

A highly sensitive and selective fluorescent probe for Fe³⁺ based on 2-(2-hydroxyphenyl)benzothiazole†

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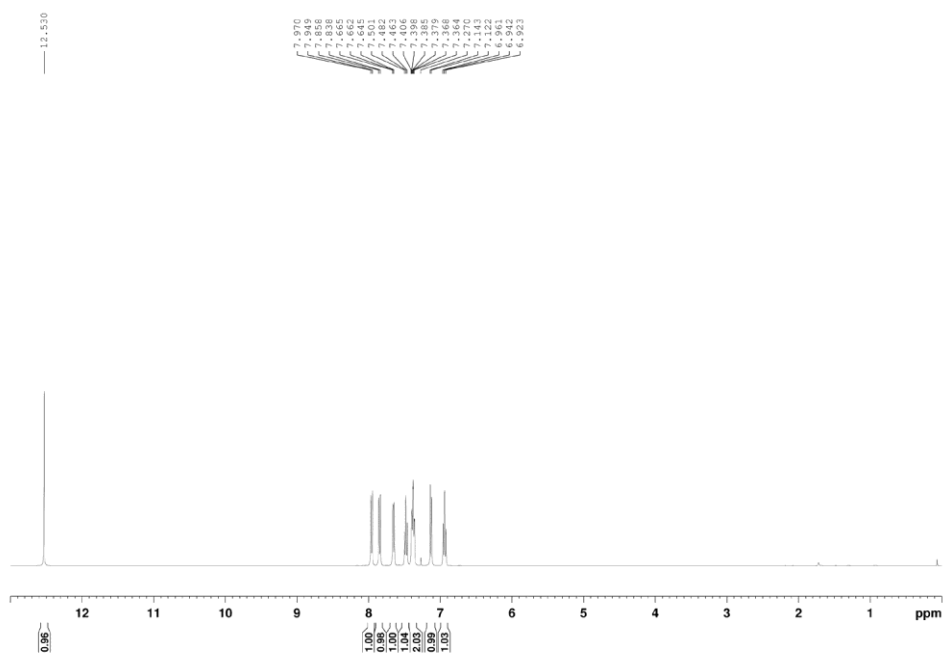


