

Electronic Supplementary Information

Synthesis of graphene oxide-Ag₂CO₃ composites with improved photoactivity and anti-photocorrosion

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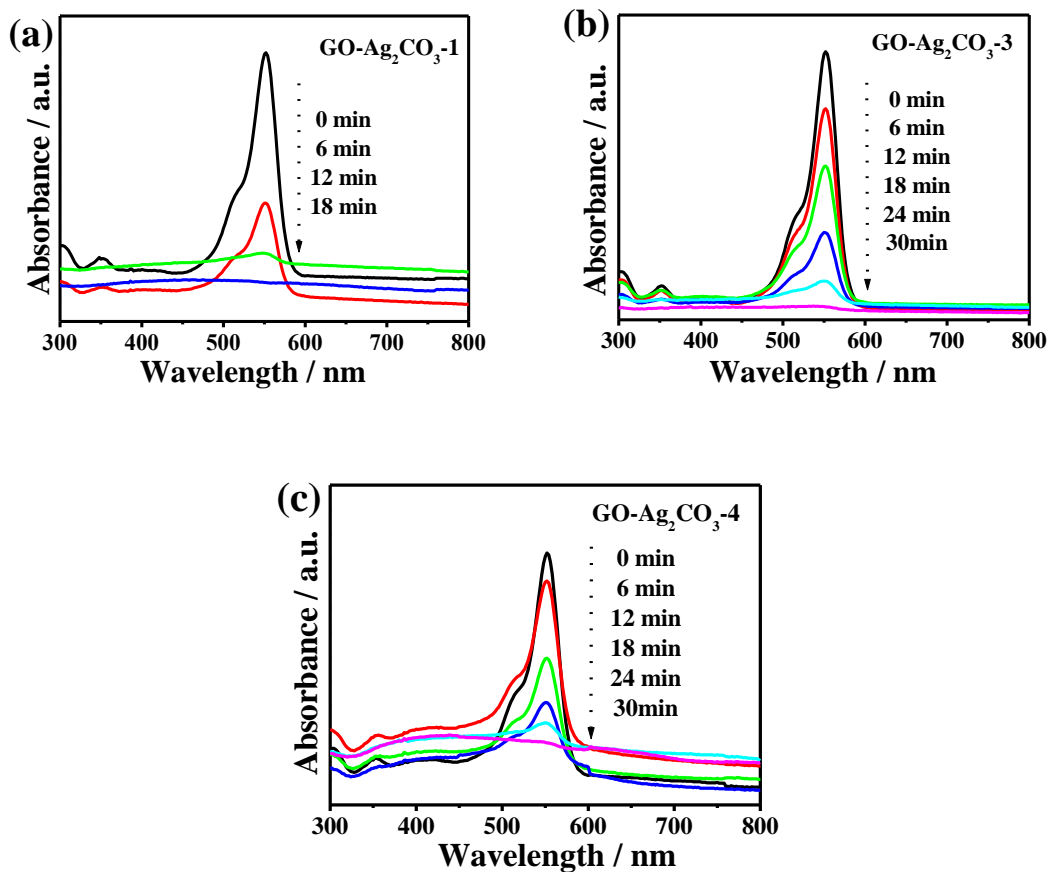


Fig. S1. UV-vis spectral changes of RhB in aqueous (a) GO-Ag₂CO₃-1, (b) GO-Ag₂CO₃-3, and (c) GO-Ag₂CO₃-4 dispersions as a function of irradiation time.

