

Supporting Information

A highly selective chemosensor for naked-eye sensing of nanomolar Cu(II) in an aqueous medium

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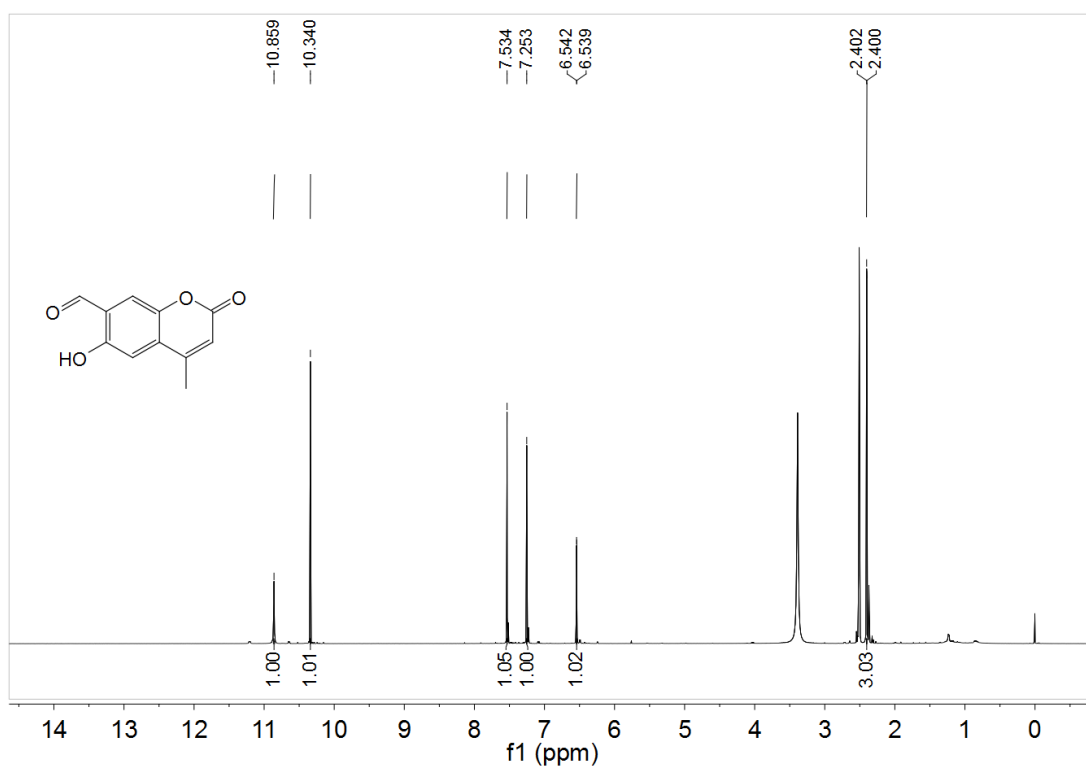


Fig. S1 ^1H NMR (400 MHz) spectrum of **2** in $(\text{CD}_3)_2\text{SO}$.