Fig. S1 ^1H NMR spectra of **1** in CDCl_3

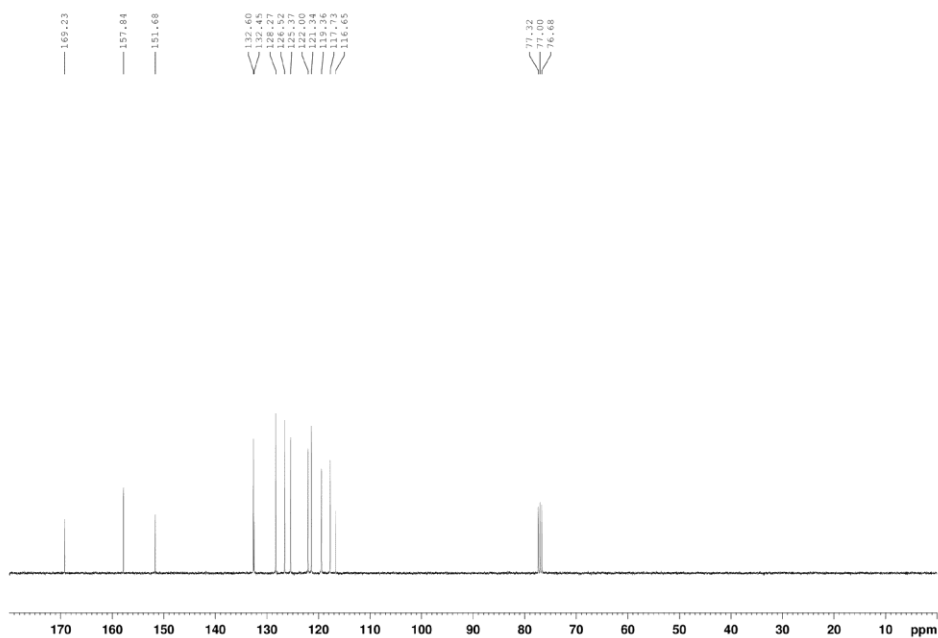


Fig. S2 ^{13}C NMR spectra of **1** in CDCl_3

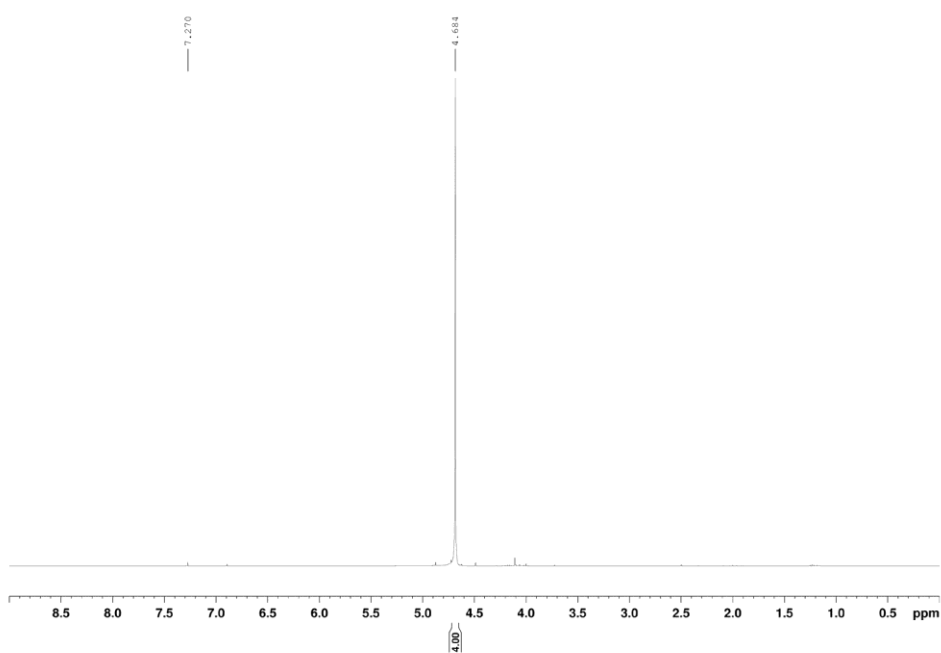


Fig. S3 ¹H NMR spectra of **2** in CDCl₃



