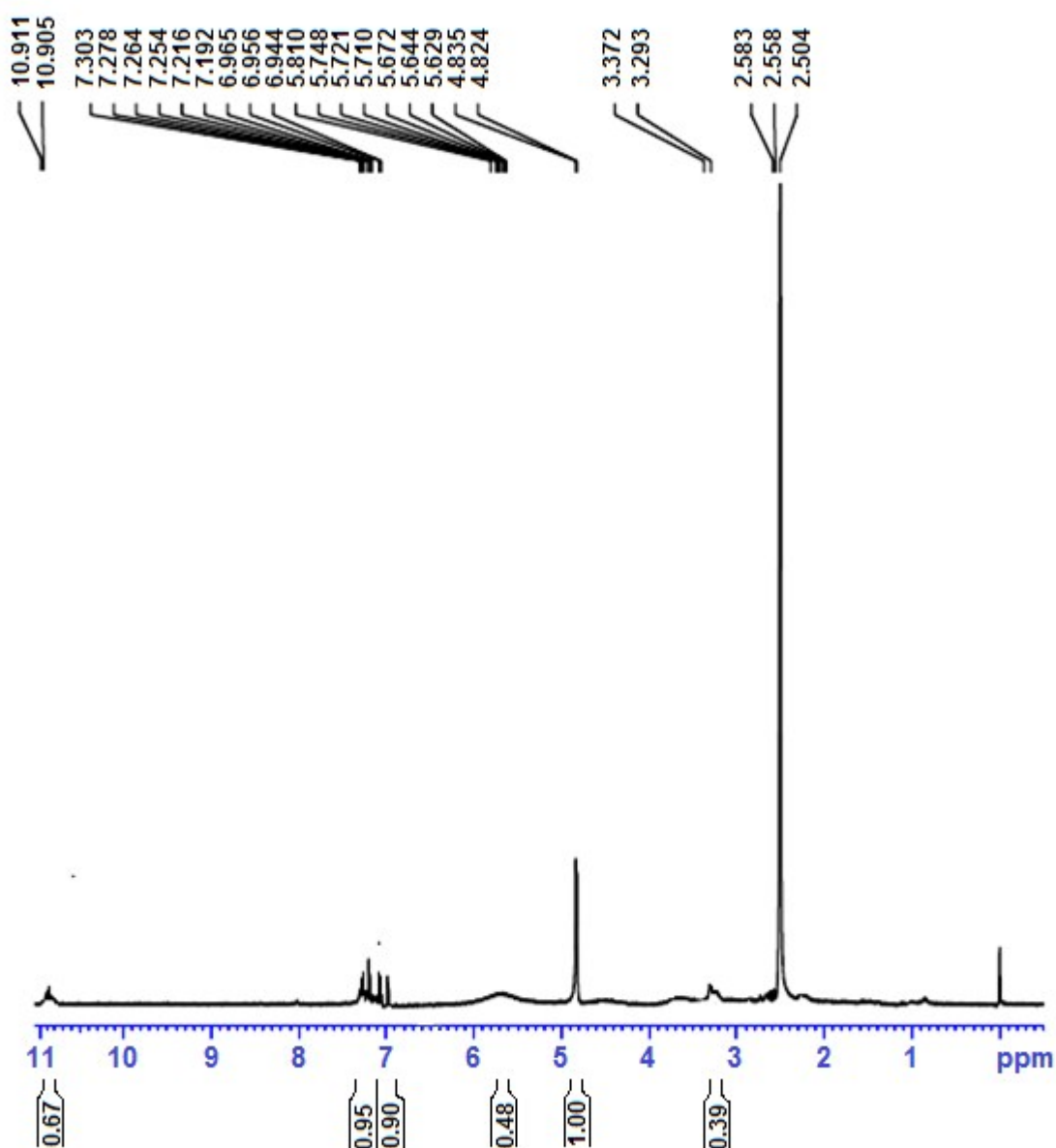
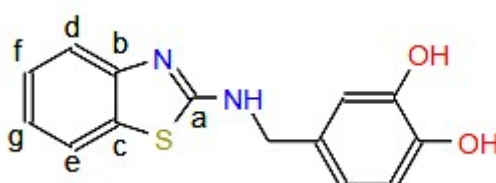