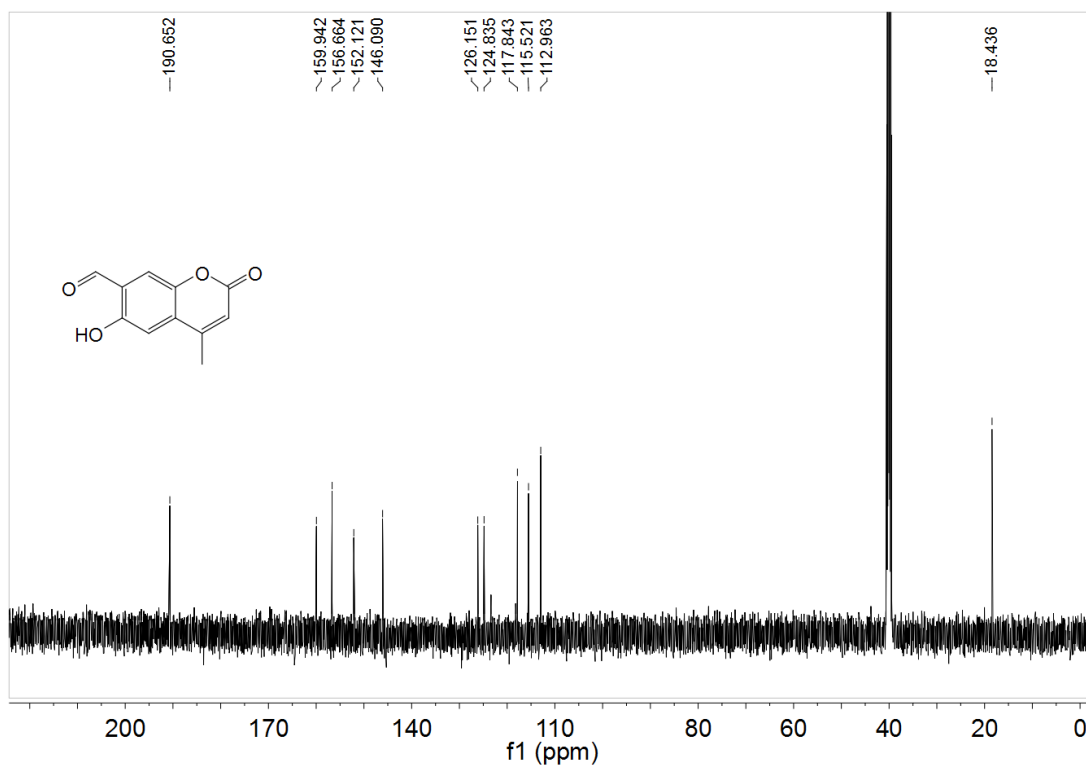


Fig. S2 ^{13}C NMR (101 MHz) spectrum of **2** in $(\text{CD}_3)_2\text{SO}$.

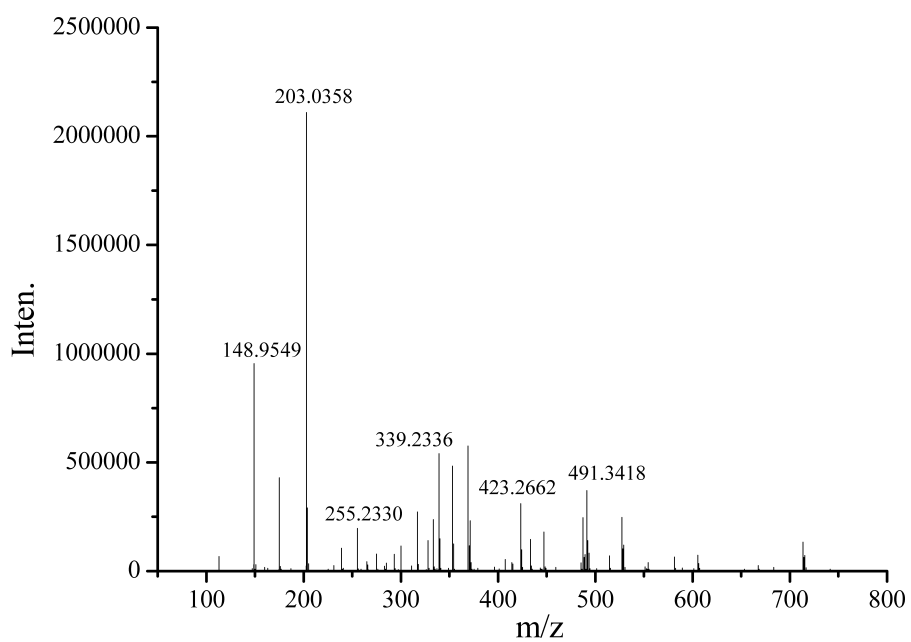


Fig. S3 ESI mass spectrum of **2**.

