Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

A NBD-based two-in-one Cu^{2+}/Ni^{2+} chemosensor with differential charge transfer processes

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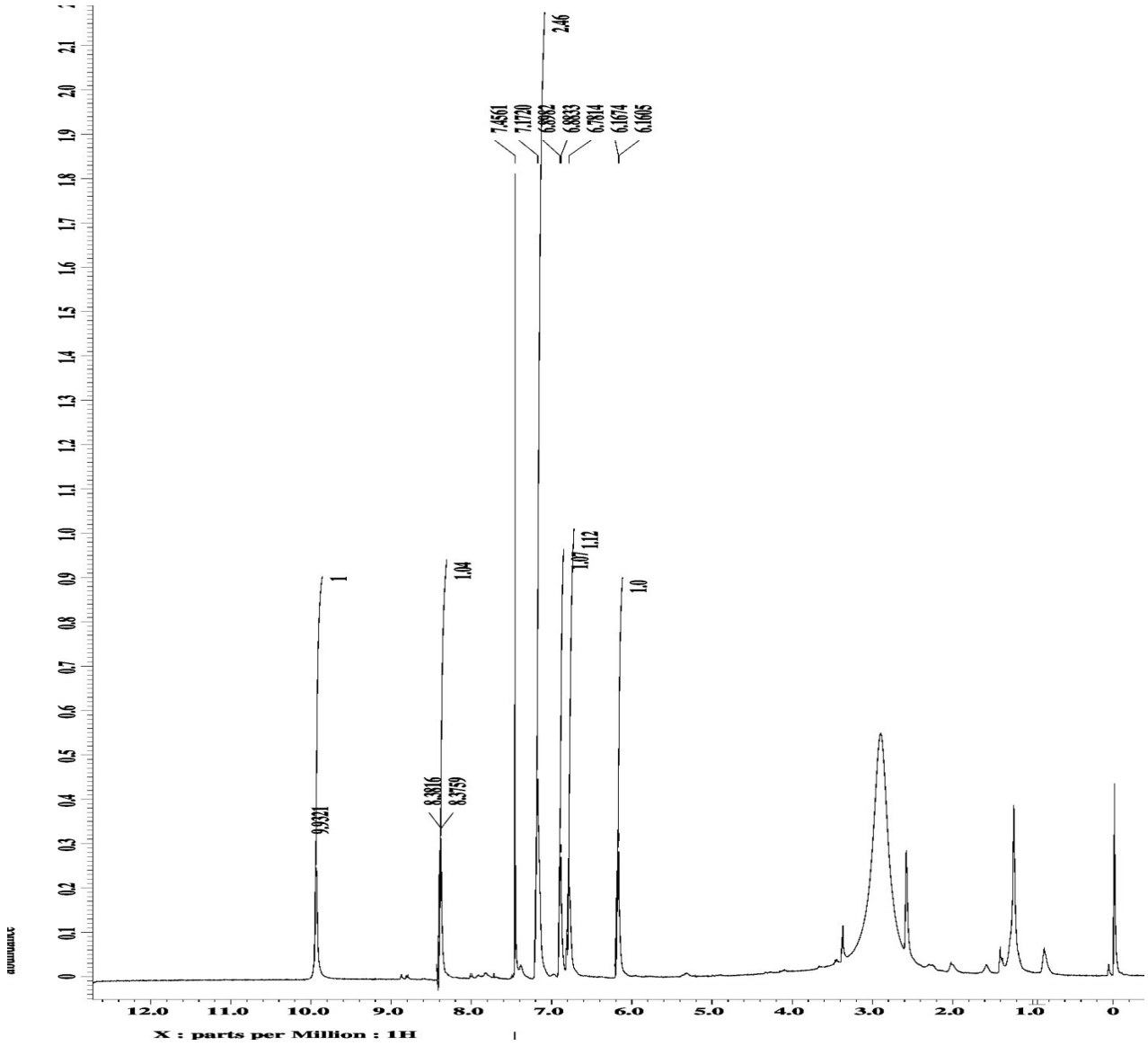

