

Supporting Information

Photoactive graphitic carbon nitride-based gel beads as recyclable photocatalysts

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Supplementary Experimental Section

Swelling ratio measurement

The swelling ratios were determined by the weight difference between freeze dried and swollen samples. 40 mg (W_d) dried MGB samples were immersed into excessive amount of distilled water at room temperature and weighed after left to stand for 3 h (W_s), the excessive surface water was removed by lightly touching the samples with filter paper. The MGB swelling ratios (S) were calculated by the following equation:

$$S = \frac{W_s - W_d}{W_d} \times 100\%$$

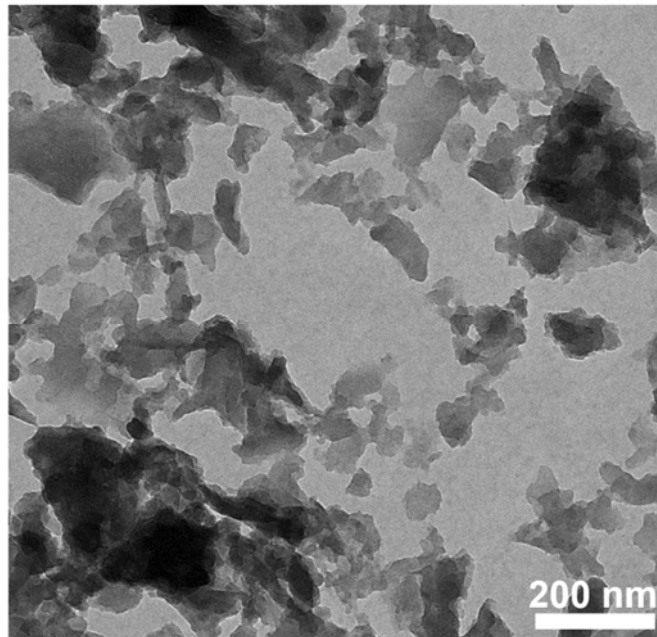


Figure S1. TEM image of CMp.

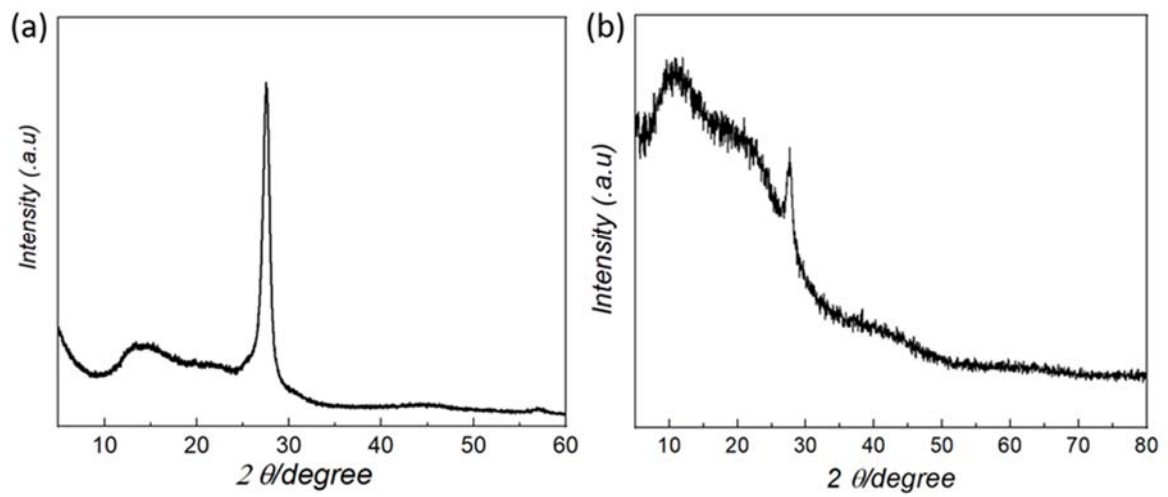


Figure S2. XRD of the pure CMp (a) and PDMA/CMp (b) MGB composites.