Fig. S4 ¹³C NMR spectra of **2** in CDCl₃

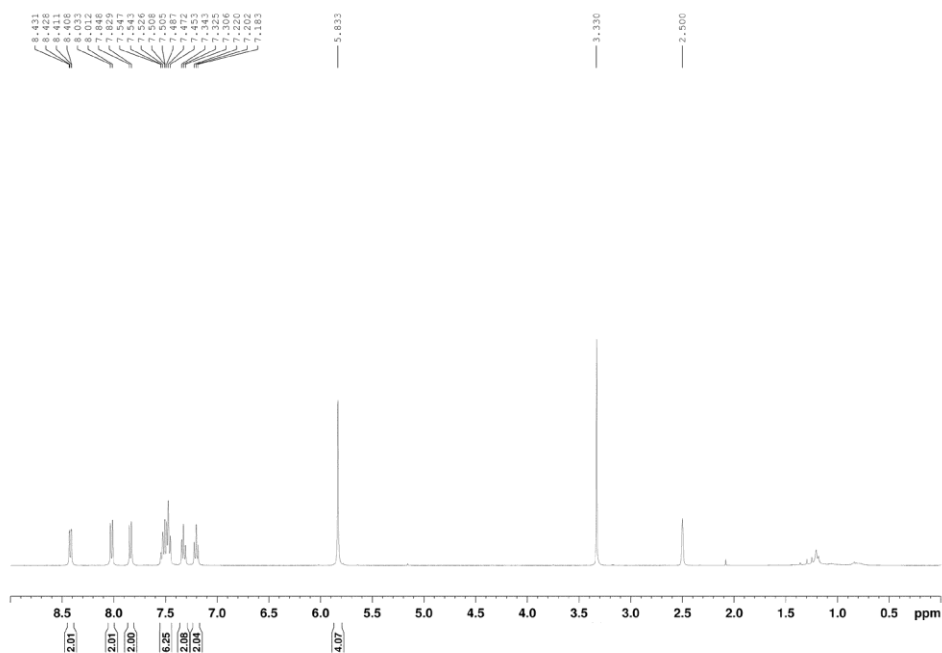


Fig. S5 ¹H NMR spectra of **L** in DMSO-d₆

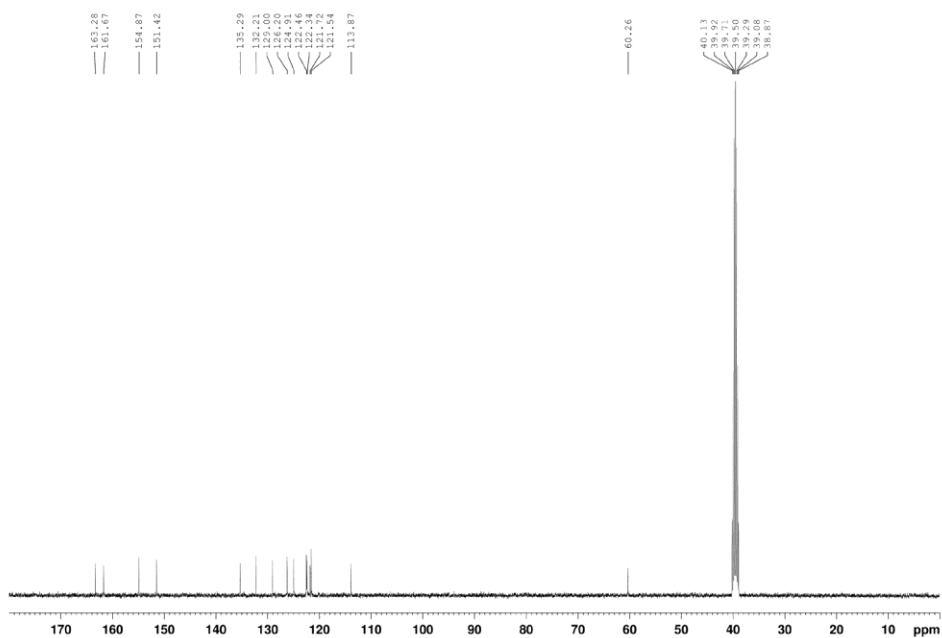


Fig. S6 ¹³C NMR spectra of **L** in DMSO-d₆

