

Rhodamine Embedded bio-compatible Smart Molecule Mimicking Combinatorial Logic Circuit and 'Key-pad Lock' memory device for defending information risk.

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Supporting Information for Publication

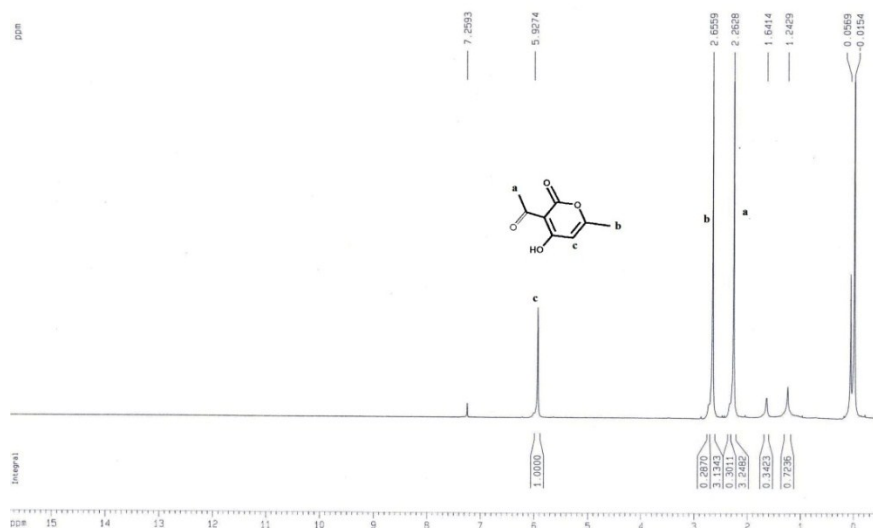


Fig S1. ¹H NMR spectrum of L^B in CDCl₃.

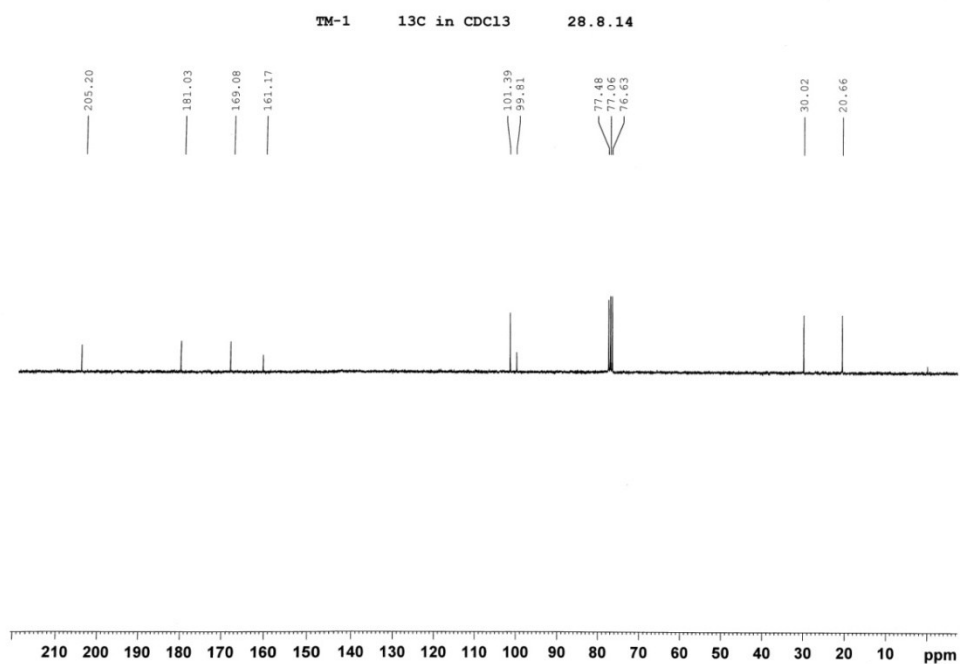


Fig S2. ^{13}C NMR spectrum of L^{B} in CDCl_3 .

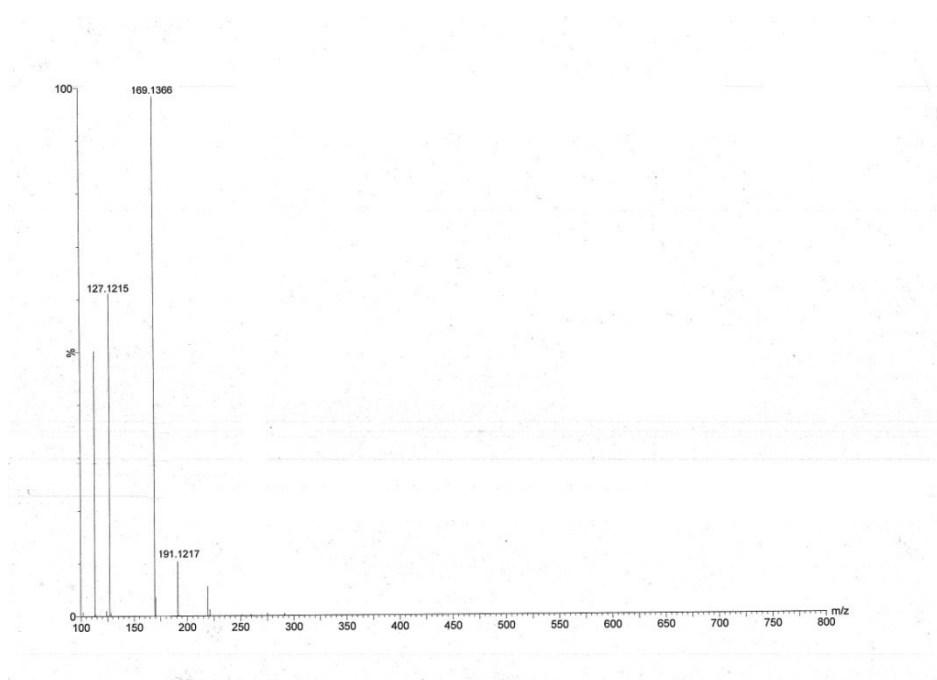


Fig S3. Mass spectrum of L^{B} ($\text{C}_8\text{H}_8\text{O}_4 + \text{H}^+$).