Figure SI 1: ^{1}H NMR spectrum of 2

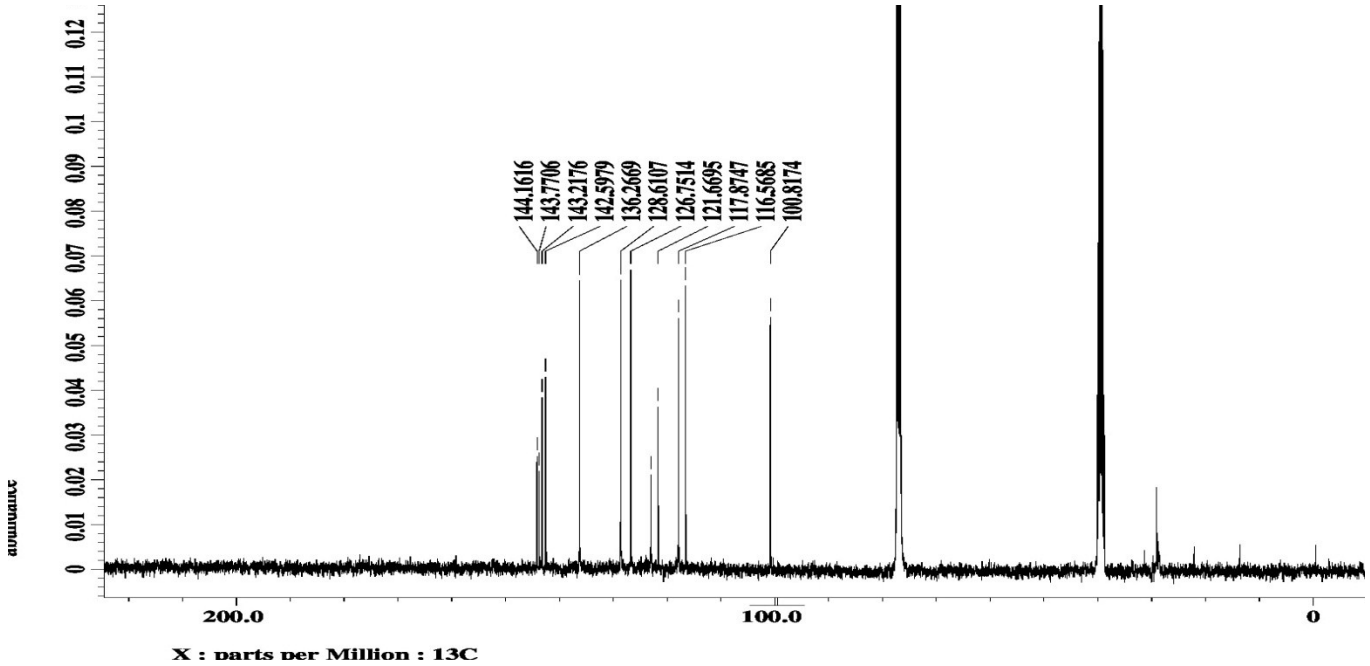

Figure SI 2: ^{13}C NMR spectrum of 2

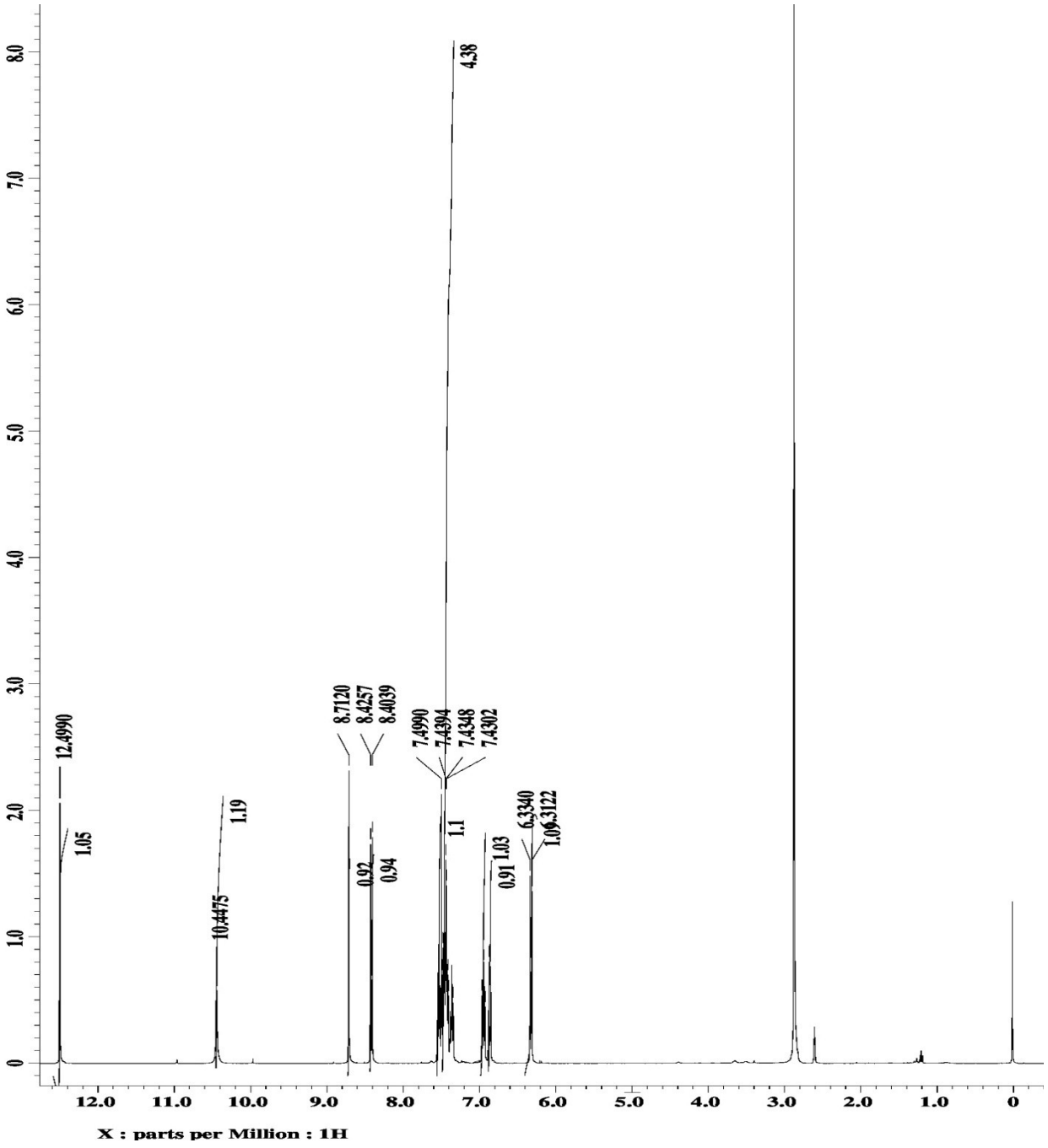

Figure SI 3: ^{1}H NMR spectrum of probe 1

