

Supplementary Information

**Triazole-based novel *bis* Schiff base Colorimetric and Fluorescent *turn-on* dual Chemosensor for Cu<sup>2+</sup> and Pb<sup>2+</sup>: Application to living cell imaging and molecular logic gate**

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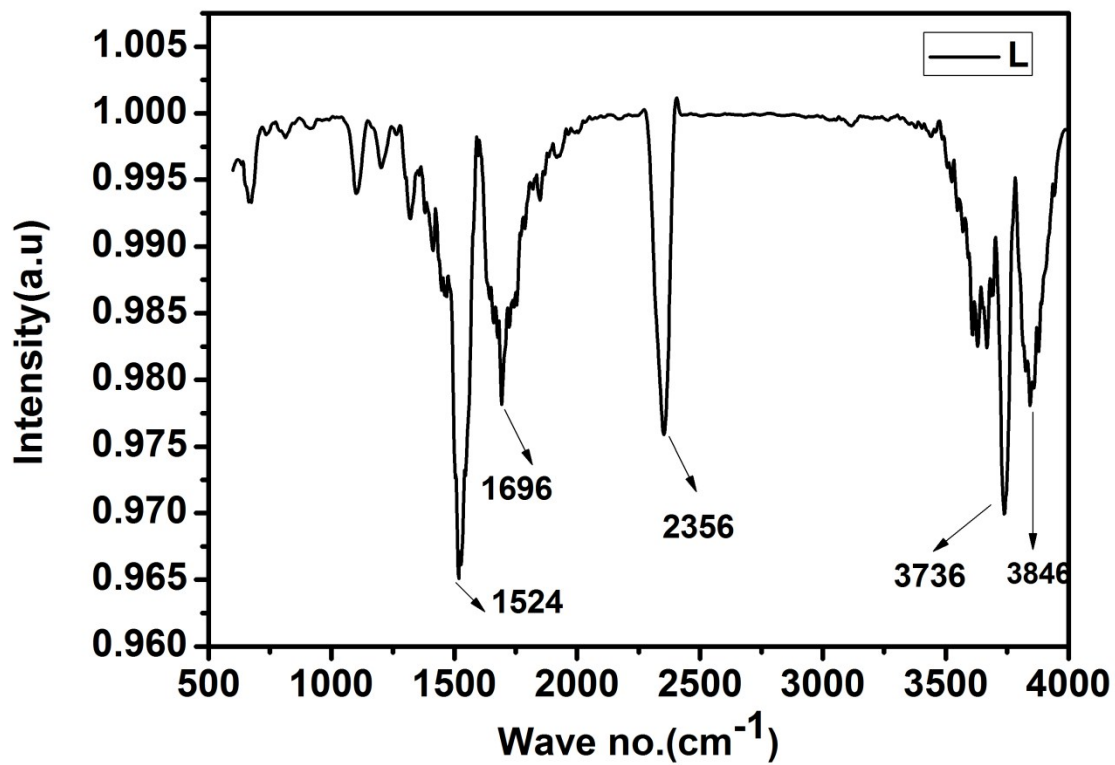