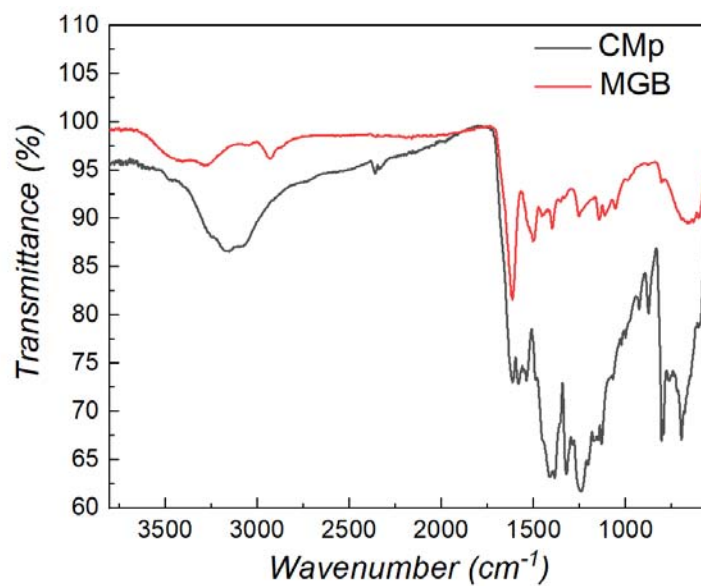


Figure S3. FT-IR of pure CMp and PDMA/CMp-6 MGB.

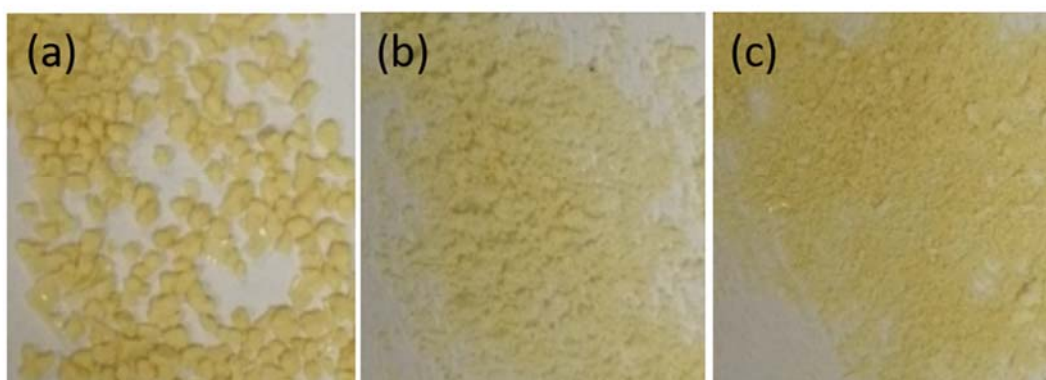


Figure S4. Digital images of PDMA/CMp-1, PDMA/CMp-2, PDMA/CMp-3.

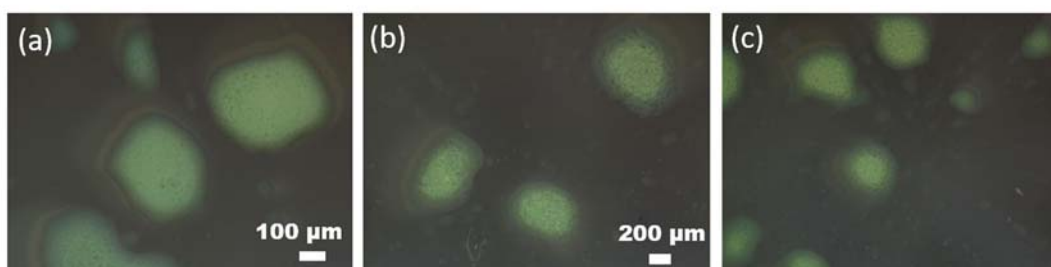


Figure S5. Optical microscopy images of monomer droplets with agitation of 1200 rpm (a), 700 rpm (b) and 300 rpm (c).

