Introduction of luminescent rhenium(I), ruthenium(II), iridium(III) and rhodium(III) systems into rhodamine-tethere ligands for the construction of bichromophoric chemosensors

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Electronic supplementary information (ESI)

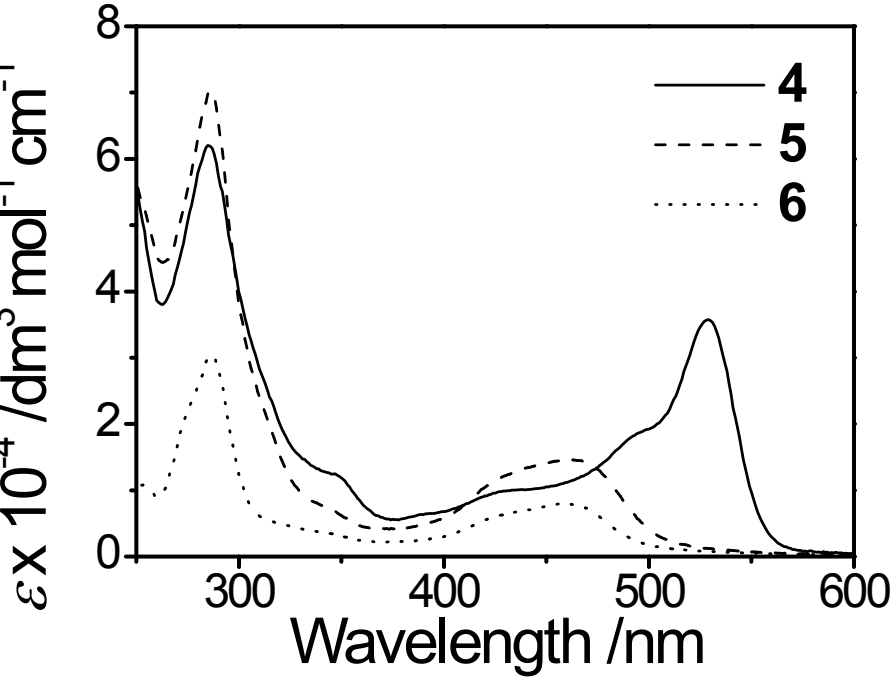

Figure S1 Electronic absorption spectra of **4**–**6** in acetonitrile at 298 K

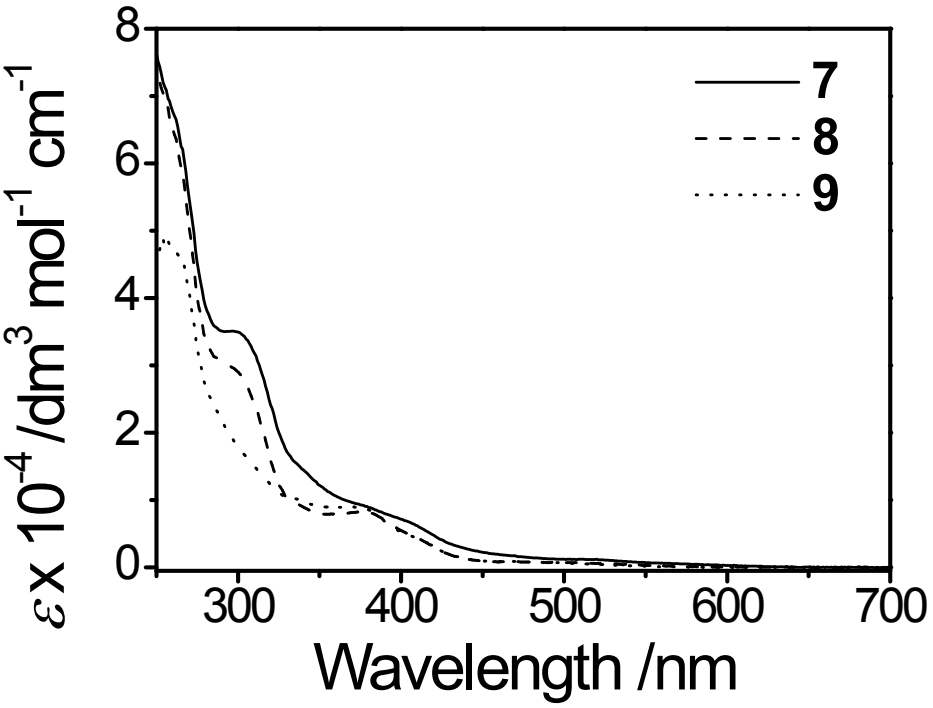

Figure S2 Electronic absorption spectra of **7**–**9** in acetonitrile at 298 K