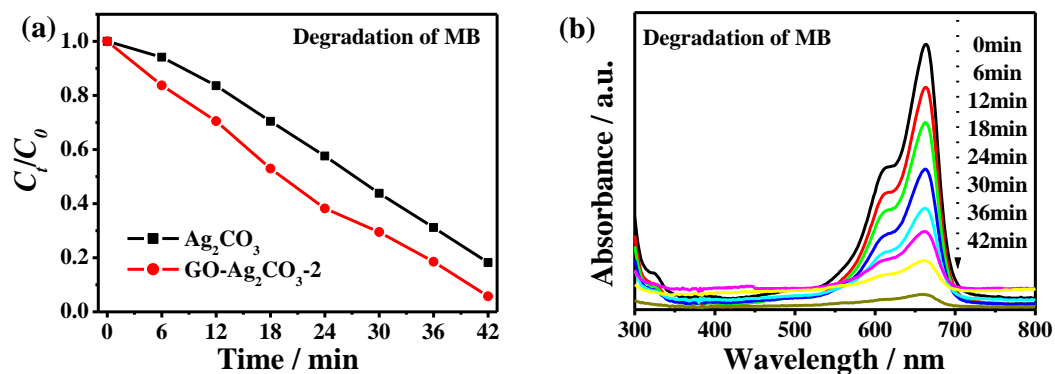


Fig. S2. (a) The dynamic curve of degradation of MB in aqueous Ag_2CO_3 (black line) and $\text{GO-Ag}_2\text{CO}_3\text{-2}$ (red line) dispersions, and (b) UV-Vis spectral changes of MB in aqueous $\text{GO-Ag}_2\text{CO}_3\text{-2}$ dispersion as a function of irradiation time (30 mg of catalysts in 30 mL of MB aqueous solution (10 mg/L)).

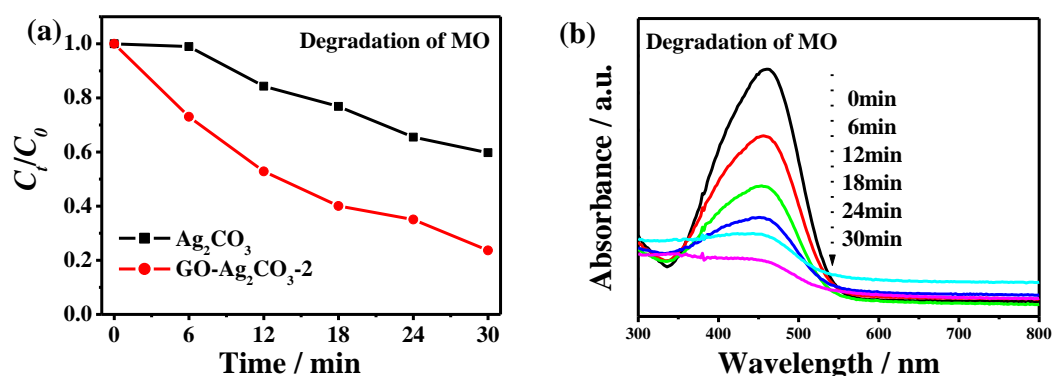


Fig. S3. (a) The dynamic curve of degradation of MO in aqueous Ag_2CO_3 (black line) and $\text{GO-Ag}_2\text{CO}_3\text{-2}$ (red line) dispersions, and (b) UV-Vis spectral changes of MO in aqueous $\text{GO-Ag}_2\text{CO}_3\text{-2}$ dispersion as a function of irradiation time (50 mg of catalysts in 30 mL of MO aqueous solution (10 mg/L)).

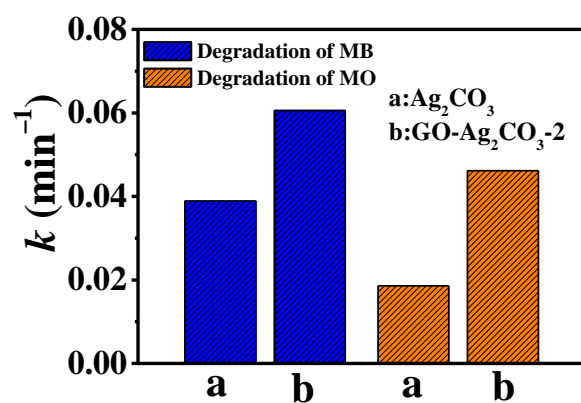


Fig. S4. Degradation rate constants for the photodegradation of MB and MO aqueous solution by Ag₂CO₃ and GO-Ag₂CO₃-2.