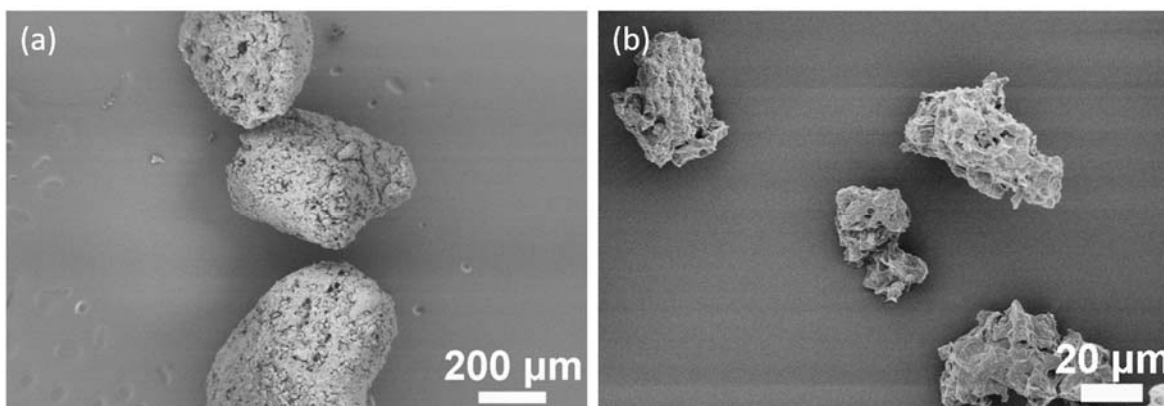


Figure S6. SEM images of PDMA/CMp-7 and PDMA/CMp-8.

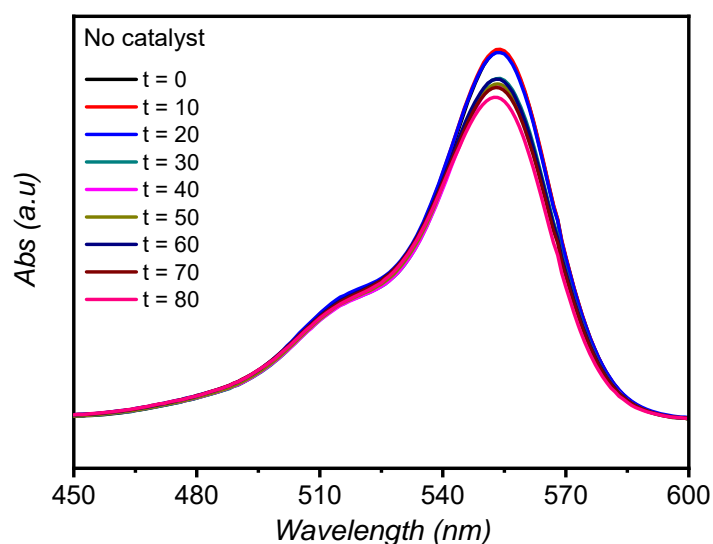


Figure S7. UV-vis absorption spectra of RhB solution (10 minutes interval) during photocatalytic degradation under visible light in the absence of PDMA/CMp MGB samples.