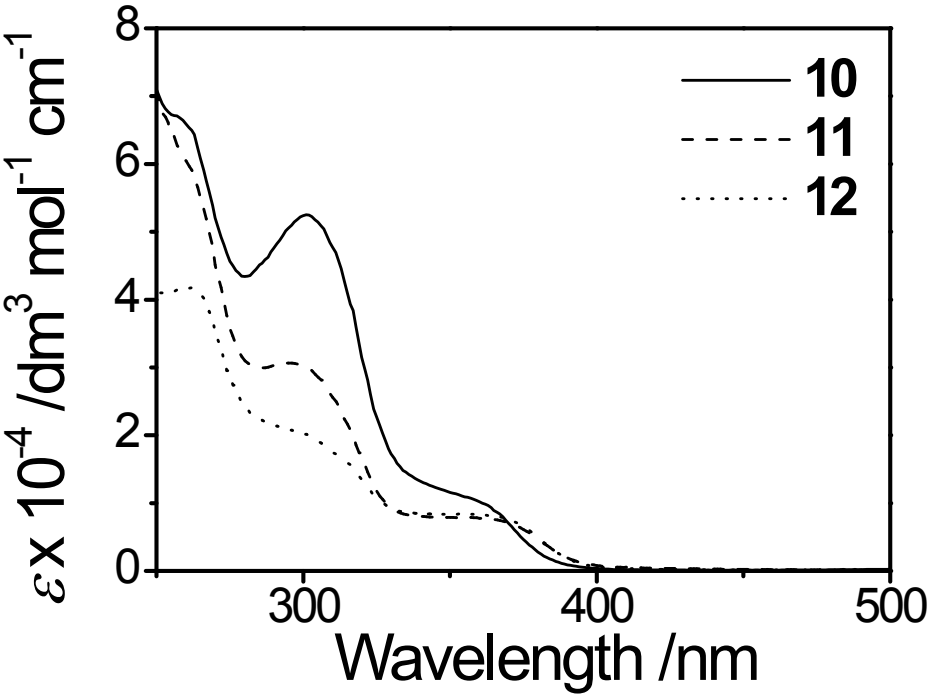

Figure S3 Electronic absorption spectra of **10**–**12** in acetonitrile at 298 K

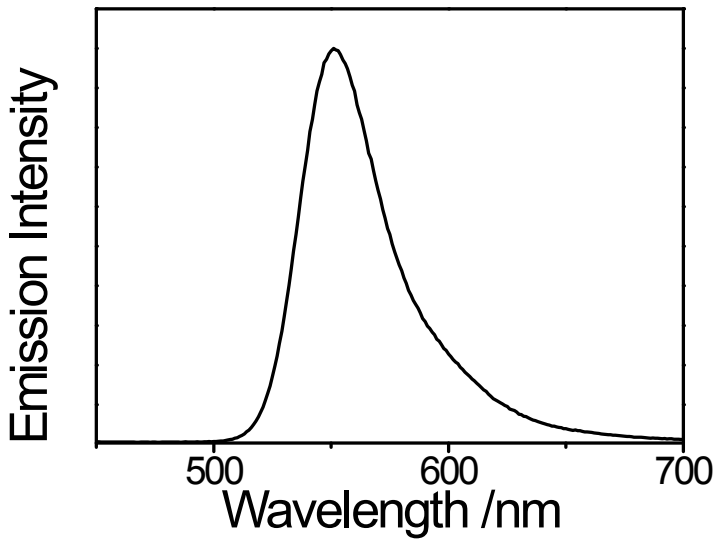

Figure S4 The normalized emission spectrum of **4** in acetonitrile at 298 K

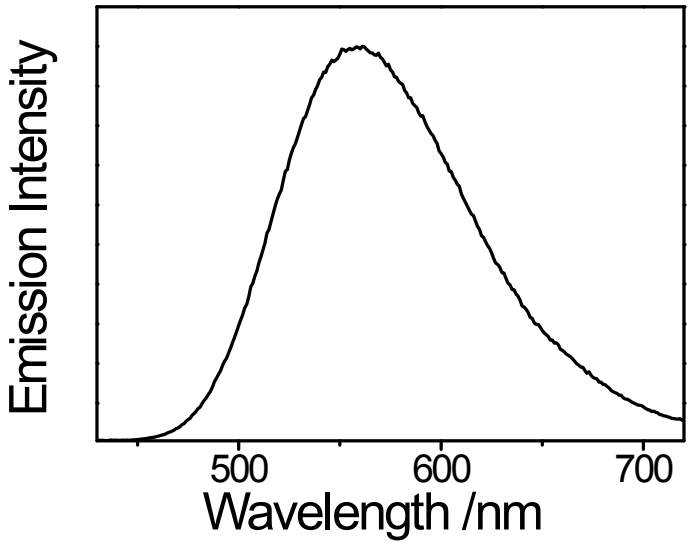

Figure S5 The normalized emission spectrum of **12** in acetonitrile at 298 K

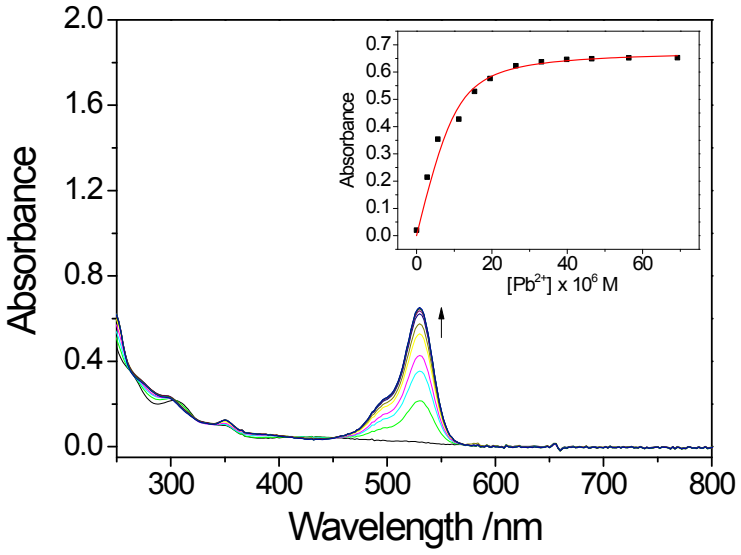

Figure S6 Electronic absorption of **1** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Pb^{2+}.

