Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

One-pot synthesis of $PrPO_4$ nanorods/reduced graphene oxide composites and their photocatalytic properties

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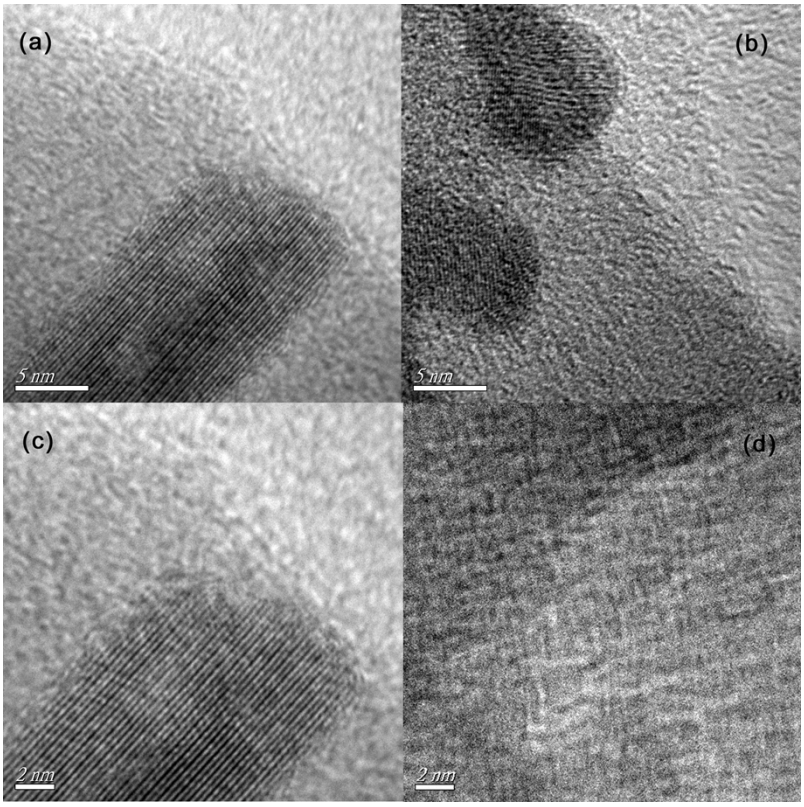


Fig. S1 HRTEM images of $PrPO_4$/RGO nanocomposite.

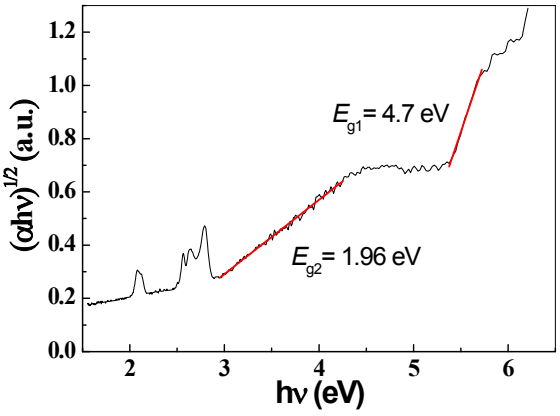
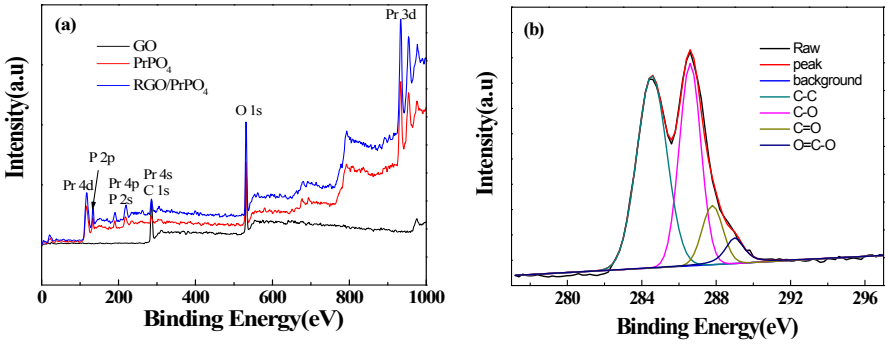


Fig. S2 $(\alpha h\nu)^{1/2}$ *vs.* hν curve deriving from UV-vis spectra of $PrPO_4$ nanorods.