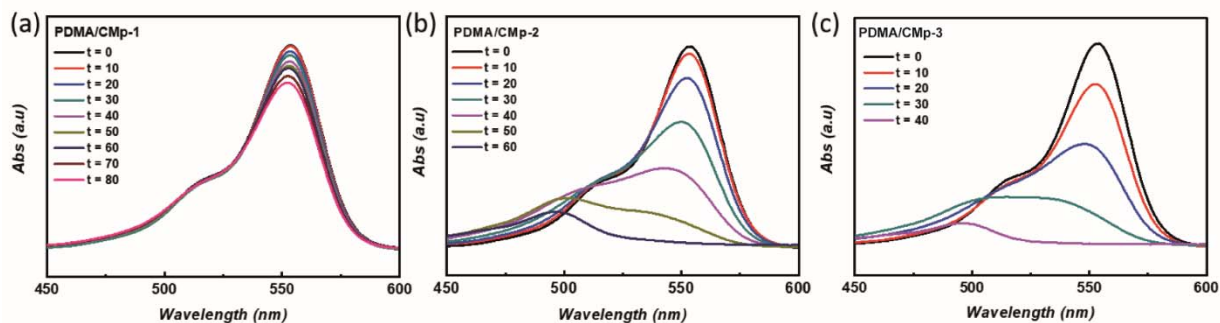


Figure S8. UV-vis absorption spectra of RhB solution (10 minutes interval) during photocatalytic degradation under visible light in the presence of PDMA/CMp-1 (a), PDMA/CMp-2 (b) and PDMA/CMp-3 (c) samples, respectively.

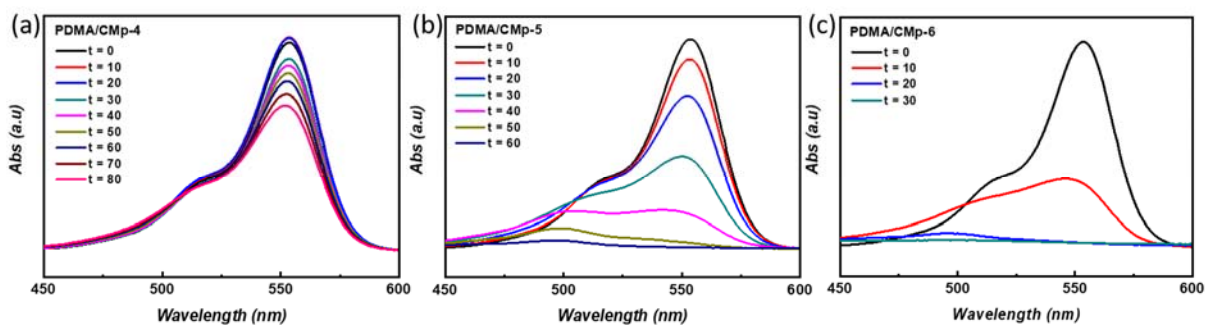


Figure S9. UV-vis absorption spectra of RhB solution (10 minutes interval) during photocatalytic degradation under visible light in the presence of PDMA/CMp-4 (a), PDMA/CMp-5 (b) and PDMA/CMp-6 (c) samples, respectively.

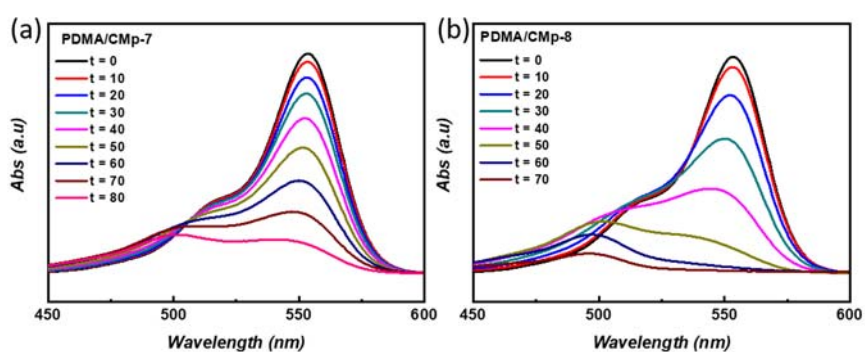


Figure S10. UV-vis absorption spectra of RhB solution (10 minutes interval) during photocatalytic degradation under visible light in the presence of PDMA/CMp-7 (a) and PDMA/CMp-8 (b) samples, respectively.