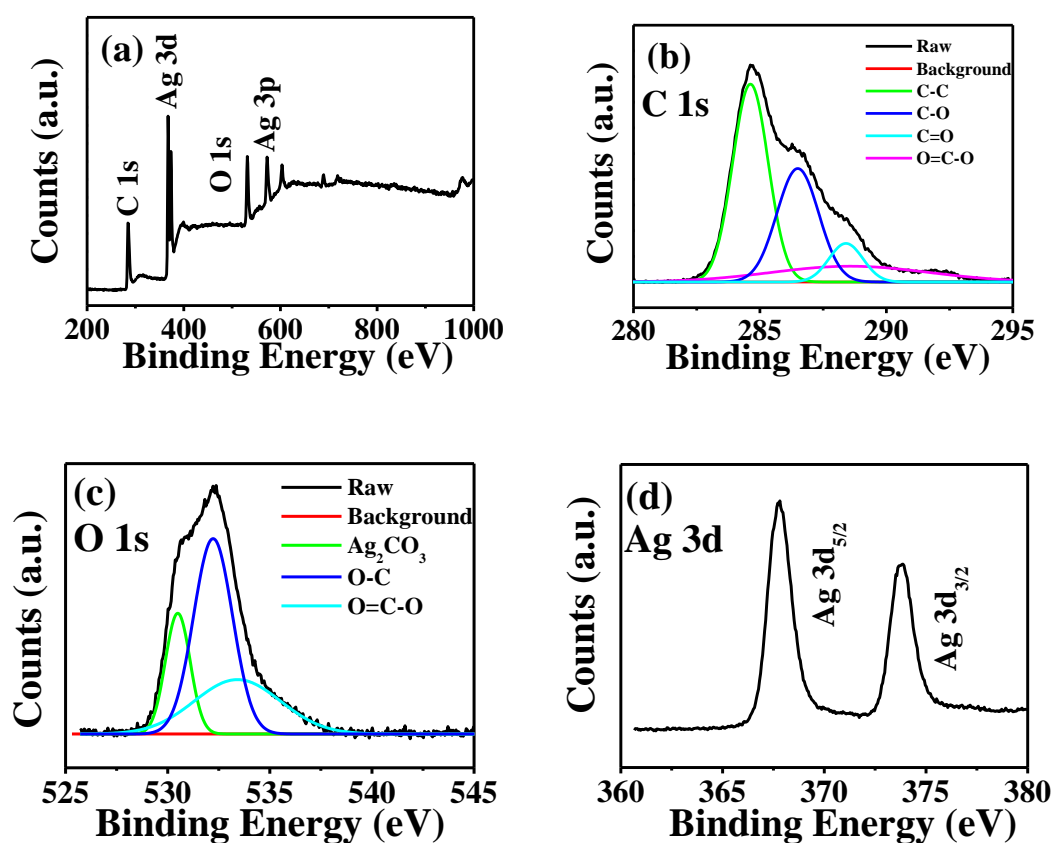


Fig. S5. XPS spectra of (a) survey, (b) C 1s, (c) O 1s, and (d) Ag 3d in the GO-Ag₂CO₃-2 composite after 5 cycle photodegradation experiments under visible light irradiation.