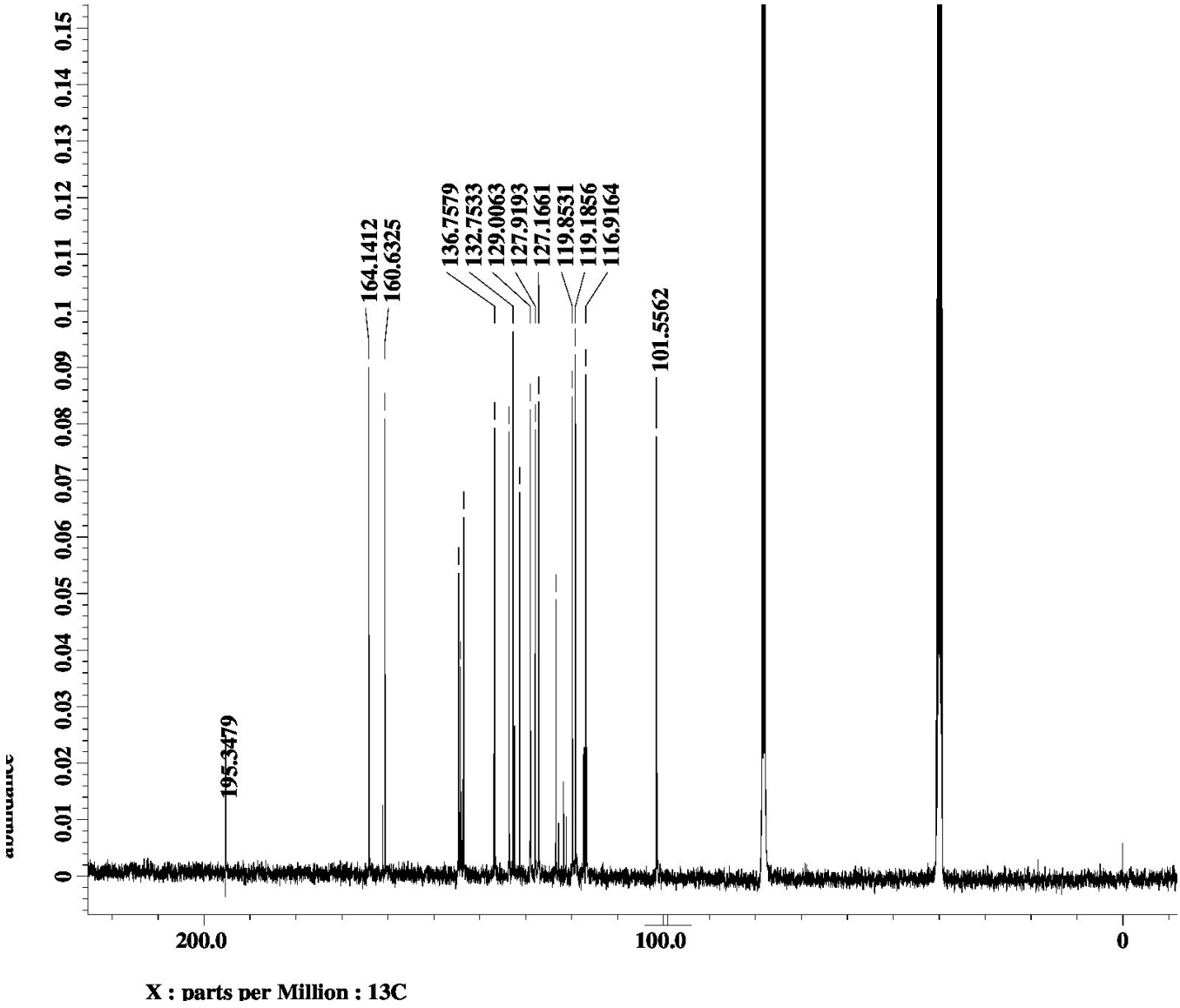

Figure S4: ^{13}C NMR spectrum of probe 1

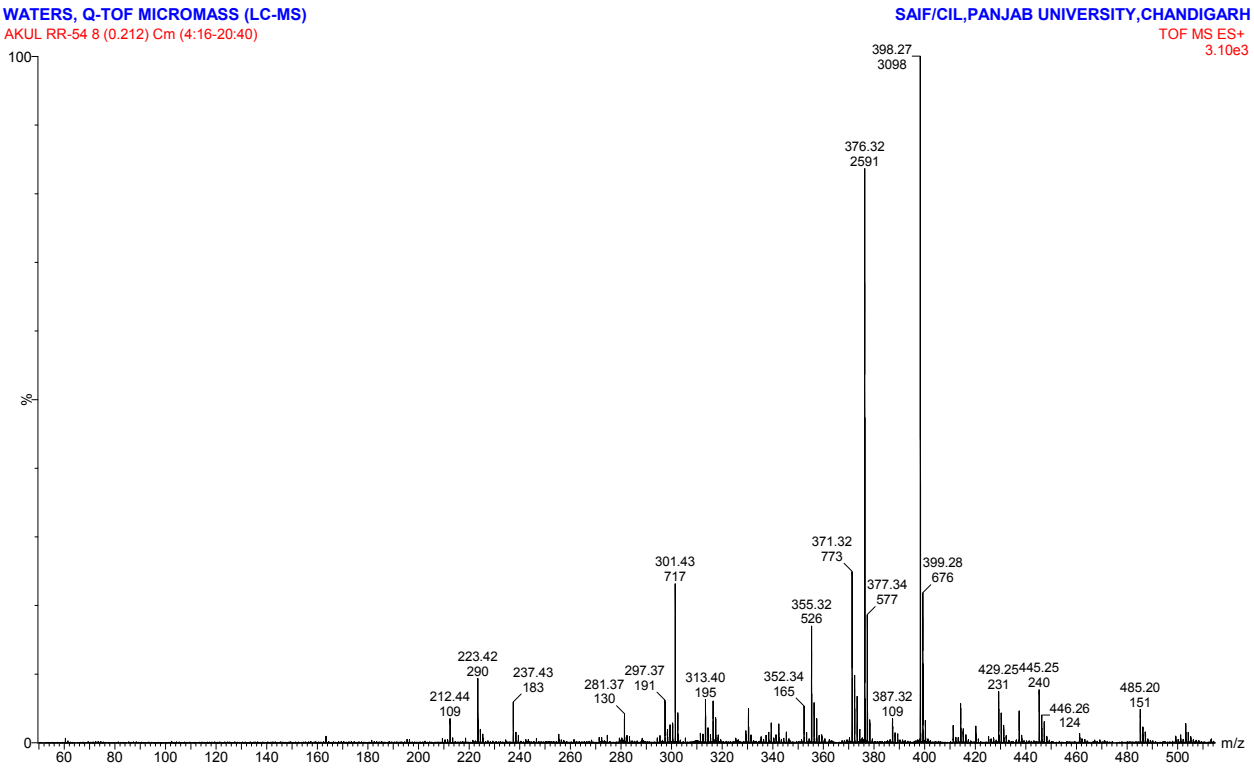

Figure S5: Mass spectrum of probe **1.**

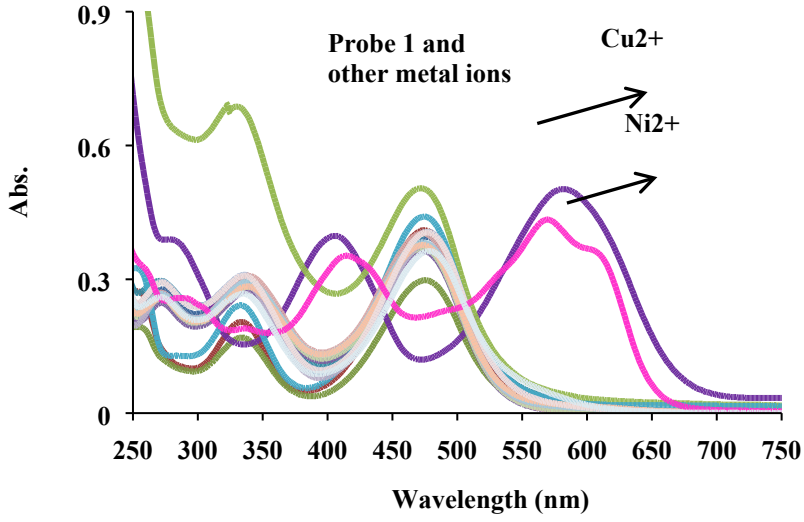

