

Supplementary Information

Investigation of Structure and Photocatalytic Activity on TiO₂ Hybridized with graphene: Compared to CNT Case

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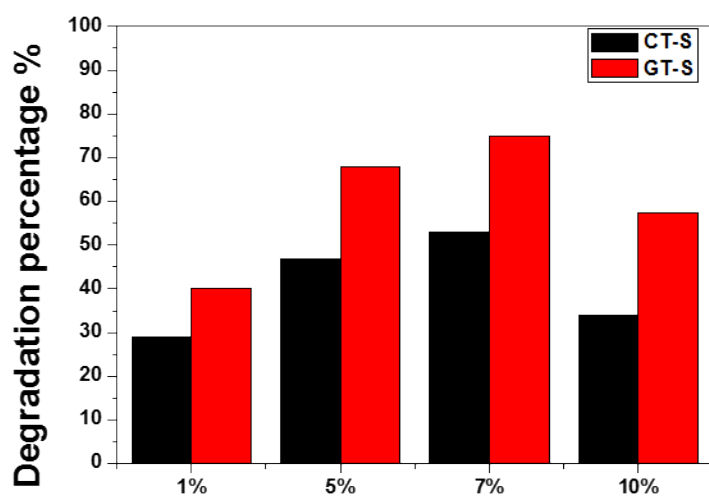


Fig S1. The degradation efficiencies of Rh.B over the CT-S and GT-S composites with different CNTs or Gr content under visible light.

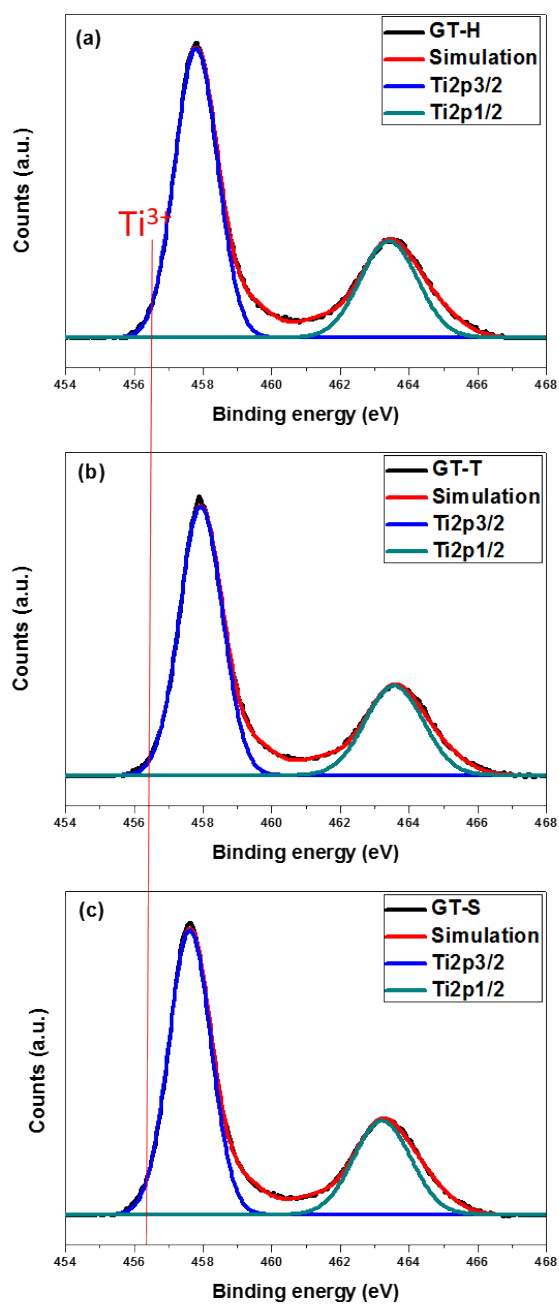


Fig. S2. The high resolution Ti2p XPS spectra for various GT composites.

The XRD pattern of GO showed a strong and sharp diffraction peak at 2θ of 10.6° (Figure 7), corresponding to a d-spacing of ~ 8.4 Å. This is in agreement with the lamellar structure of GO. For the

RGO obtained from the hydrothermal reduction, this diffraction peak disappeared and a very broad peak at 2θ of $\sim 25^\circ$ (corresponding to a d-spacing of 3.6 \AA) was observed, suggesting the reduction of GO to grapheme sheets.

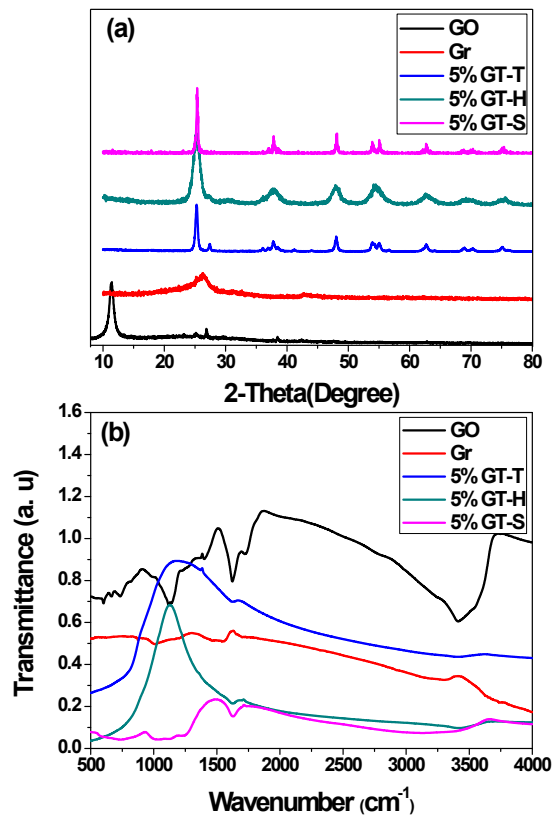


Fig. S3. The XRD patterns (a) and FT-IR spectra of GO, Gr, and various GT with 5% graphene content.