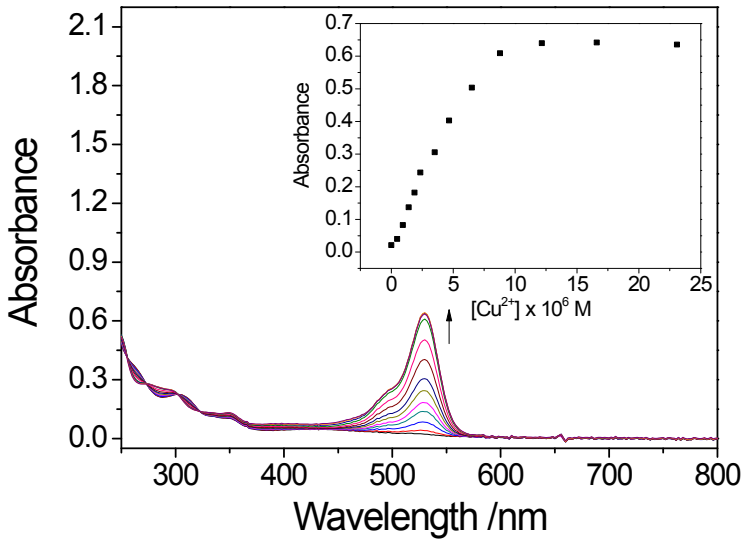

Figure S7 Electronic absorption of **1** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Cu^{2+}.

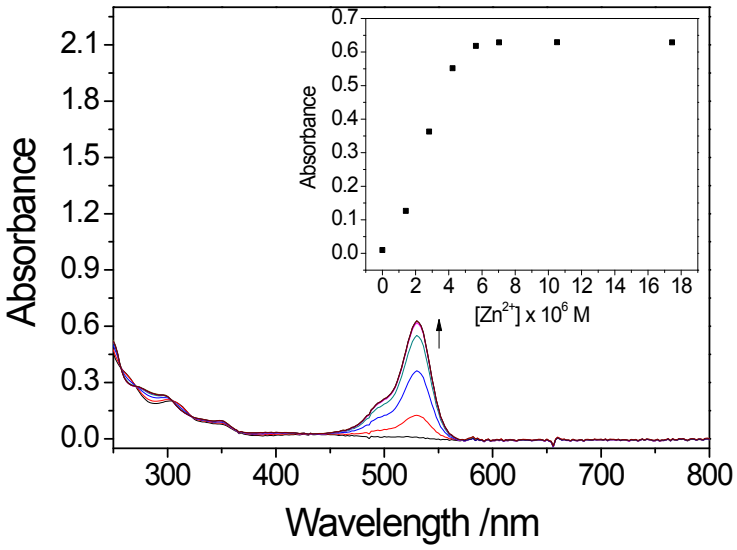

Figure S8 Electronic absorption of **1** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Zn^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Zn^{2+}.

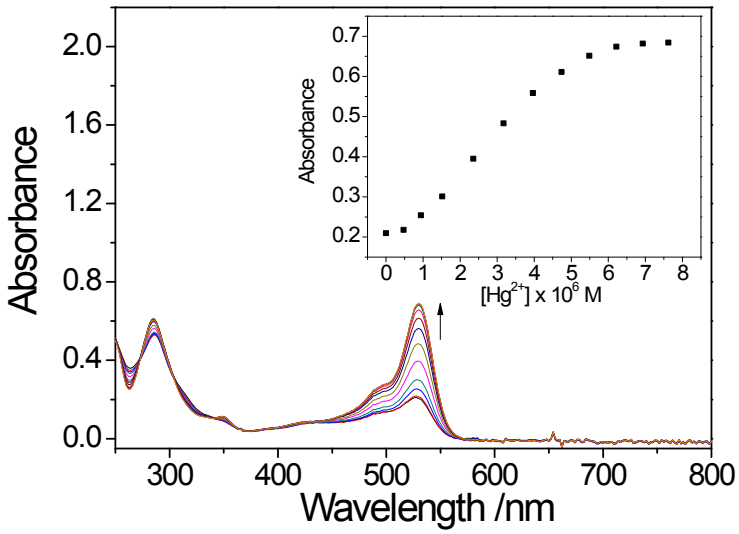

Figure S8 Electronic absorption of **4** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Hg^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Hg^{2+}.