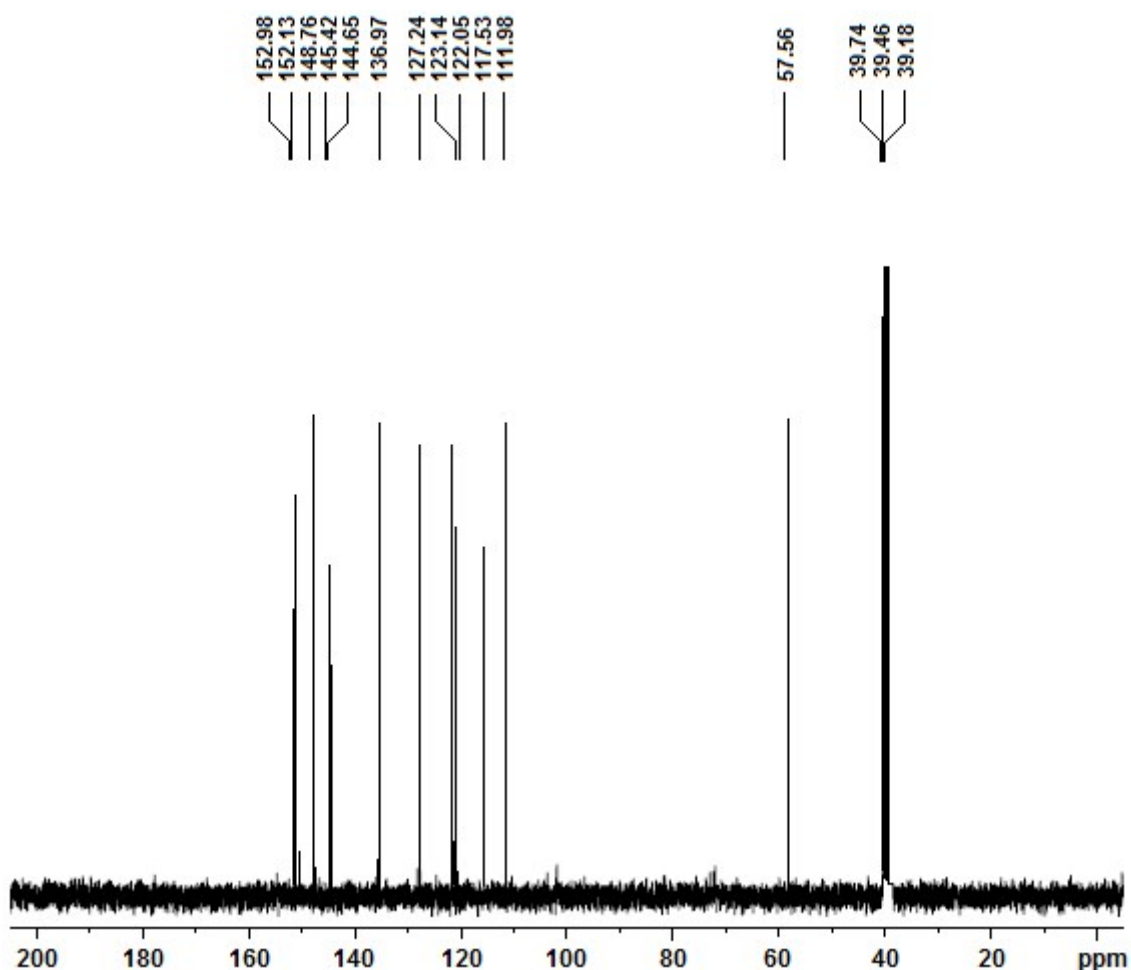
## Supporting Information



SI1 (a)  $^1\text{H}$  NMR Spectrum of Compound 1.



