Supplementary data

Prussian Blue/TiO_2 Nanocomposites as a Heterogeneous Photo-Fenton Catalyst for Degradation of Organic Pollutants in Water

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Fig. S1. Diagram of room temperature ^{57}Fe Mössbauer measurement setup with UV lamp in this study.

Fig. S2. The emission spectrum of UV lamp used in the photo-Fenton processes.

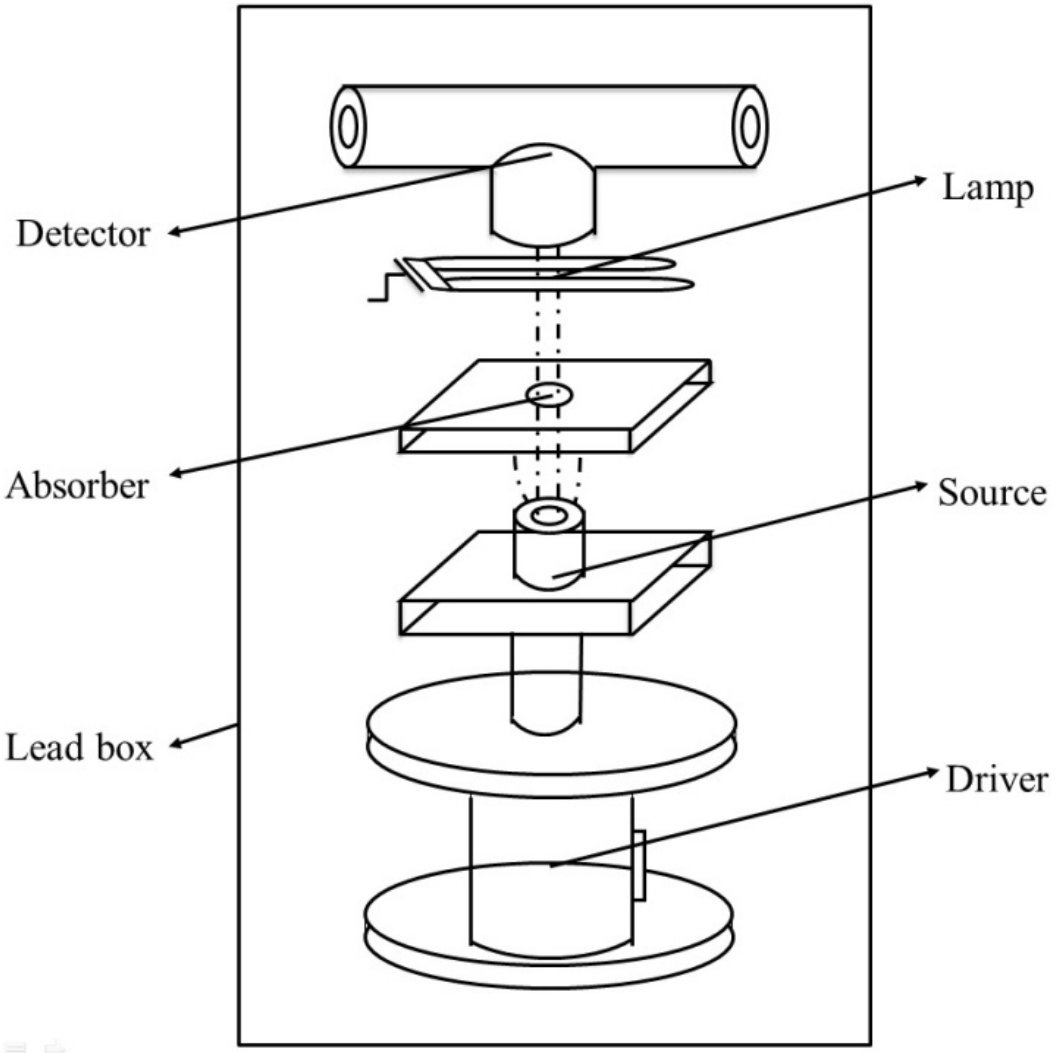
Fig. S3. The emission spectrum of visible light lamp used in the photo-Fenton process.

