

S1. <sup>1</sup>HNMR spectrum of H<sub>2</sub>L



S2.  $^{13}\mbox{CNMR}$  spectrum of  $\mbox{H}_2\mbox{L}$ 



## S3. DEPT spectrum of $H_2L$







Fig. S5. The mass spectrum of [ZnL].



S6. Job's plot of  $H_2L$  with  $Zn^{2+}$ .

## **Determination of detection limit:**

The detection limit was calculated on the basis of the fluorescence titration. To determine the S/N the emission intensity of HL without any analyte was measured by 10 times and the standard deviation of blank measurements was found to be 0.4482. To obtain the slope, the fluorescence emission intensity at 508 nm was plotted against the concentration of  $Zn^{2+}$ . The detection limit was calculated using the following equation.  $LOD = 3\sigma/s$ . Where  $\sigma$  is the standard deviation of blank measurement, and s is the slope of the calibration curve obtained from linear dynamic plot of fluorescence intensity vs. [Zn2+]. Thus using the formula we get the  $LOD = 4.98 \times 10^{-9}$  M.



Fig. S7. Linear response curve of  $H_2L$  (10 $\mu$ M) at 508 nm depending on  $Zn^{2+}$  concentration.