

Electronic Supplementary Information (ESI)

Exfoliated and Reorganized Graphite Oxide on Titania Nanoparticles as an Auxiliary Co-catalyst for Photocatalytic Solar Conversion

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1. FT-IR analysis

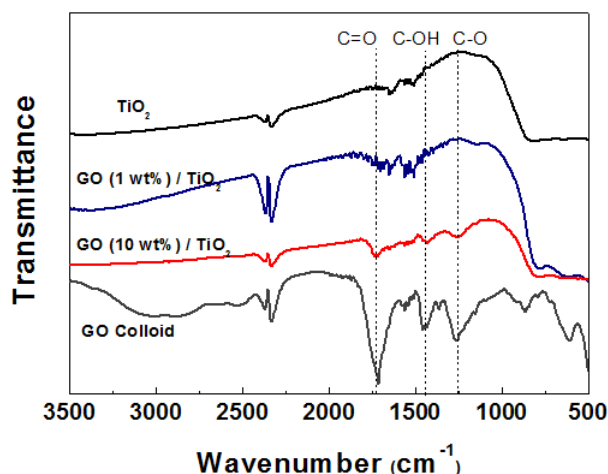


Figure S1. FT-IR spectra of TiO₂, GO colloid, GO (1 wt %)/TiO₂ and GO (10 wt %)/TiO₂

To determine functional groups existed in GO/TiO₂, FT-IR spectroscopy was performed. Figure S1 shows FT-IR spectra of TiO₂, GO, GO (1 wt %)/TiO₂ and GO (10 wt %)/TiO₂. In curve of GO, the absorption peak due to C=O stretching of COOH groups of GO was observed at about 1726 cm⁻¹ and the absorption at 1470 cm⁻¹ and 1280 cm⁻¹ were attributed to the tertiary C-OH and C-O stretching mode, respectively. These peaks were also observed in curve of GO (1 wt %)/TiO₂ and GO (10 wt %)/TiO₂ as well.¹

2. ζ -potential analysis

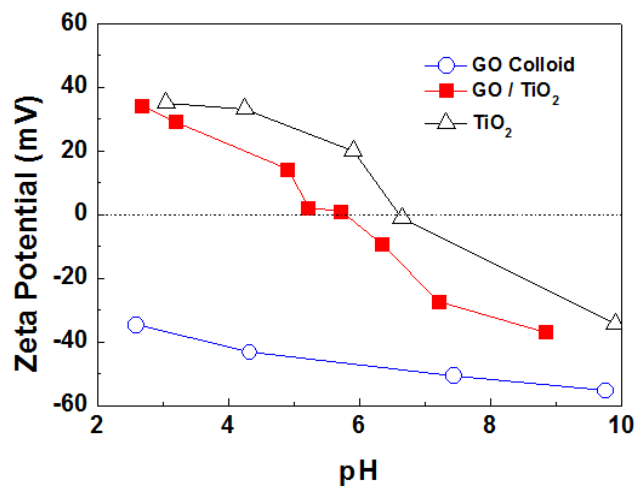


Figure S2. pH-dependent ζ -potential of GO/TiO₂, GO, TiO₂ suspensions in the presence of NaNO₃ (0.1 mM)

References

- (1) H. Zhang, X. Lv, Y. Li, Y. Wang, J. Li, *ACS Nano*, 2010, **4**, 380.