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: $[\text{RhB}] = 12 \text{ mg L}^{-1}$, $[\text{H}_2\text{O}_2] = 0.4 \text{ M}$, catalyst = $1.0 \text{ g L}^{-1}$, and $T = 308 \text{ K}$.

**Fig. S5.** Effect of PB content on the catalytic activities of PB/TiO$_2$ NPs for RhB degradation in dark. Reaction conditions: $[\text{RhB}] = 12 \text{ mg L}^{-1}$, $[\text{H}_2\text{O}_2] = 0.4 \text{ M}$, catalyst = $1.0 \text{ g L}^{-1}$, and $T = 308 \text{ K}$.

**Fig. S6.** Effect of PB content on the catalytic activities of PB/TiO$_2$ NPs for RhB degradation under UV irradiation. Reaction conditions: $[\text{RhB}] = 12 \text{ mg L}^{-1}$, $[\text{H}_2\text{O}_2] = 0.4 \text{ M}$, catalyst = $1.0 \text{ g L}^{-1}$, $T = 308 \text{ K}$, 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: $[\text{RhB}] = 12 \text{ mg L}^{-1}$, $[\text{H}_2\text{O}_2] = 0.4 \text{ M}$, catalyst = $1.0 \text{ g L}^{-1}$, $T = 308 \text{ K}$,
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 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\(_2\)O\(_2\)] = 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$_2$O$_2$] = 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/TiO₂ NPs for RhB degradation under UV irradiation. Reaction conditions: [RhB] = 12 mg L⁻¹, [H₂O₂] = 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:

$[\text{RhB}] = 12 \text{ mg L}^{-1}$, $[\text{H}_2\text{O}_2] = 0.4 \text{ M}$, catalyst = 1.0 g L$^{-1}$, $T = 308 \text{ K}$. 
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.