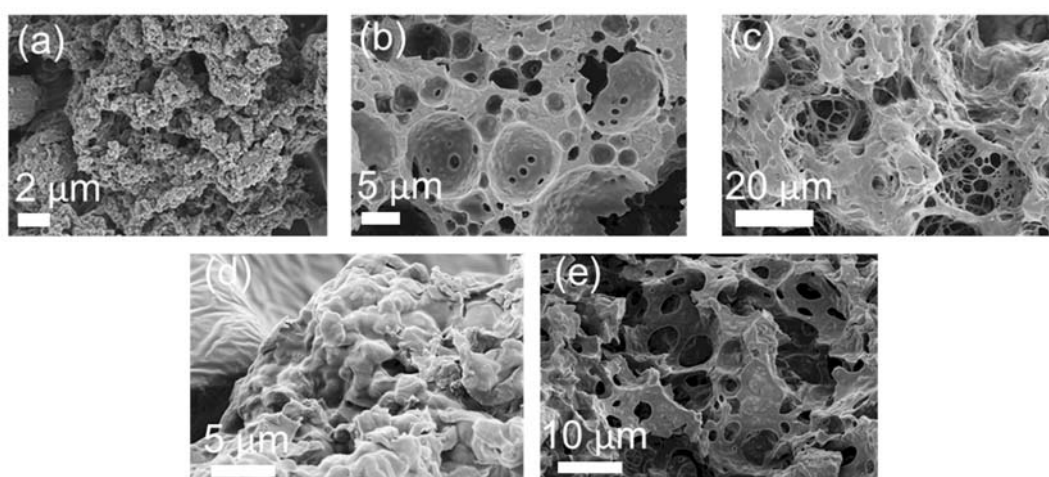


Figure S11. Magnified SEM images of PDMA/CMp-4 (a), PDMA/CMp-5 (b), PDMA/CMp-6 (c), PDMA/CMp-7 (d) and PDMA/CMp-8 (e).

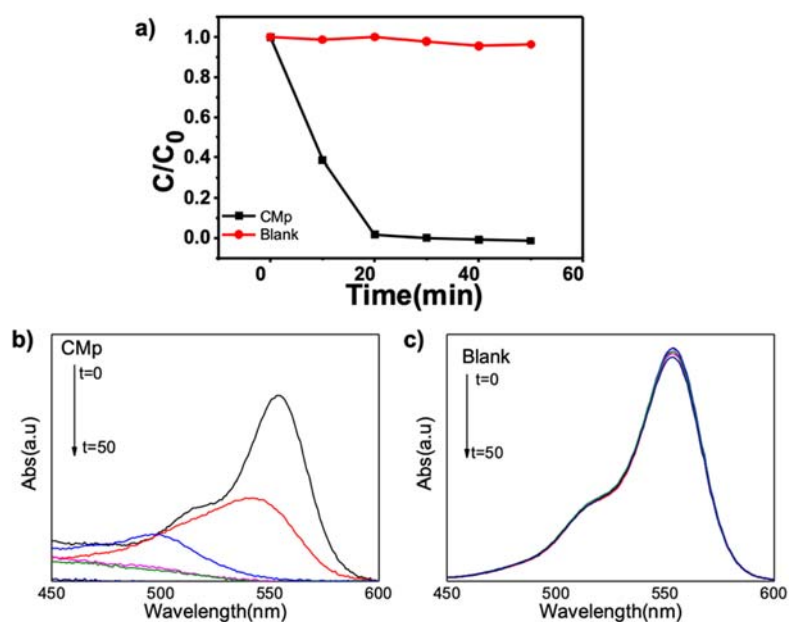


Figure S12. RhB degradation performance (10 mg mL^{-1}) a) and UV-vis curves (b, c) utilizing Cmp as photocatalyst.