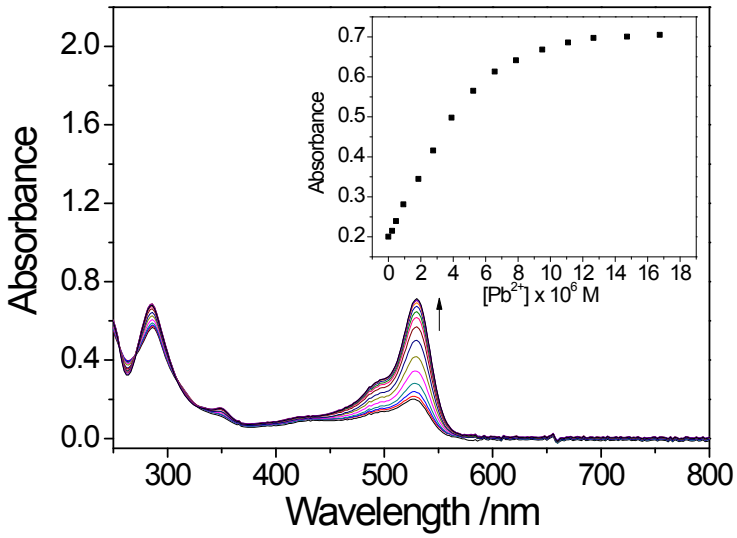

Figure S9 Electronic absorption of **4** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Pb^{2+}.

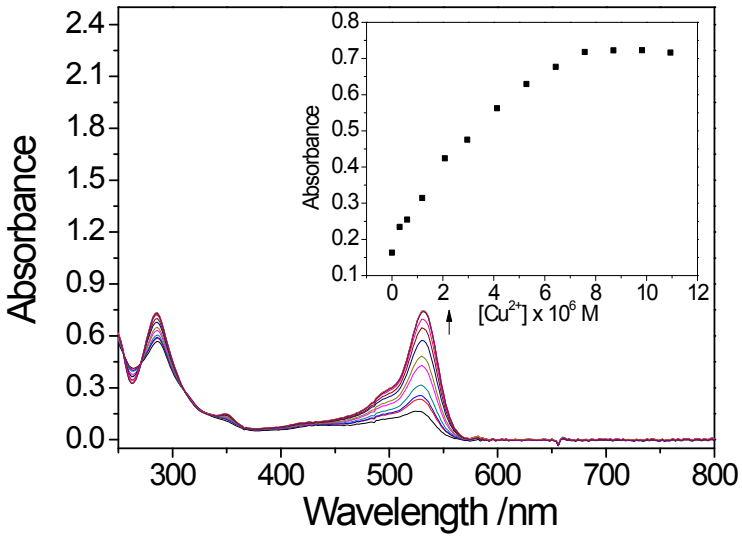

Figure S10 Electronic absorption of **4** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Cu^{2+}.

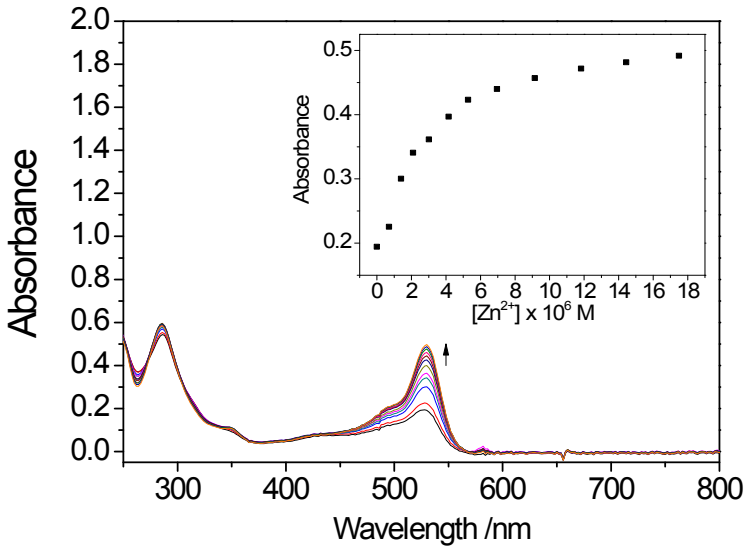

Figure S11 Electronic absorption of **4** in CH_3CN (concentration = 11.8 μM) at 298 K upon addition of various concentrations of Zn^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Zn^{2+}.

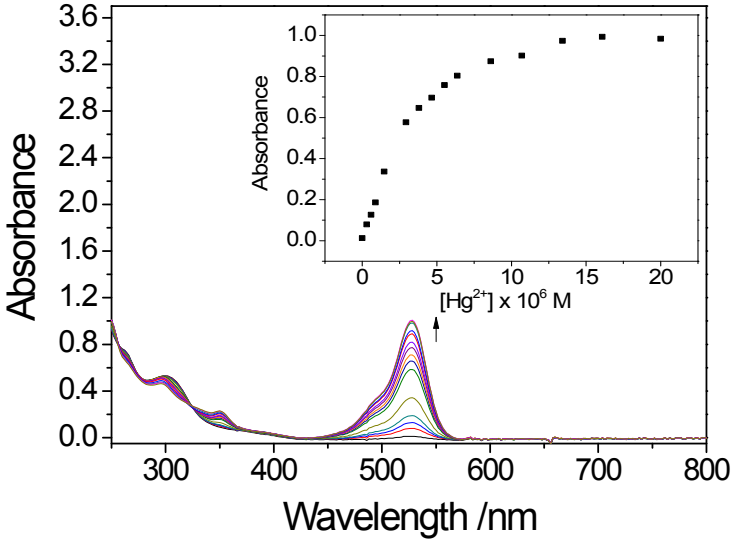

Figure S12 Electronic absorption of **7** in CH_3CN (concentration = 11.7 μM) at 298 K upon addition of various concentrations of Hg^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Hg^{2+}.