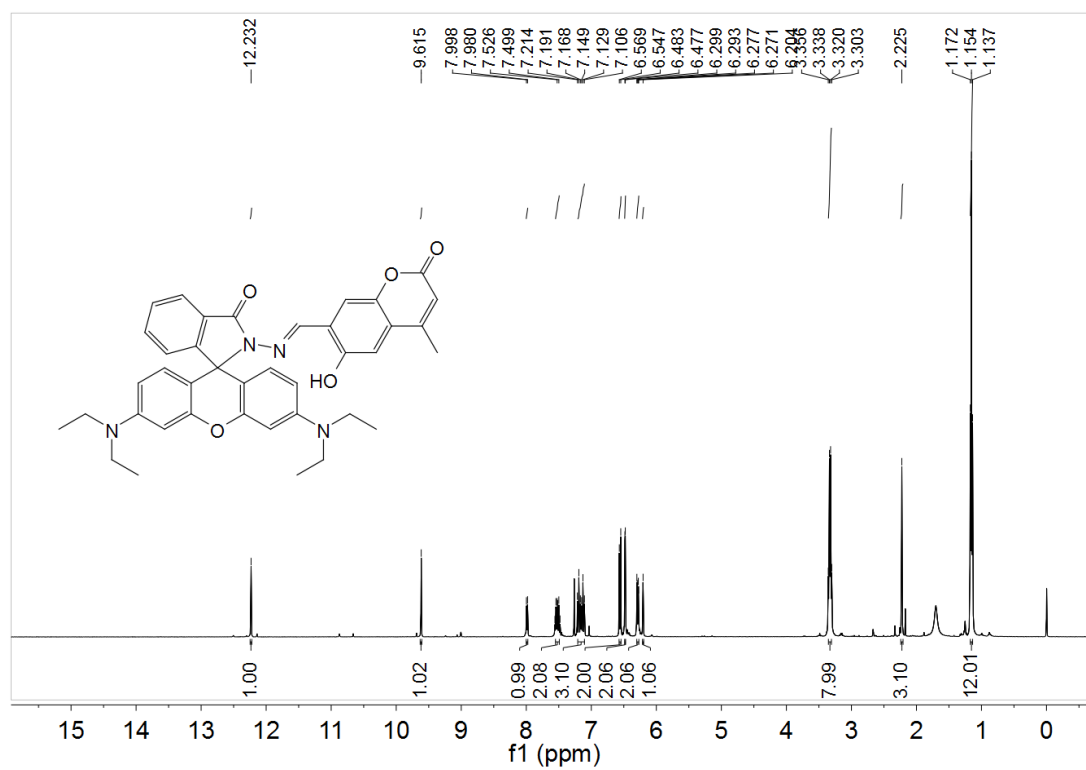


Fig. S4 ^1H NMR (400 MHz) spectrum of **L** in CDCl_3 .

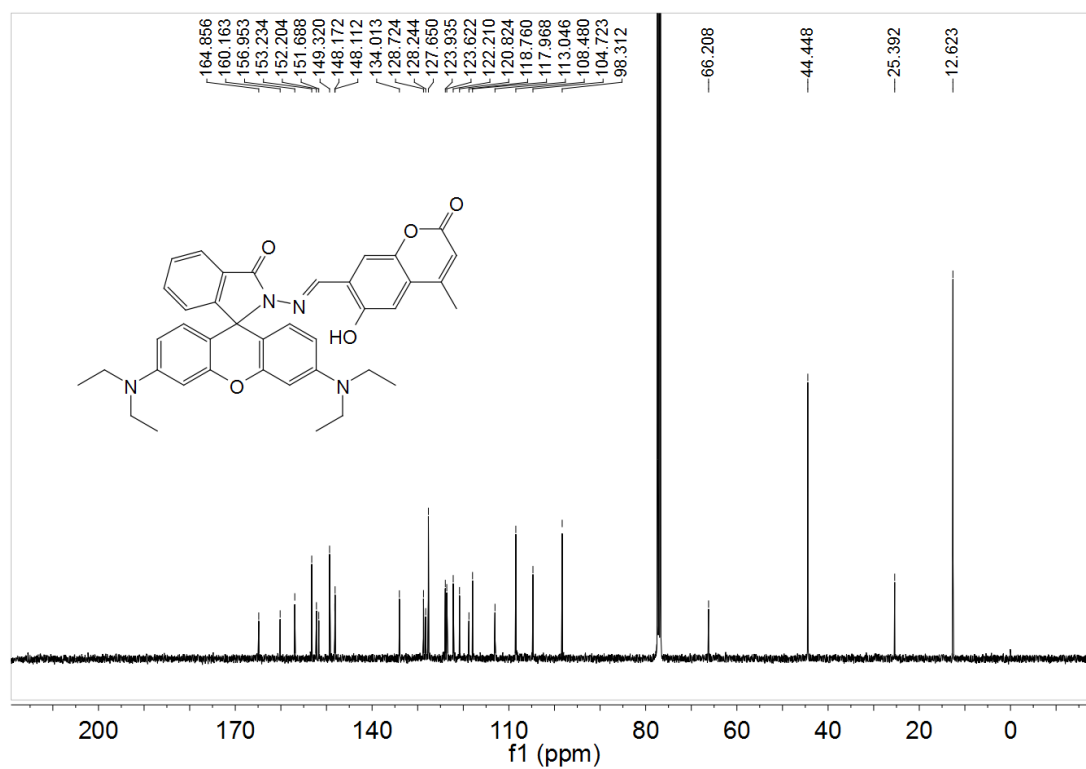


Fig. S5 ^{13}C NMR (101 MHz) spectrum of **L** in CDCl_3 .