Fig. S1. FTIR spectra of L

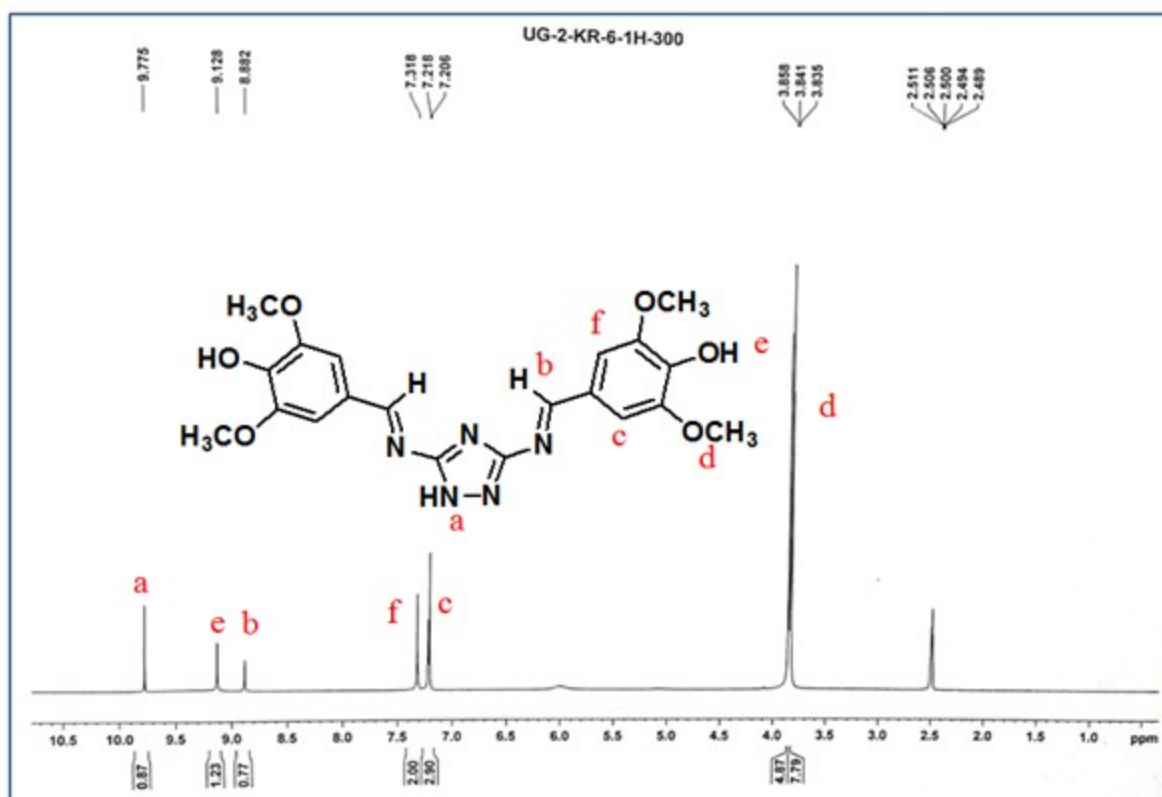


Fig. S2. <sup>1</sup>H NMR spectra of L in DMSO-d<sub>6</sub>.

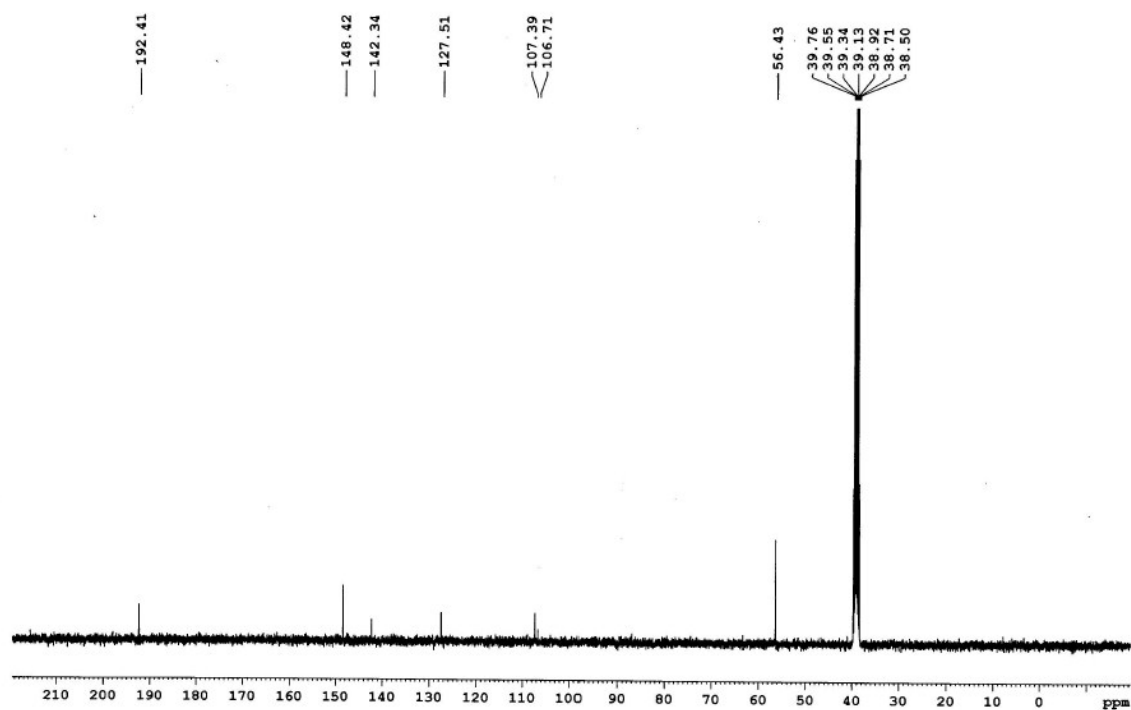
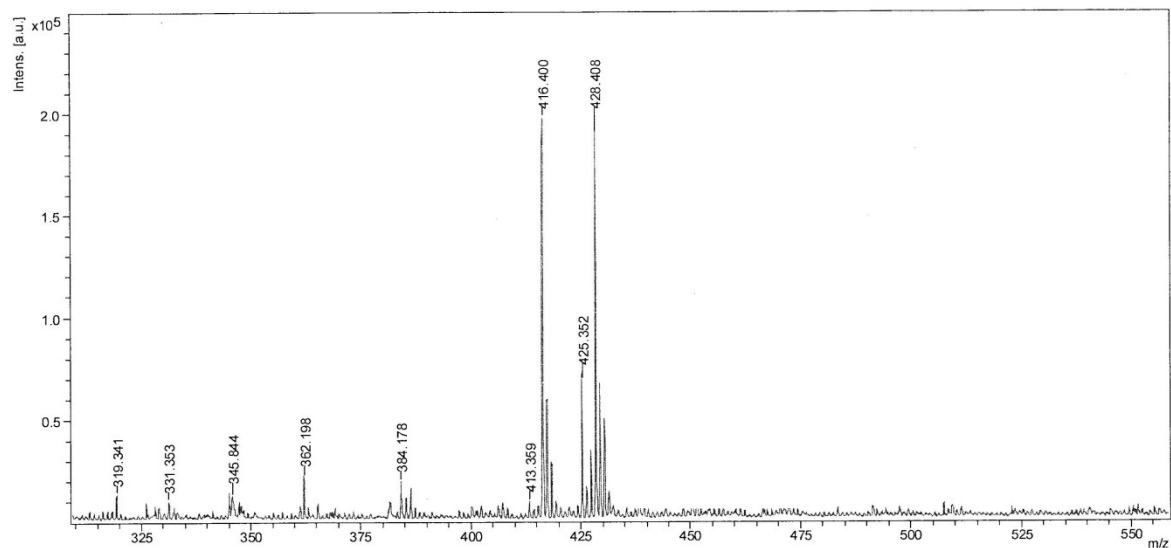


Fig. S3. <sup>13</sup>C NMR spectra of L in DMSO-d<sub>6</sub>.