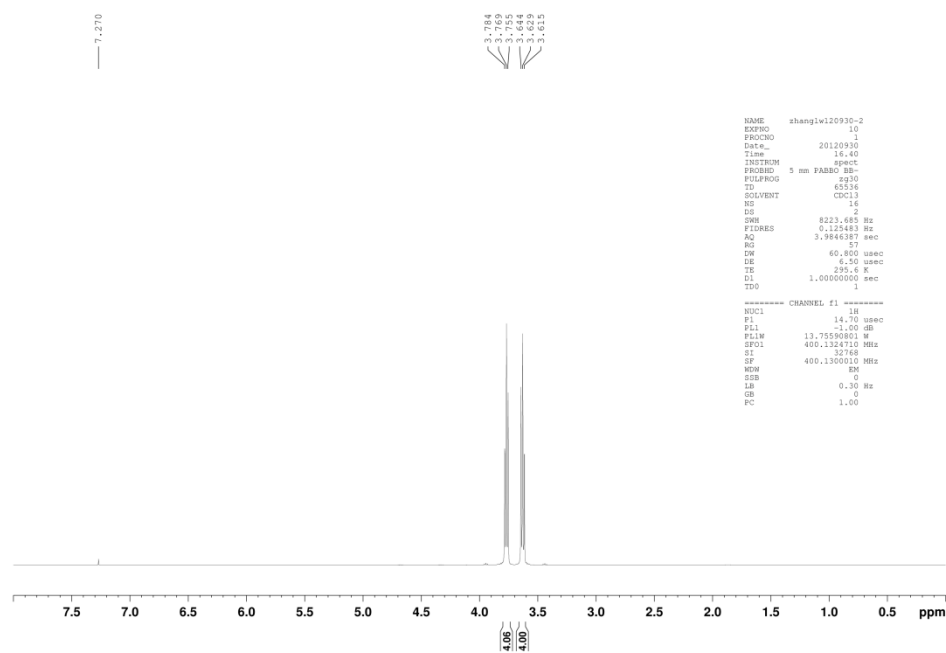


Fig. S7 ¹H NMR spectra of **3** in CDCl₃



Fig. S8 ¹³C NMR spectra of **3** in CDCl₃

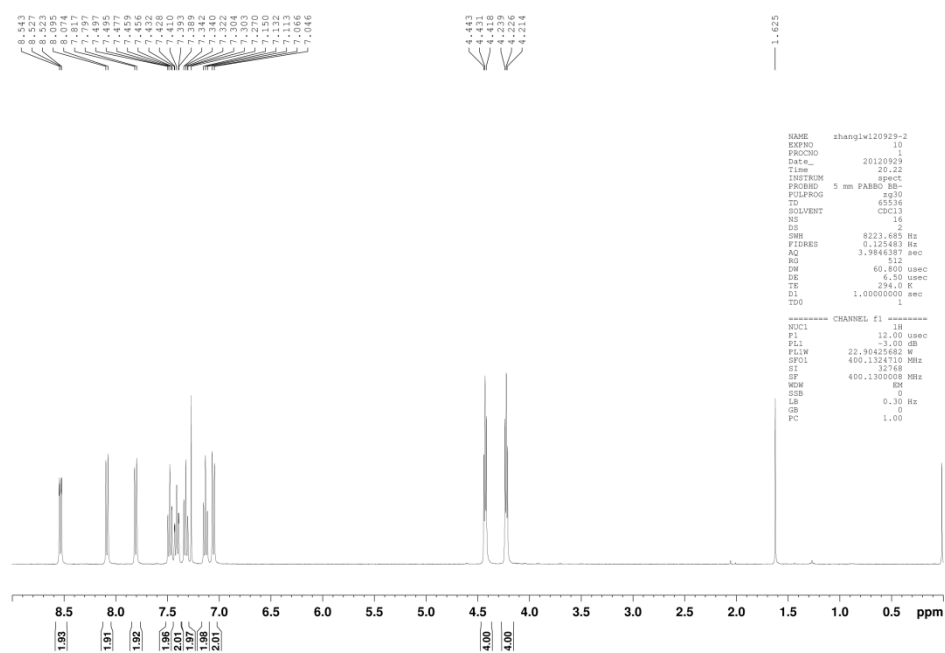


Fig. S9 ¹H NMR spectra of **4** in CDCl₃