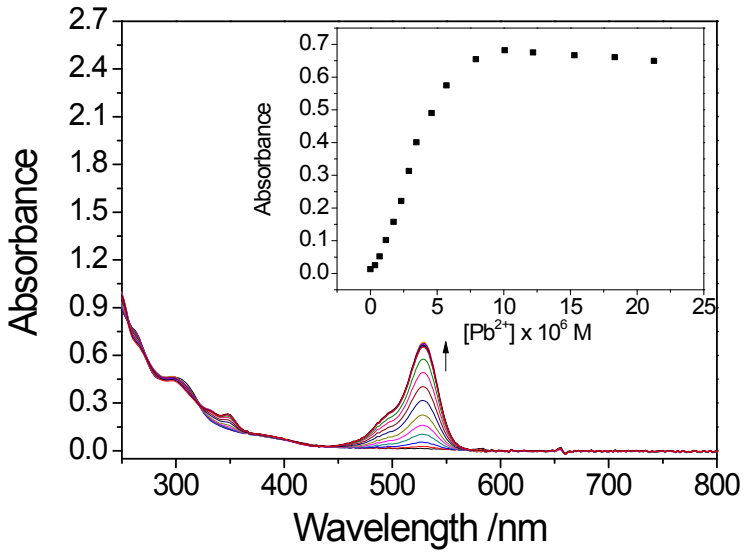

Figure S13 Electronic absorption of **7** in CH_3CN (concentration = 11.7 μM) at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Pb^{2+}.

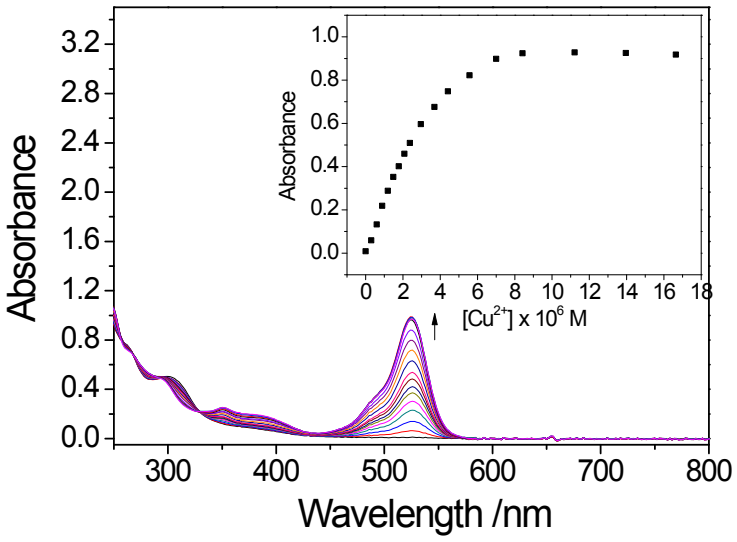

Figure S14 Electronic absorption of **7** in CH_3CN (concentration = 11.7 μM) at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the absorbance at 530 nm as a function of the concentration of Cu^{2+}.

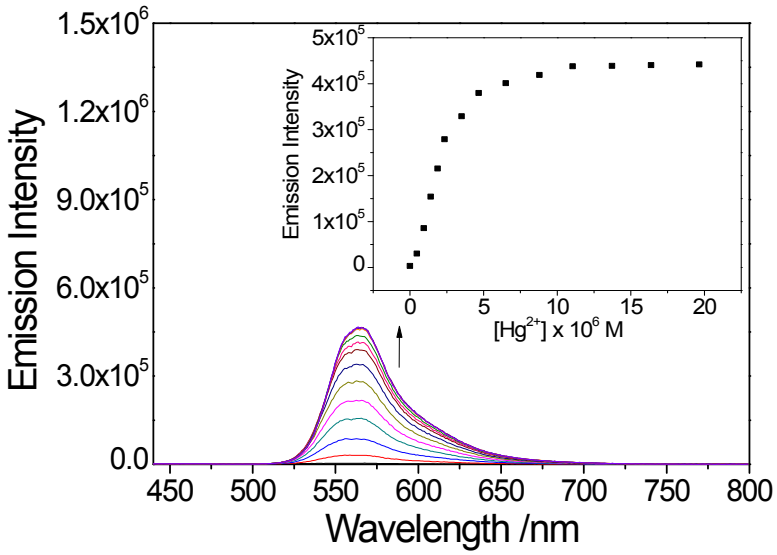

Figure S15 Corrected emission spectra of **1** (9.66 μM) in acetonitrile at 298 K upon addition of various concentrations of Hg^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Hg^{2+}.