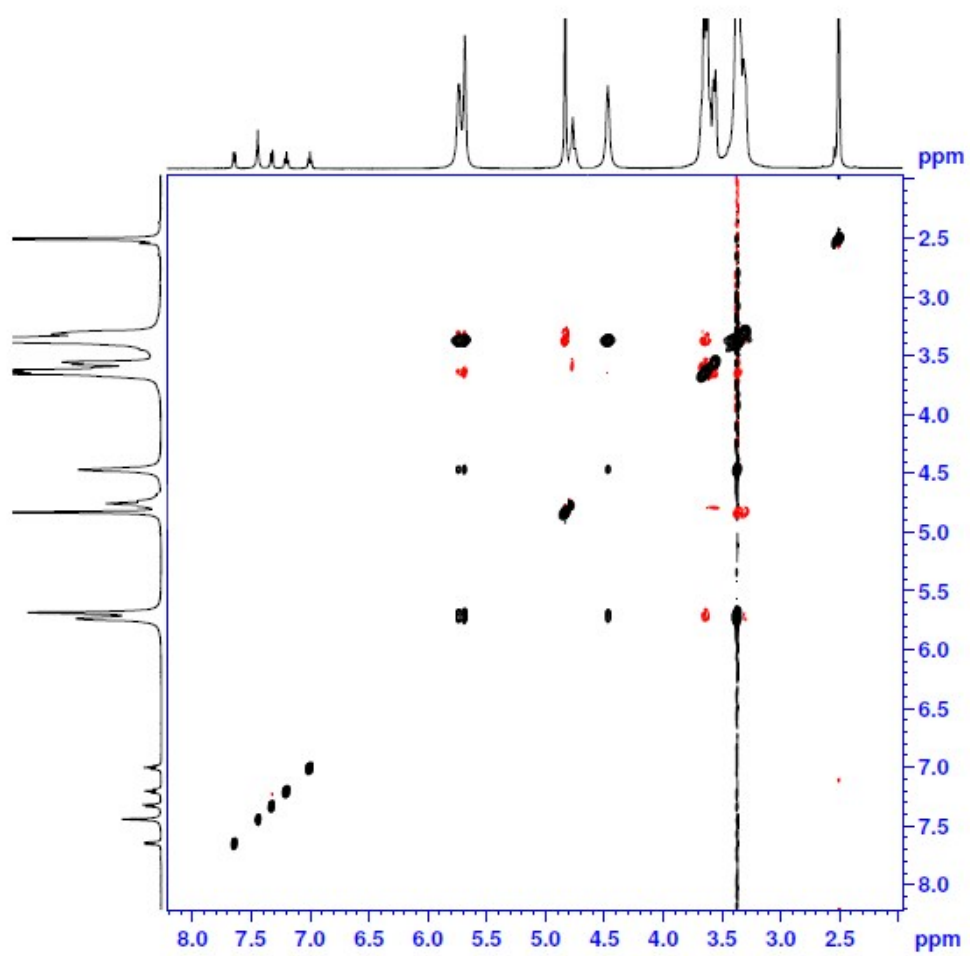
Chemical shift (ppm)	Proton
4.824	Methylene protons of the $-\text{NH}-\text{CH}_2-$ bridge
5.672	NH proton
6.944 – 7.303	Aromatic protons
10.905 and 10.911	Phenolic OH protons



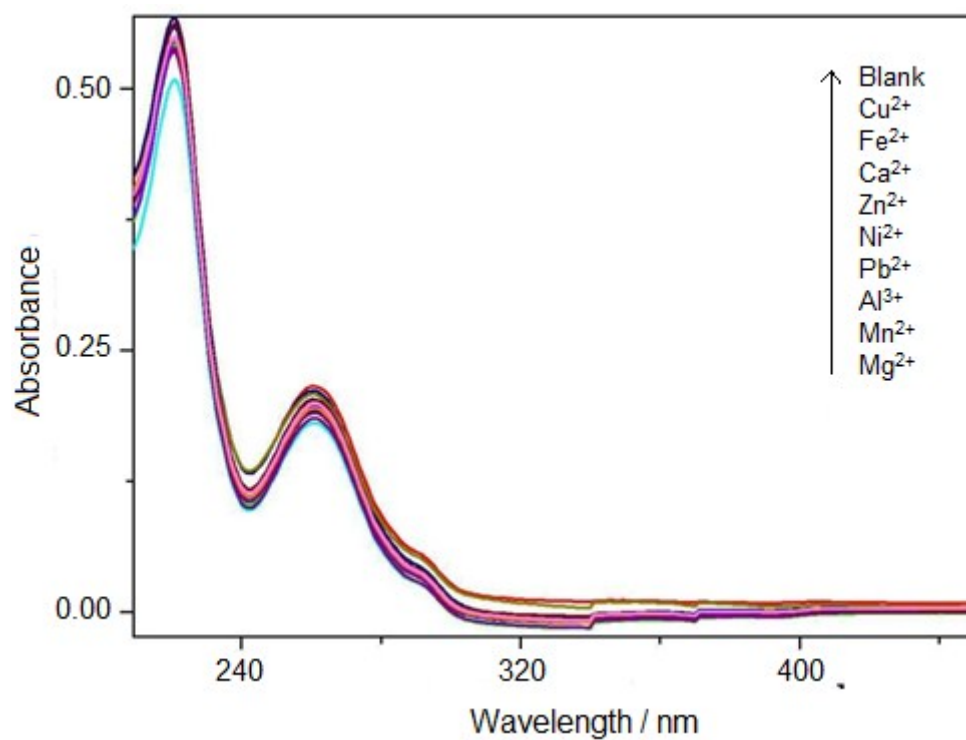
**SI2.**  $C^{13}$  NMR Spectrum of Compound 1.



