Supporting Information

An intramolecular charge transfer (ICT) based chemosensor for silver ion using 4-methoxy-N-(thiophen-2-yl) methyl)benzenamine

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Fig. S1 ¹H-NMR spectrum of 4-methoxy-*N*-((thiophen-2-yl)methyl)benzenamine



Fig. S2 ¹³C-NMR spectrum of 4-methoxy-N-((thiophen-2-yl)methyl)benzenamine



Fig. S3 ESI-Mass spectrum of 4-methoxy-N-((thiophen-2-yl)methyl)benzenamine (Ligand 1)



Fig. S4 Dependence of the fluorescence intensity of ligand **1** ($5.0 \times 10^{-6} \mod L^{-1}$) on pH. The intensities were taken at the peak height at 358 nm in aqueous methanol solution (pH 7.4 phosphate buffer 10 mM). Excitation: 320 nm.



Fig. S5 Job's plot of the complexation between ligand and Ag^+ ion, total concentration of ligand and Ag^+ ion was kept constant at Ag^+ ion 1.0 equiv in pH 7.4 phosphate buffer.



Fig. S6 Fluorescence spectra of Ag^+ ion complex of ligand **1** in various MeOH : H_2O binary mixtures (from left to right 10 : 90 to 90 : 10, v/v) at room temperature ($\lambda_{ex} = 320$ nm, slit width: 5 nm/5 nm).



Fig. S7 Frontier molecular orbitals optimized at the B3LYP/LANL2DZ (d) level theory of ligand 1 with Pb^{2+} ion.