Electronic Supplementary Material (ESI) for Dalton Transactions

Supporting Information

A Cap-Type Schiff Base Acting as Fluorescence Sensor for Zinc(II) and Colorimetric Sensor for Iron(II), Copper(II), and Zinc(II) in Aqueous Media

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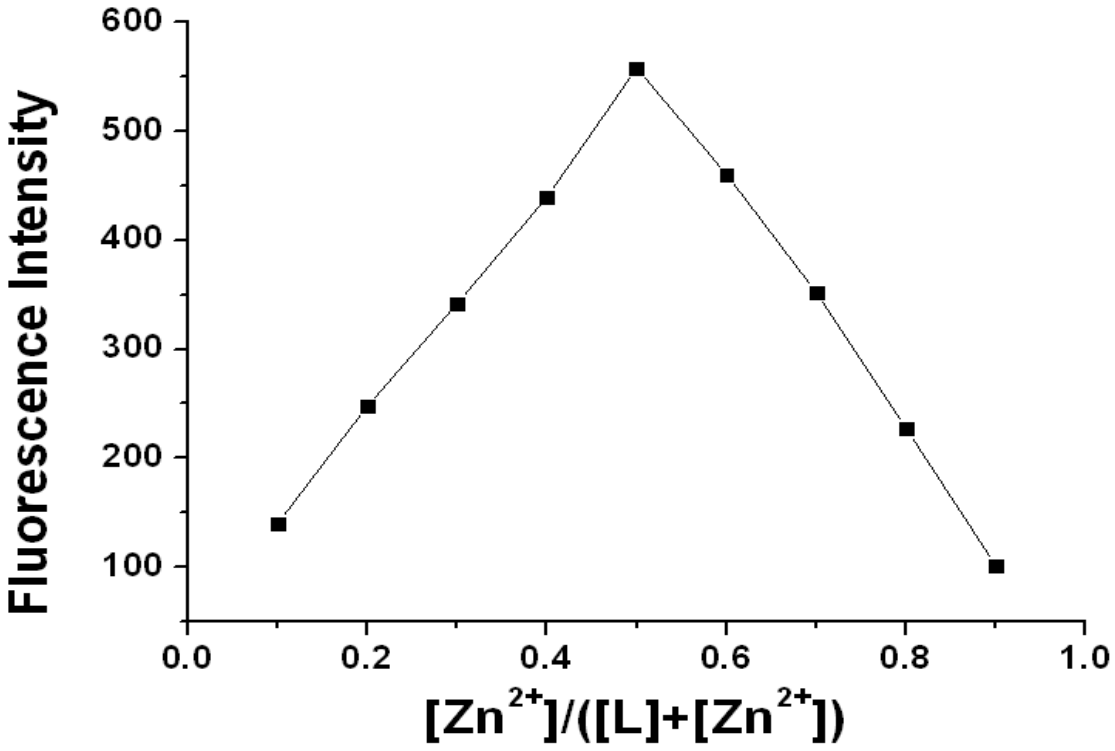


Fig. S1. Job plot of a 1:1 complex of **L** and Zn^{2+}, where the intensity at 462 nm was plotted against the mole fraction of zinc ions.