Fig. S4. The TOC removal efficiency of RhB in the photo-Fenton process. (Inset: The UV-vis absorption spectra of RhB during the photo-Fenton process at different time intervals.) Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, and T = 308 K.

Fig. S5. Effect of PB content on the catalytic activities of PB/TiO_2 NPs for RhB degradation in dark. Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, and T = 308 K.

Fig. S6. Effect of PB content on the catalytic activities of PB/TiO_2 NPs for RhB degradation under UV irradiation. Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, T = 308 K, and 27 W black light with 2.5 mW cm^{-2} intensity.

Fig. S7. The catalytic activities of RhB degradation in different systems. Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, T = 308 K,



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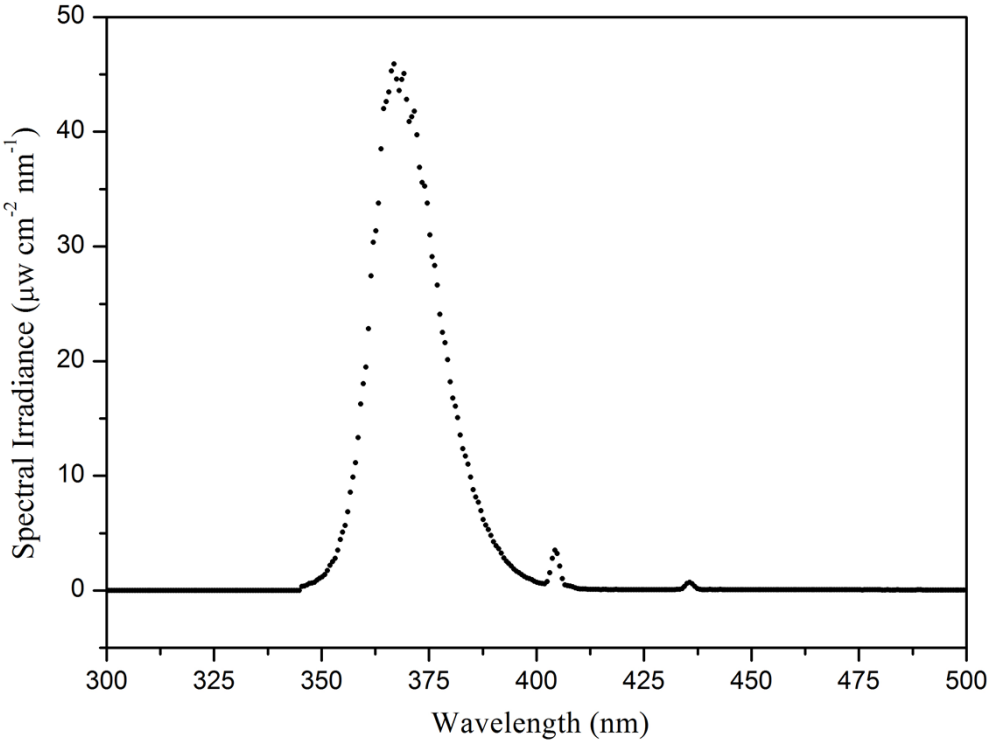


Fig. S2. The emission spectrum of UV lamp used in the photo-Fenton process.

