Supplementary Information

Photoinduced Electron Transfer of Poly(o-phenylenediamine)-Rhodamine B Copolymer Dots: Application in Ultrasensitive Detection of Nitrite in Vivo

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**Fig. S1** XPS survey spectrum for Pp-RhB dots

**Table S1.** Elemental composition (at. %) of Pp-RhB dots

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<td>78.38</td>
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Fig. S2 C1s spectra of Pp-RhB dots

Fig. S3 O1s spectra of Pp-RhB dots
Fig. S4 FTIR spectrum of Pp-RhB dots

Fig. S5 PL emission spectra of Pp-RhB dots with different excitation wavelength
The difference in PL intensity of Pp-RhB dots between the blank and solutions containing different disturbing substances with the presence of NO$_2^-$ ($F_0$ and $F$ are PL intensities in the absence and presence of these ions, respectively). The disturbing substances are: F$^-$, I$^-$, HPO$_4^{2-}$, H$_2$PO$_4^-$, Sn$^{4+}$, Sn$^{2+}$, Cu$^{2+}$, Cu$^+$, Ca$^{2+}$, Hg$^{2+}$, Cr$^{3+}$, Co$^{2+}$, ClO$_4^-$, ClO$_3^-$, H$_2$O$_2$, L-cysteine (L-Cys), L-methionine (L-Met), L-tryptophan (L-Trp), L-histidine (L-His), L-leucine (L-Leu), L-tyrosine (L-Tyr), L-phenylalanine (L-Phe), L-glycine (L-Gly), L-valine (L-Val), L-isoleucine (L-Ile), L-proline (L-Pro), L-arginine (L-Arg), L-serine (L-Ser), L-asparaginate (L-Asn), L-glutamate (L-Gln), glutathione (GSH) and creatinine (Cr) left to right.
Fig. S7 The difference in PL intensity of Pp-RhB dots between the blank and solutions containing different disturbing substances without the presence of NO$_2^-$ ($F_0$ and $F$ are PL intensities in the absence and presence of these ions, respectively). The disturbing substances are: F$, I^-$, HPO$_4^{2-}$, H$_2$PO$_4^-$, Sn$^{4+}$, Sn$^{2+}$, Cu$^{2+}$, Cu$^+$, Ca$^{2+}$, Hg$^{2+}$, Cr$^{3+}$, Co$^{2+}$, ClO$_4^-$, ClO$_3^-$, H$_2$O$_2$, L-cysteine (L-Cys), L-methionine (L-Met), L-tryptophan (L-Trp), L-histidine (L-His), L-leucine (L-Leu), L-tyrosine (L-Tyr), L-phenylalanine (L-Phe), L-glycine (L-Gly), L-valine (L-Val), L-isoleucine (L-Ile), L-proline (L-Pro), L-arginine (L-Arg), L-serine (L-Ser), L-asparaginate (L-Asn), L-glutamate (L-Gln), glutathione (GSH) and creatinine (Cr) left to right.
Fig. S6 The difference in PL intensity of Pp-RhB dots between the blank and solutions containing different anionic with the presence of NO$_2^-$ ($F_0$ and $F$ are PL intensities in the absence and presence of anionic, respectively). The disturbing substances are: Cl$^-$, Br$^-$, SO$_4^{2-}$, HSO$_4^-$, CO$_3^{2-}$, HCO$_3^-$, S$^{2-}$, HS$^-$, SO$_3^{2-}$, HSO$_3^-$, NO$_3^-$, ClO$_4^-$ and BrO$_3^-$ left to right.
Fig. S9 The difference in PL intensity of Pp-RhB dots between the blank and solutions containing different anionic without the presence of NO$_2^-$ ($F_0$ and $F$ are PL intensities in the absence and presence of anionic, respectively). The disturbing substances are: Cl$^-$, Br$^-$, SO$_4^{2-}$, HSO$_4^-$, CO$_3^{2-}$, HCO$_3^-$, S$^2-$, HS$^-$, SO$_3^{2-}$, HSO$_3^-$, NO$_3^-$, ClO$_4^-$ and BrO$_3^-$ left to right.
**Fig. S10** PL intensity of Pp-RhB dots under different pH. The $F$ and $F_0$ are PL intensity of Pp-RhB dots when pH=7 and other value, respectively. The concentration of Pp-RhB dots is 0.2 mg/L.

**Fig. S11** A schematic of the molecular structures of Pp-RhB dots before the NO$_2^-$ was added.
Fig. S12 A schematic of the molecular structures of Pp-RhB dots after the NO$_2^-$ was added.