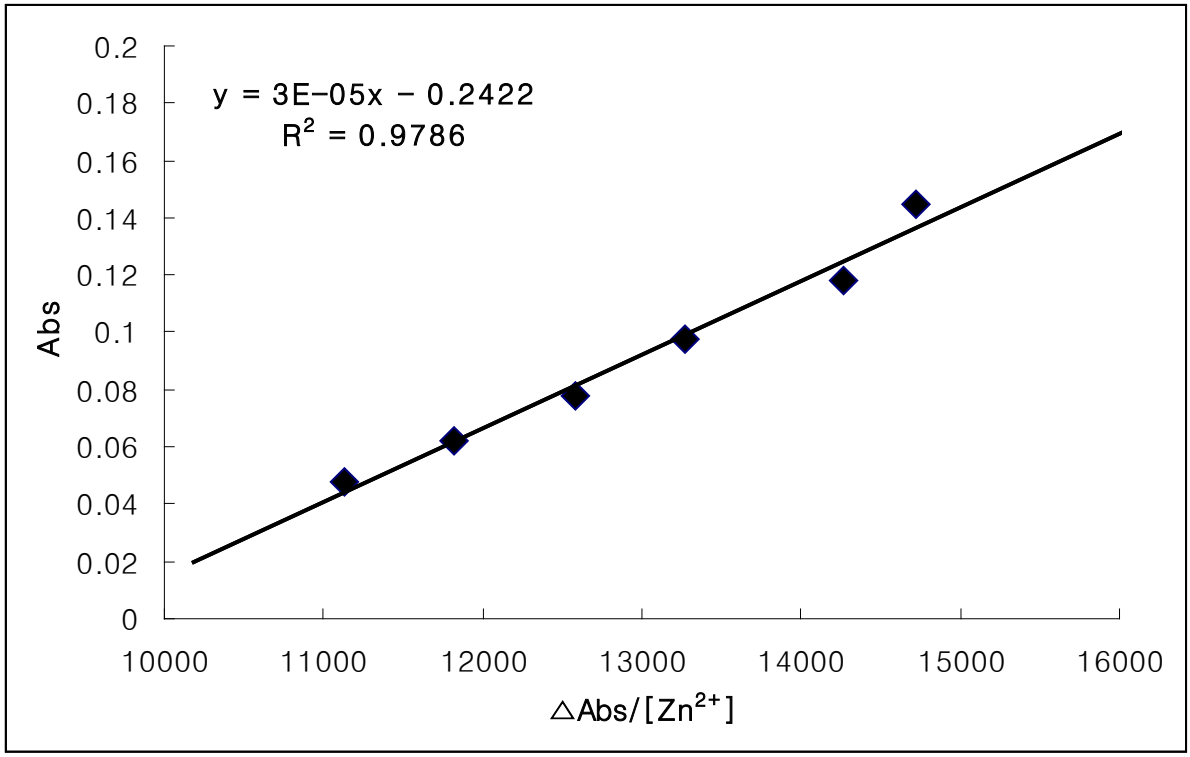


Fig. S2. Benesi-Hildebrand plot (absorption at 397 nm) of **L**, assuming a 1:1 stoichiometry for association between **L** and Zn^{2+}.

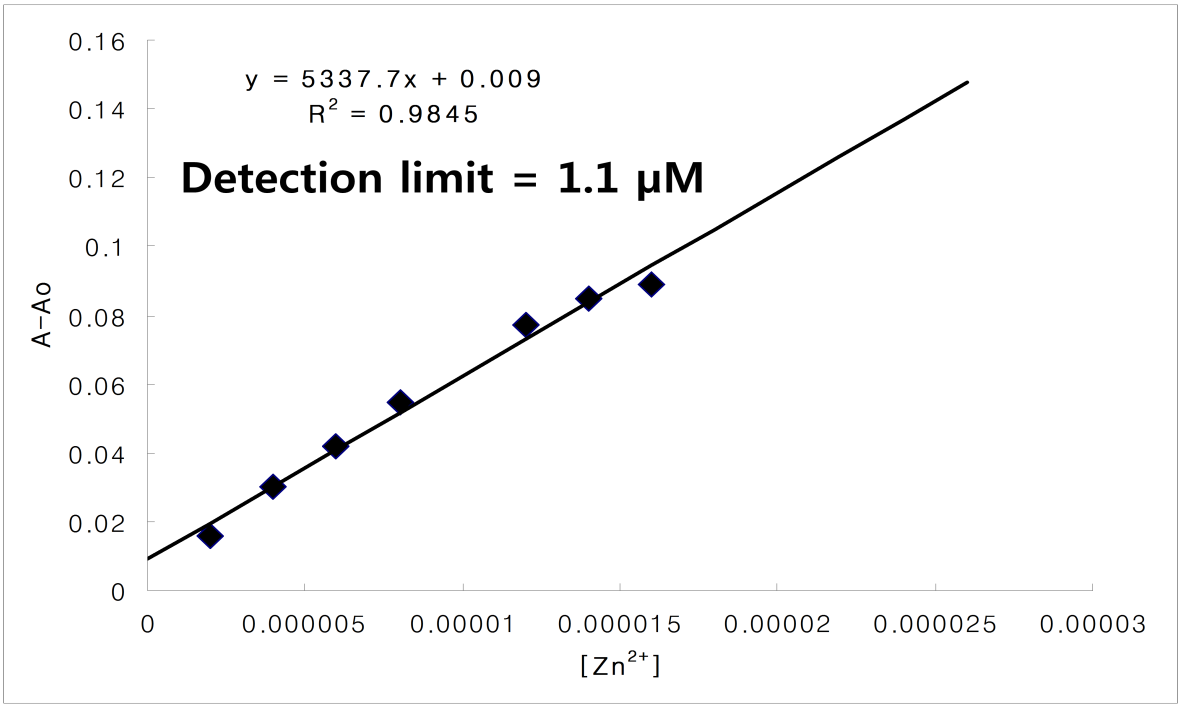
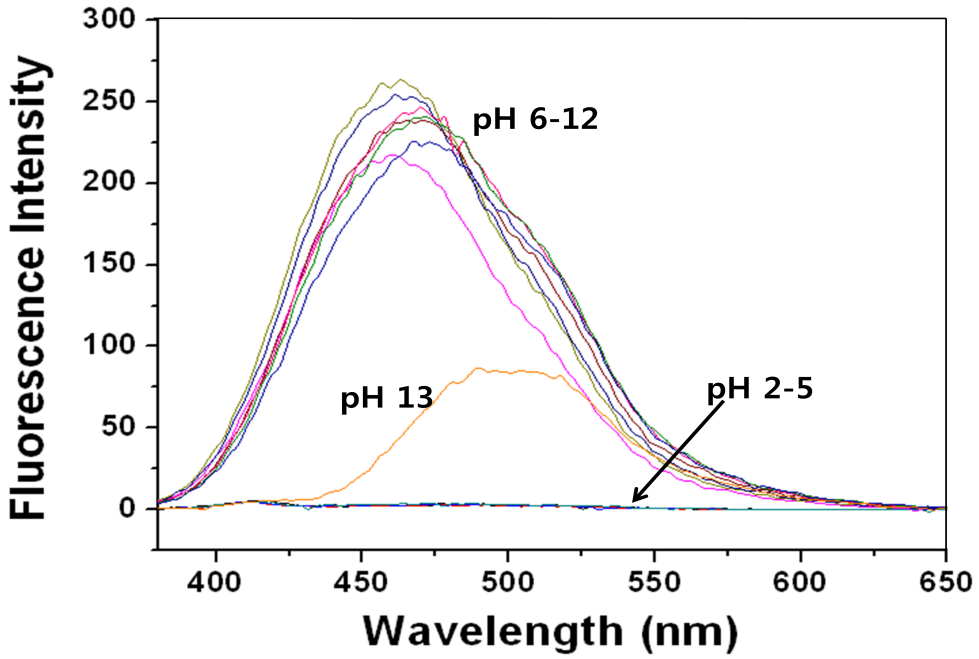