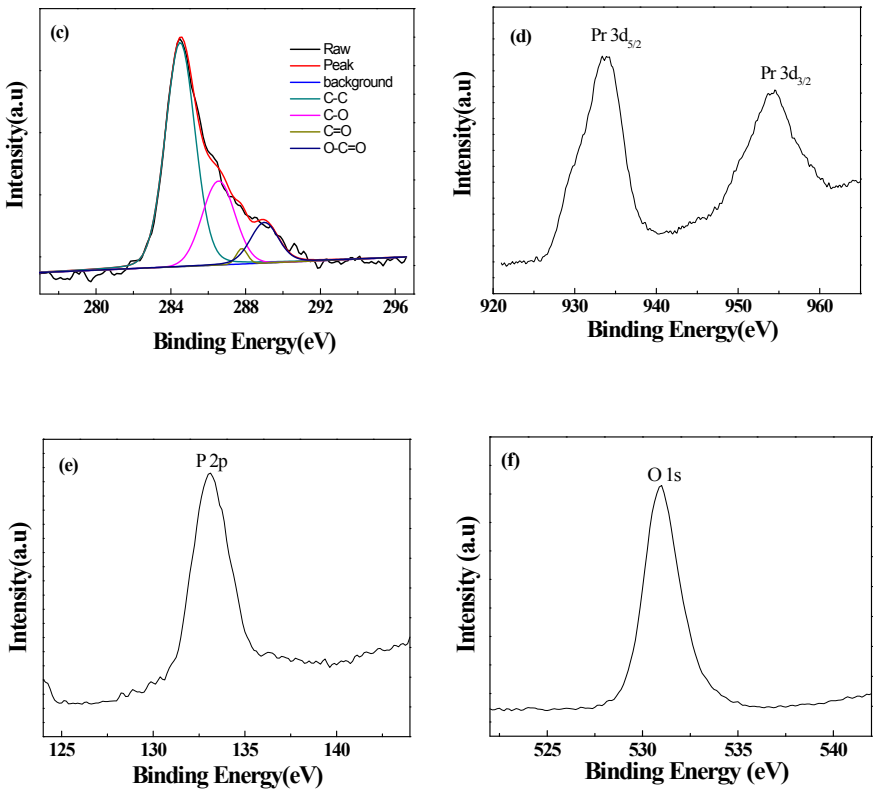


Fig. S3 (a) XPS spectra of GO, $PrPO_4$ and $PrPO_4$/RGO; (b) and (c) C 1s XPS spectra of GO and $PrPO_4$/RGO, respectively; (d)-(f) Pr 3d, P 2p and O 1s regions, respectively.

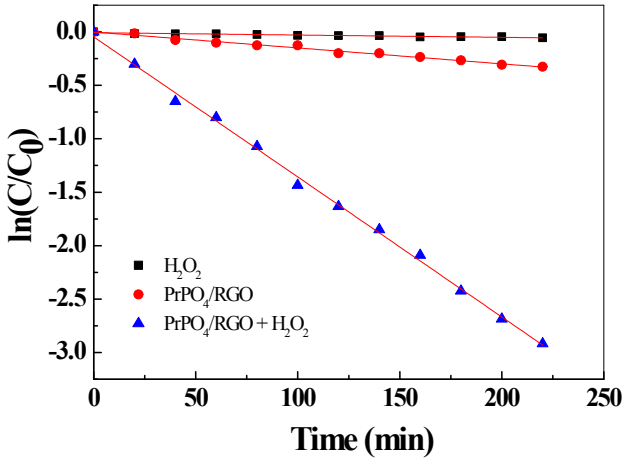


Fig. S4 Plots of $\ln(C/C_0)$ versus irradiation time.

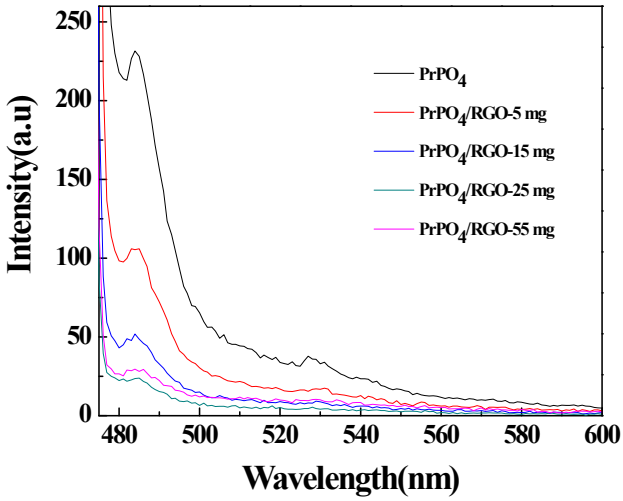


Fig. S5 The room temperature photoluminescence (PL) spectra of $PrPO_4$ and $PrPO_4$/RGO nanocomposites with different graphene content (λ_{ex} = 468 nm).