Figure S6: The UV-Visible spectra of probe **1** (20 μM, CH_3OH: H_2O:: 1:1) in the presence of various metal ions (50 equiv.).

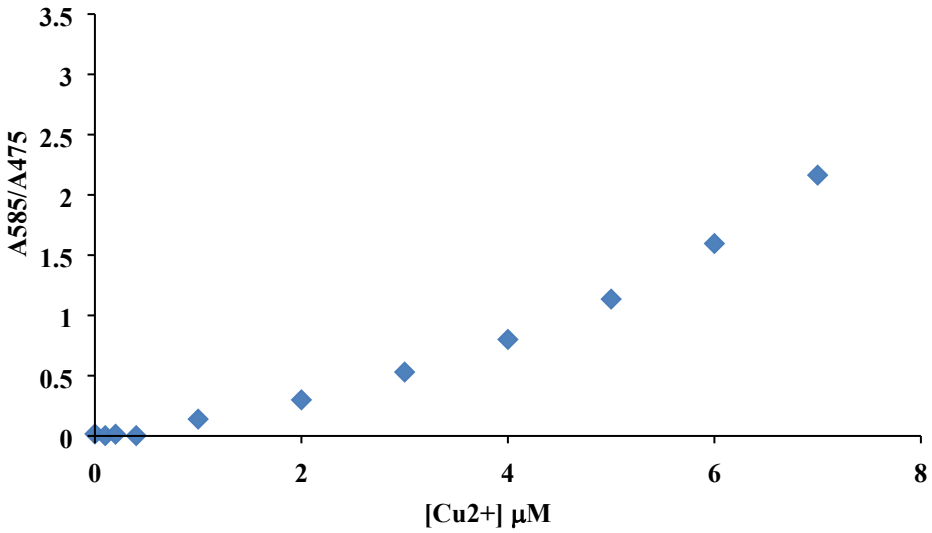

Figure S7: Ratiometric plot for the analysis of Cu^{2+} ions.