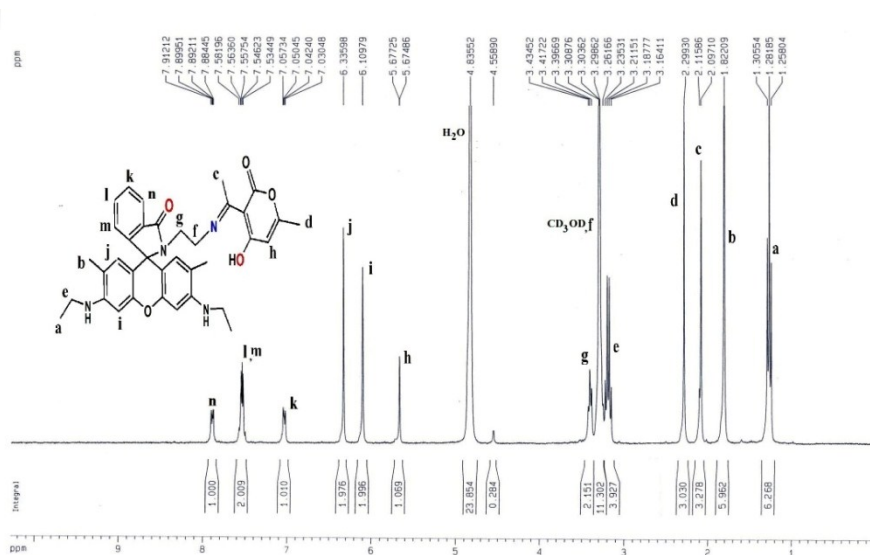


Fig S4 (A). ¹H NMR spectrum of **L^c** in CD₃OD.

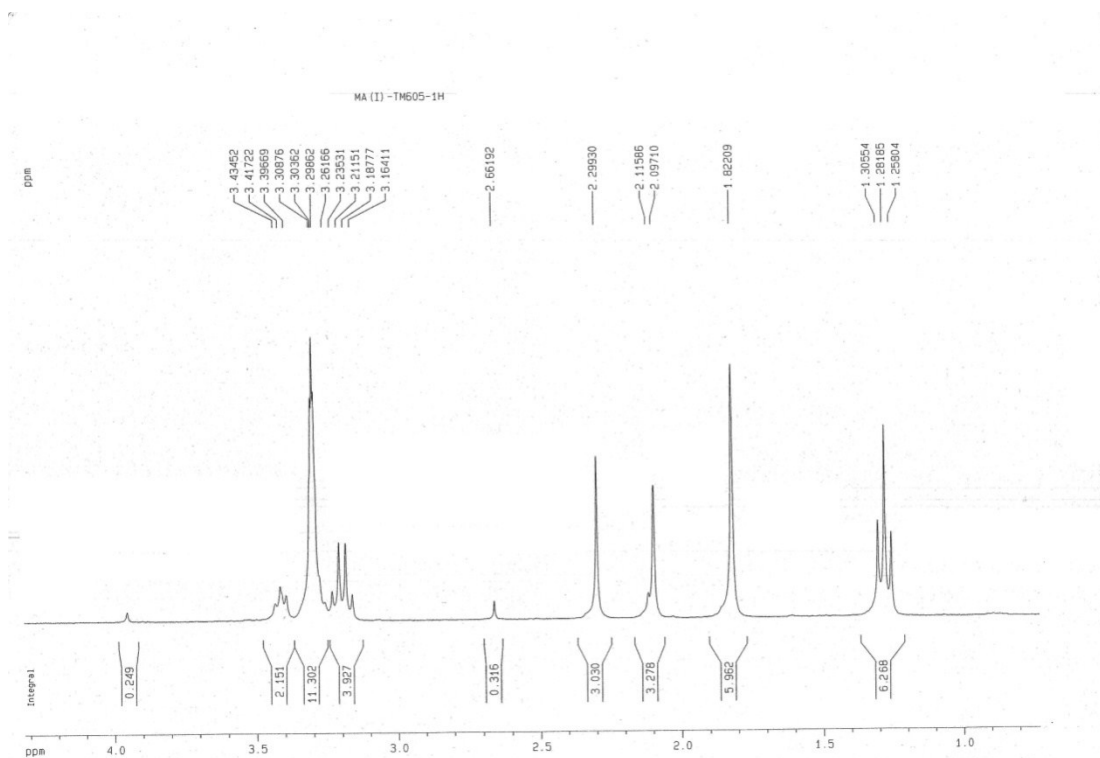


Fig S4(B). ¹H NMR spectrum of **L^c** in CD₃OD (Illustrating mainly aliphatic proton)

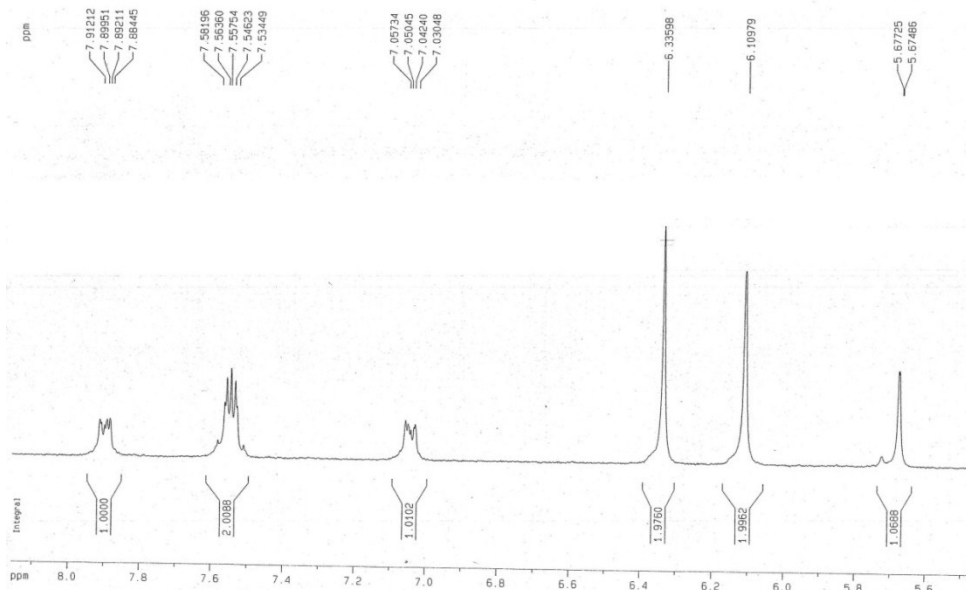


Fig. S4(C). ^1H NMR spectrum of L^c in CD_3OD (Illustrating mainly aromatic proton).

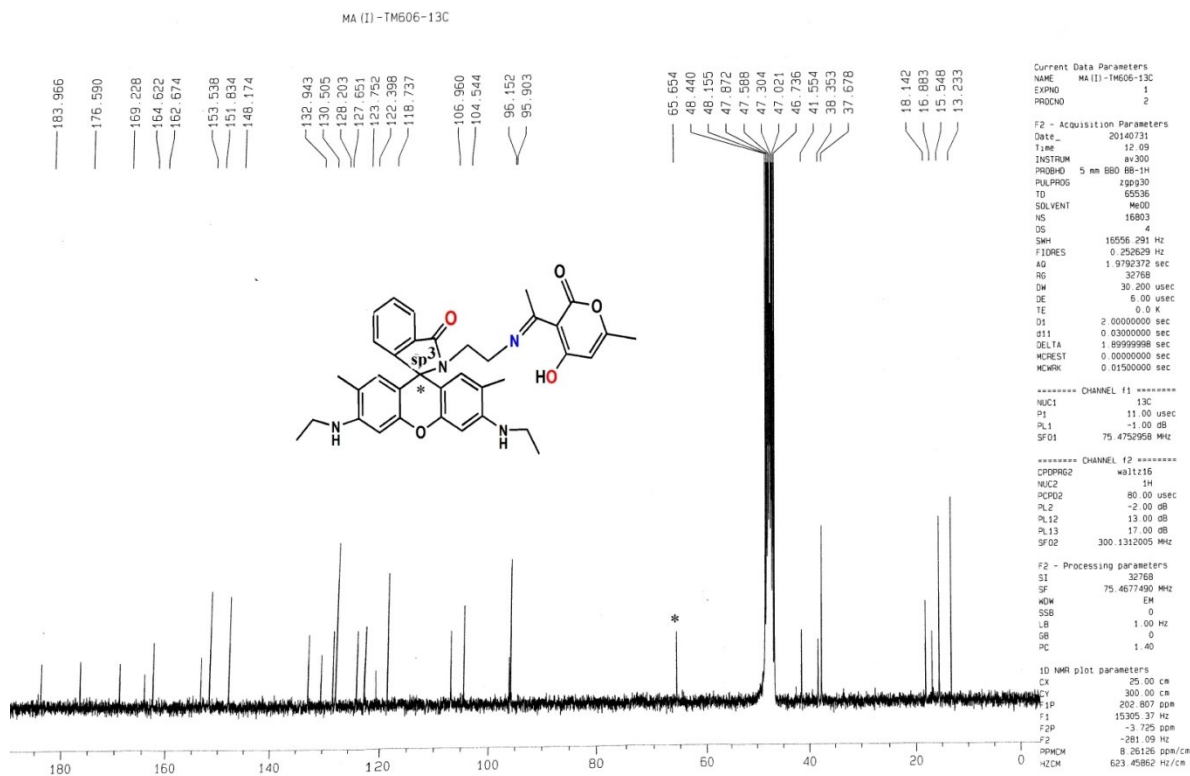


Fig. S5. ^{13}C -NMR spectra of L^c in DMSO (d_6)

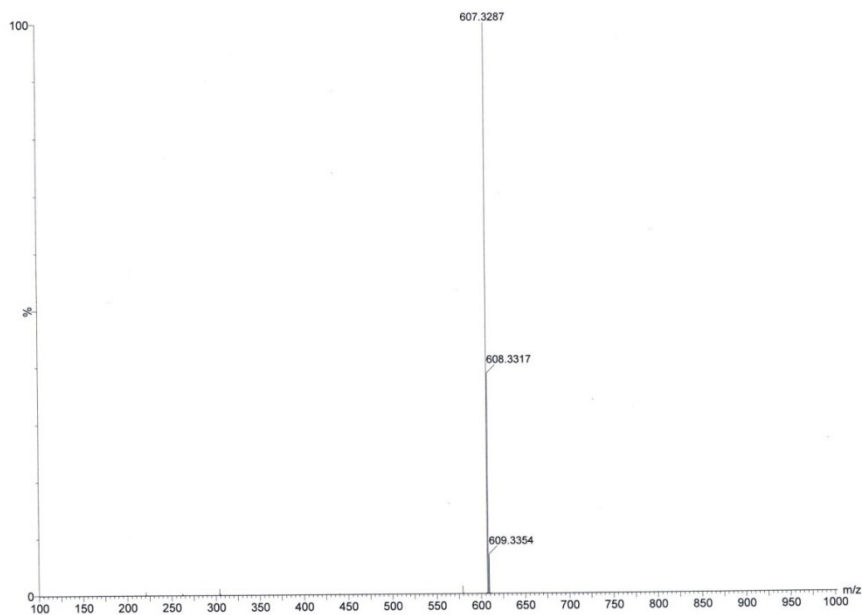


Fig S6. Mass Spectra of L^C ($C_{36}H_{38}N_4O_5+H^+$).

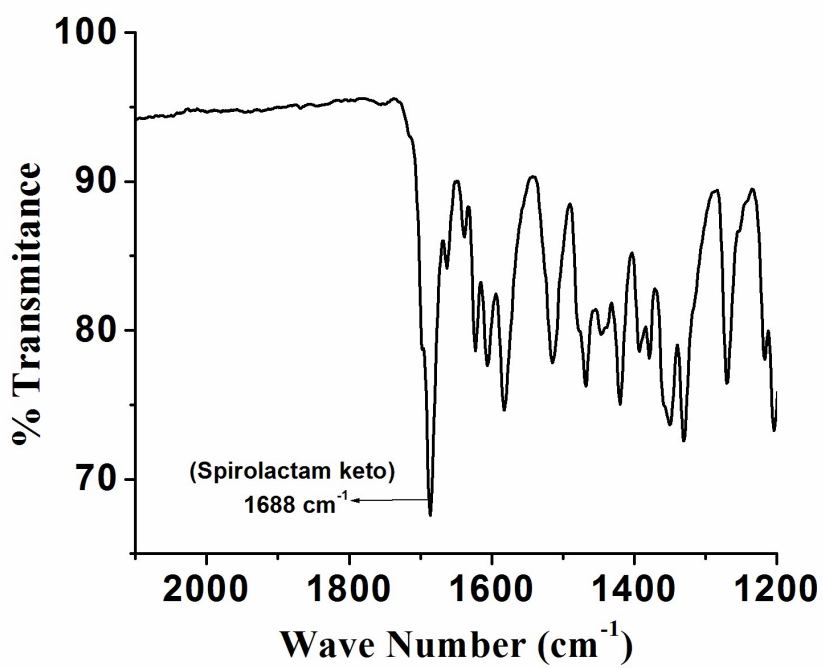


Fig. S7. IR spectrum of L^C .

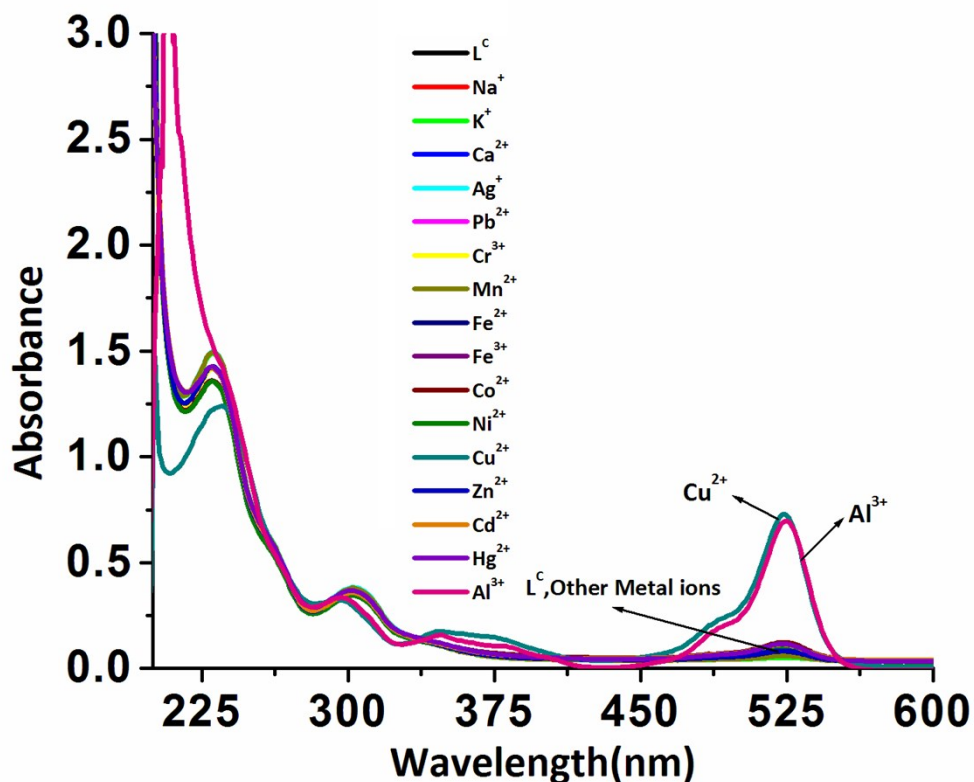


Fig. S8. UV-Vis spectral studies of selective binding of L^C (20 μ M) toward Al^{3+} over other metal ions in HEPES buffer at pH 7.0 in H_2O -MeOH = 3:7 (v/v) at 25 $^{\circ}C$

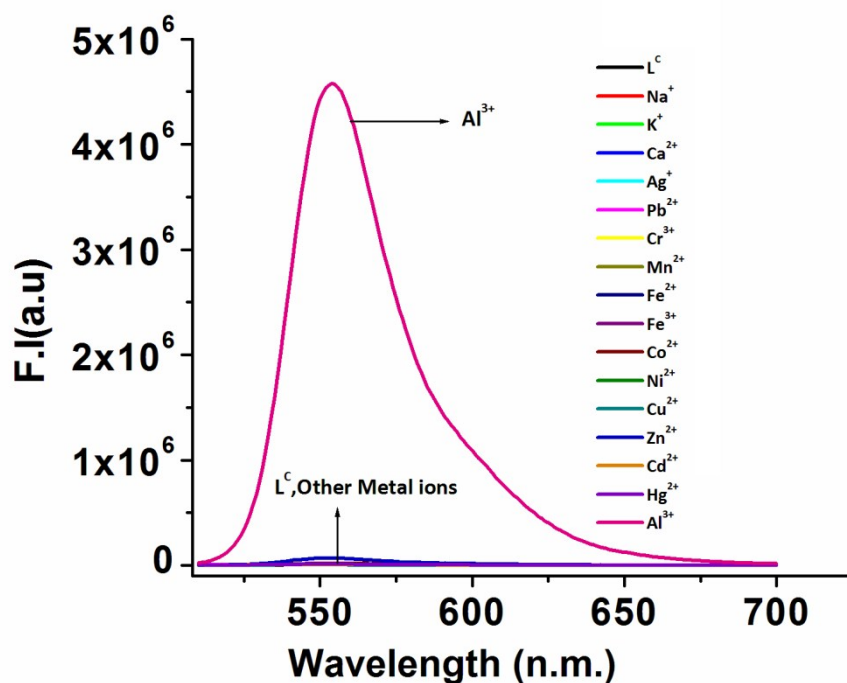


Fig. S9. Fluorescence studies of selective binding of L^C (10 μ M) toward Al^{3+} over other metal ions in HEPES buffer at pH 7.0 in H_2O -MeOH = 3:7 (v/v) at 25 $^{\circ}C$.

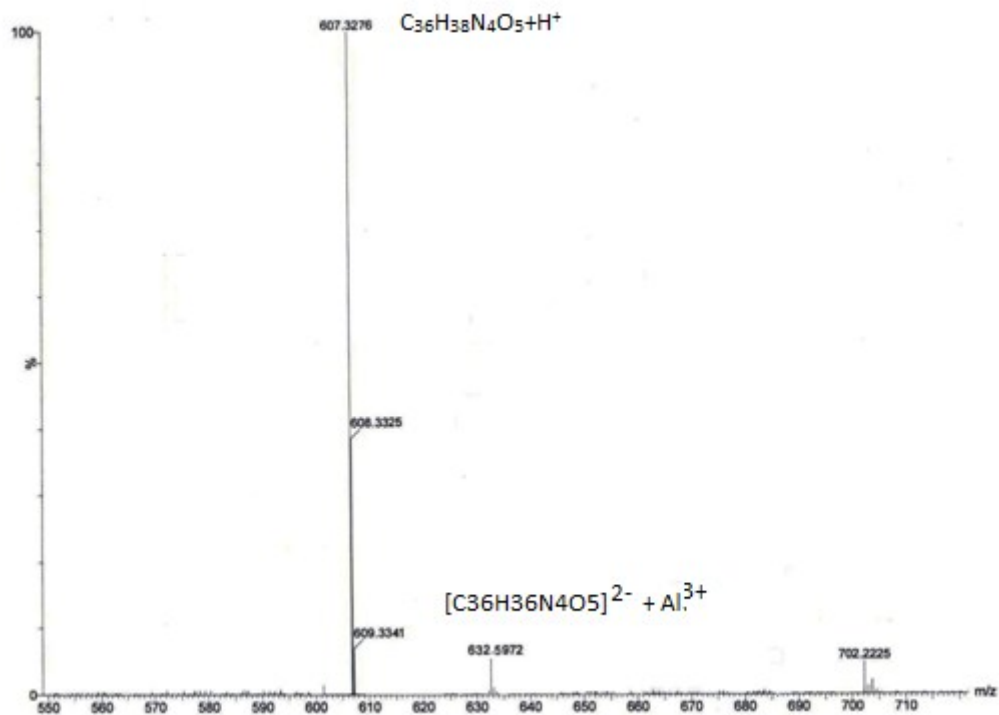


Fig. S10. Mass Spectra of Al-Complex of Receptor (L^c) ($C_{36}H_{38}N_4O_5+Al^{3+}$)

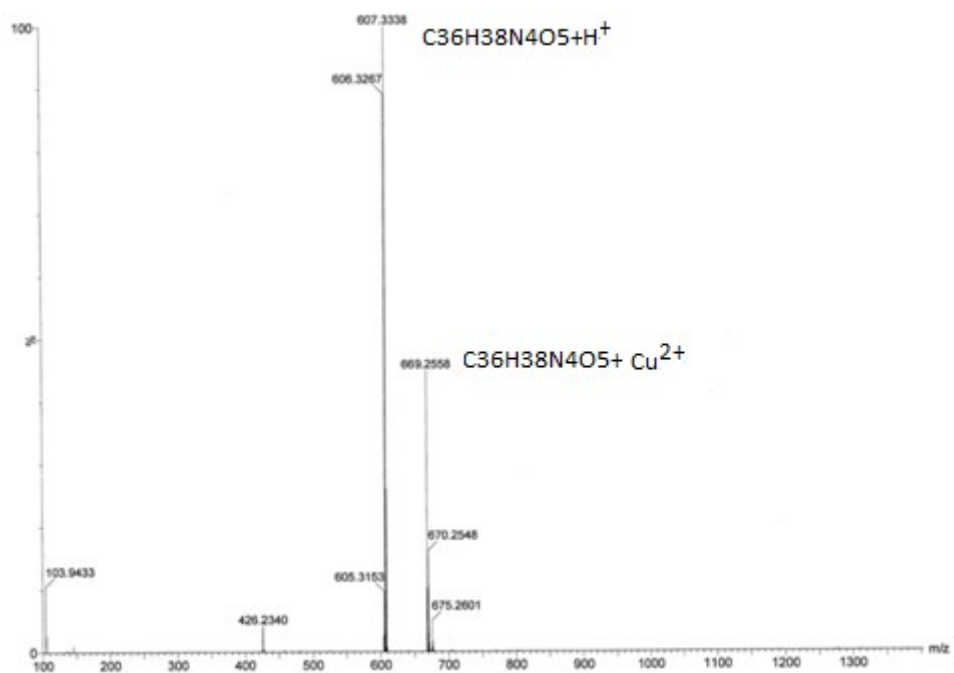


Fig. S11. Mass Spectra of Cu-Complex of Receptor (L^c).

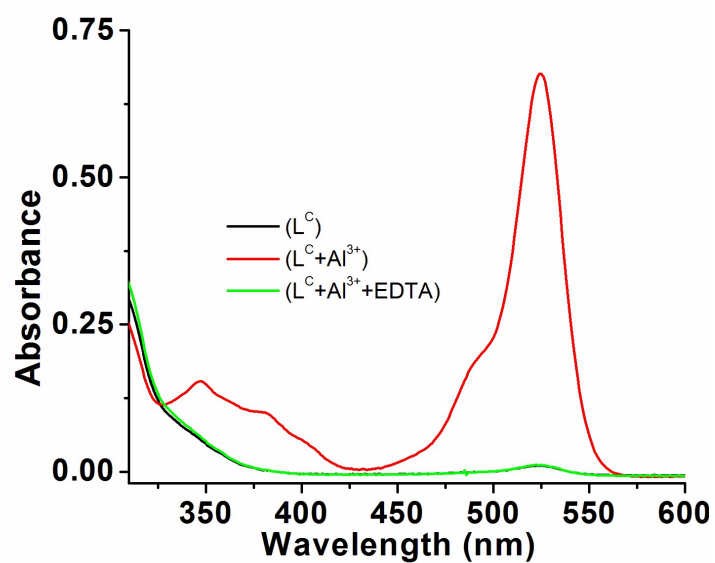


Fig. S12 (A). Change in absorption upon addition of EDTA to $L^C - Al^{3+}$ complex in HEPES buffer at pH 7.0 in $H_2O - MeOH = 3:7$ (v/v) at 25 °C.

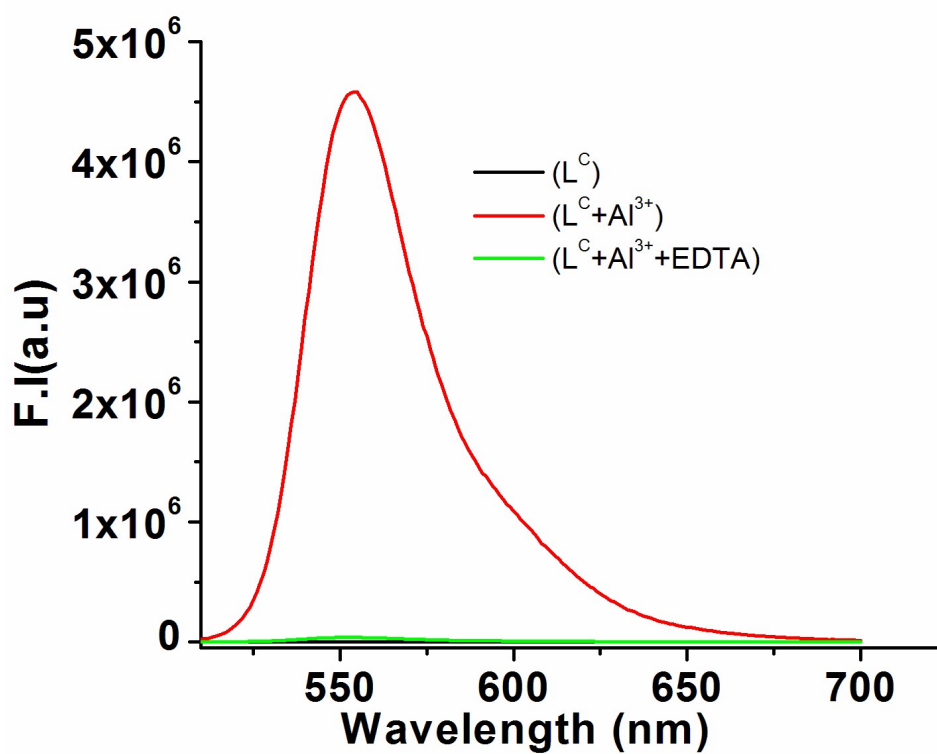


Fig. S12 (B). Change in emission upon addition of EDTA to $L^C - Al^{3+}$ complex in HEPES buffer at pH 7.0 in $H_2O - MeOH = 3:7$ (v/v) at 25 °C.

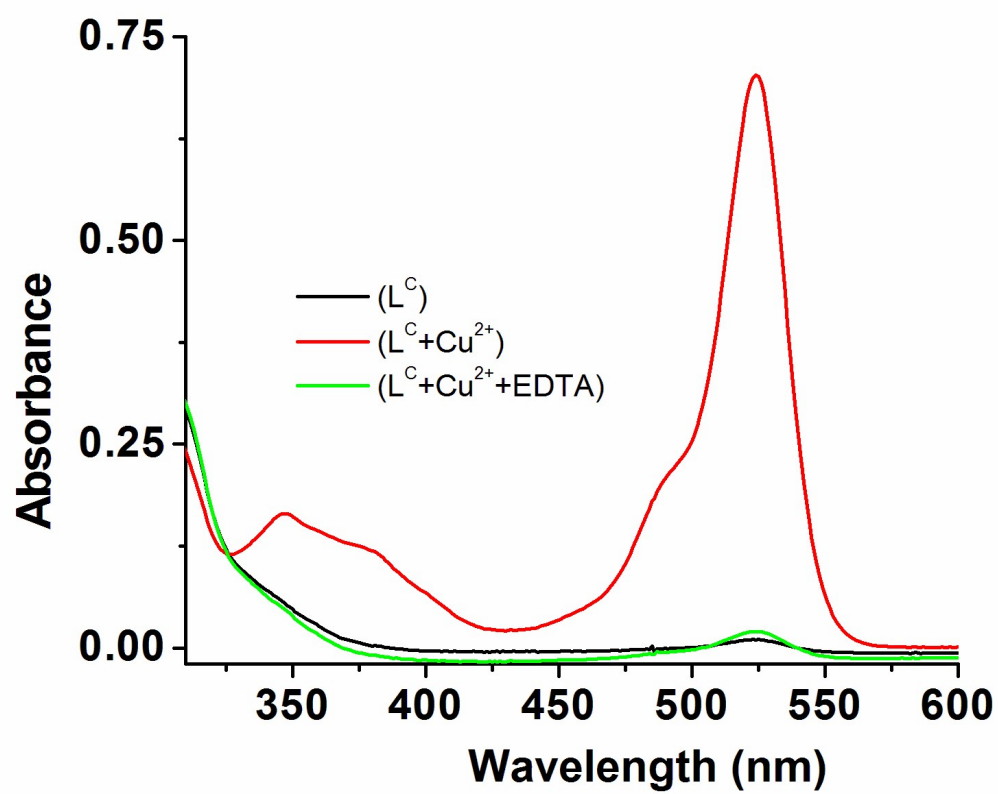


Fig. S13. Change in absorption upon addition of EDTA to $L^C - Cu^{2+}$ complex in HEPES buffer at pH 7.0 in $H_2O - MeOH = 3:7$ (v/v) at 25 °C.

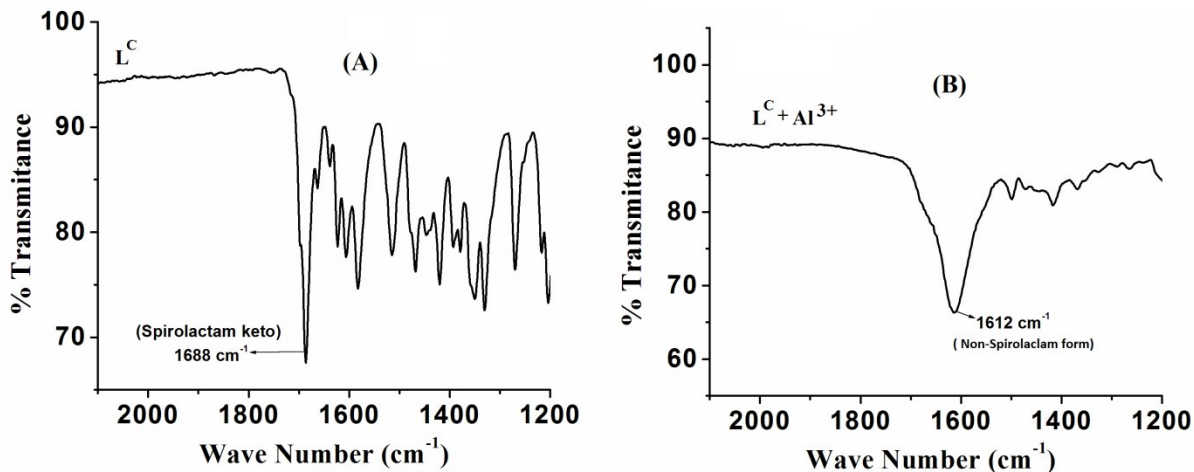


Fig. S14. Comparative IR spectra of L^C and complex (L^C+Al^{3+}).

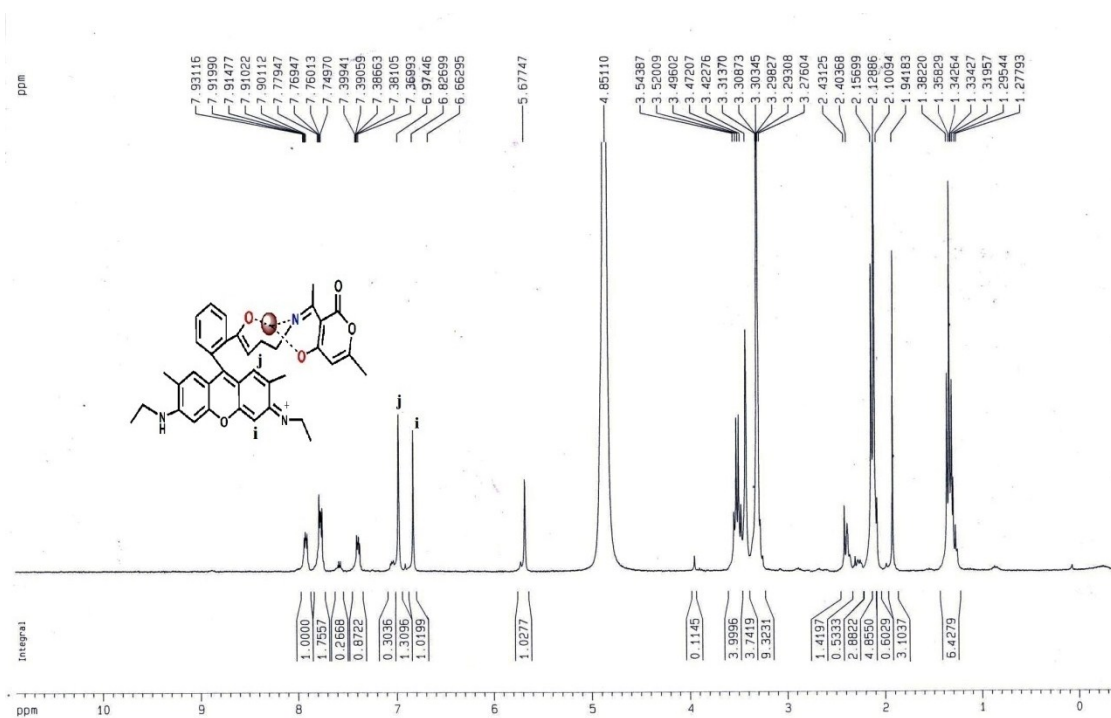


Fig. S15 (A). 1H NMR Studies of the L^C-Al^{3+} complex in CD_3OD .