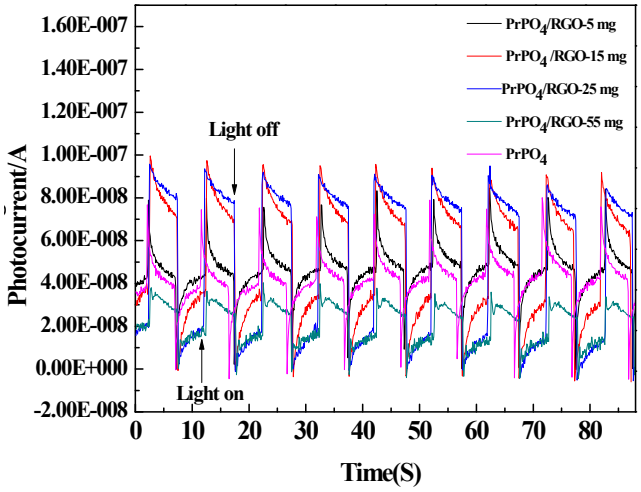


Fig. S6 Photocurrent response of $PrPO_4$, and $PrPO_4$/RGO nanocomposites with different amount of RGO.

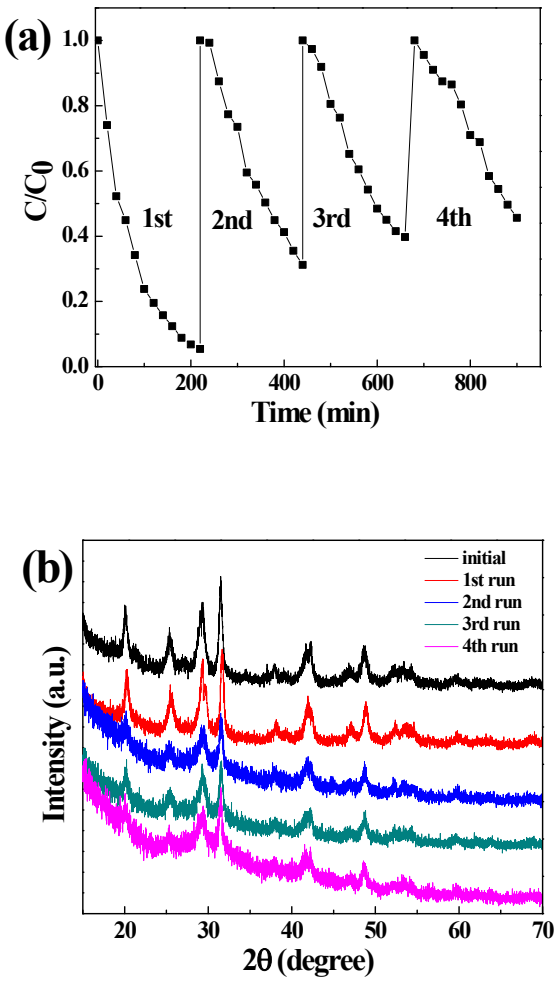


Fig. S7 (a) Repeated photocatalytic degradation of MB with $PrPO_4$/RGO-25mg nanocomposite as a photocatalyst; (b) XRD patterns of $PrPO_4$/RGO-25mg nanocomposites after photocatalytic reaction and different cycling runs.

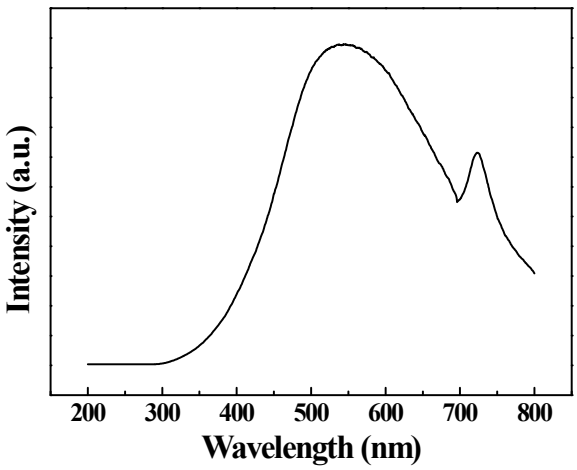


Fig. S8 The output wavelength spectrum of tungsten lamp.

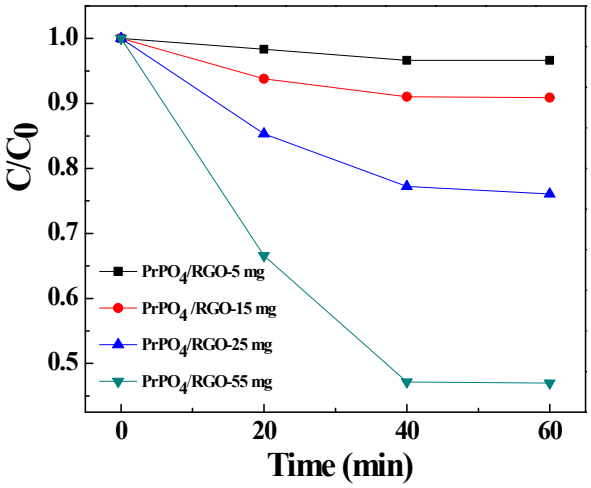


Fig. S9 The adsorption-desorption equilibrium experiment of $PrPO_4$/RGO nanocomposites with different graphene content.