Fig. S3. Detection limit of **L** (20 μM) with Zn^{2+}.

(a)



(b)

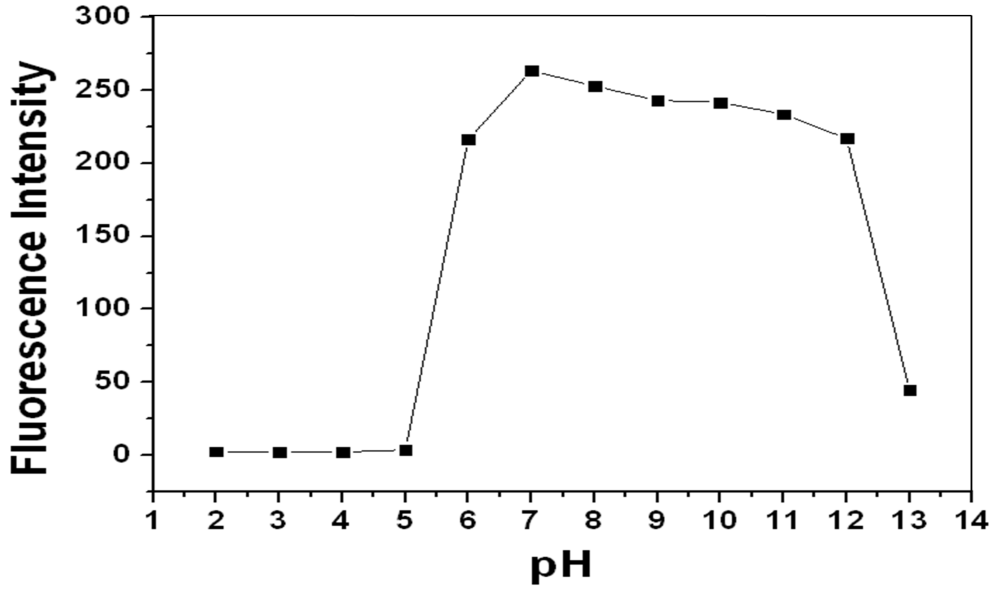


Fig. S4. (a) Fluorescence spectra of **L** (10 μM) after the addition of zinc ions (1 equiv) at different pH in 10 mM HEPES buffer-CH_3OH (99:1, v/v). (b) Plot of the fluorescence intensity of **L** at 462 nm against pH.