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Fig. S4. ESI-mass spectra of L.

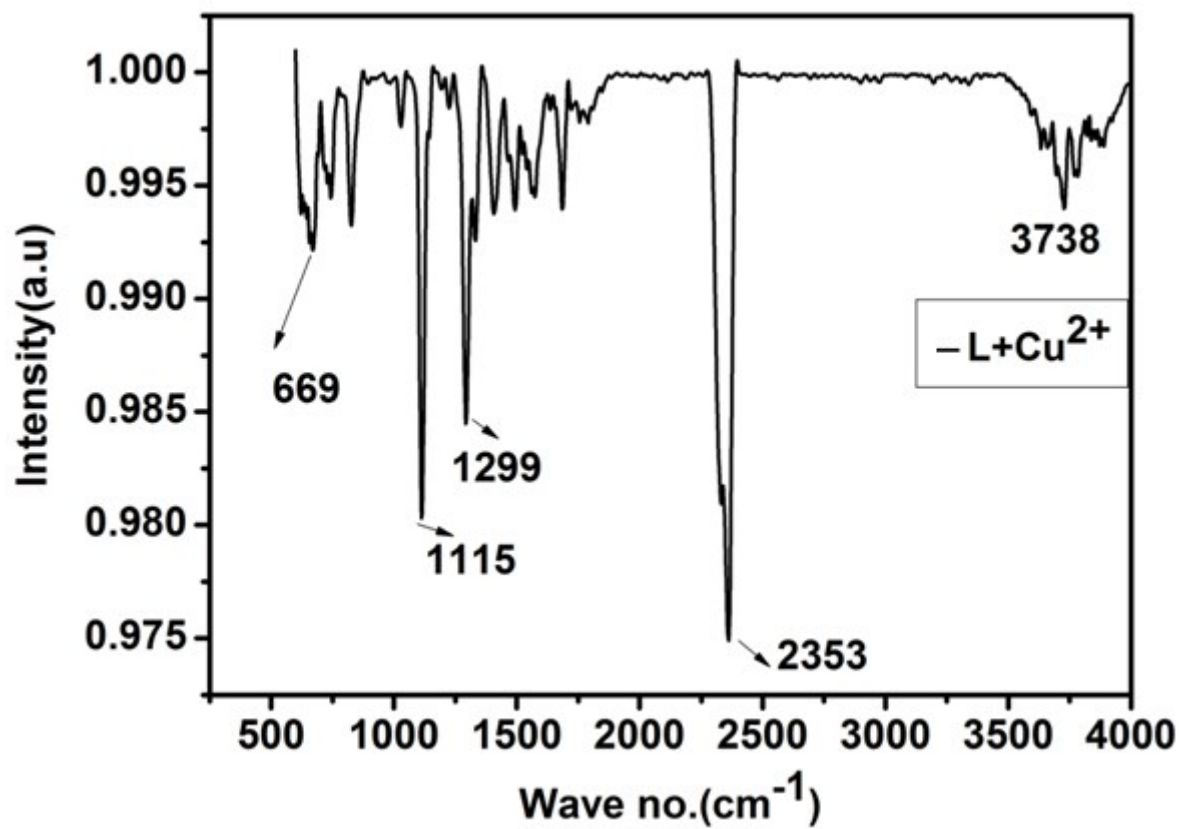


Fig. S5. FTIR spectra of L-Cu<sup>2+</sup> complex (1).

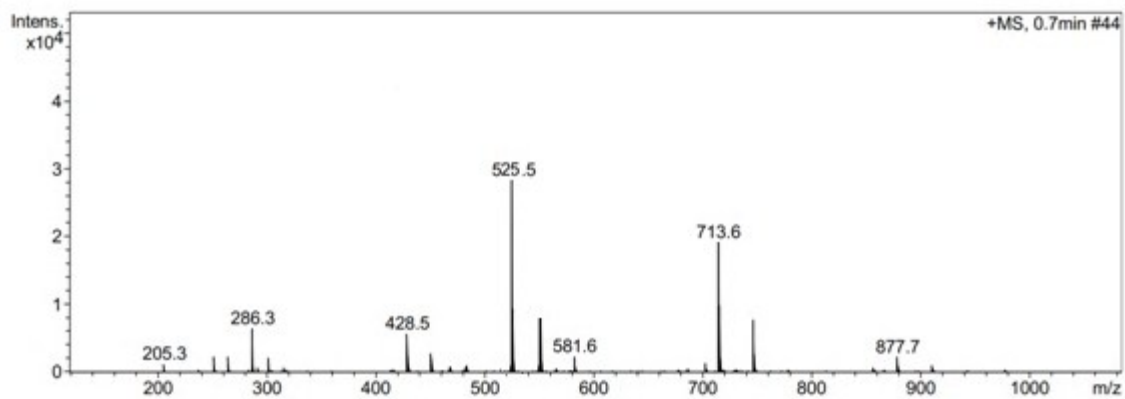


Fig. S6. ESI-mass spectra of L-Cu<sup>2+</sup> complex (1).