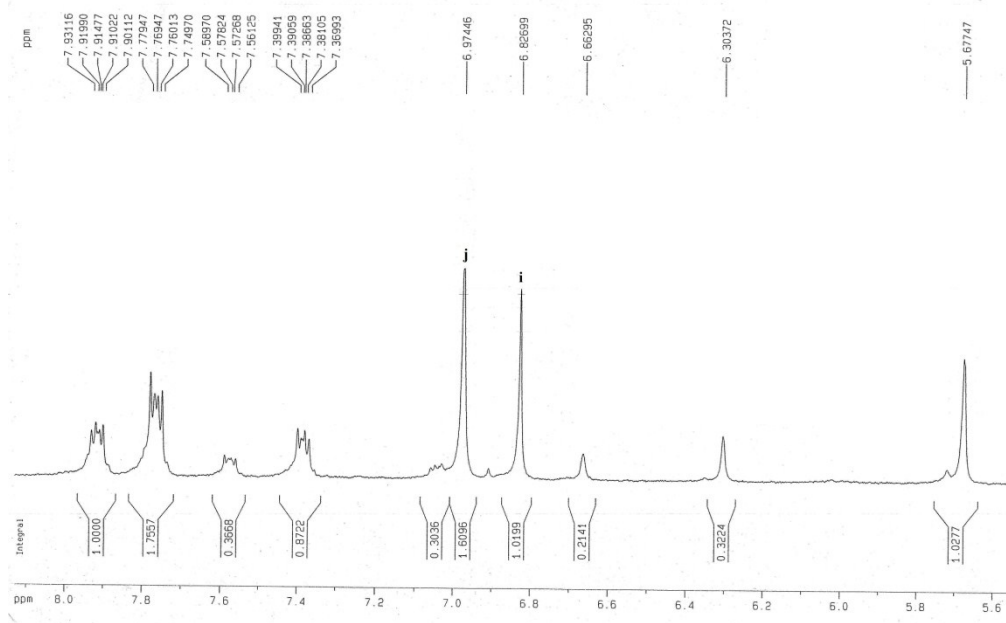


Fig. S15 (B). ^1H NMR Studies of the $\text{L}^{\text{C}}\text{-Al}^{3+}$ in CD_3OD (illustrating mainly aromatic protons).

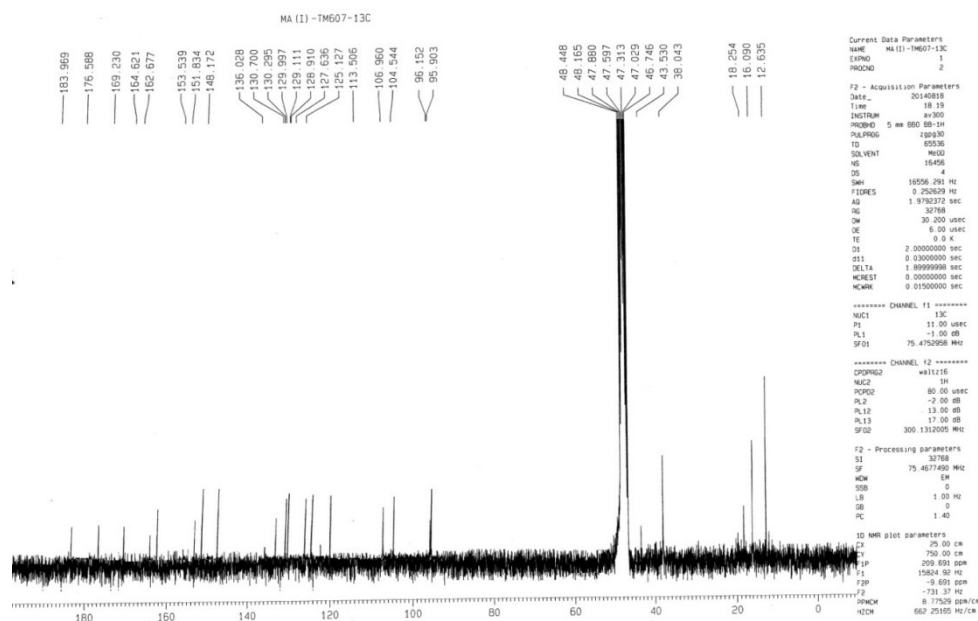


Fig. S16. ^{13}C -NMR spectra of complex ($\text{L}^{\text{C}}\text{-Al}^{3+}$) in $\text{DMSO}(\text{d}_6)$.

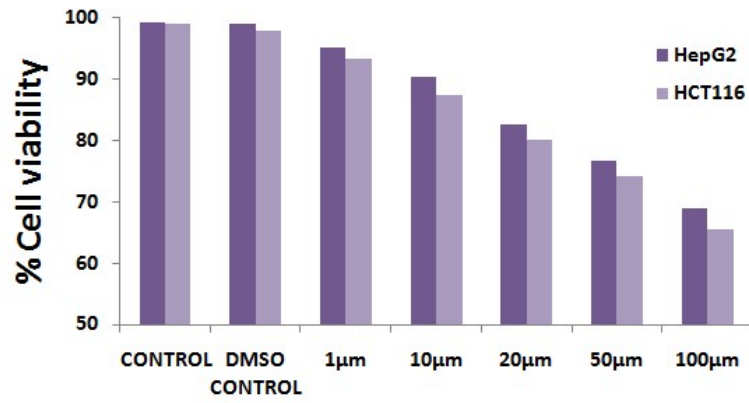


Fig. S17. (A) Depicts % cell viability of HepG2 and HCT116 cells treated with different concentrations (1 μ M-100 μ M) of L^c for 12 hours determined by MTT assay.