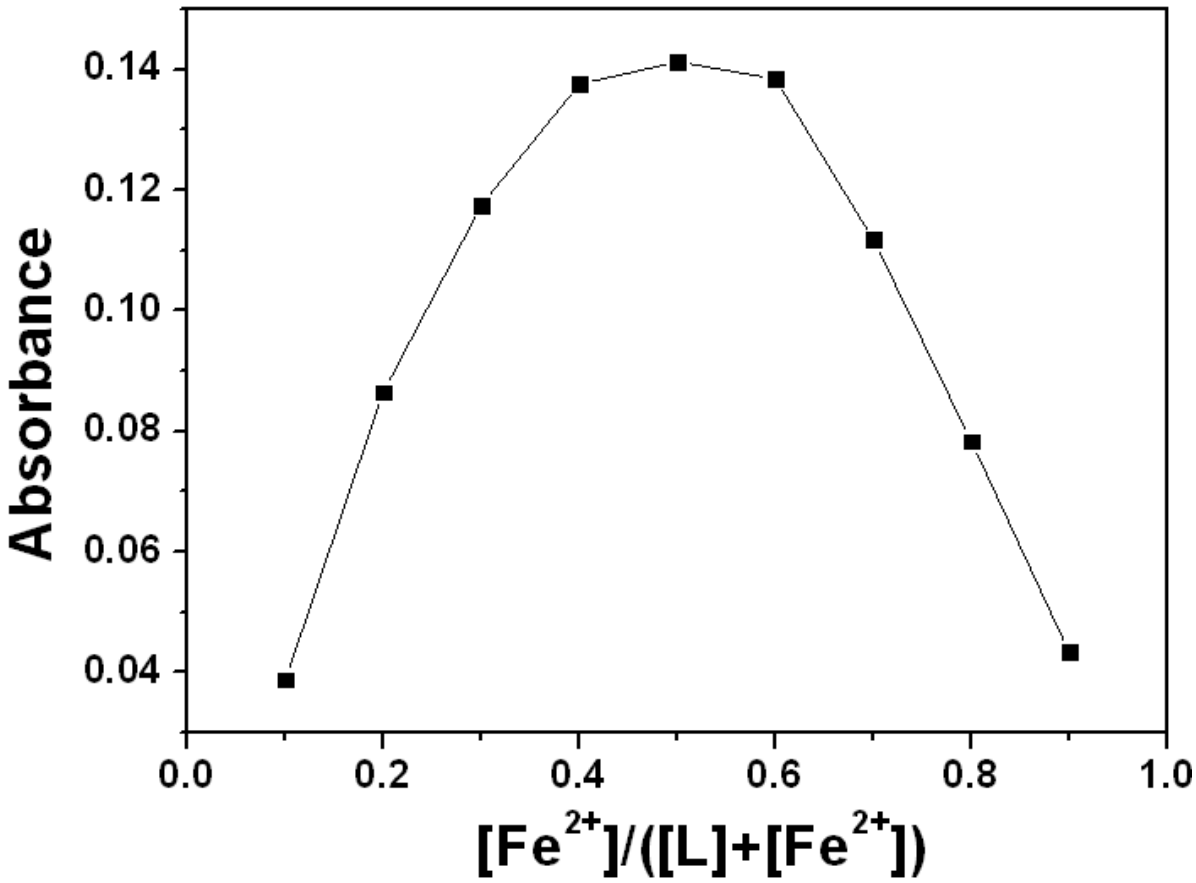


Fig. S5. Job plot of a 1:1 complex of **L** and Fe^{2+}, where the absorption at 515 nm was plotted against the mole fraction of ferrous ions.

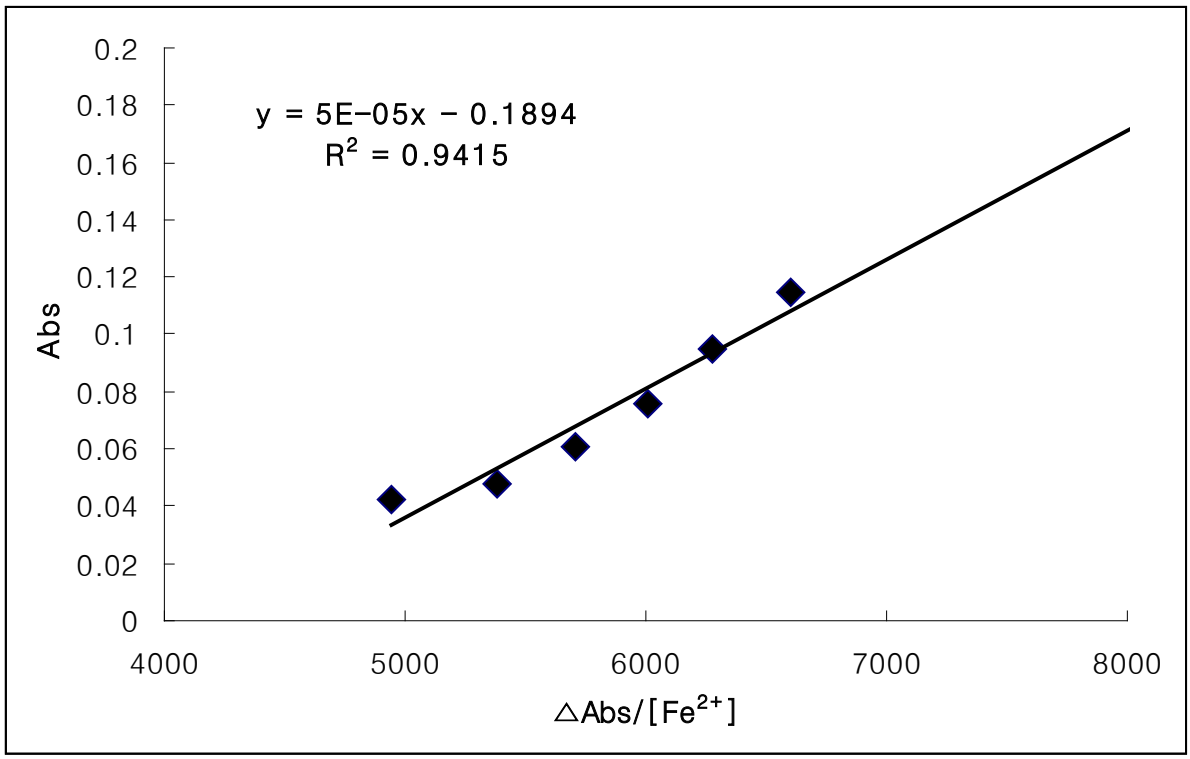


Fig. S6. Benesi-Hildebrand plot (absorption at 400 nm) of **L**, assuming a 1:1 stoichiometry for association between **L** and Fe^{2+}.

