Supplementary Material for Dyes and Pigments

Highly selective fluorescent and colorimetric sensor for Hg^{2+} based on triazole-linked NBD

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Electronic Supporting Information

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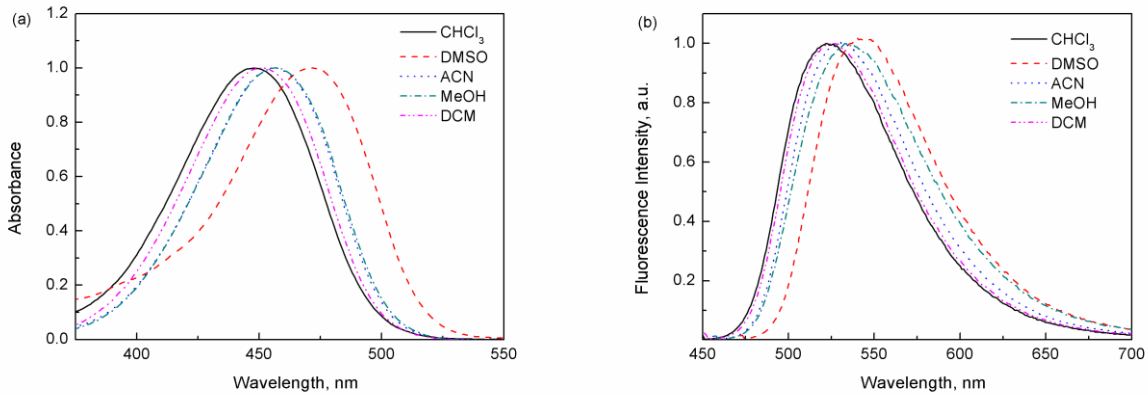

Fig. S1 Normalized absorption (a) and fluorescence (b) spectra of **1** in various solvents including $CHCl_3$, DMSO, acetonitrile (ACN), methanol (MeOH) and dichloromethane (DCM); excitation wavelengths correspond to the peaks of absorption band in different solvents, [**1**] = 10 μM.

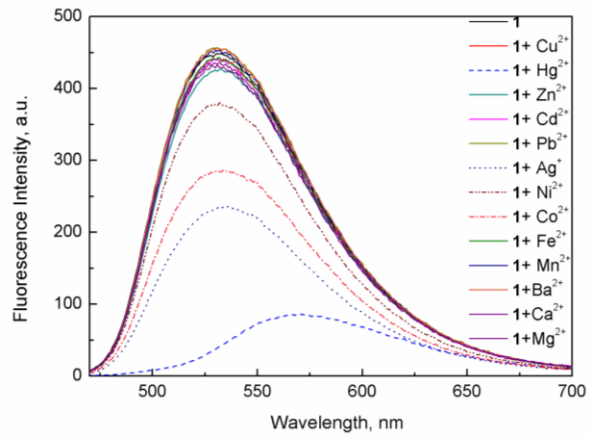

Fig. S2 Fluorescence spectra of **1** in the presence of different kinds of metal ions in ethanol. [**1**] = 10 μM, $[M^{n+}]$ = 200 μM, λ_{ex} = 456 nm.

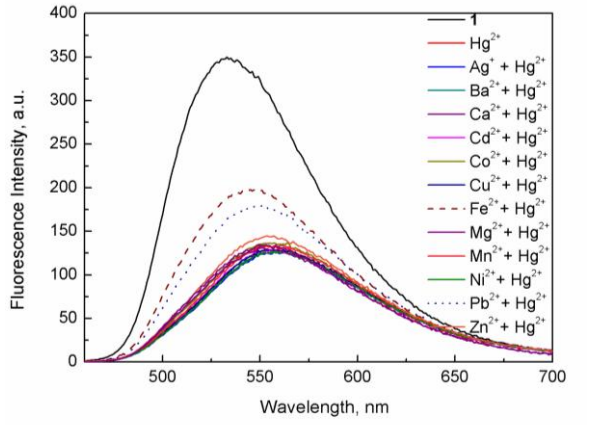

Fig. S3 Fluorescence spectra of **1** in the coexistence of different kinds of metal ions and Hg^{2+} in EtOH/HEPES (v/v = 9:1). [**1**] = 10 μM, $[M^{n+}]$ = 200 μM, $[Hg^{2+}]$ = 40 μM, λ_{ex} = 456 nm.

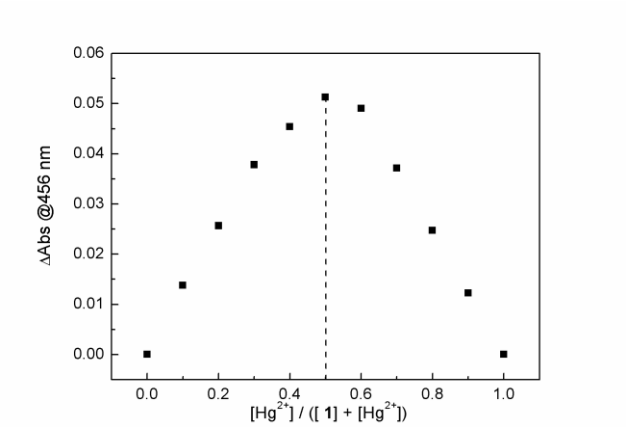

Fig. S4 Job plot for **1**-Hg^{2+}. The total concentration of [Hg^{2+}] and [**1**] is 20 μM.