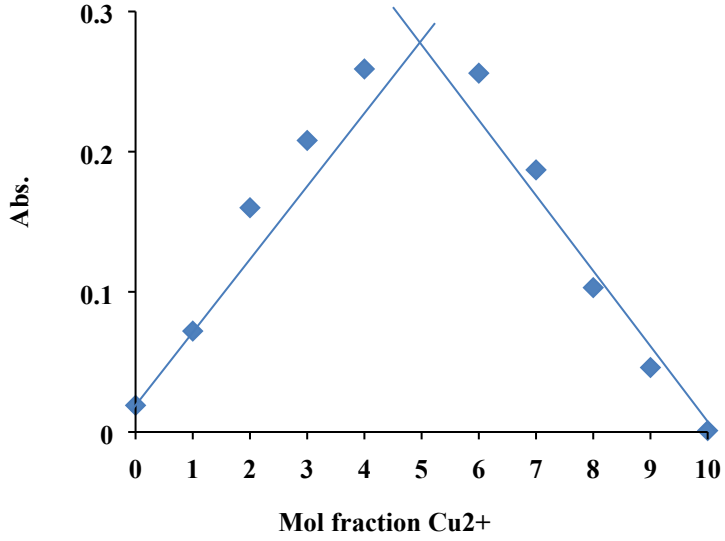

Figure S8: Job's plot showing the 1: 1 stoichiometry between probe **1** and Cu^{2+}.

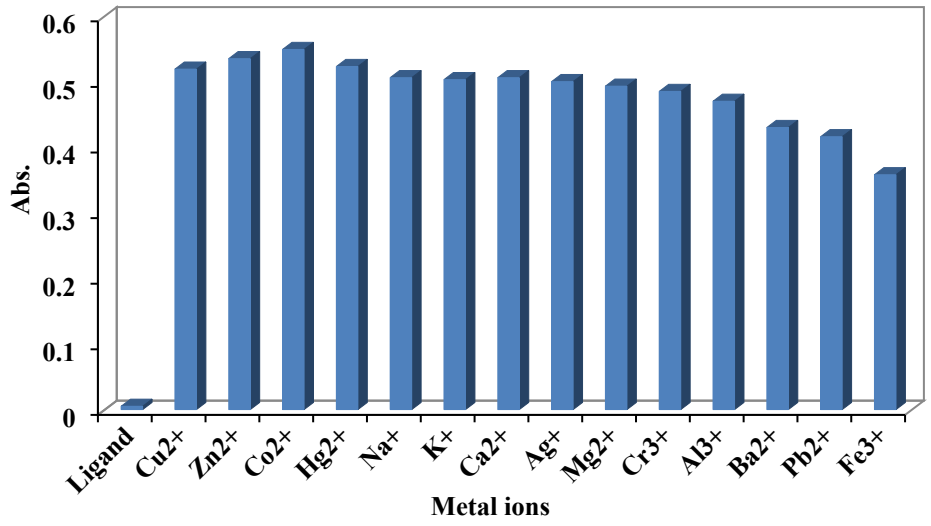

Figure S9: The absorption response of probe **1. Cu^{2+}** (20 μM, CH_3OH: H_2O:: 1:1) at 585 nm in the presence of various interfering metal ions (1 mM).

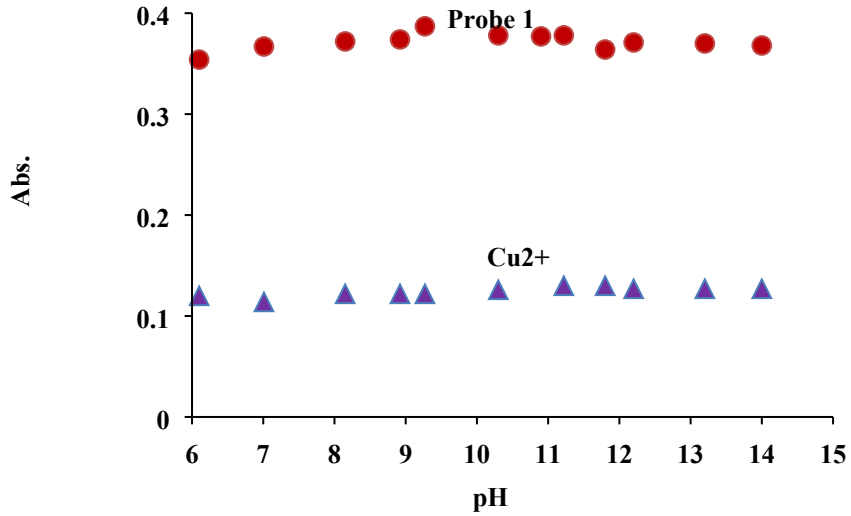

Figure S10: The effect of pH on absorption of probe **1** (475 nm) and probe **1. Cu^{2+}** (20 μM, CH_3OH: H_2O:: 1:1, 585 nm) .