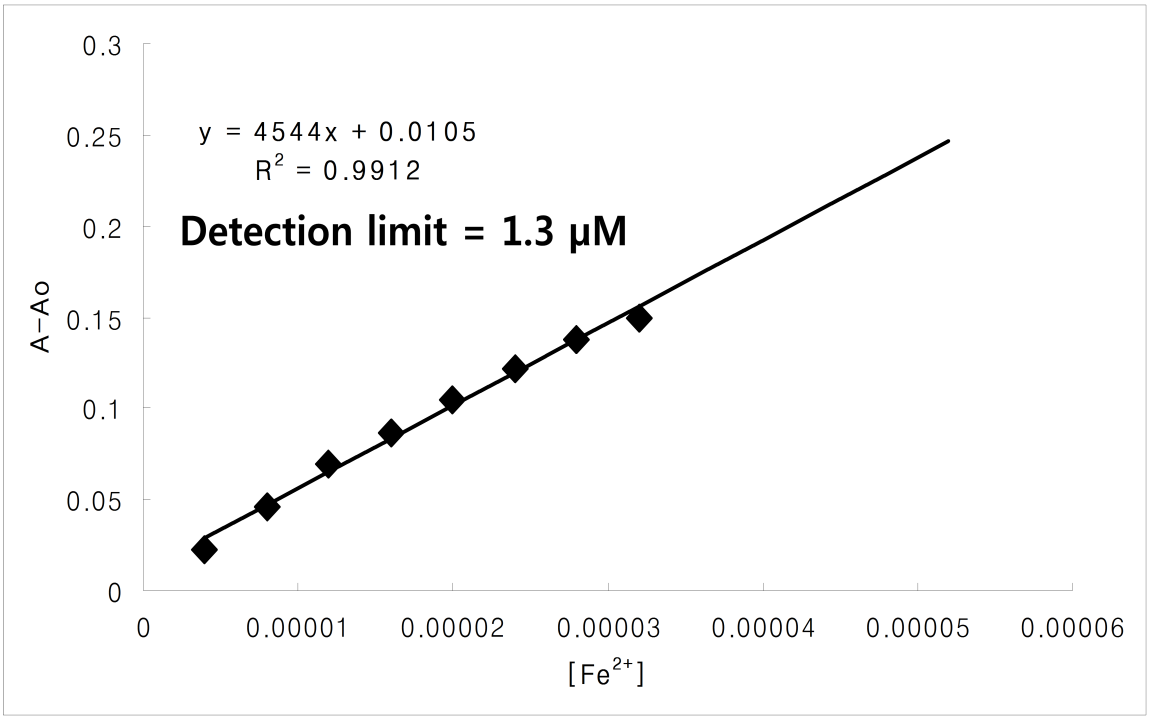
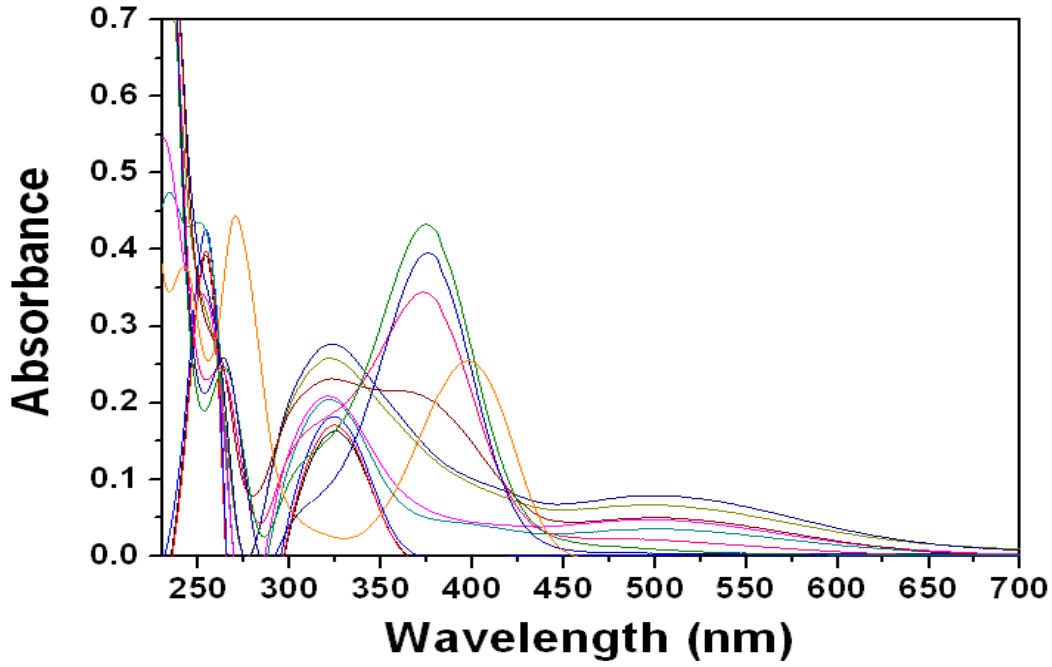


Fig. S7. Detection limit of **L** (20 μM) with Fe^{2+}.