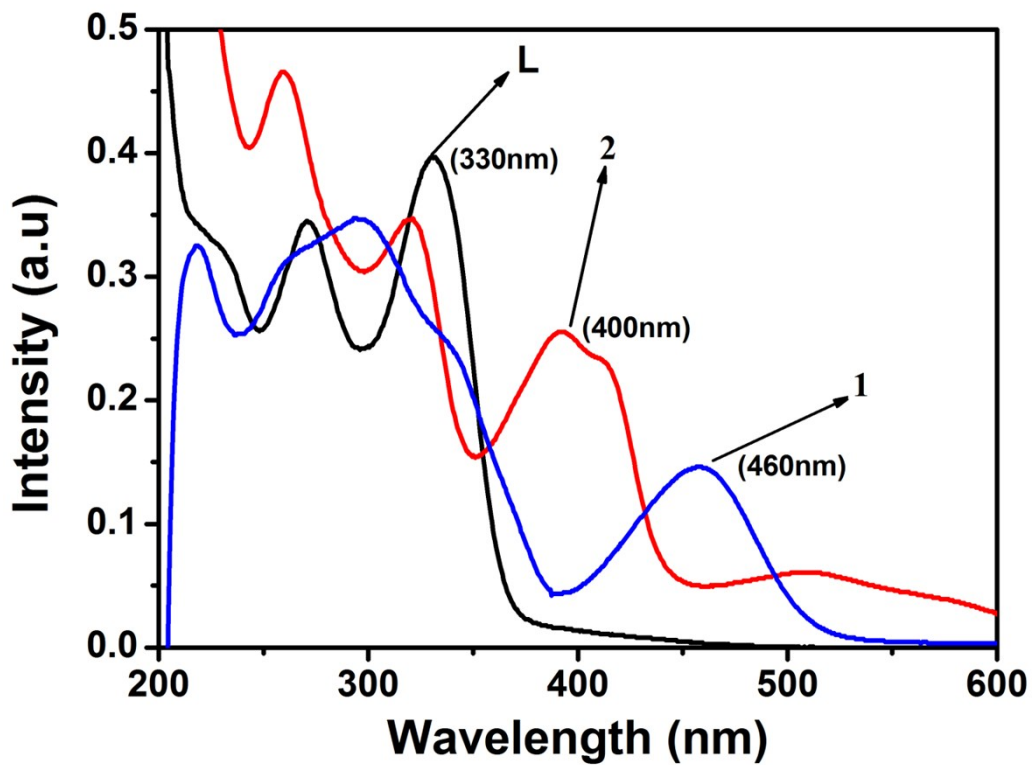


Fig. S7. UV-Vis spectra of L, L-Cu<sup>2+</sup> complex (1) and L-Pb<sup>2+</sup> complex (2).

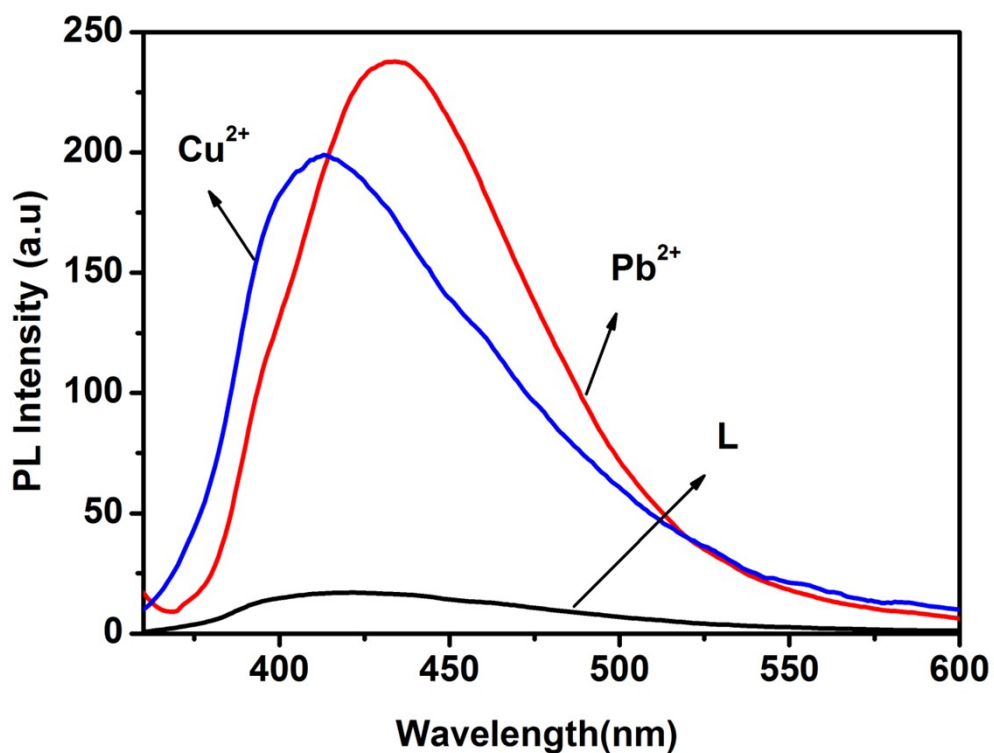


Fig. S8. Emission spectra of L, L-Cu<sup>2+</sup> complex (1) and L-Pb<sup>2+</sup> complex (2).