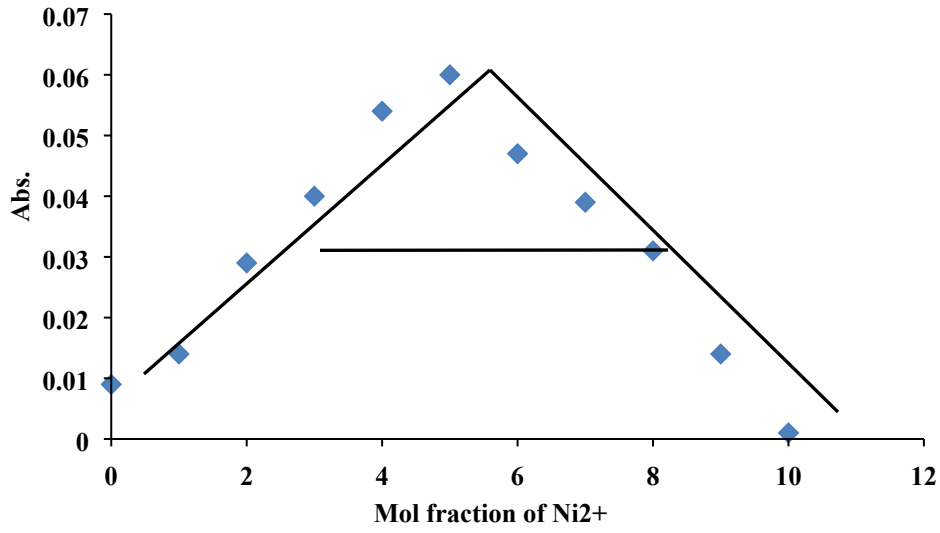

Figure S11: Job's plot showing the 1: 1 stoichiometry between probe **1** and Ni^{2+} at 575 nm.

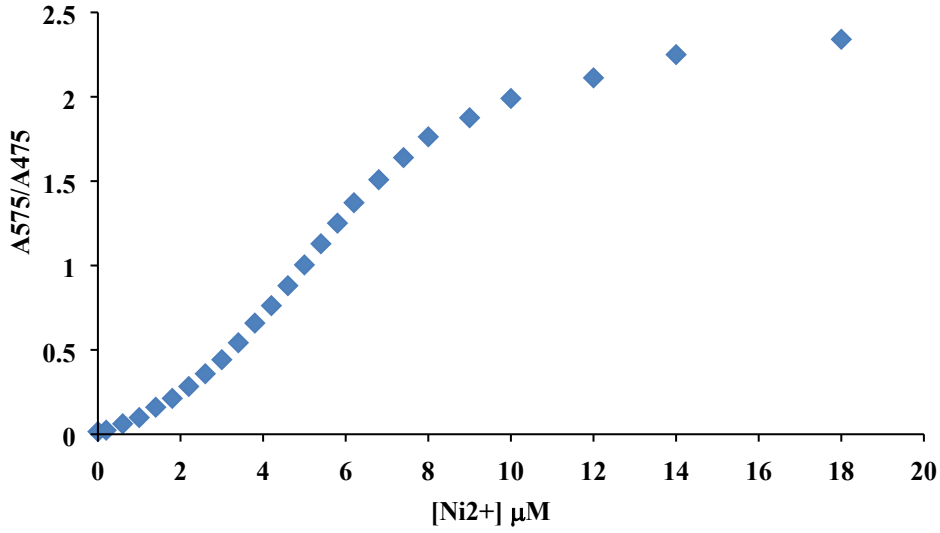

Figure S12: Ratiometric plot for the analysis of Ni^{2+} ions.

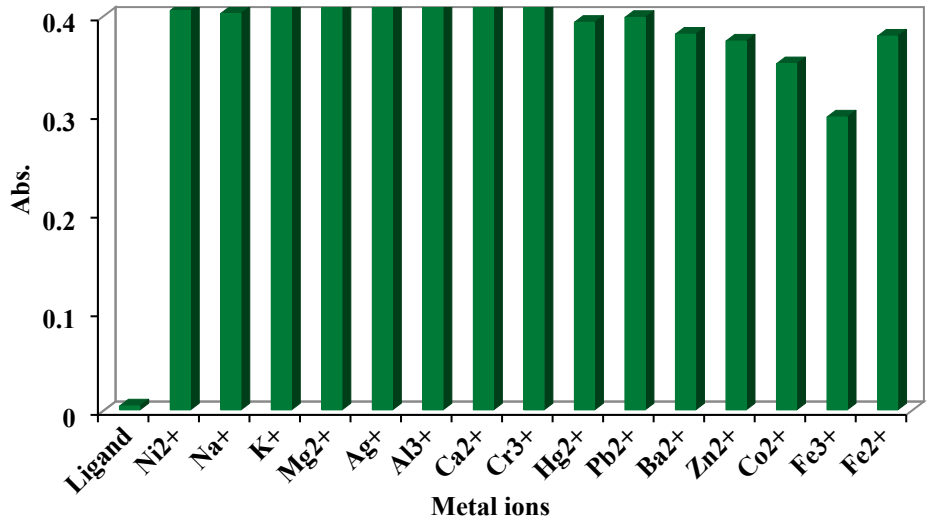

Figure S13: The absorption response of probe **1. Ni^{2+}** (20 μM, CH_3OH: H_2O:: 1:1) in the presence of various interfering metal ions (1mM) at 575 nm.