(a)



(b)

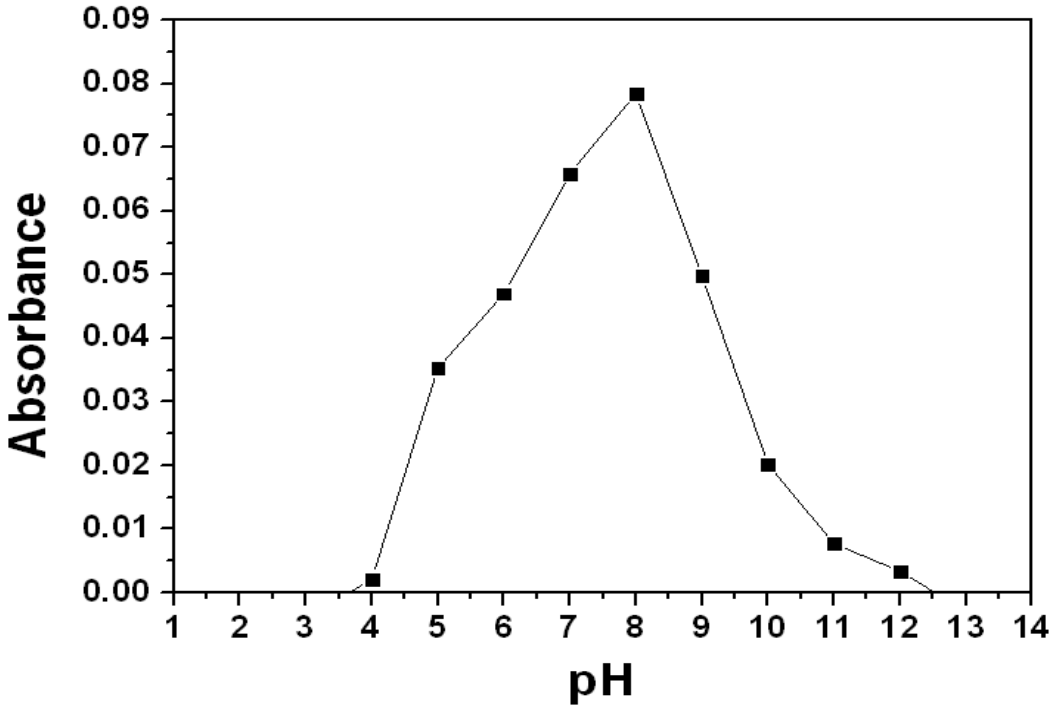


Fig. S8. (a) Absorption spectra of **L** (20 μM) after the addition of ferrous ions (2 equiv) in 10 mM HEPES buffer and CH_3OH (99:1, v/v). (b) Plot of the absorbance of **L** at 509 nm against pH.