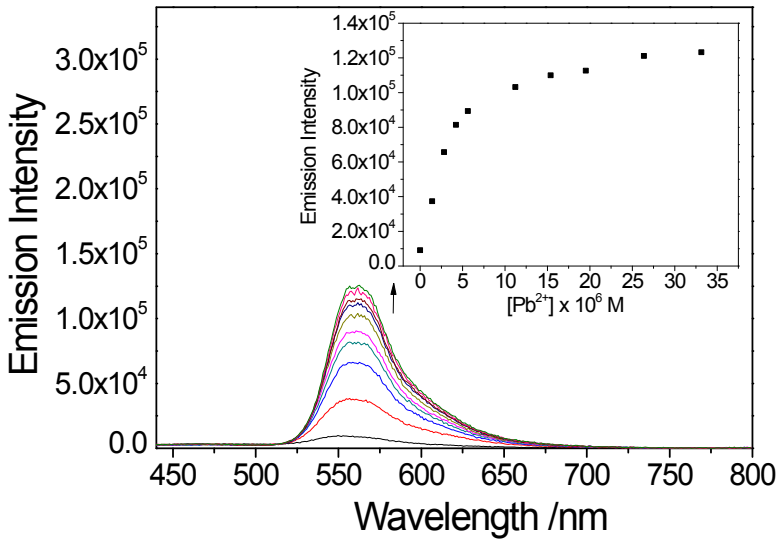

Figure S16 Corrected emission spectra of **1** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Pb^{2+}.

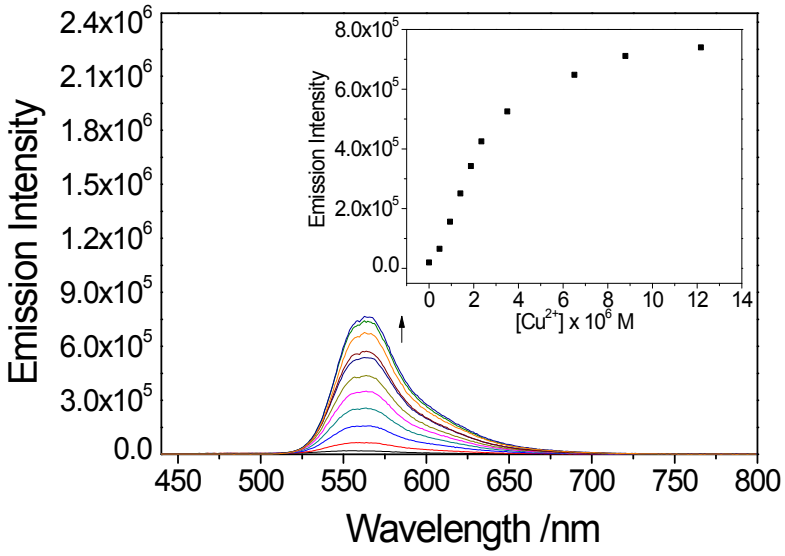

Figure S17 Corrected emission spectra of **1** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Cu^{2+}.

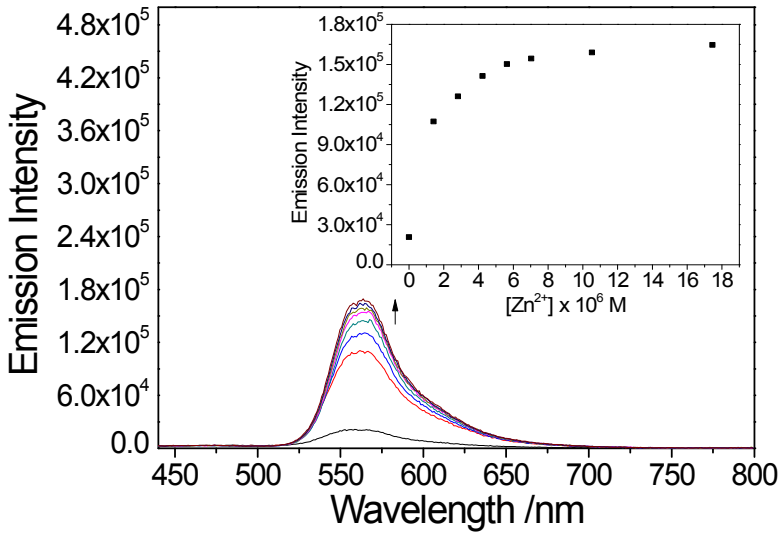

Figure S18 Corrected emission spectra of **1** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Zn^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Zn^{2+}.