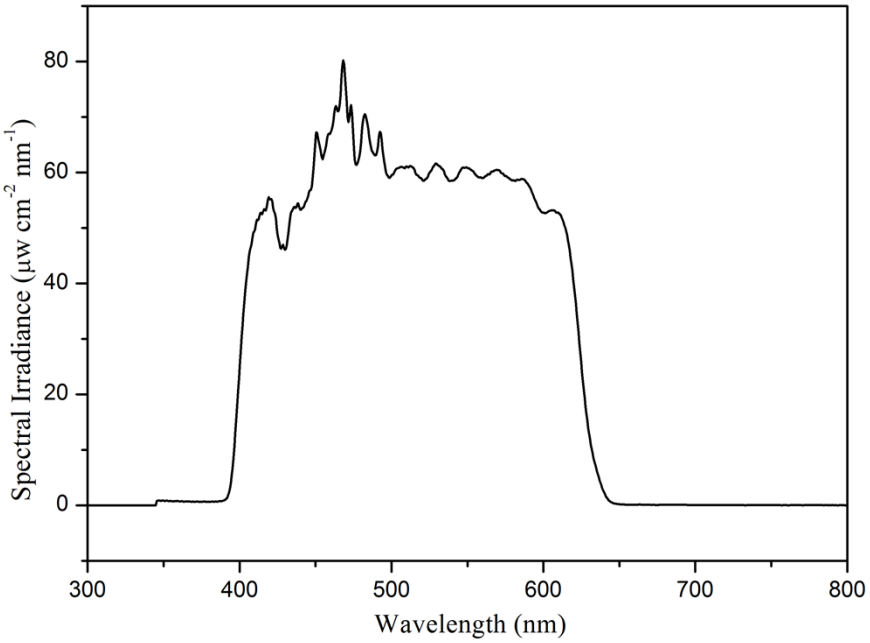


Fig. S3. The emission spectrum of visible light lamp used in the photo-Fenton process.

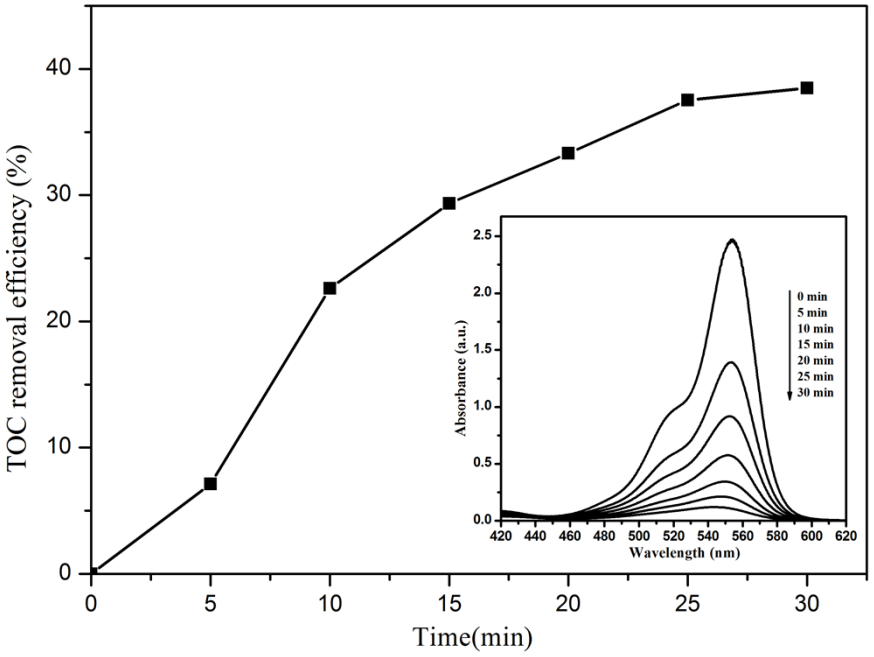


Fig. S4. The TOC removal efficiency of RhB in the photo-Fenton process. (Inset: The UV-vis absorption spectra of RhB during the photo-Fenton process at different time intervals.) Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, and T = 308 K.