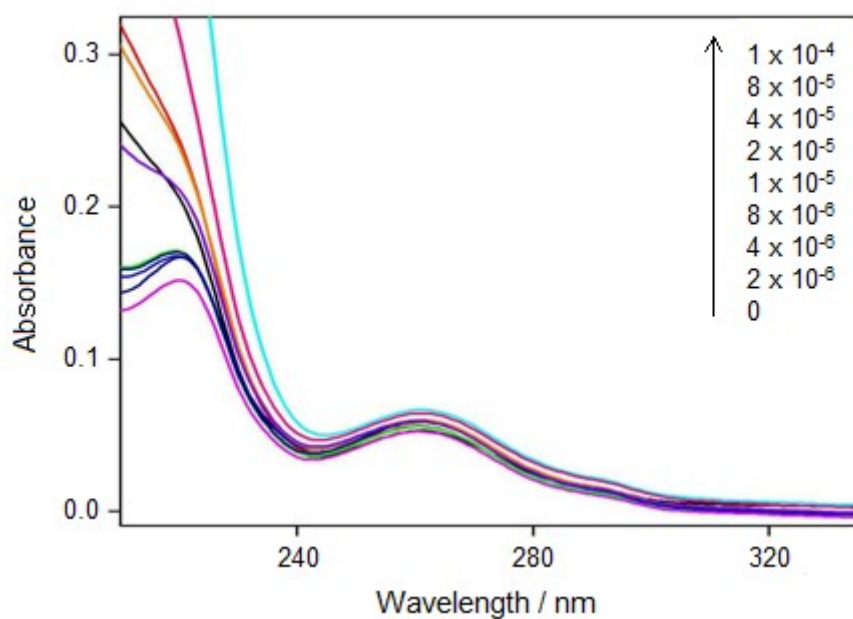
Chemical shift (ppm)	Carbon
57.56	Methylene carbons of the $-NH-CH_2-$ bridge
111.98, 117.53	Aromatic carbons of the phenolic ring
144.65, 145.47	Aromatic carbons carrying phenolic OH
152.98	Carbon 'a' of the benzothiazole ring
152.13	Carbon 'b'
148.76	Carbon 'c'
120 – 137	Carbons 'd', 'e', 'f', 'g'



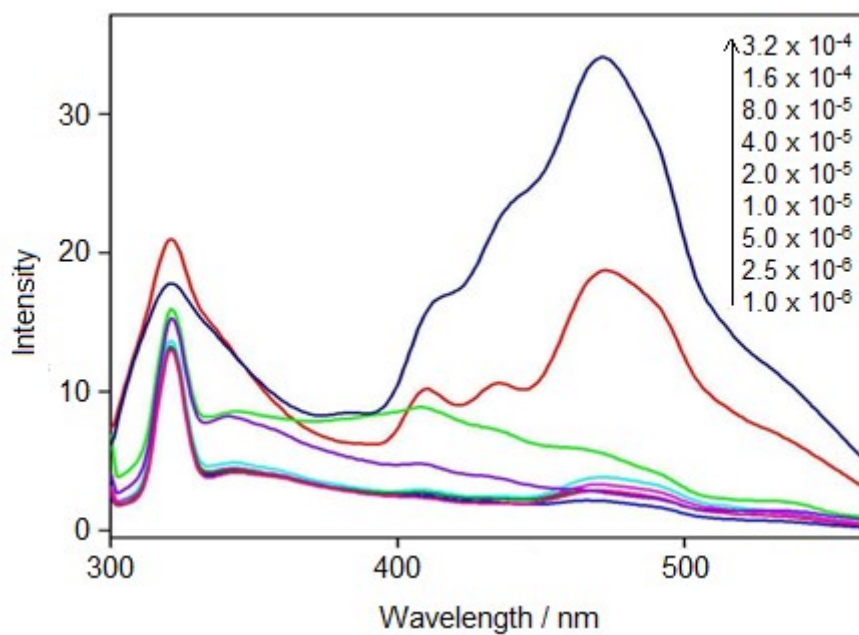
SI3. 2D ROESY Spectrum of Compound 1- $\beta$ -CD complex.



