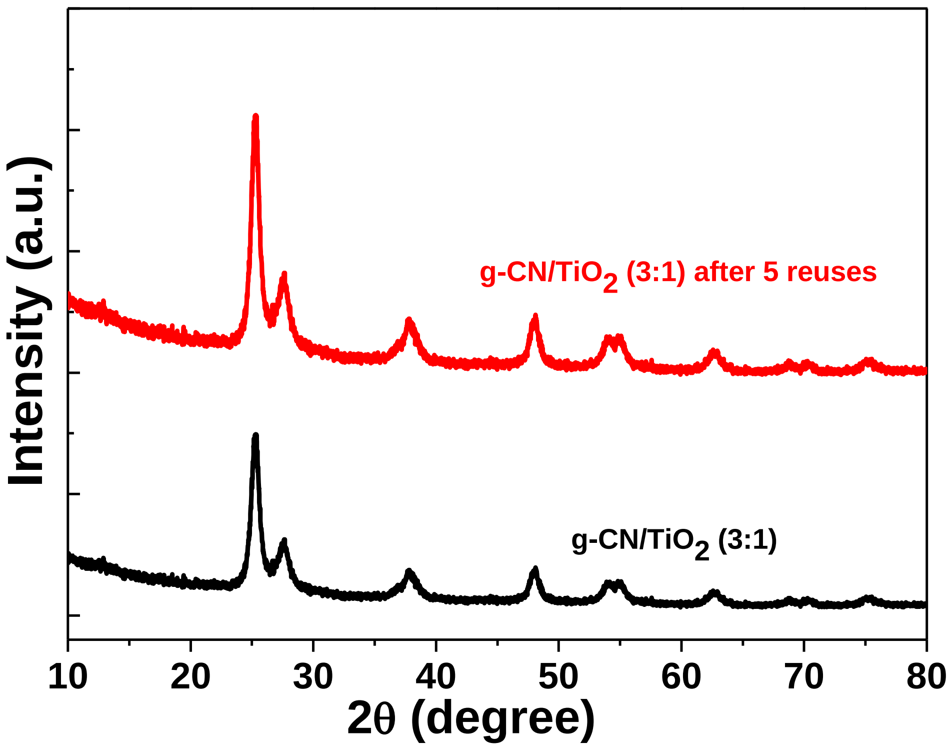

Figure S12. XRD patterns of the g-CN/TiO_2 (3:1) catalyst after synthesis (black line) and after 5 reuses for the degradation of the Orange II dye (red line).