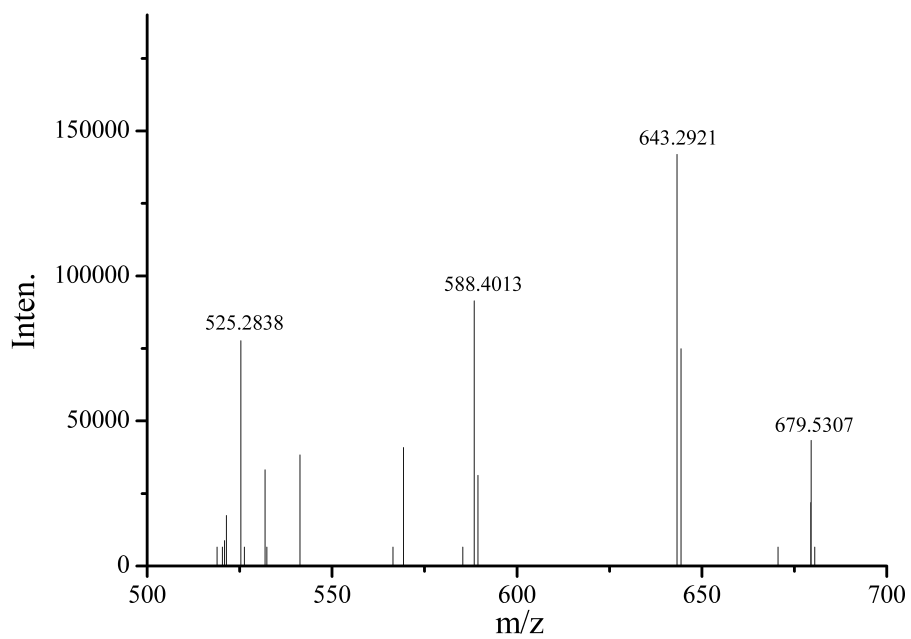


Fig. S6 ESI mass spectrum of **L**.

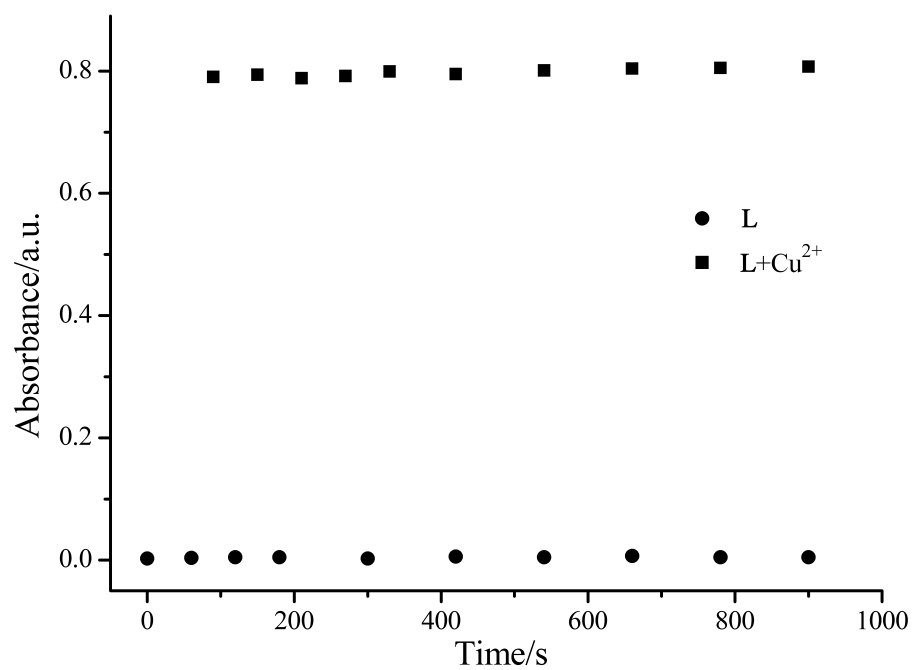


Fig. S7 Time-dependent absorption intensities change of **L** (10 μM , in DMSO) and **L** (10 μM , in DMSO) with $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$ (10 μM , in H_2O) in DMSO/ H_2O (1:1, v/v) solution at room temperature.

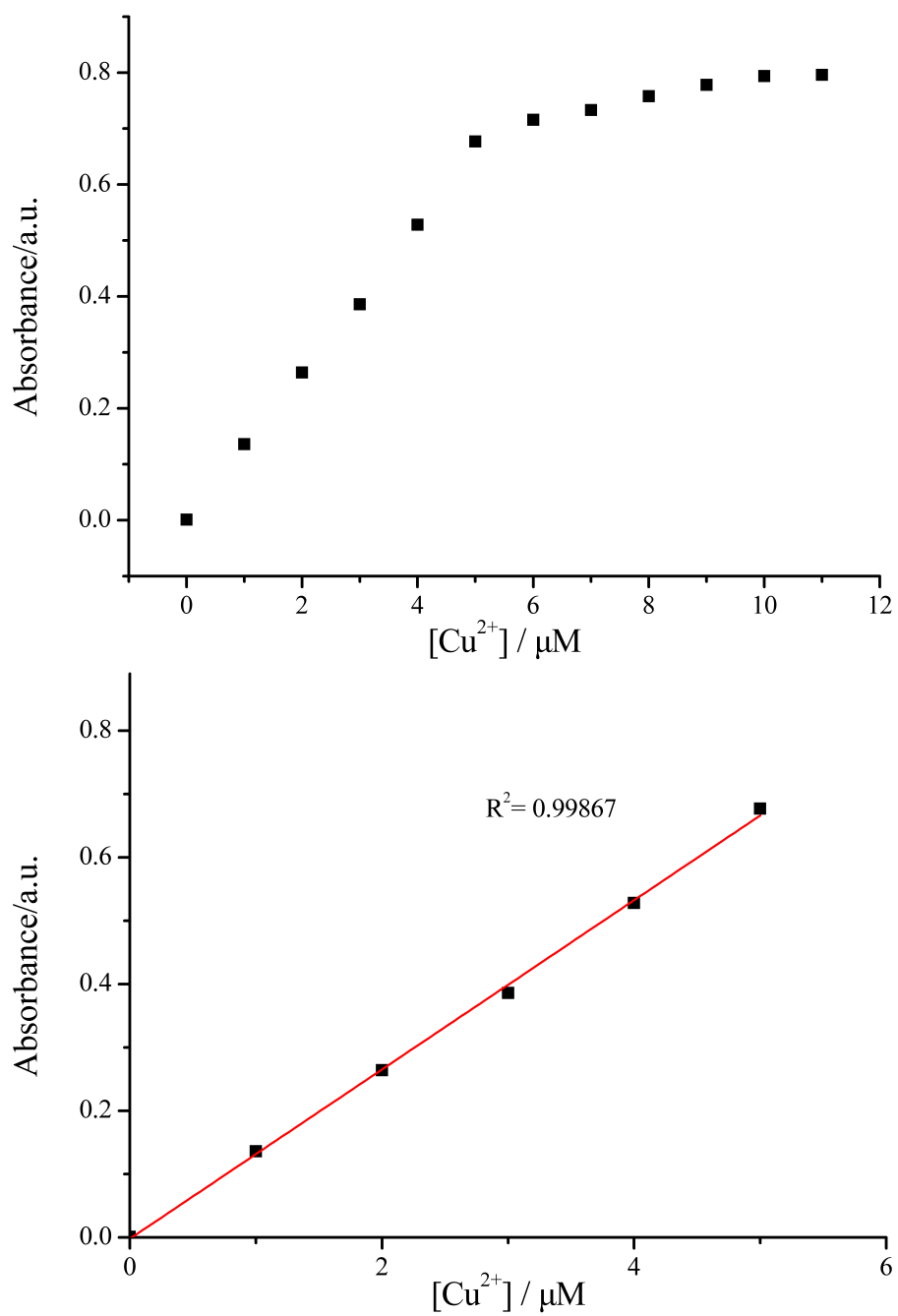


Fig. S8 (top) Absorbance of **L** at 562 nm vs. $[Cu^{2+}]$. (bottom) Linear plot of the change in absorbance of the system vs. $[Cu^{2+}]$.

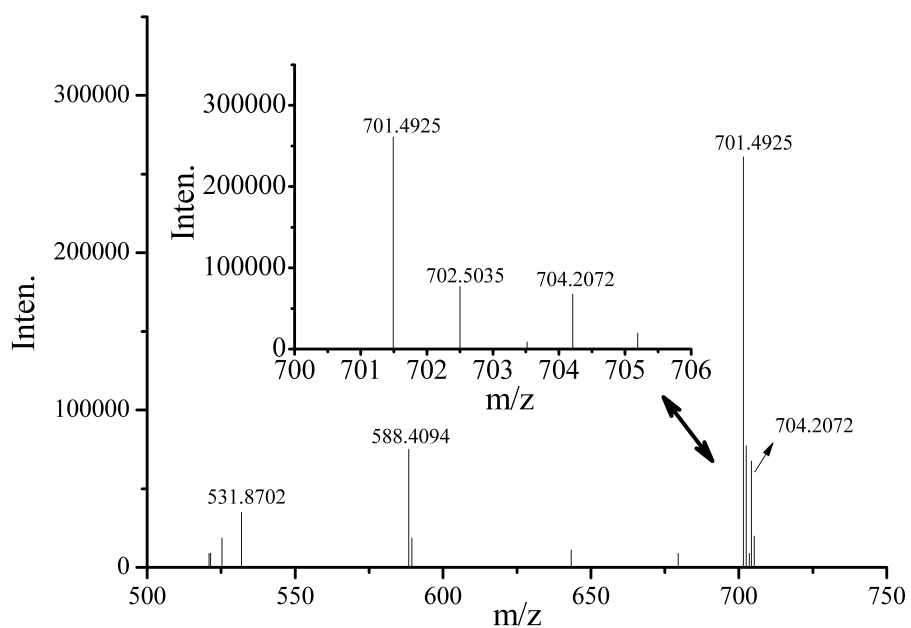


Fig. S9 ESI mass spectrum of L-Cu²⁺ complex.

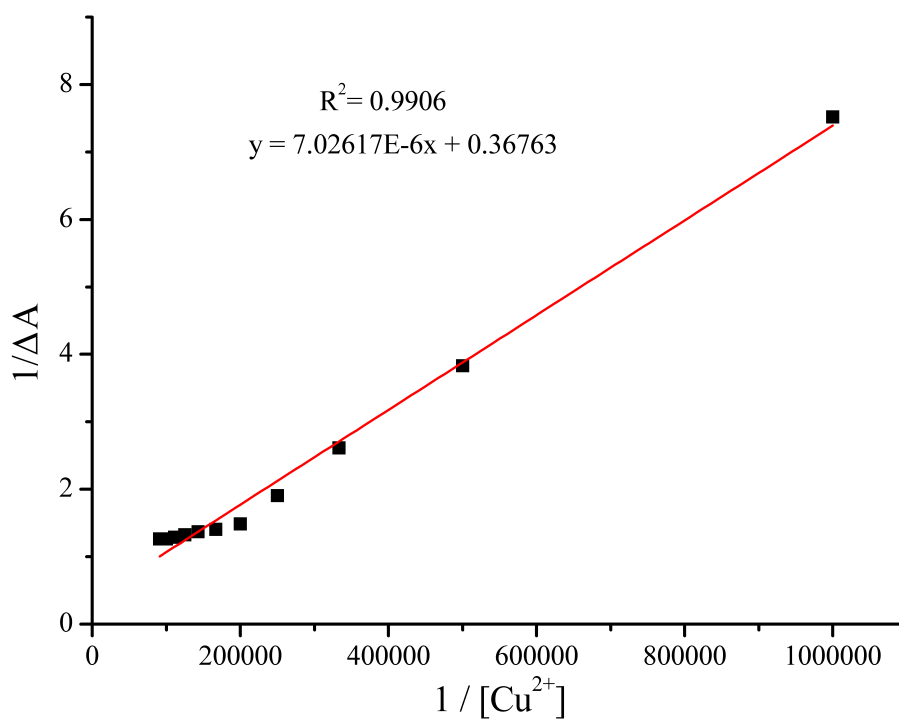


Fig. S10 Benesi-Hildebrand analysis of L at different Cu²⁺ concentrations. The absorbance was monitored at 562 nm.

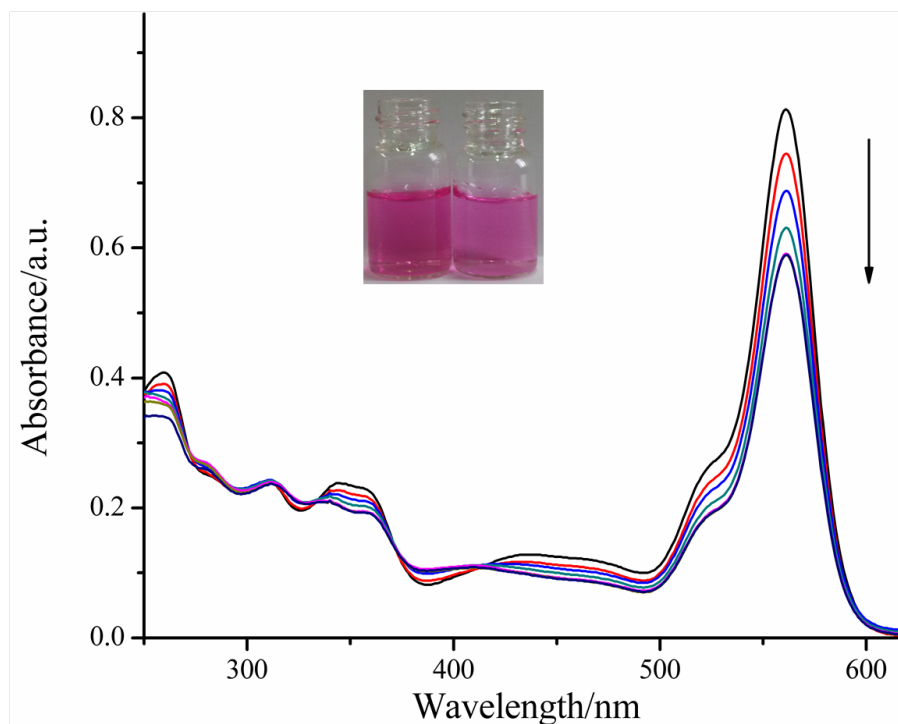


Fig. S11 Titration curves of $L-Cu^{2+}$ complex ($10 \mu M$, $DMSO/H_2O = 1:1$, v/v) upon addition of $HgCl_2$ ($0\sim 60 \mu M$, in H_2O). Inset shows the color change of the solution before (left) and after (right) the addition of Hg^{2+} .

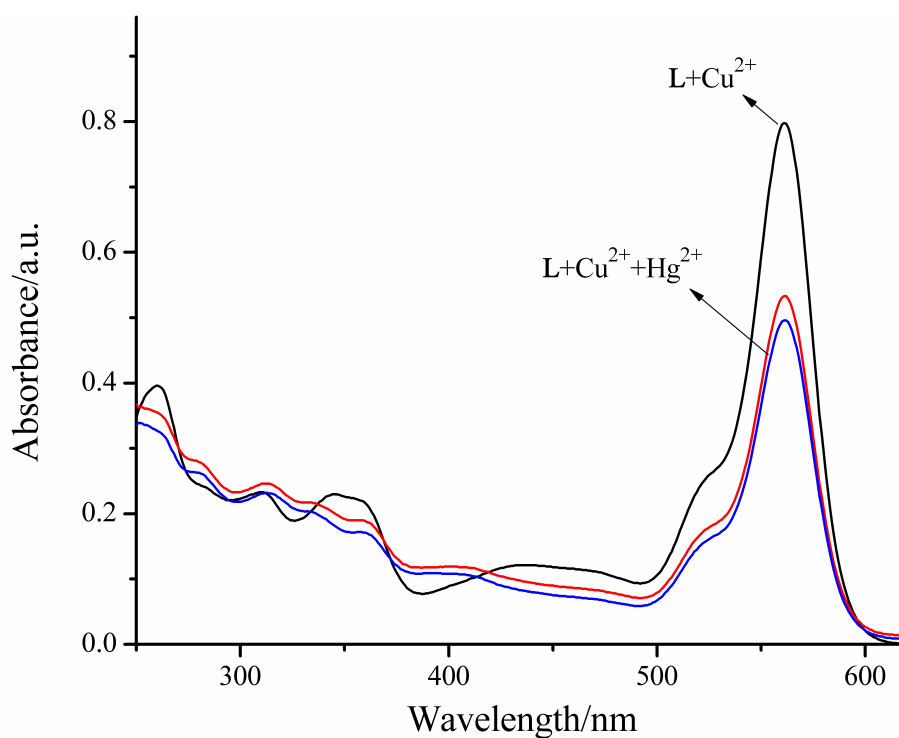


Fig. S12 Absorption spectra of $L-Cu^{2+}$ complex ($10 \mu M$, $DMSO/H_2O = 1:1$, v/v) upon the addition of $HgCl_2$ ($50 \mu M$, $100 \mu M$, in H_2O , respectively).

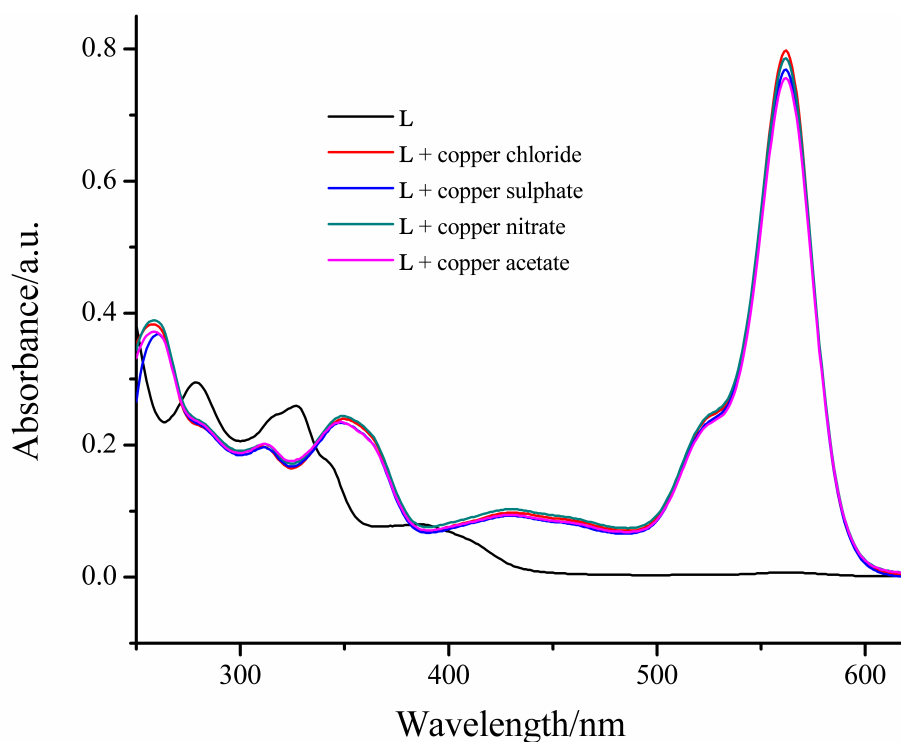


Fig. S13 Absorption spectra of **L** (10 μM , in DMSO) recorded after the addition of different copper salts (10 μM , in H_2O , respectively) in DMSO/ H_2O (1:1, v/v) solution.