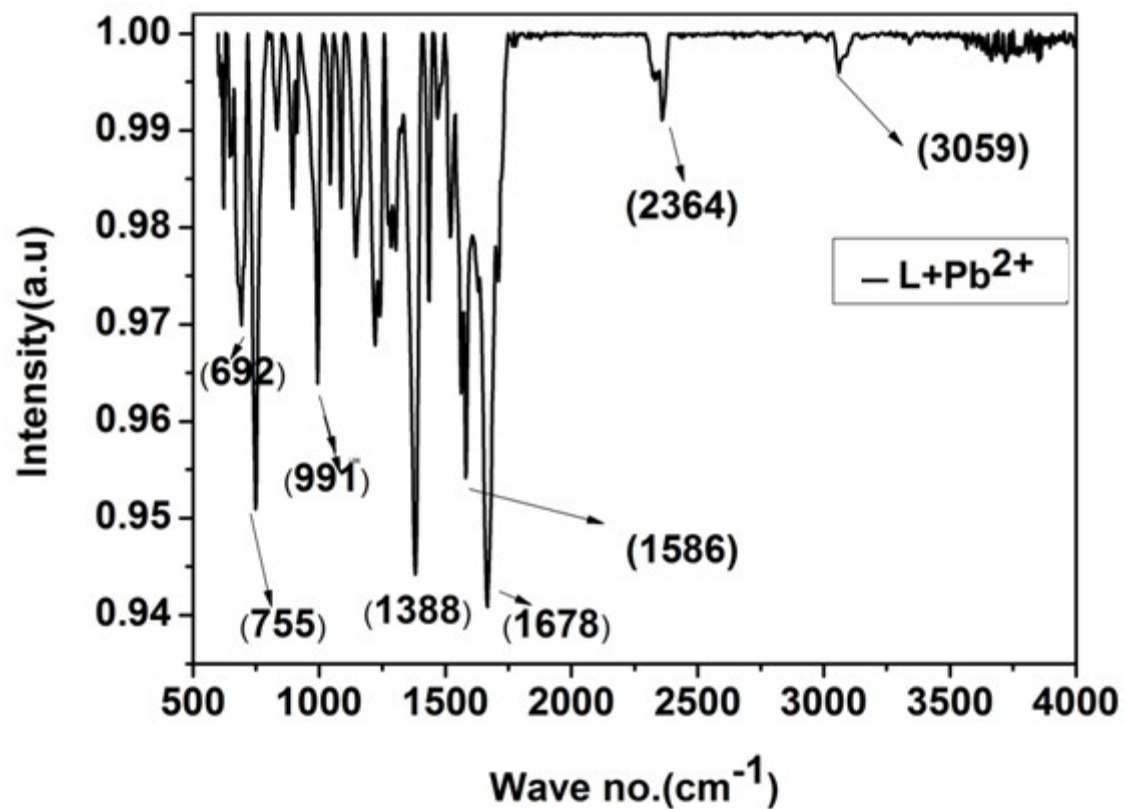


Fig. S9. FTIR spectra of L-Pb<sup>2+</sup> complex (2).

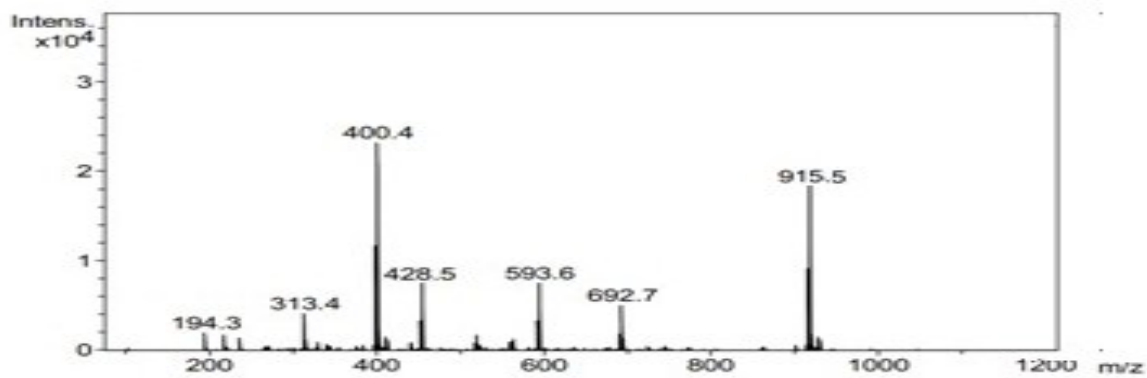


Fig. S10. ESI-mass spectra of L-Pb<sup>2+</sup> complex (2)