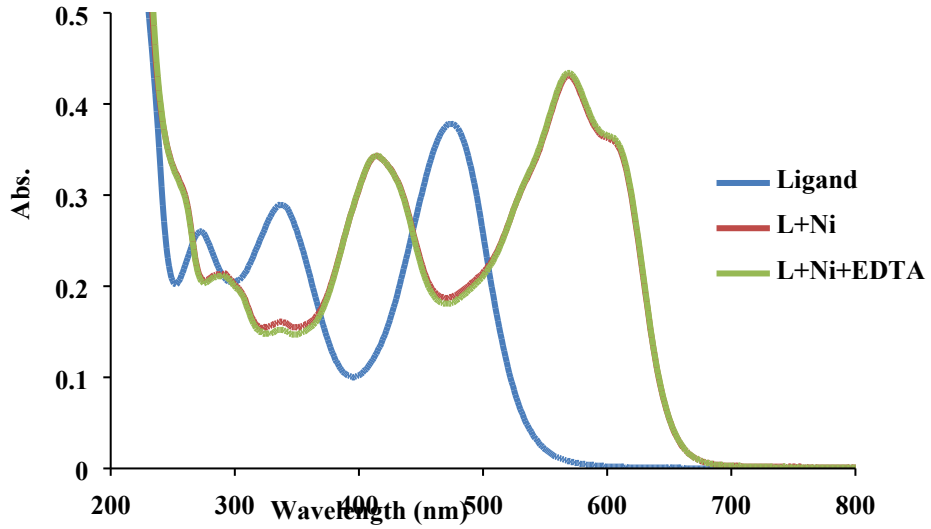

Figure S14: Effect of addition of EDTA on absorption spectra of probe **1**.Ni^{2+} complex.

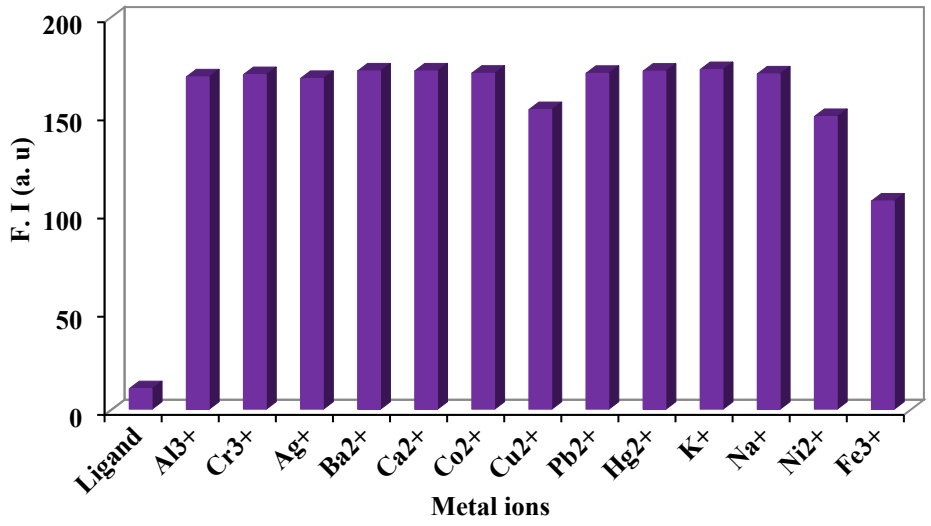

Figure S15: The absorption response of probe **1. Al^{3+}** (10 μM, CH_3OH: H_2O:: 1:1) in the presence of various interfering metal ions (1mM).

Table S1: Comparison of bond distances of probe **1** with Cu^{2+} and Ni^{2+}

Bond Distance (Å)	**M = Cu^{2+}**	**M = Ni^{2+}**
Salicyl H-O….M	1.9587	1.8793
NBD =N…M	1.9908	1.8920
H-N….M	2.0672	1.9692
Schiff =N….M	1.9057	1.8457

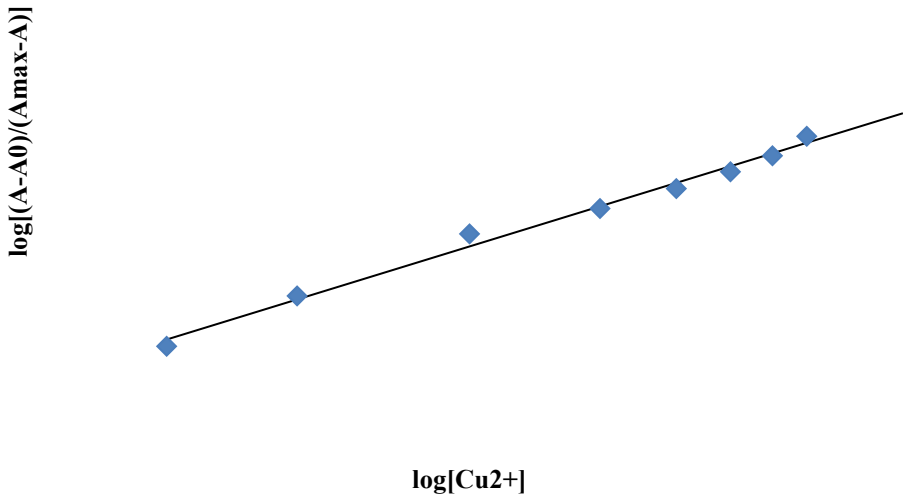

Figure S16: Spectral linear curve fit data for incremental addition of Cu^{2+} to probe **1** (20 µM, CH_3OH: H_2O:: 1:1, HEPES buffer, pH = 7.0).