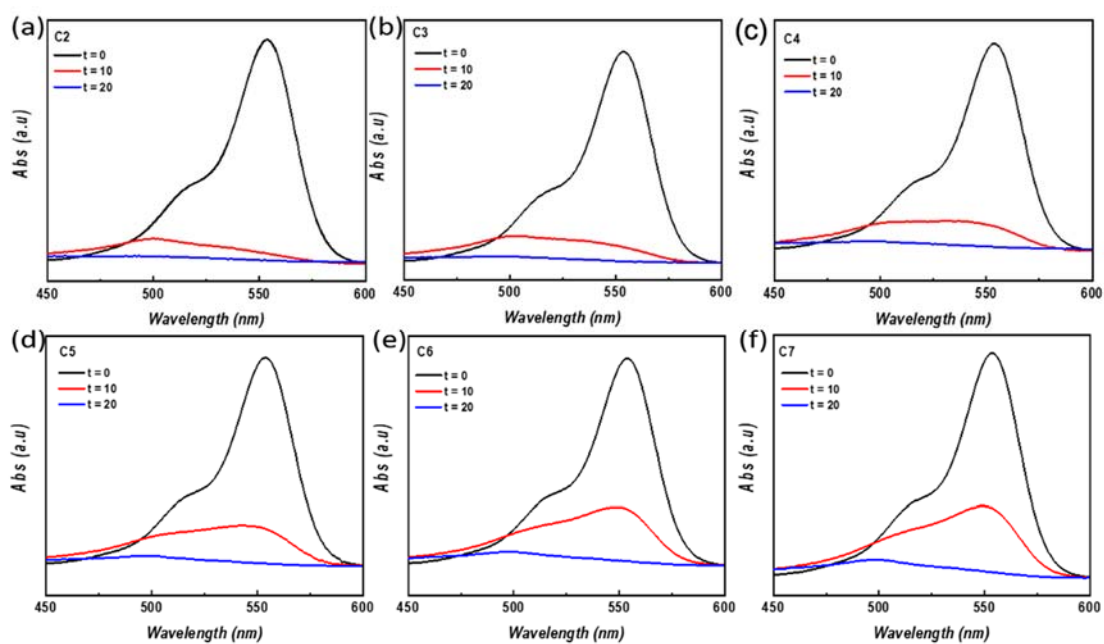


Figure S13. UV-vis absorption spectra of cycling run of RhB in the presence of PDMA/Cmp-6 MGB under visible light irradiation.

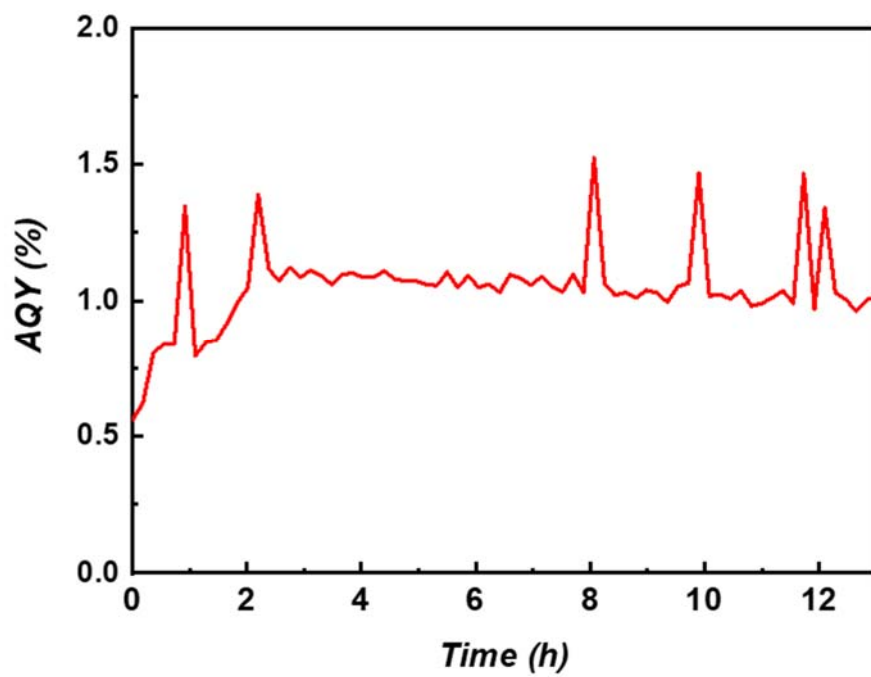


Figure S14. Average quantum yield upon illumination at 405 nm.