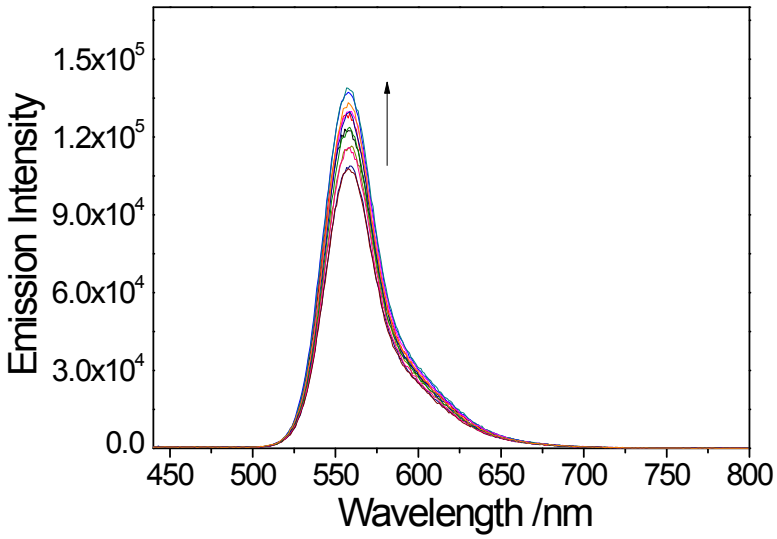

Figure S19 Corrected emission spectra of **4** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Hg^{2+}.

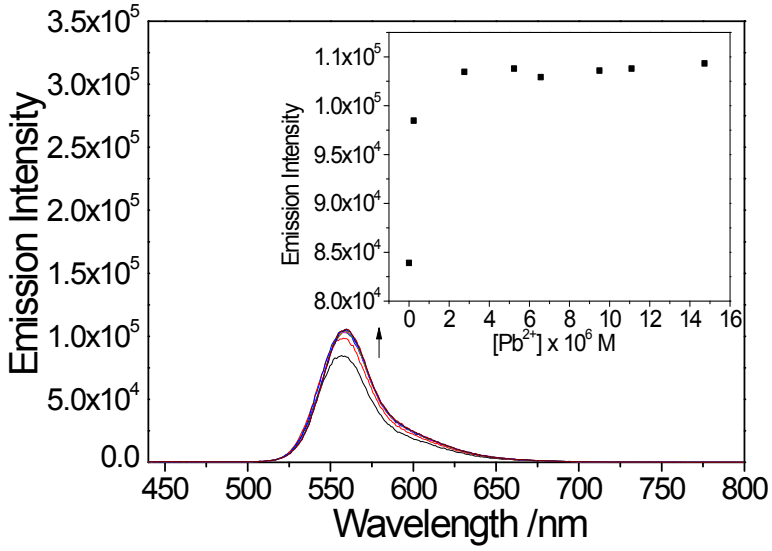

Figure S20 Corrected emission spectra of **4** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Pb^{2+}.

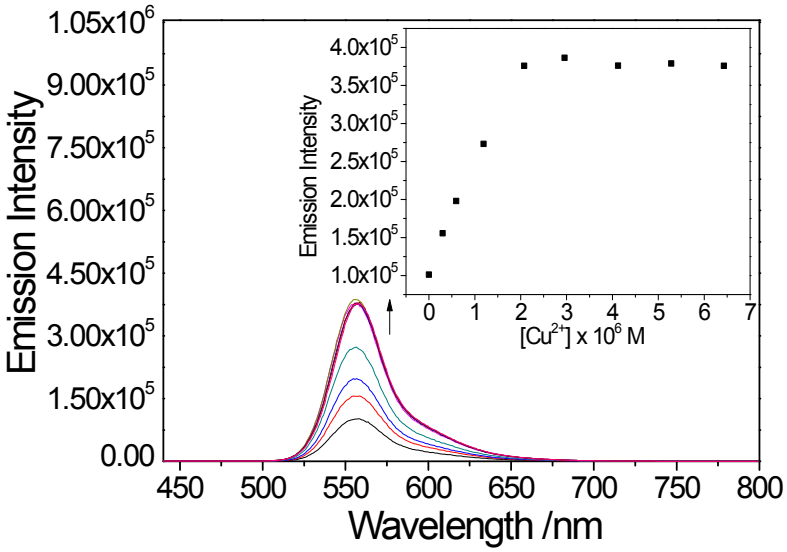

Figure S21 Corrected emission spectra of **4** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Cu^{2+}.

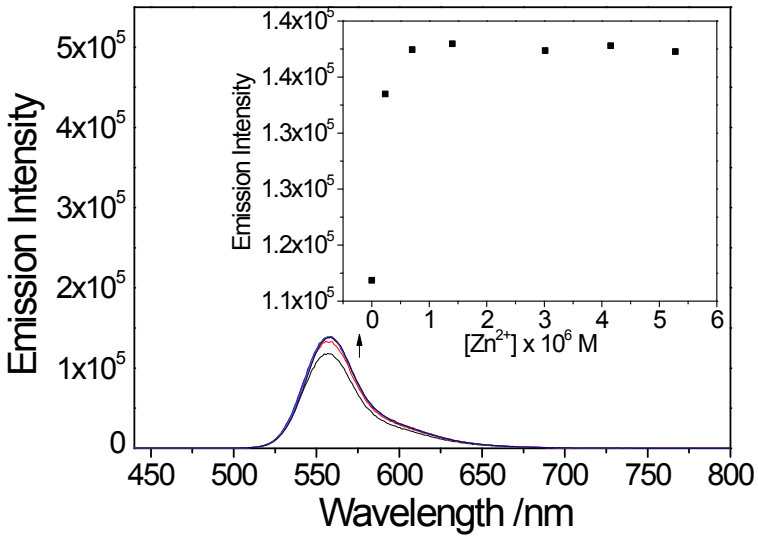

Figure S22 Corrected emission spectra of **4** (11.8 μM) in acetonitrile at 298 K upon addition of various concentrations of Zn^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Zn^{2+}.