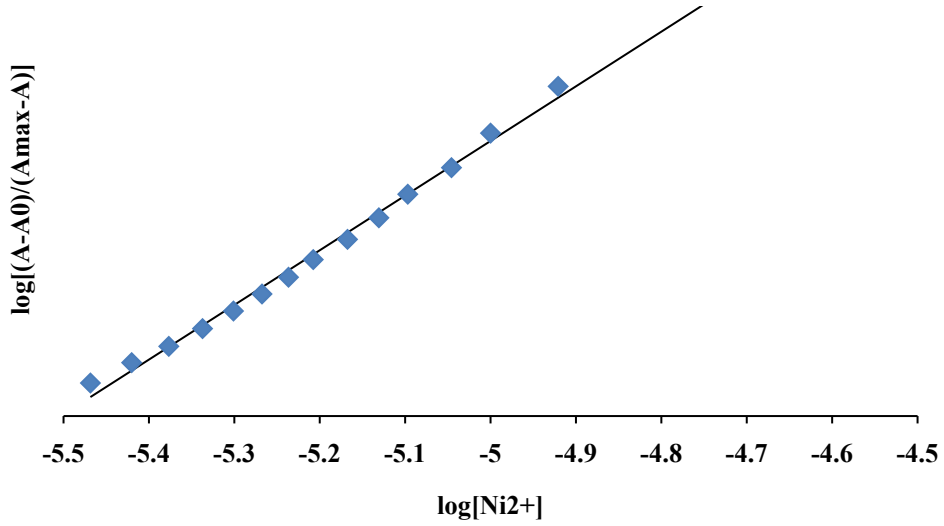

Figure S17: Spectral linear curve fit data for incremental addition of Ni^{2+} to probe **1** (20 µM, CH_3OH: H_2O:: 1:1, HEPES buffer, pH = 7.0).

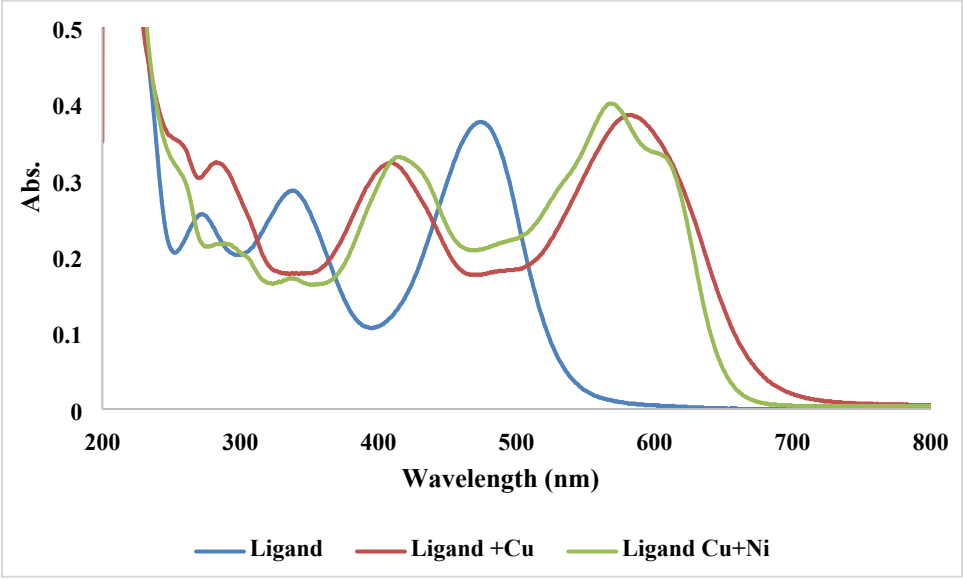

Figure S18: Effect of addition Ni^{2+} on absorption spectrum (1:1) probe **1.Cu^{2+}** (20 µM, CH_3OH: H_2O:: 1:1, HEPES buffer, pH = 7.0).

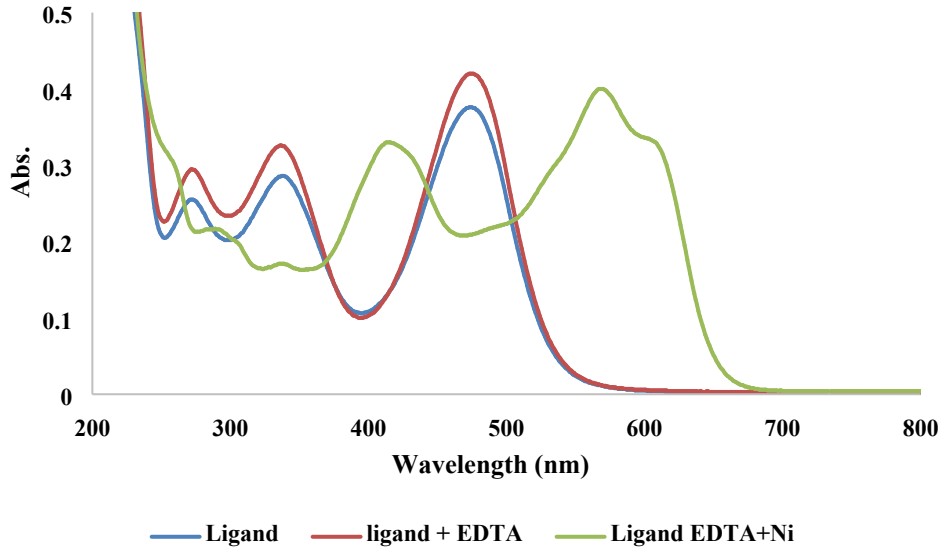

Figure S19: Effect of addition Ni^{2+} on absorption spectrum probe **1** having EDTA (1 equiv.) **(**20 µM, CH_3OH: H_2O:: 1:1, HEPES buffer, pH = 7.0).