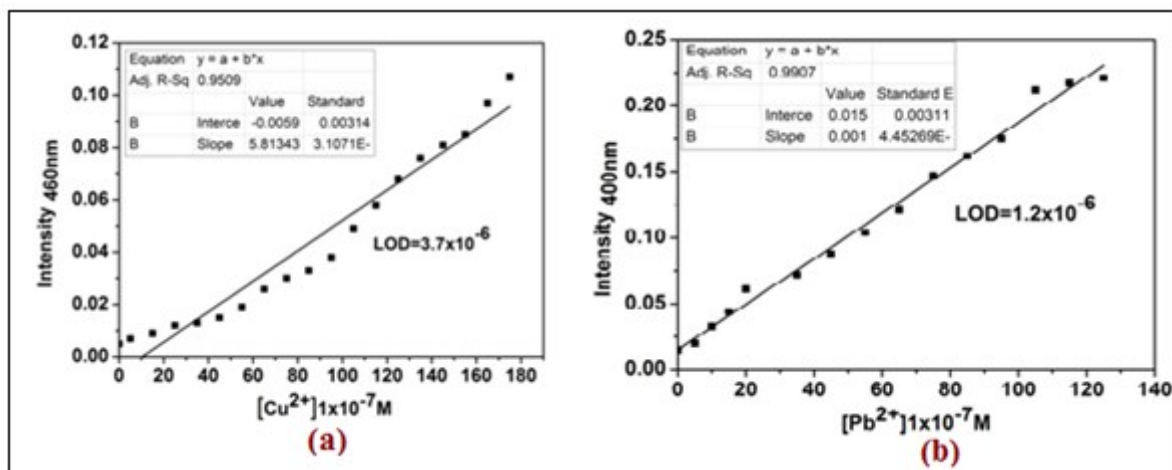


Fig. S11. Colorimetric Detection limits of L for (a) Cu<sup>2+</sup> and (b) Pb<sup>2+</sup>

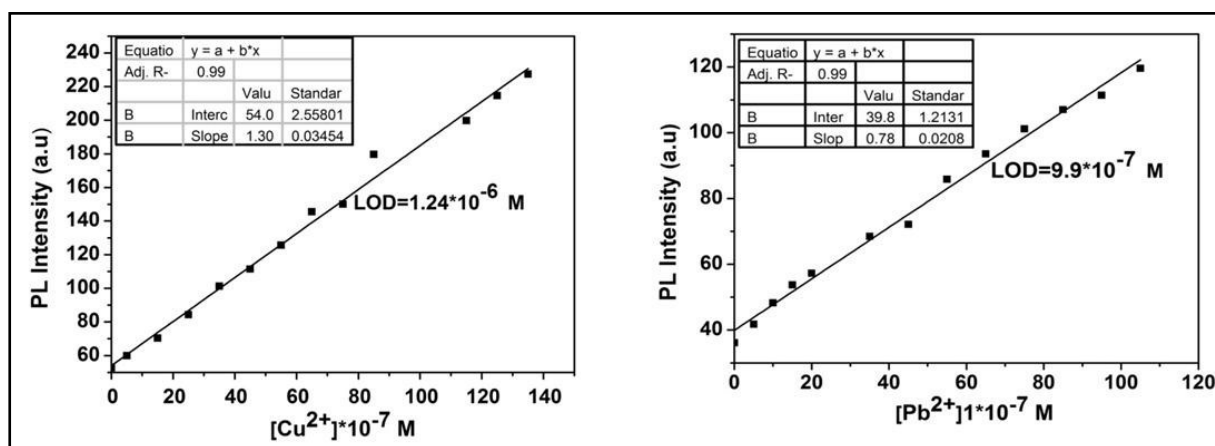


Fig.S12. Fluorometric Detection limits of L for (a) Cu<sup>2+</sup> and (b) Pb<sup>2+</sup>