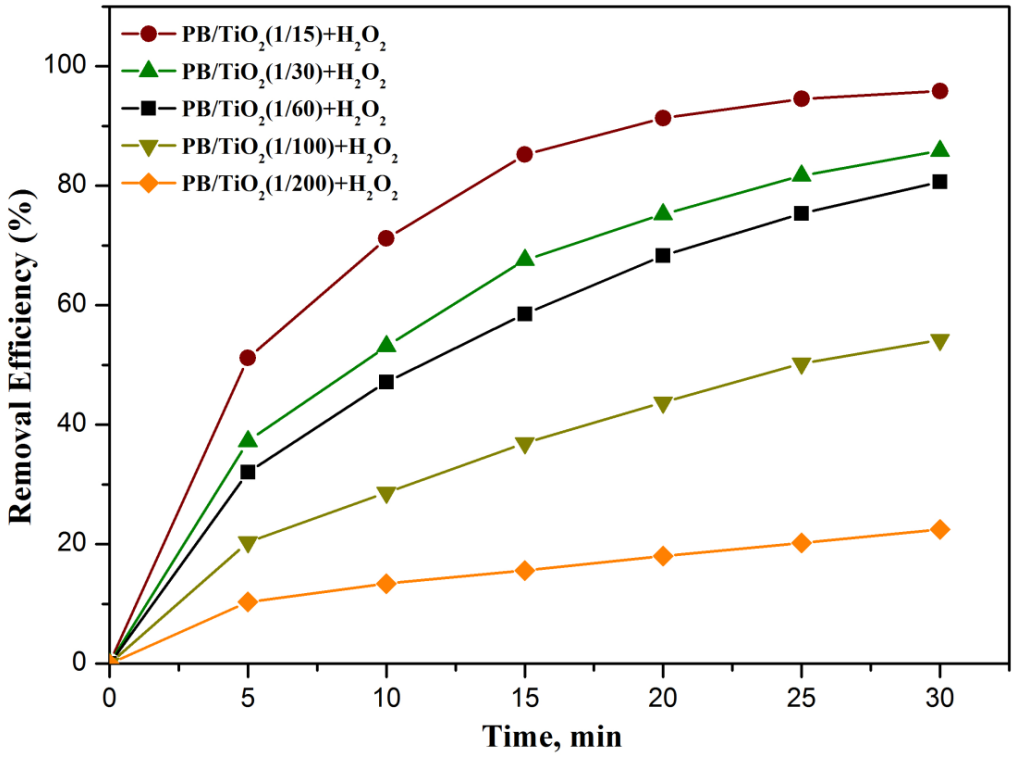
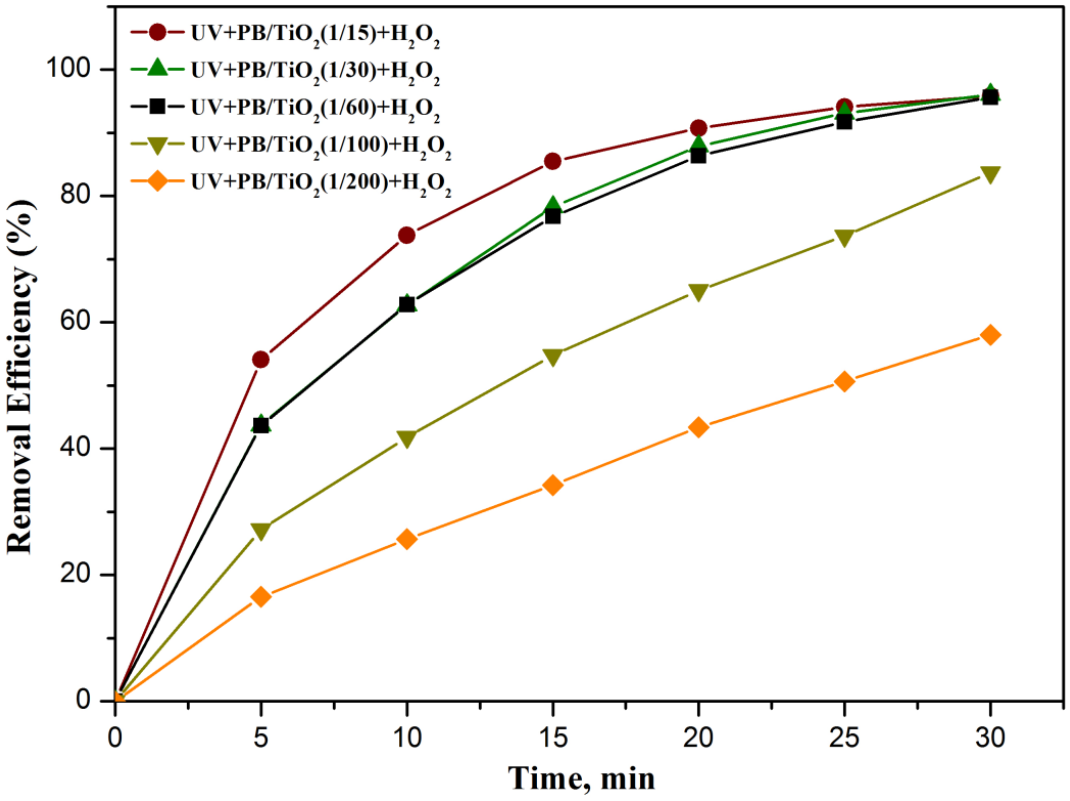


Fig. S5. Effect of PB content on the catalytic activities of PB/TiO_2 NPs for RhB degradation in dark. Reaction conditions: [RhB] = 12 mg L^{-1}, [H_2O_2] = 0.4 M, catalyst = 1.0 g L^{-1}, and T = 308 K.