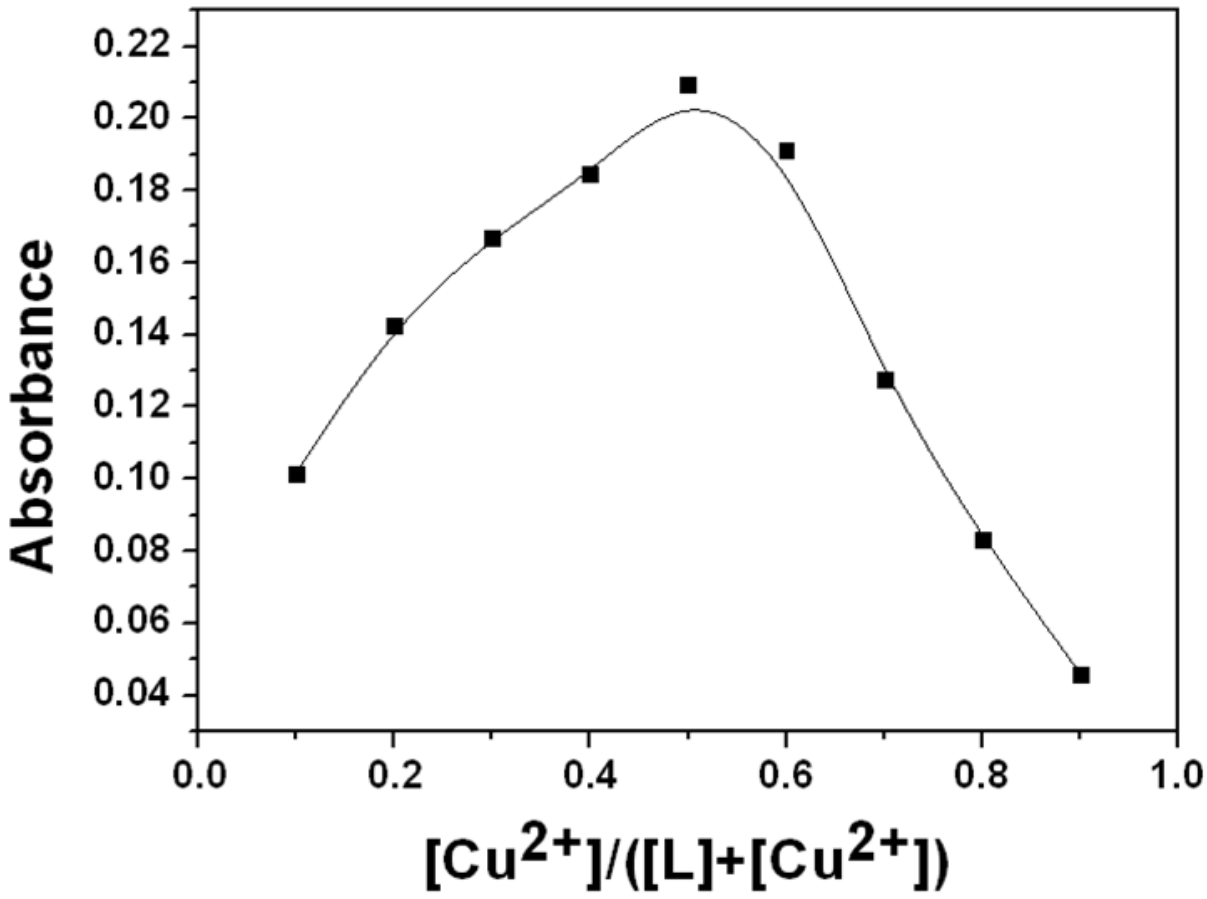


Fig. S9. Job plot of a 1:1 complex of **L** and Cu^{2+}, where the absorption at 396 nm was plotted against the mole fraction of copper ions.

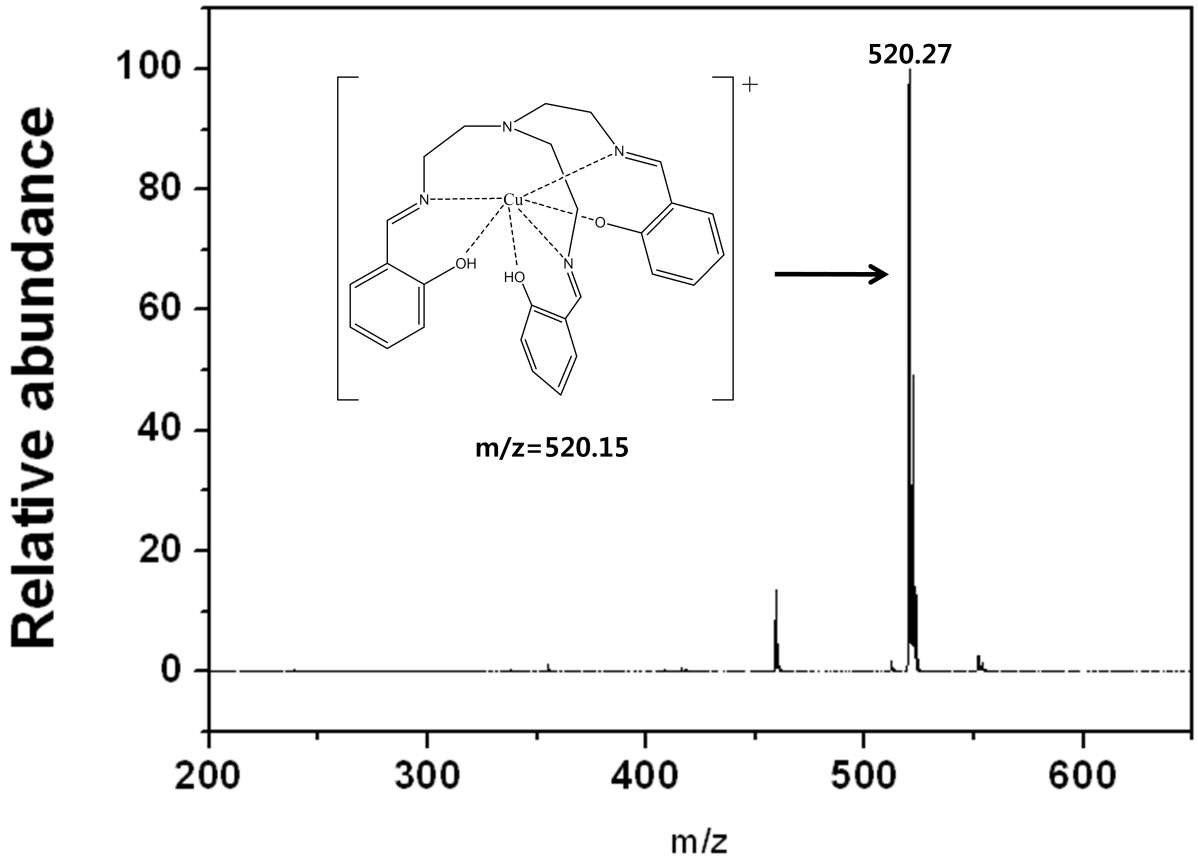


Fig. S10. Positive-ion electrospray ionization mass spectrum of **L** upon addition of 1 equiv of Cu^{2+} in CH_3OH.

