Electronic Supplementary Information (ESI)

Multi-responsive turn-on flurogenic probe to sense Zn$^{2+}$, Cd$^{2+}$ and Pb$^{2+}$: Left- Right-Center emission signal swing

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Figure S1: $^1$H-NMR spectra of L

Figure S2: Expanded (aromatic region) $^1$H-NMR spectra of L
Figure S3: Expanded (aliphatic region) $^1$H-NMR spectra of L

Figure S4: $^{13}$C-NMR spectra of L
Figure S5: Mass spectrum of L

Figure S6: UV-Vis spectra of L (10µM) in presence of excess (20 equivalents) of various metal ions in CH3OH/aqueous HEPES buffer (5mM, pH~7.3; 4:1, v/v) mixed solvent
**Figure S7:** UV-Vis titration spectra of L (20μM) with incremental addition of Cu$^{2+}$ in mixed solvent. INSET: Changes in the emission intensity at 573 nm with different concentration of Cu$^{2+}$.

**Figure S8:** Job’s plot for Cu$^{2+}$ from the titration spectra.
Figure S9: Changes in the emission intensity of L at 582 nm with time upon interaction with Pb$^{2+}$; $\lambda_{\text{ex}} = 450$ nm

Figure S10: Fluorescence intensity vs. concentration of Zn$^{2+}$ plot for determination of detection limit
Figure S11: Fluorescence intensity vs. concentration of Cd$^{2+}$ plot for determination of detection limit

Figure S12: Fluorescence intensity vs. concentration of Pb$^{2+}$ plot for determination of detection limit
**Figure S13:** Job’s plot for Zn$^{2+}$ from the fluorescence titration spectra

**Figure S14:** Job’s plot for Cd$^{2+}$ from the fluorescence titration spectra
Figure S15. Mass spectrum of L in presence of Zn$^{2+}$

Figure S16. Mass spectrum of L in presence of Cd$^{2+}$
**Figure S17:** Mass spectrum of L in presence of Pb$^{2+}$.

**Figure S18:** Optimized structures of L and its Cd$^{2+}$ and Zn$^{2+}$ complexes. For L and its Zn$^{2+}$ complex the calculations were performed using B3LYP/6-31 G (d,p) as implemented on Gaussian 09. For L-Cd$^{2+}$ complex calculation was performed using B3LYP/6-31 G (d) basis set for all the atoms except for Cd$^{2+}$, where LANL2DZ effective core potential (ECP) was employed.
References: