Supporting Information

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

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Fig. S1 $^1$H NMR (400 MHz) spectrum of 2 in (CD$_3$)$_2$SO.
Fig. S2 $^{13}$C NMR (101 MHz) spectrum of 2 in (CD$_3$)$_2$SO.

Fig. S3 ESI mass spectrum of 2.

Fig. S4 $^1$H 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 CuCl$_2$·2H$_2$O (10 μM, in H$_2$O) in DMSO/H$_2$O (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-Cu$^{2+}$ complex.

**Fig. S10** Benesi-Hildebrand analysis of L at different Cu$^{2+}$ concentrations. The absorbance was monitored at 562 nm.
Fig. S11 Titration curves of \textbf{L-Cu}^{2+} complex (10 μM, DMSO/H_{2}O = 1:1, v/v) upon addition of HgCl_{2} (0–60 μM, in H_{2}O). Inset shows the color change of the solution before (left) and after (right) the addition of Hg^{2+}.

Fig. S12 Absorption spectra of \textbf{L-Cu}^{2+} complex (10 μM, DMSO/H_{2}O = 1:1, v/v) upon the addition of HgCl_{2} (50 μM, 100 μM, in H_{2}O, respectively).
**Fig. S13** Absorption spectra of L (10 μM, in DMSO) recorded after the addition of different copper salts (10 μM, in H₂O, respectively) in DMSO/H₂O (1:1, v/v) solution.

**Fig. S14** Partial $^1$H NMR spectra of L (10 mg) before (a) and after (b) addition of 1 equiv. of CuCl₂·2H₂O in DMSO-$d_6$. 
**Fig. S15** Absorption spectra of L (10 μM) and L-Cu$^{2+}$ complex (10 μM) upon the addition of 1.5 equiv. of EDTA-2Na.