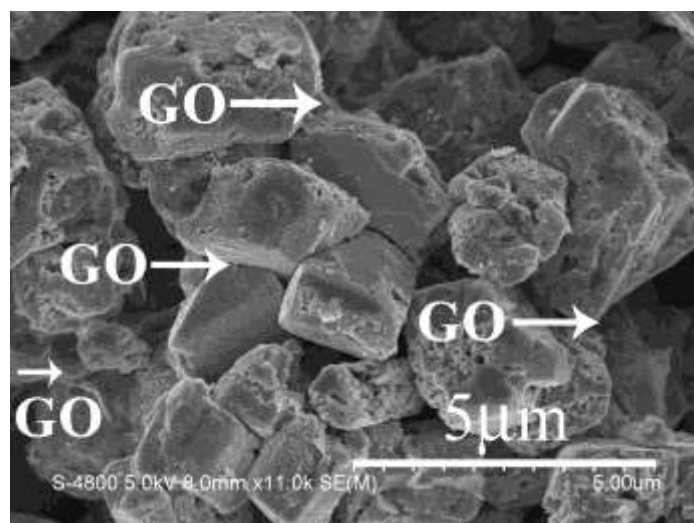


Fig. S6. SEM image of GO-Ag₂CO₃-2 after 5 cycle photodegradation experiments under visible light irradiation.

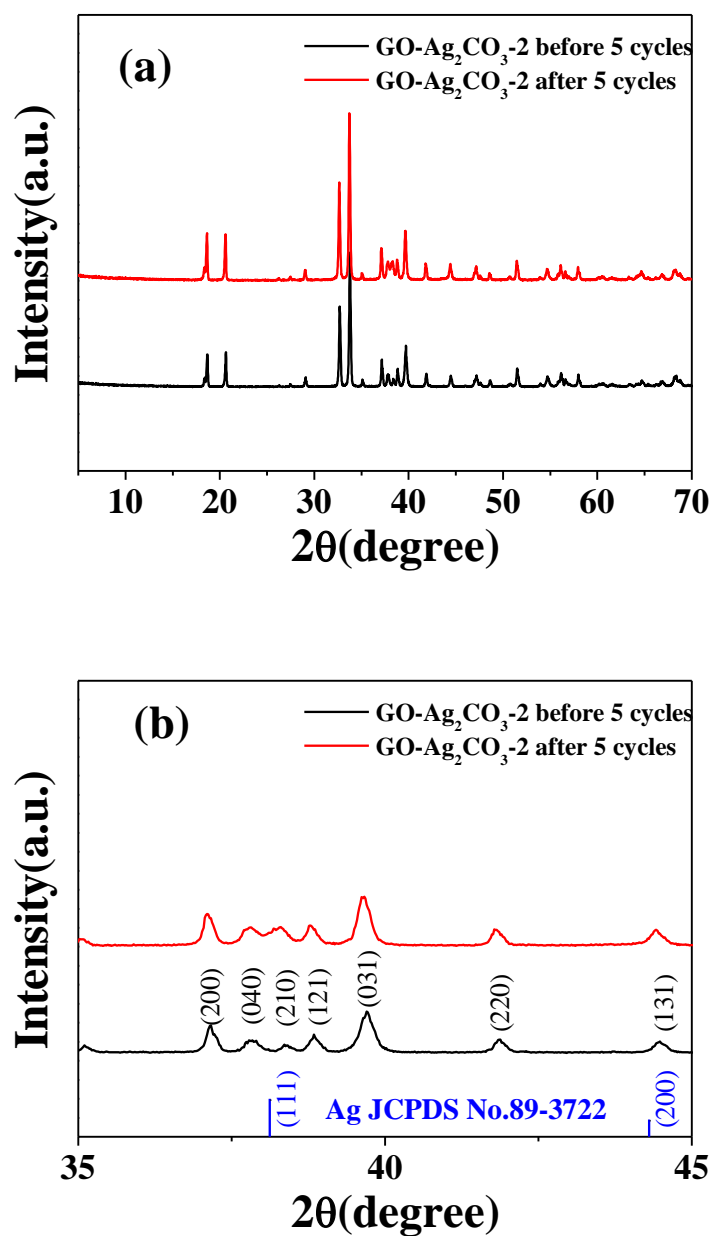


Fig. S7. (a) XRD patterns of $\text{GO-Ag}_2\text{CO}_3\text{-2}$ before (black line) and after (red line) 5 cycle photodegradation experiments under visible light irradiation. (b) Detailed comparison of XRD patterns in (a) (2θ from 35° to 45°)