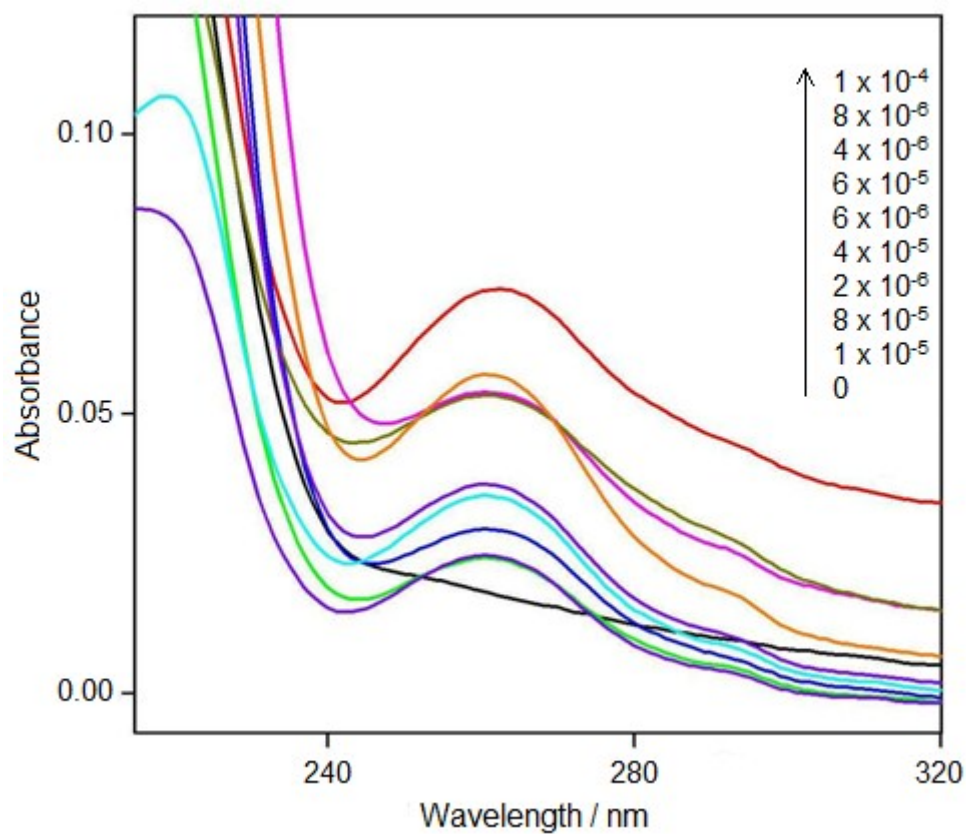
**SI4.** Absorption spectra of various metal ion added–Compound 1.