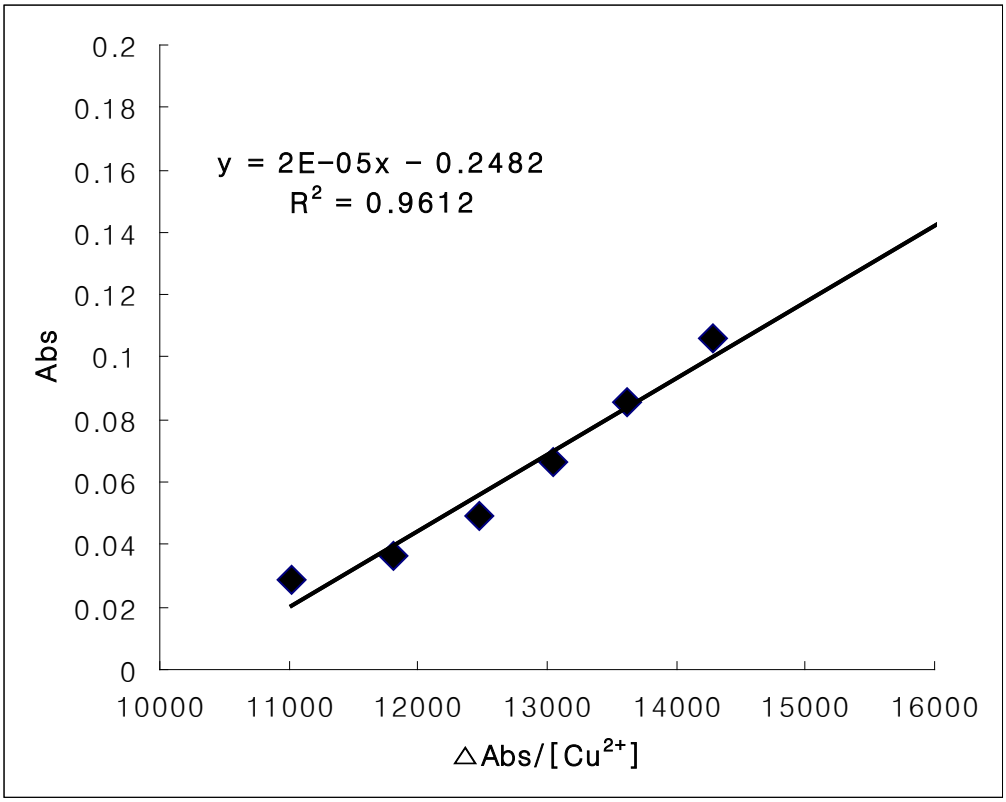


Fig. S11. Benesi-Hildebrand plot (absorption at 400 nm) of **L**, assuming a 1:1 stoichiometry for association between **L** and Cu^{2+}.

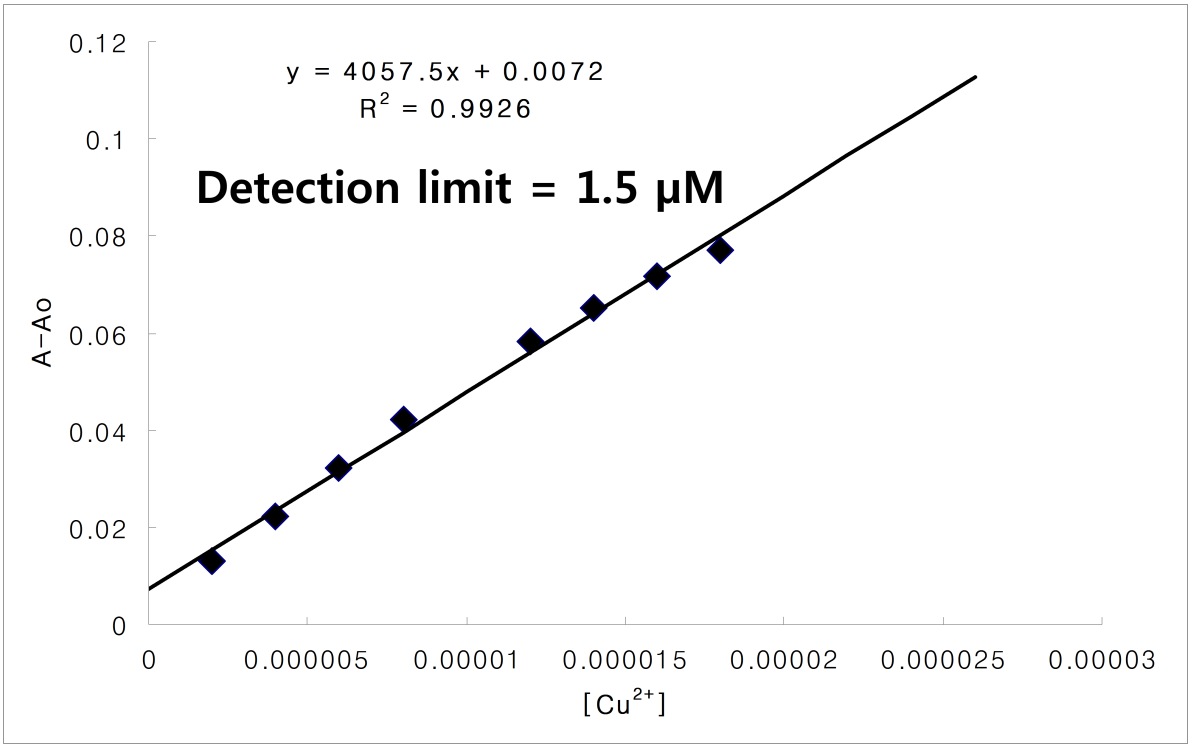


Fig. S12. Detection limit of **L** (20 μM) with Cu^{2+}.