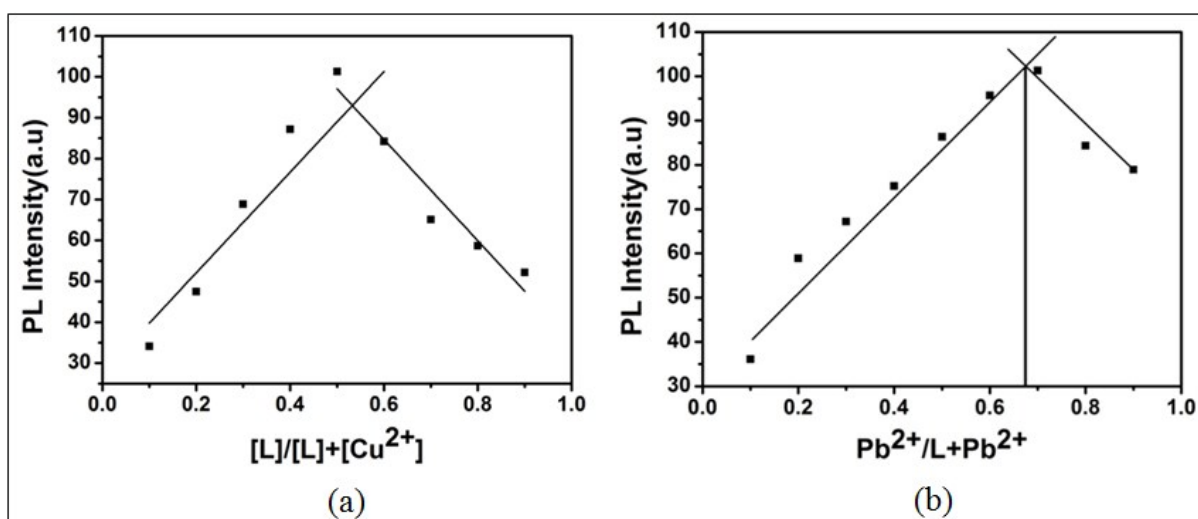


Fig. S13. Job's plot for (a) Cu<sup>2+</sup> and (b) Pb<sup>2+</sup>

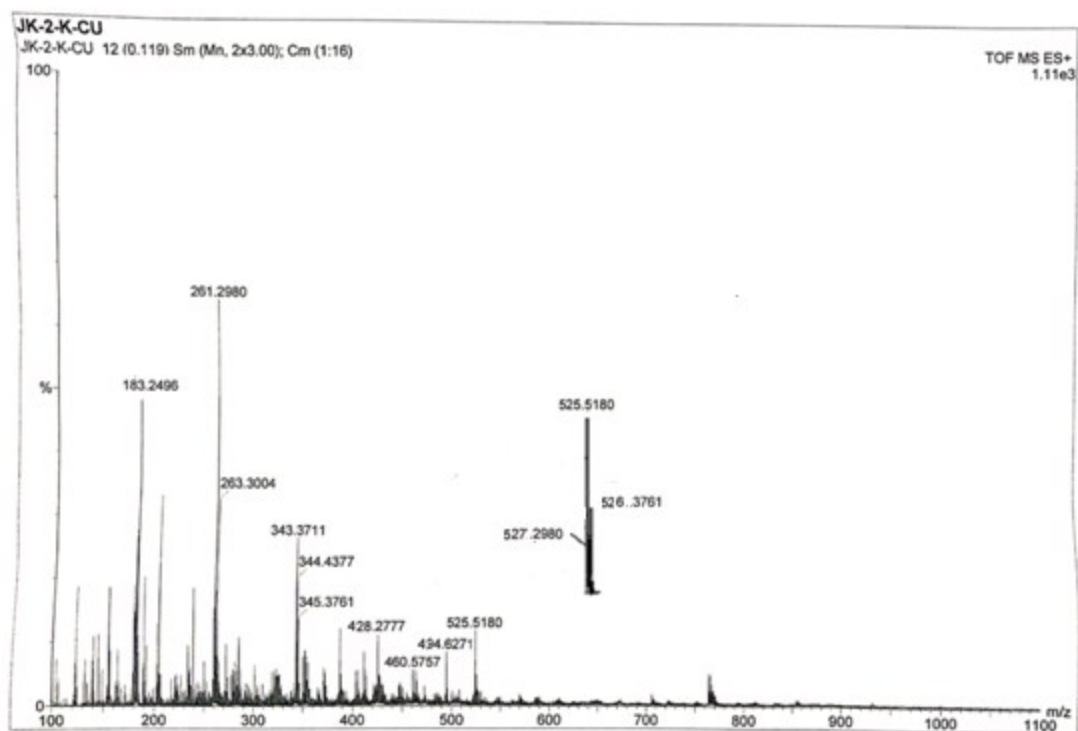


Fig. S14. ESI-mass spectra of L-Cu<sup>2+</sup> adduct

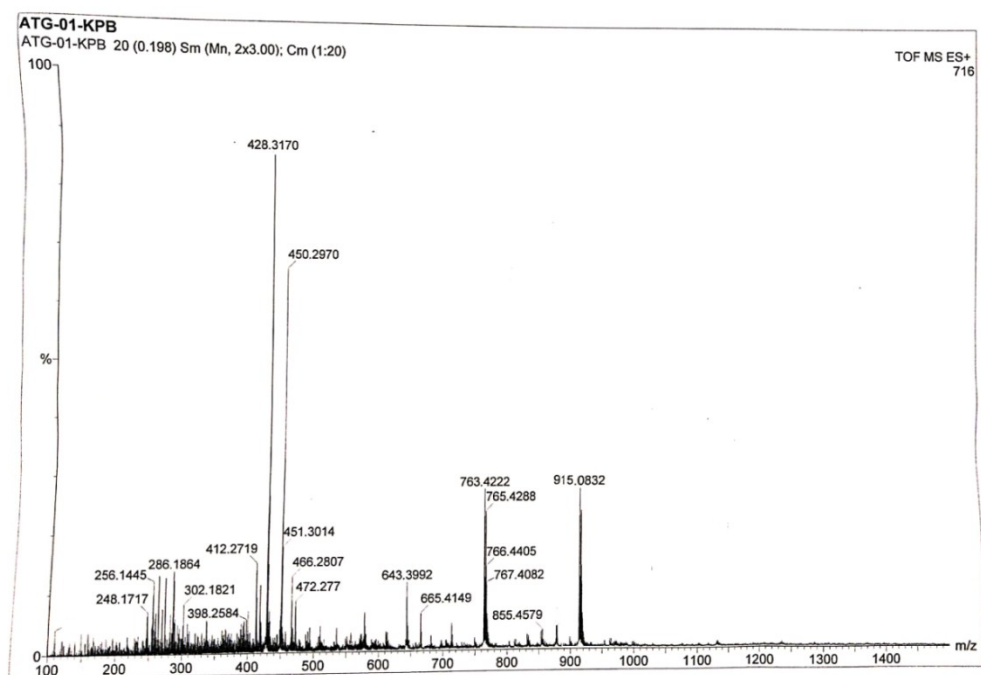


Fig. S15. ESI-mass spectra of L-Pb<sup>2+</sup> adduct



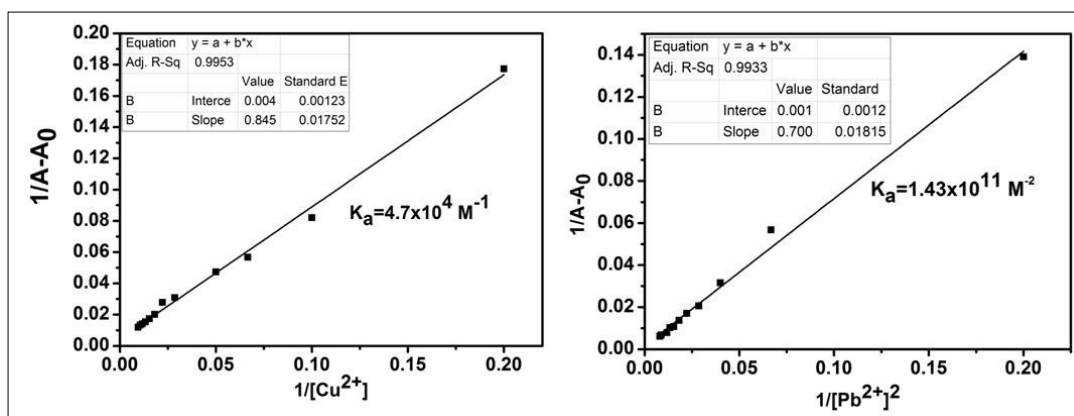