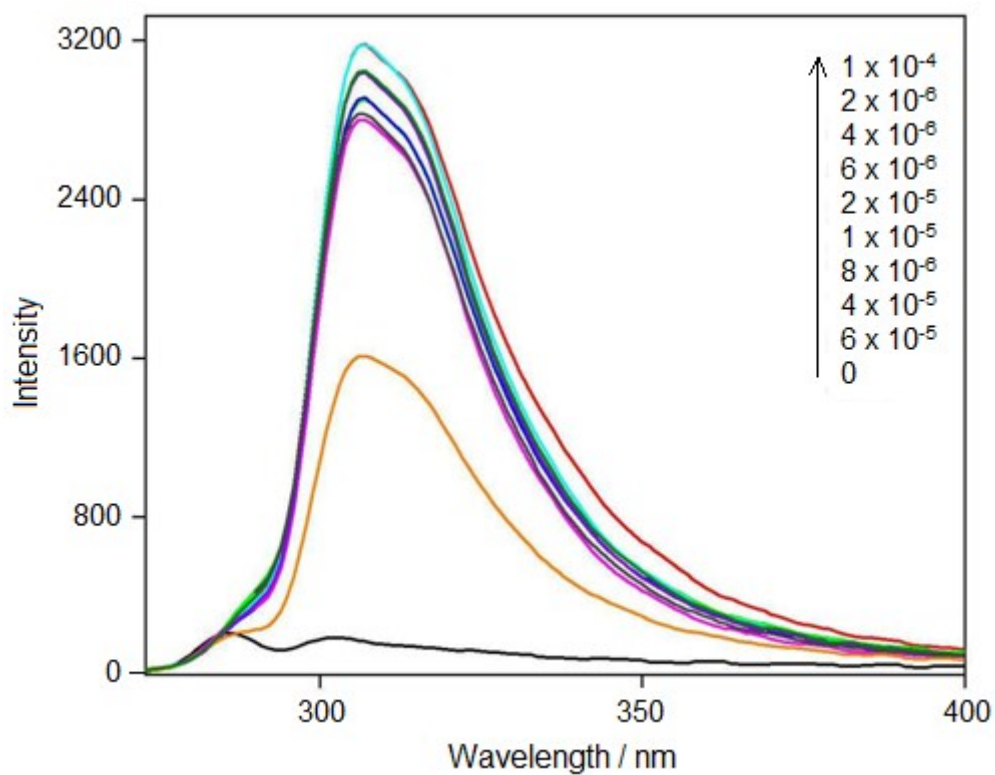
**SI5.** (a). Absorption spectra used for the Job's plot of **1**–Zn<sup>2+</sup> binding in HEPES.



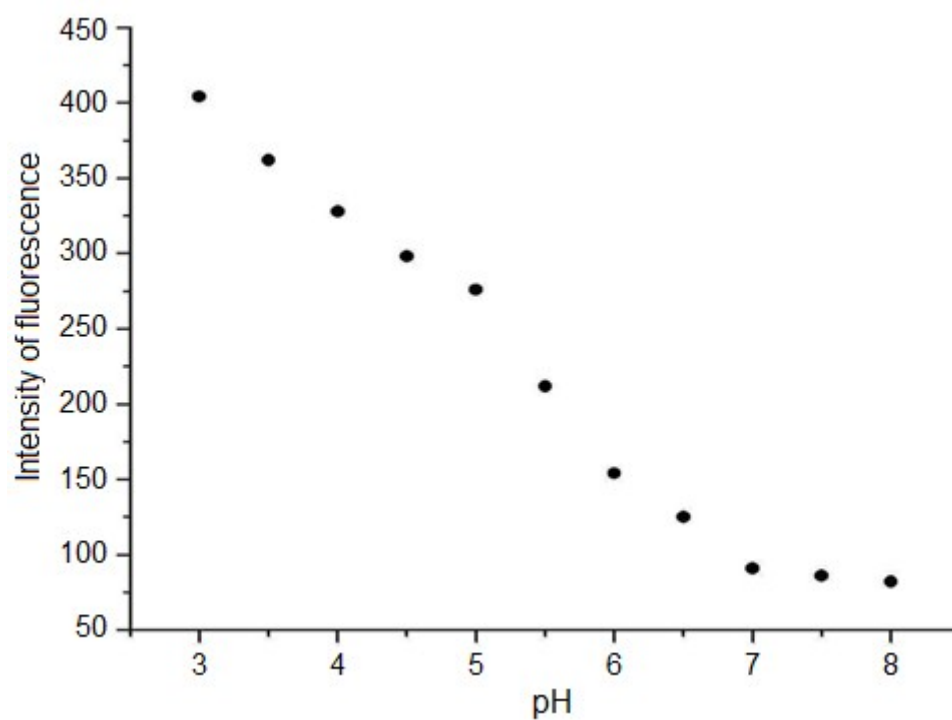
SI5. (b). Fluorescence spectra used for the Job's plot of **1**-Zn<sup>2+</sup> binding in HEPES.



SI6. (a). Absorption spectra used for the Job's plot of **1**-Zn<sup>2+</sup> binding in  $\beta$ -CD.



SI6. (b). Fluorescence spectra used for the Job's plot of **1**-Zn<sup>2+</sup> binding in  $\beta$ -CD.



SI7. Effect of pH on the fluorescence intensity of **1**.