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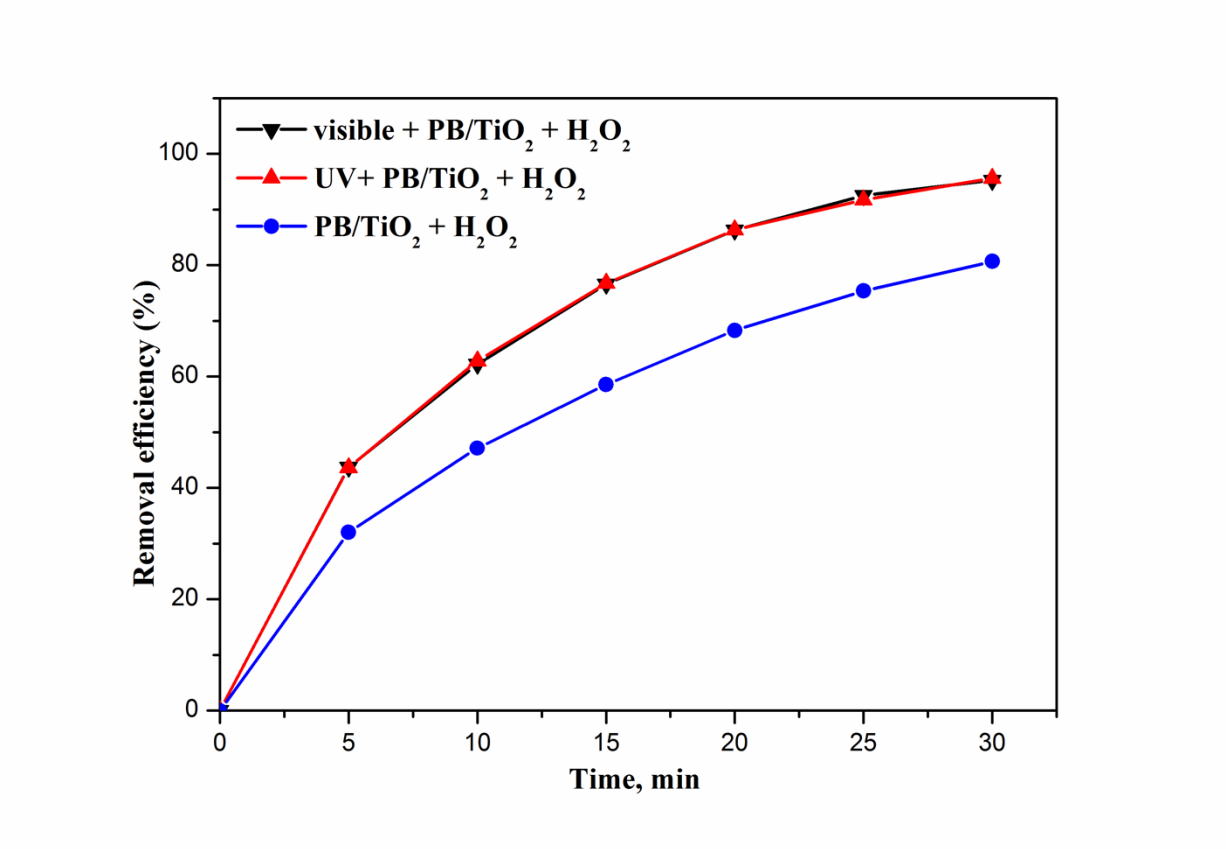

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Appendix A. Supplementary data

Figures of Mössbauer measurement setup, emission spectra of the UV and visible light lamps, TOC removal efficiency of RhB in the photo-Fenton process, effect of PB content on the catalytic activities in dark and UV irradiation and the visible-Fenton activity of PB/TiO_2 NPs could be found, in the online version, at xxxx.