Fig.S16. Association constant of L-Cu<sup>2+</sup> and L-Pb<sup>2+</sup> complexes

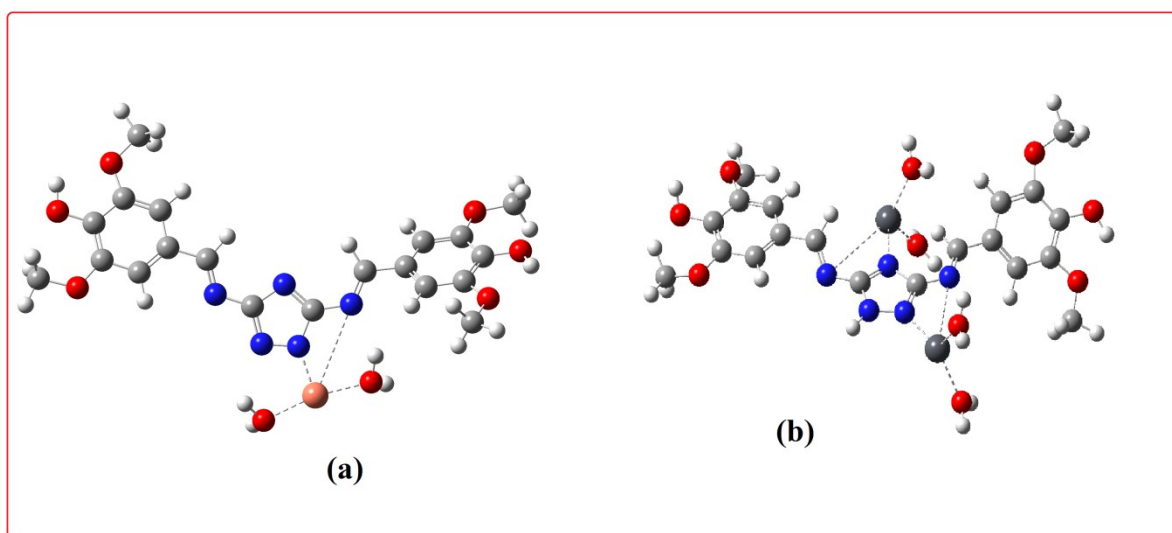


Fig.S17. DFT optimised structures of L-Cu<sup>2+</sup> complex (1) and L-Pb<sup>2+</sup> complex (2)

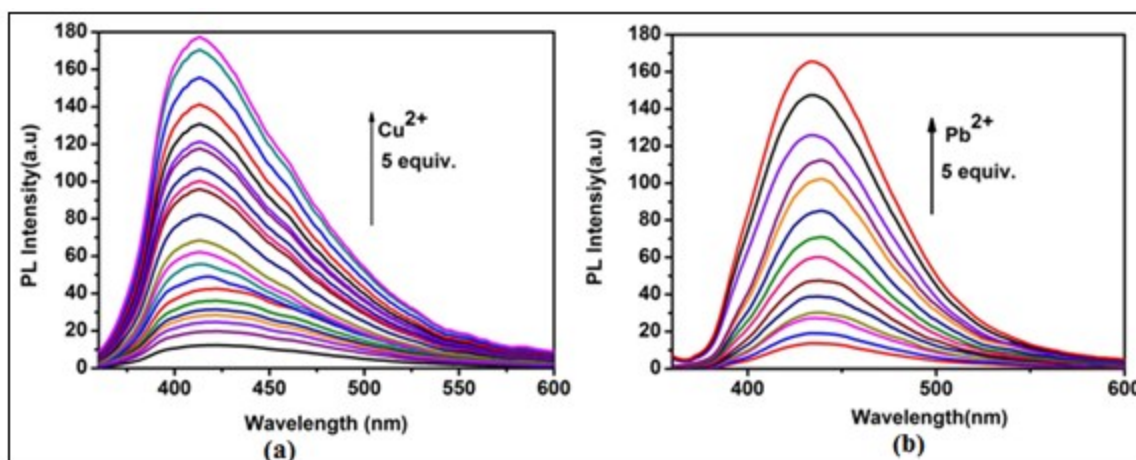


Fig. S18. In aqueous bovine serum albumin medium-fluorescence spectra of L in presence of 5 equiv. of (a) Cu<sup>2+</sup> and (b) Pb<sup>2+</sup>.