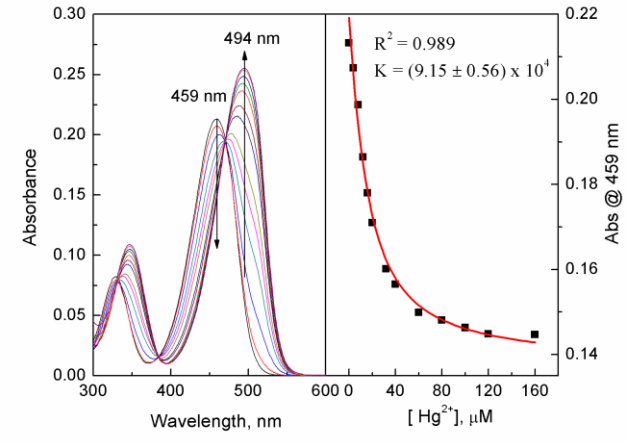

Fig. S5 Absorption spectra of **1** in the presence of varying concentrations of Hg^{2+} in EtOH/HEPES (v/v = 9:1) and plot of absorbance of **1** at 459 nm as the function of [Hg^{2+}]; [**1**] = 10 μM.

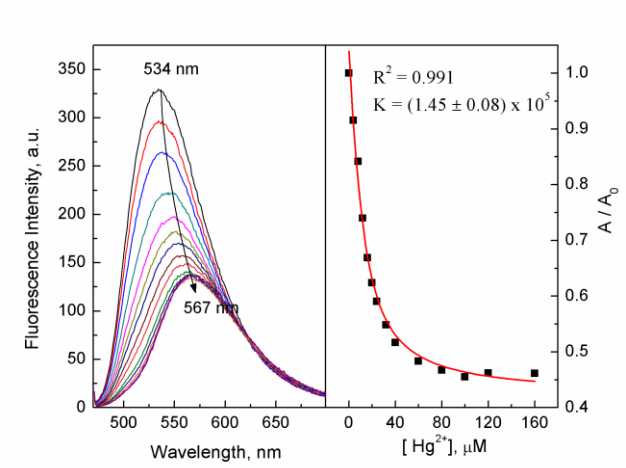

Fig. S6 Fluorescence spectra of **1** in the presence of varying concentrations of Hg^{2+} in EtOH/HEPES (v/v = 9:1) and plot of fluorescence integral area of **1** as the function of [Hg^{2+}]; [**1**] = 10 μM, λ_{ex} = 470 nm.

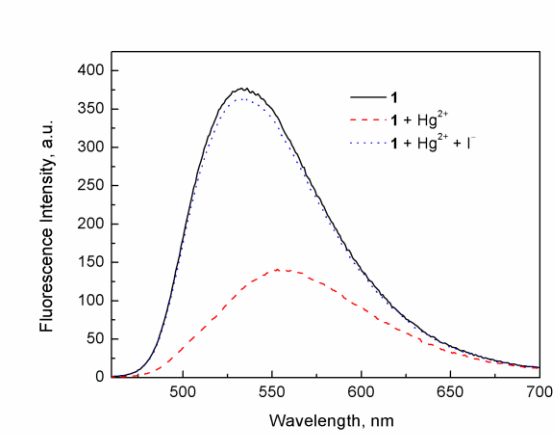

Fig. S7 Fluorescence spectra of **1** in the presence of Hg^{2+} and then addition of I^- in EtOH/HEPES (v/v = 9:1), [Hg^{2+}] = 40 μM, [I^-] = 80 μM, λ_{ex} = 456 nm.

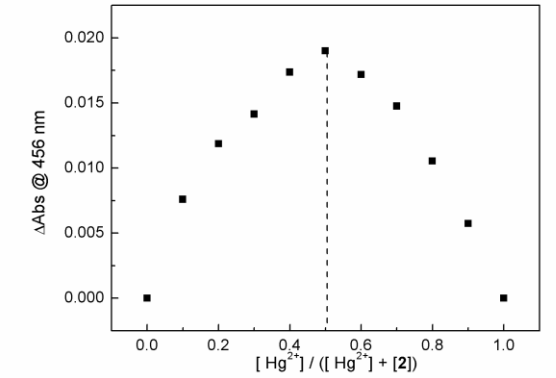

Fig. S8 Job plot for **2**-Hg^{2+}. The total concentration of [Hg^{2+}] and [**2**] is 20 μM.

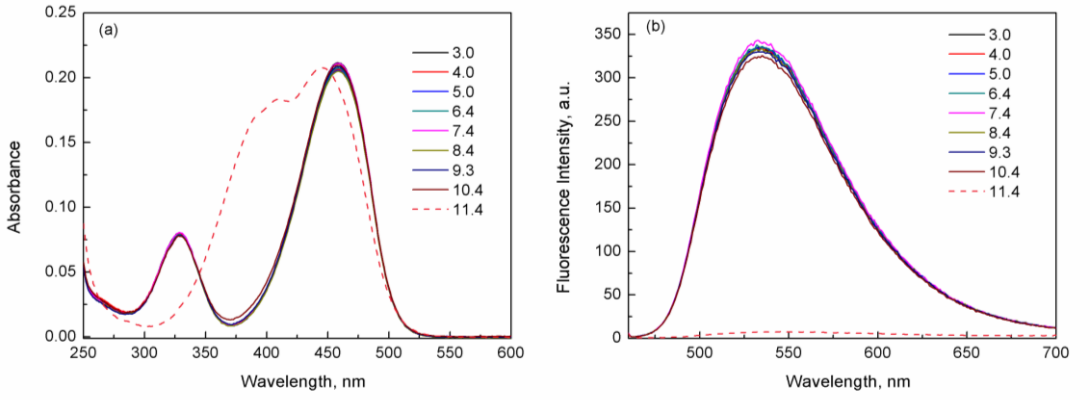

Fig. S9 Absorption (a) and fluorescence (b) spectra of **1** in EtOH/HEPES (v/v = 9:1) under different pH conditions, [**1**] = 10 μM, λ_{ex} = 459 nm.