Supporting information

Deciphering the liaison of CHEF-PET-ESIPT mechanism in a Zn^{2+}chemosensor and its applications in cell imaging study

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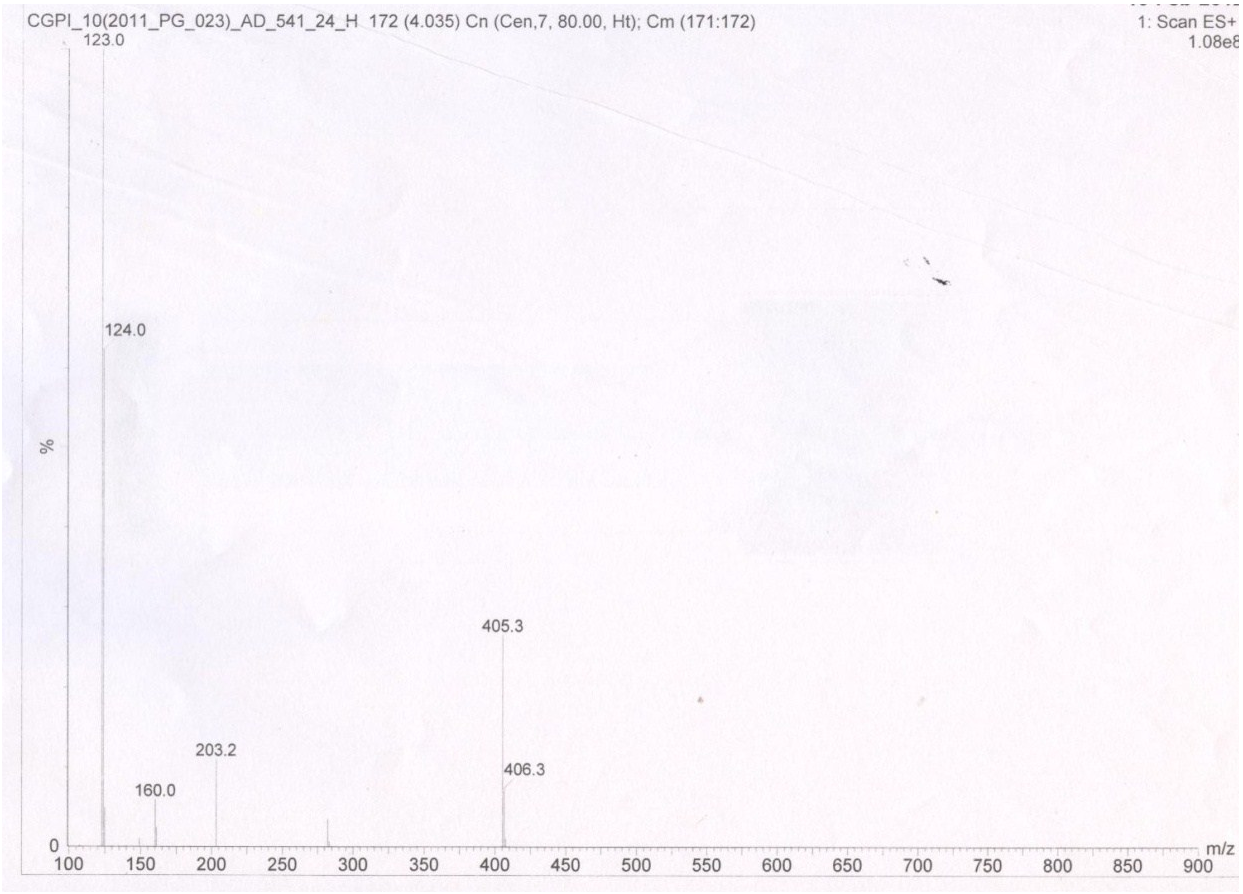

Figure S1. Mass of the Chemosensor **(L)**

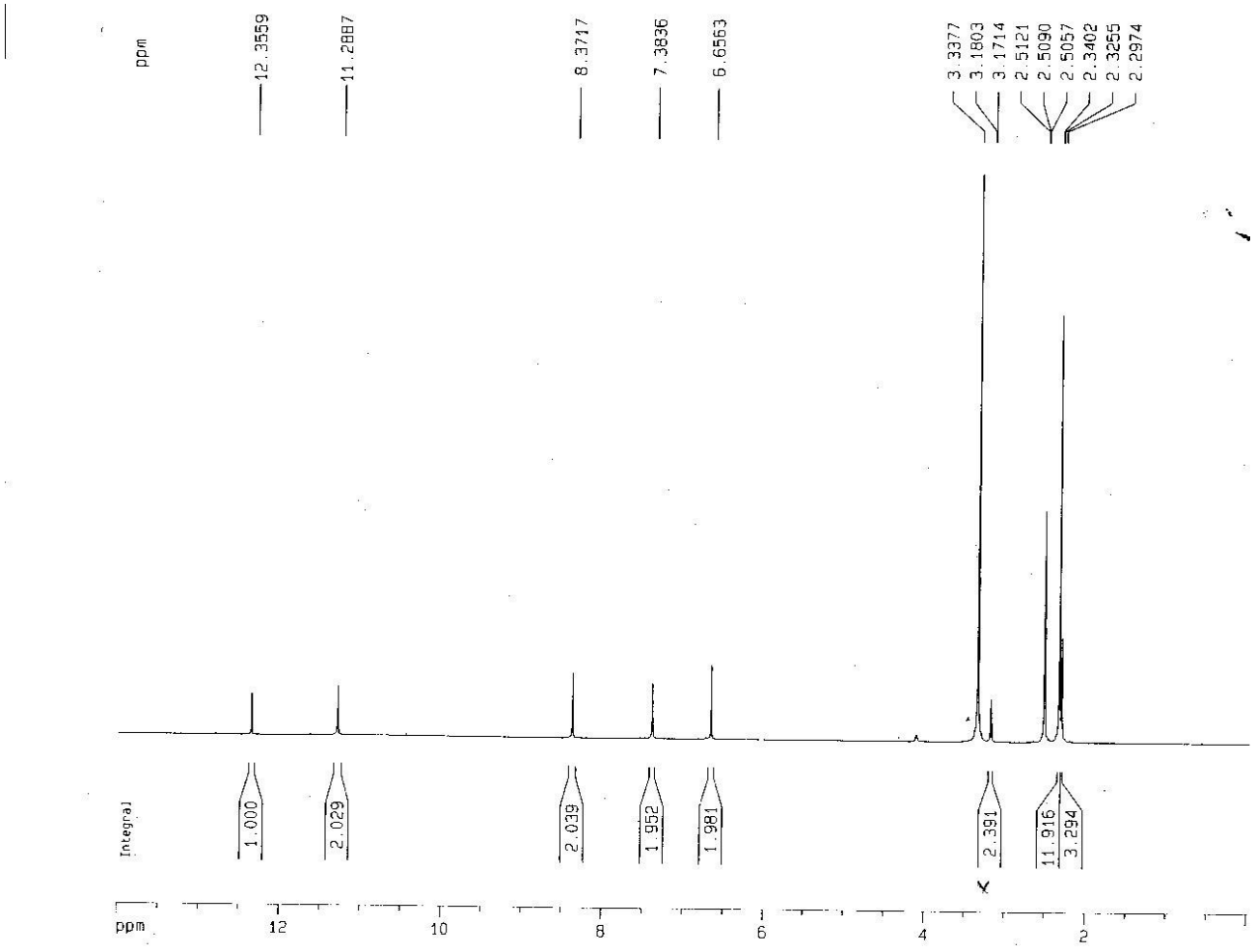

Figure S2. Proton NMR of the Chemosensor (**L**)

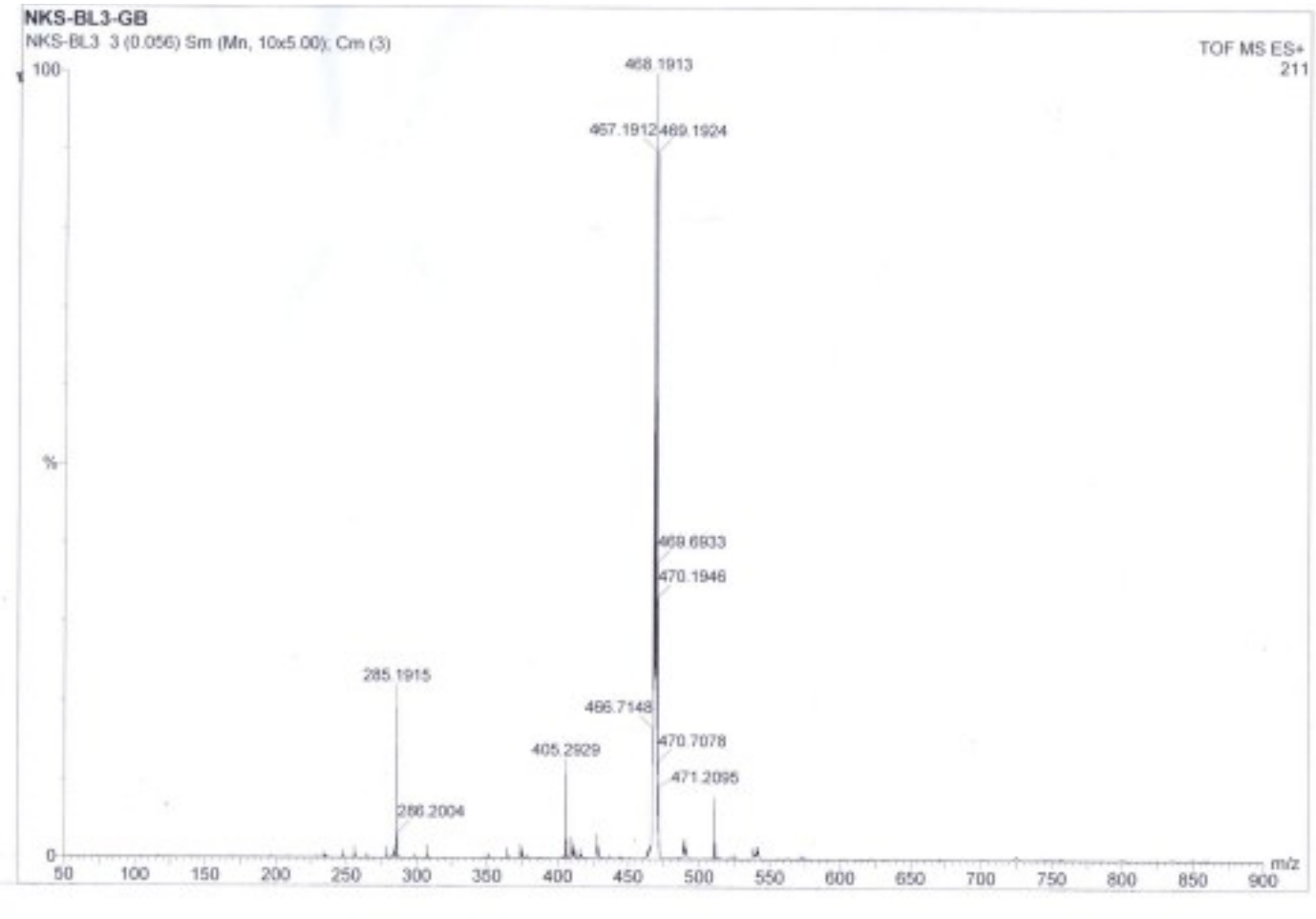

Figure S3. Mass Spectrum of the **L**-Zn^{2+} complex.

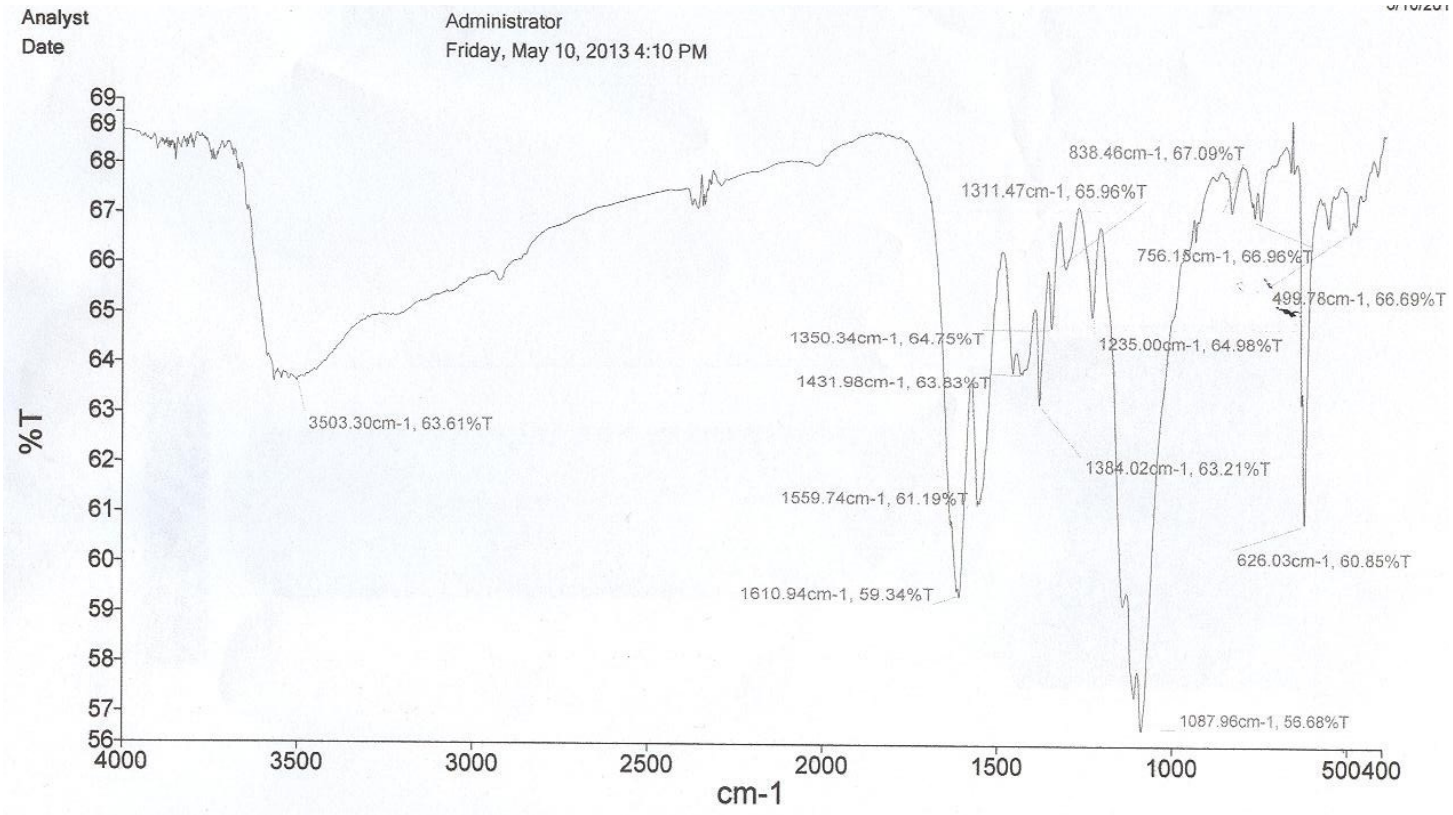

Figure S4. IR spectrum of the **L**

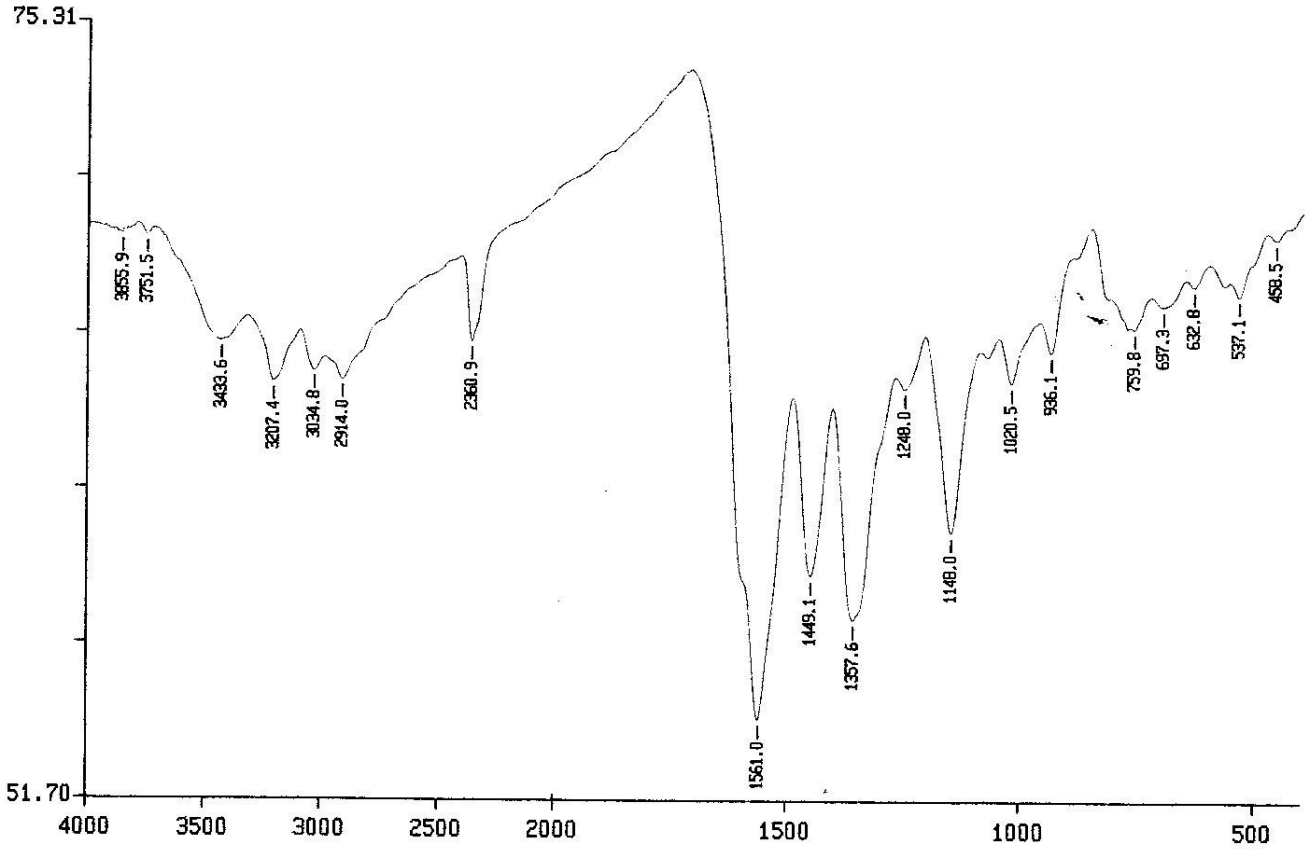

Figure S5. IR spectrum of the **L**-Zn^{2+} complex.

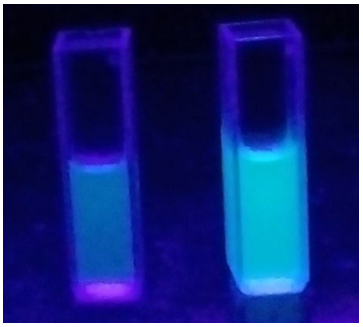

Figure S6. Image under UV light (365 nm)

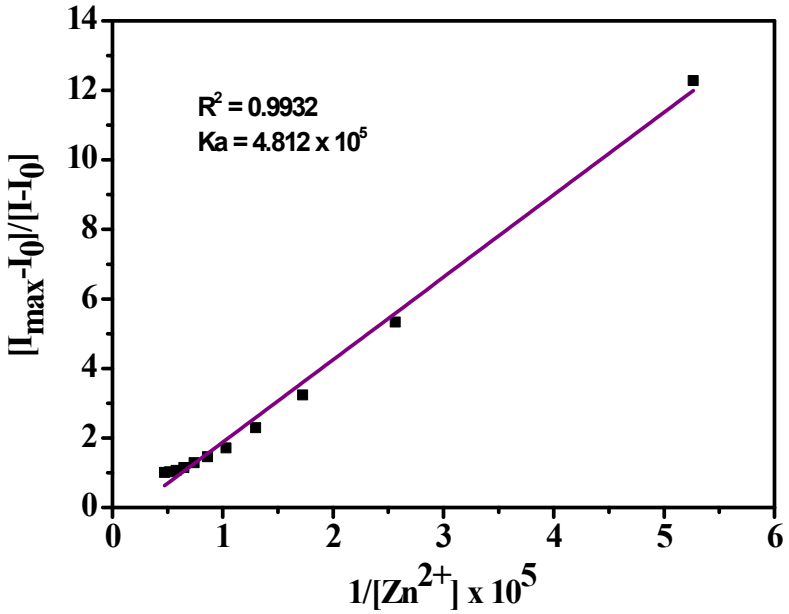

Figure S7. Benesi-Hildebrand plot of **L** (40 μM) for Zn^{2+} determined by fluorescence method in a HEPES buffer [50 μM, DMSO:water=1:9 (v/v), pH=7.2] at 25°C

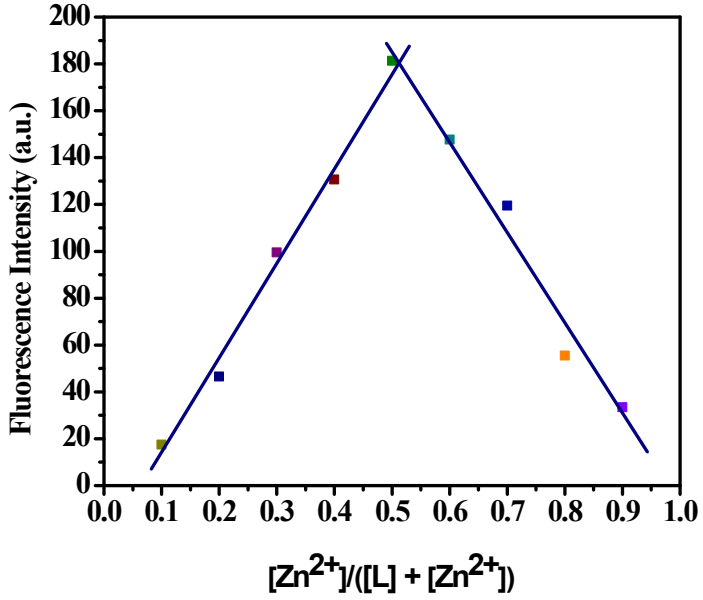

Figure S8. Job's plot of Fluorescence intensity at 495 nm of **L** and Zn^{2+} with a total concentration of 20 μM cations in a HEPES buffer [50 μM, DMSO:water=1:9 (v/v), pH=7.2] at 25°C

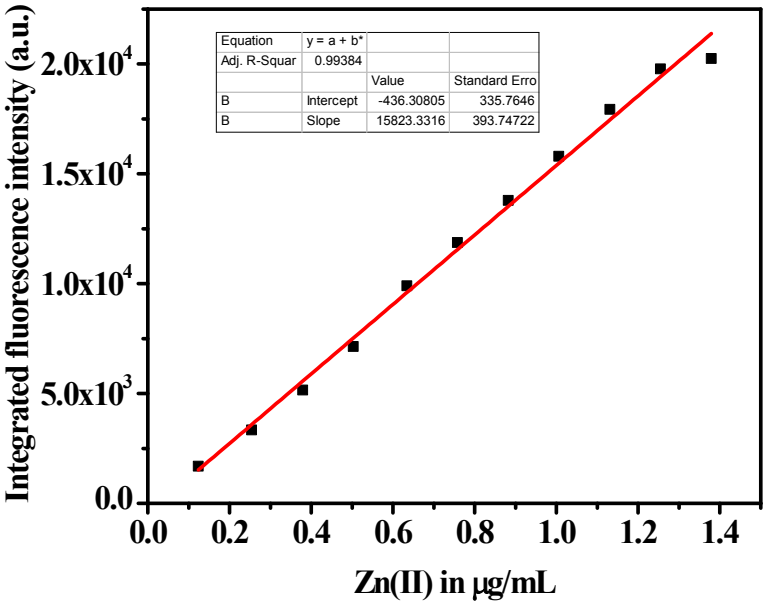

Figure S9. The limit of detection (LOD) and limit of quantification (LOQ) were calculated using 3σ/S and 10σ/S methods, respectively. σ = the standard deviation of y-intercept of regression line, S = the slope of the calibration curve.

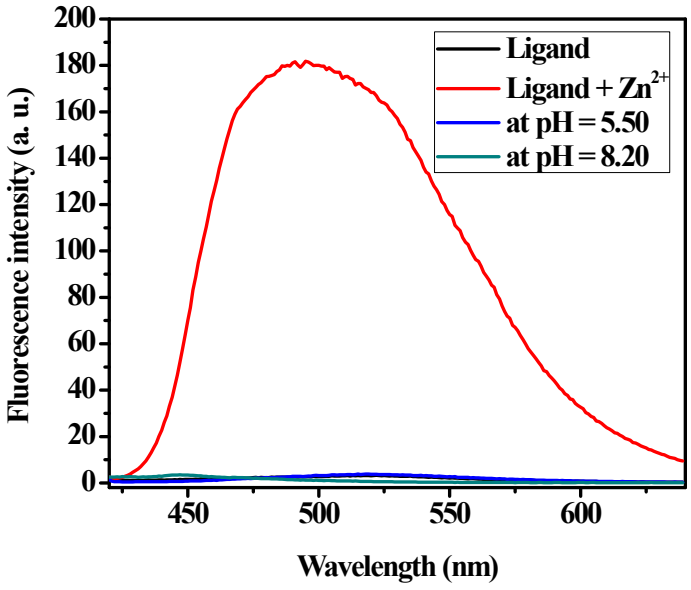

Figure S10. Effect of pH on the Chemosensor **L** (40 μM)

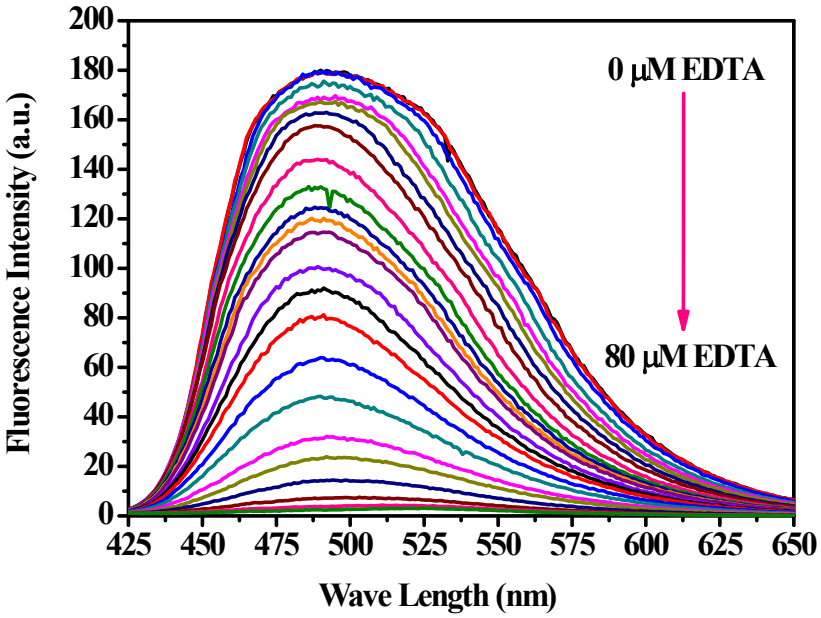

Figure S11. Emission spectral changes of **L**-Zn^{2+}complex (40 μM) upon addition of EDTA in a HEPES buffer [50 μM, DMSO:water=1:9 (v/v), pH=7.2] at 25°C.EDTA = 0-80 μM.

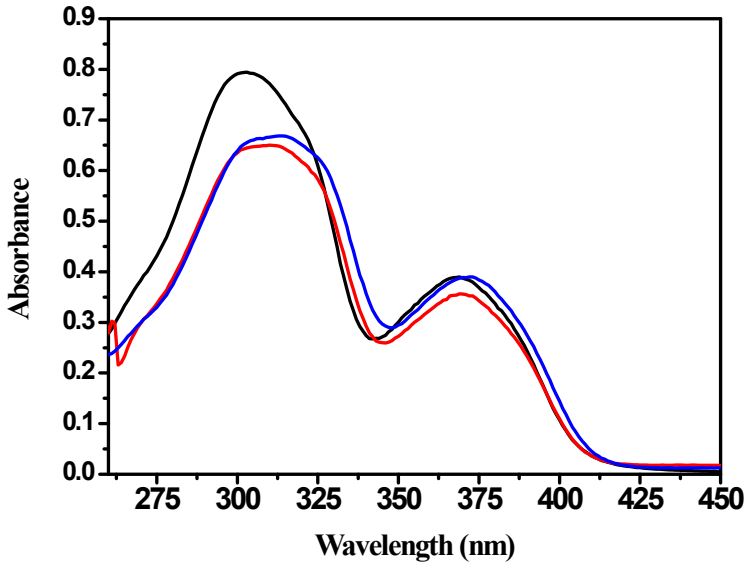

Figure S12. UV-Vis spectrum of **L** (40 μM) taken in different solvents in a HEPES buffer [50 μM, DMSO:water=1:9 (v/v), pH=7.2] at 25°C. Black curve = EtOH; Red curve = DMF; Blue curve = DMSO.

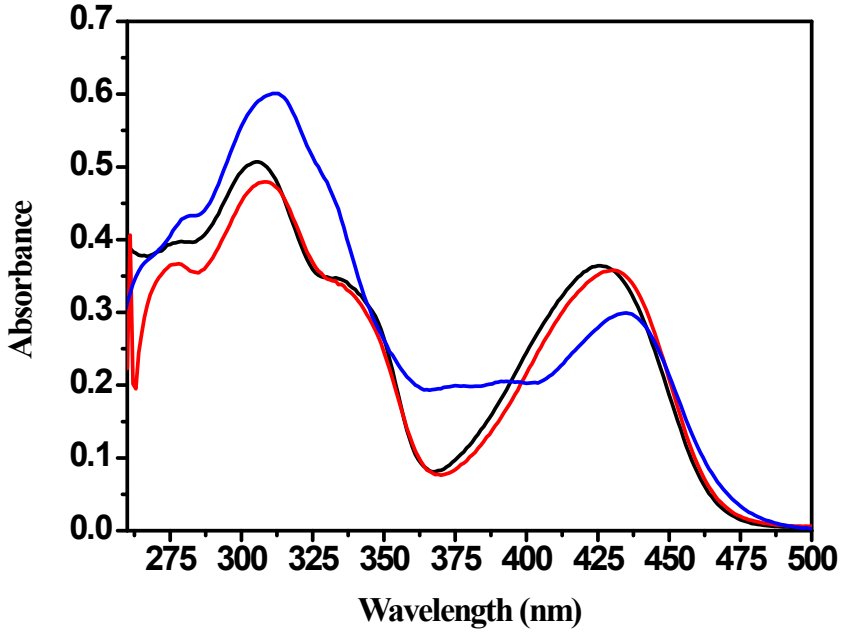

Figure S13. UV-Vis spectrum of **L-Zn^{2+}** complex (40 μM) taken in different solvents in a HEPES buffer [50 μM, DMSO:water = 1:9 (v/v), pH=7.2] at 25°C. Black curve = EtOH; Red curve = DMF; Blue curve = DMSO.

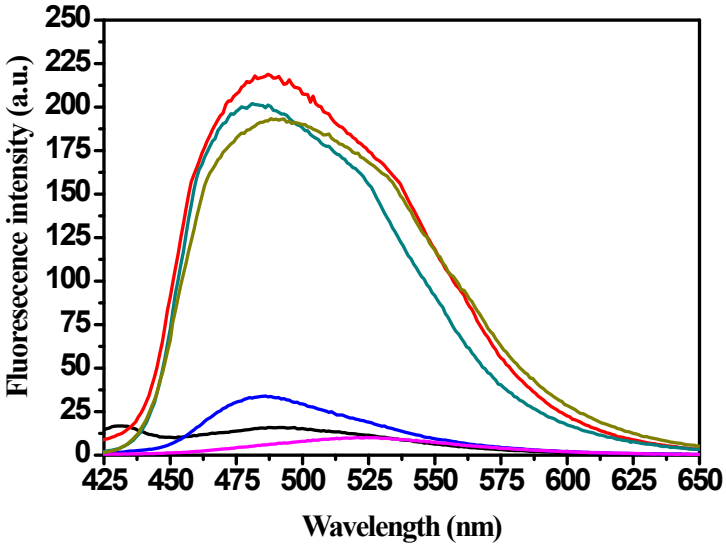

Figure S14. Fluorescence spectrum of Chemosensor **L** (40 μM) as well as the**L-Zn^{2+}**Complex taken in different solvents in a HEPES buffer [50 μM, DMSO:water=1:9 (v/v), pH=7.2] at 25°C. Black curve = **L** (in DMF), Blue curve = **L** (in DMSO) Pink curve = **L** (in EtOH); Red curve = **L-Zn^{2+}** (in DMF), Green curve = **L-Zn^{2+}** (in DMSO) yellowish green curve = **L-Zn^{2+}** (in EtOH).