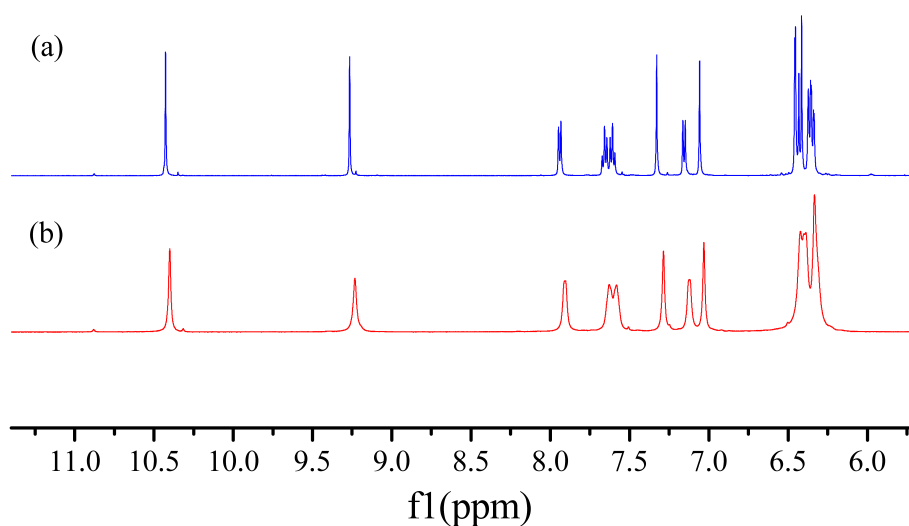


Fig. S14 Partial ^1H NMR spectra of **L** (10 mg) before (a) and after (b) addition of 1 equiv. of $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$ in $\text{DMSO}-d_6$.

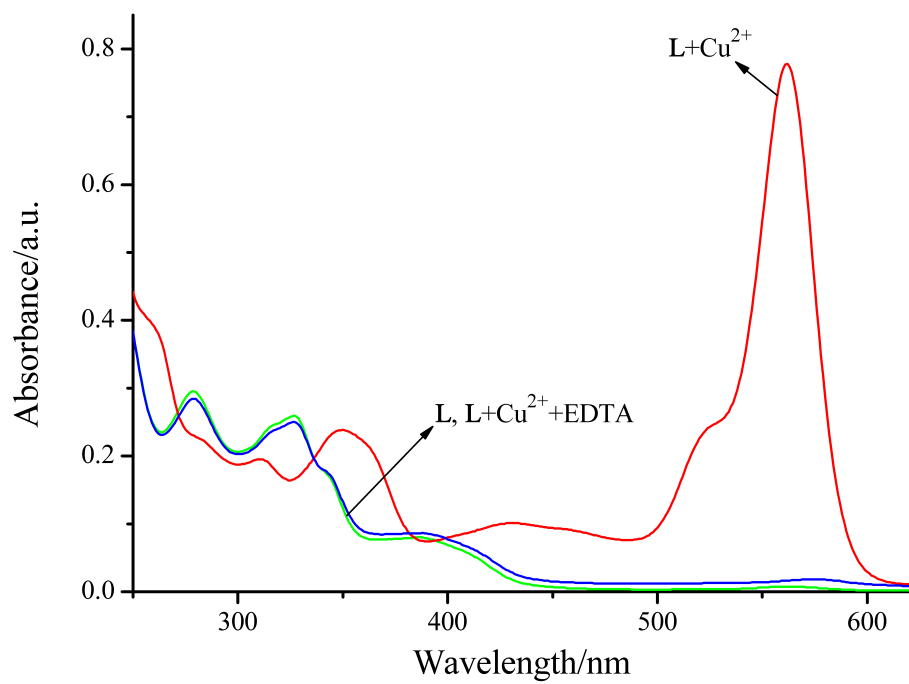


Fig. S15 Absorption spectra of **L** (10 μM) and **L-Cu²⁺** complex (10 μM) upon the addition of 1.5 equiv. of EDTA-2Na.