Supporting Information

Ratiometric Fluorescence Determining the Anthrax Biomarker 2,6-Dipicolinic Acid by Eu$^{3+}$/Tb$^{3+}$-doped Nickel Coordination Polymer

Hang Lei, Cui-Xing Qi, Xuan-Bo Chen, Tian Zhang, Ling Xu* and Bing Liu*

Scheme S1. The coordination fashions of HBTC$^{2-}$ ligands in Ni-BTC.

Fig. S1. The structure motif of discrete Ni-BTC with 32-membered ring.
**Fig. S2.** The 3D supramolecular framework of Ni-BTC constructed by H-bondings.

**Fig. S3.** The solid-state emission spectra of free H$_3$BTC ligand with $\lambda_{ex} = 340$ nm and Ni-BTC with $\lambda_{ex} = 343$ nm.
**Fig. S4.** The excitation spectra of Tb$^{3+}$/Eu$^{3+}$@Ni-BTC composites with comparison of that of Tb$^{3+}@$Ni-BTC and Eu$^{3+}@$Ni-BTC.

**Fig. S5.** The CIE 1931 chromaticity diagram together with the calculated color coordinate of Tb$^{3+}$/Eu$^{3+}@$Ni-BTC composites.

**Fig. S6.** EDS of Tb$^{3+}$ and Eu$^{3+}$ in Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}@$Ni-BTC.
Fig. S7. The low-temperature phosphorescence spectrum of Gd-BTC under 270 nm excitation at 77 K.

Fig. S8. The solid-state emission spectra of Tb$^{3+0.6}$/Eu$^{3+0.4}$@Ni-BTC ($\lambda_{ex} = 270$ nm) with soaking time of 6-42 h recorded at ambient temperature.
**Fig. S9** The PXRD patterns of Ni-BTC and Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}$@Ni-BTC dispersed in HEPES buffer solution.

**Fig. S10.** The solid-state emission spectra of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}$@Ni-BTC ($\lambda_{\text{ex}} = 270$ nm) without DPA added depending on pH recorded at ambient temperature.
Fig. S11. The solid-state emission spectra of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}@$Ni-BTC ($\lambda_{ex} = 270$ nm) with DPA added depending on pH values recorded at ambient temperature.

Fig. S12. The solid-state emission spectra of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}@$Ni-BTC ($\lambda_{ex} = 270$ nm) without DPA dropped depending on the dosage of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}@$Ni-BTC recorded at ambient temperature.
**Fig. S13.** The solid-state emission spectra of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}$@Ni-BTC ($\lambda_{ex} = 270$ nm) dropped with DPA depending on the dosage of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}$@Ni-BTC recorded at ambient temperature.

**Fig. S14.** The solid-state emission spectra of Tb$^{3+}_{0.6}$/Eu$^{3+}_{0.4}$@Ni-BTC ($\lambda_{ex} = 270$ nm) depending on $C_{DPA}$ of 0-20 µmol/L recorded at ambient temperature.
Fig. S15. The solid-state emission spectra of $\text{Tb}^{3+}_{0.6}/\text{Eu}^{3+}_{0.4}@\text{Ni-BTC}$ ($\lambda_{\text{ex}} = 270$ nm) depending on $\text{C}_{\text{DPA}}$ of 30-100 $\mu$mol/L recorded at ambient temperature.