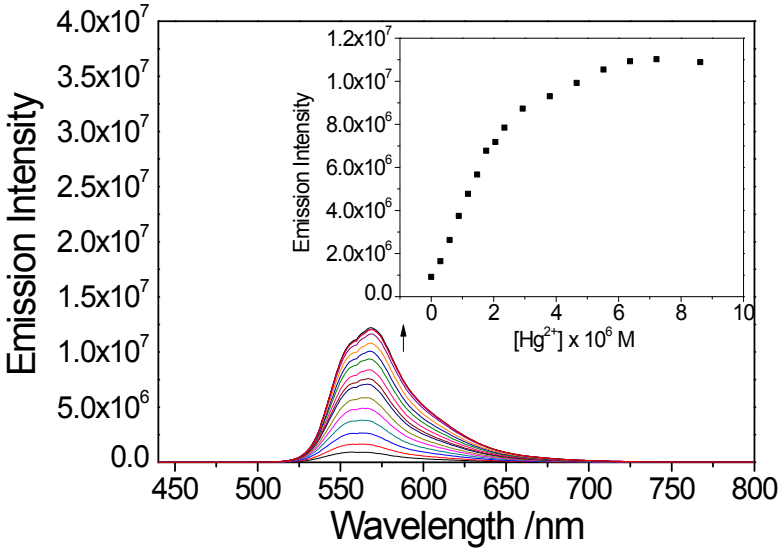

Figure S23 Corrected emission spectra of **7** (11.7 μM) in acetonitrile at 298 K upon addition of various concentrations of Hg^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Hg^{2+}.

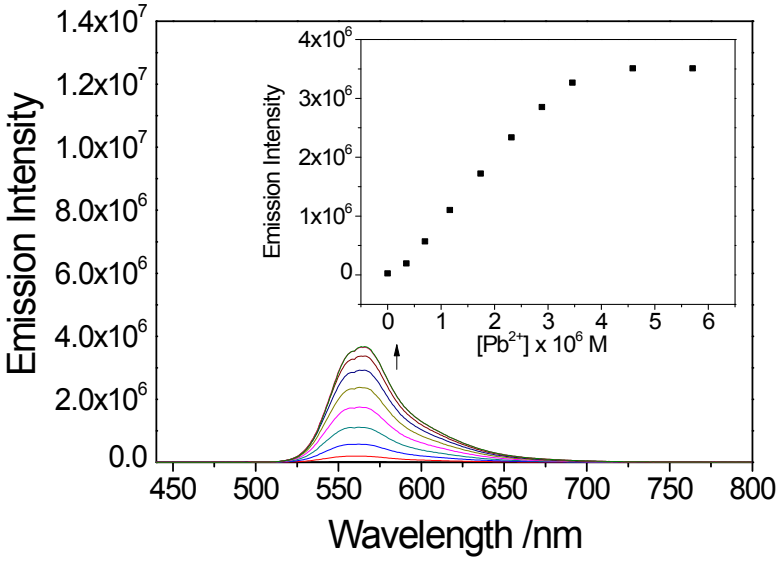

Figure S24 Corrected emission spectra of **7** (11.7 μM) in acetonitrile at 298 K upon addition of various concentrations of Pb^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Pb^{2+}.

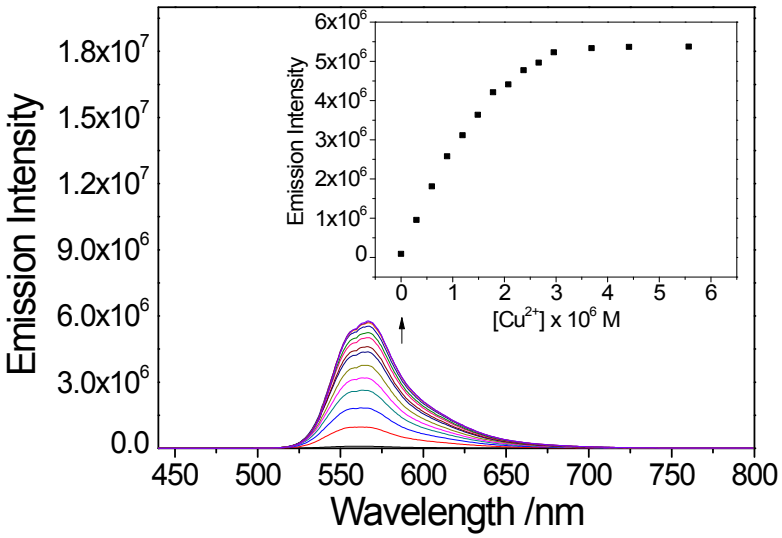

Figure S25 Corrected emission spectra of **7** (11.7 μM) in acetonitrile at 298 K upon addition of various concentrations of Cu^{2+}. Inset shows the plots of the emission intensity at 560 nm as a function of the concentration of Cu^{2+}.