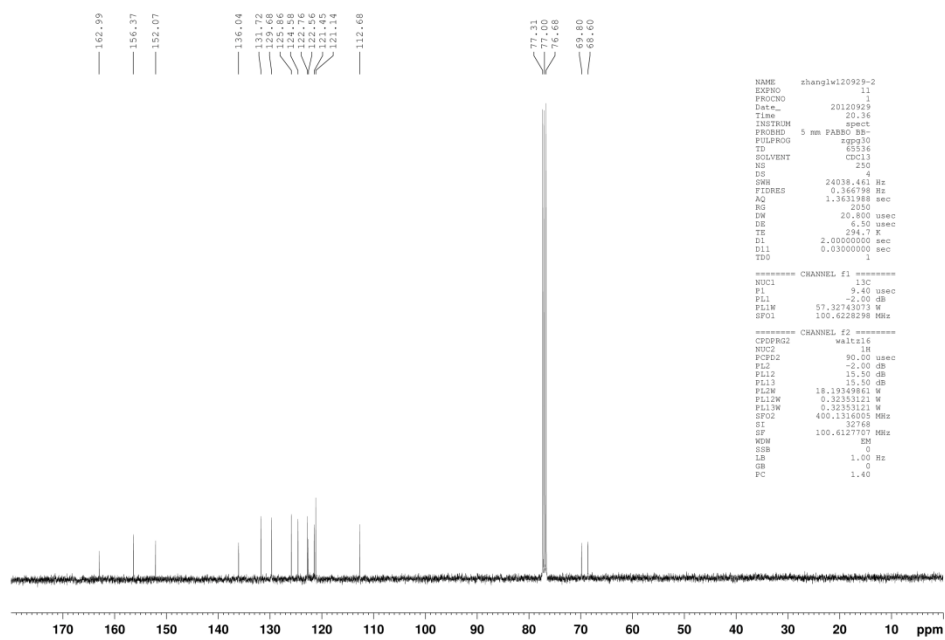


Fig. S10 ¹³C NMR spectra of **4** in CDCl₃

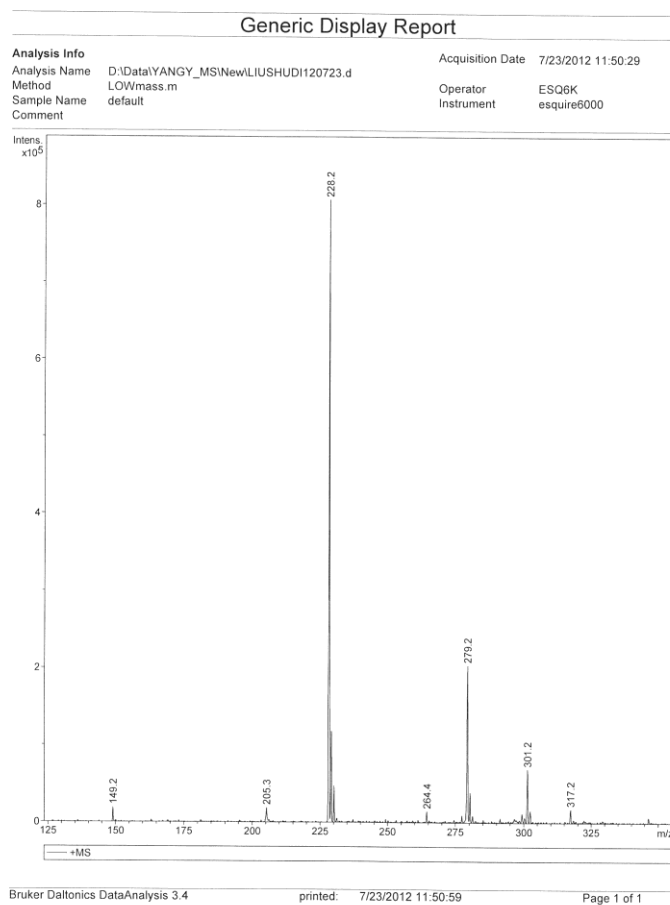


Fig. S11 Mass spectra of **1**

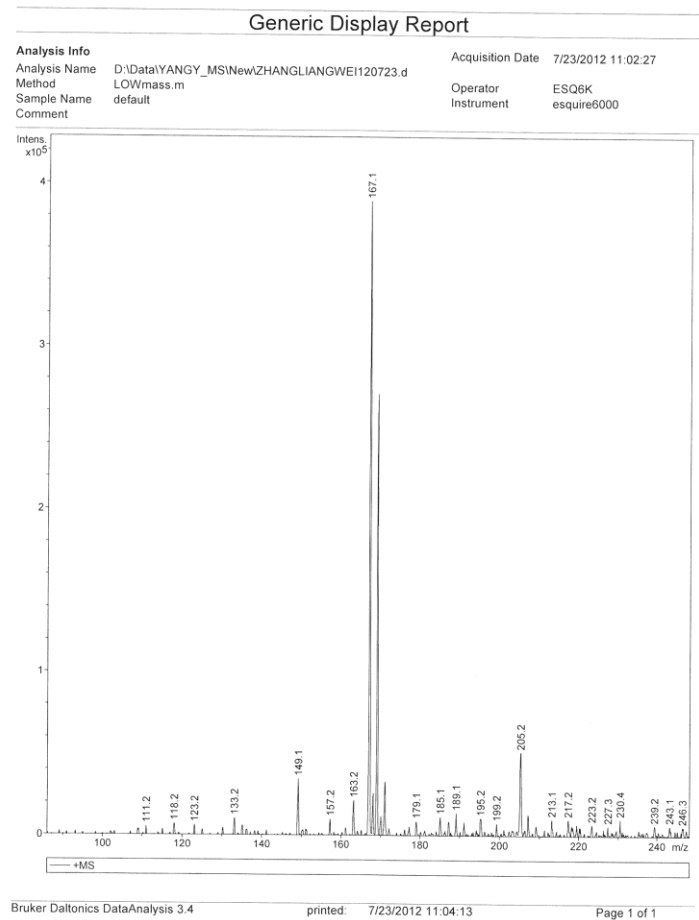


Fig. S12 Mass spectra of **2**

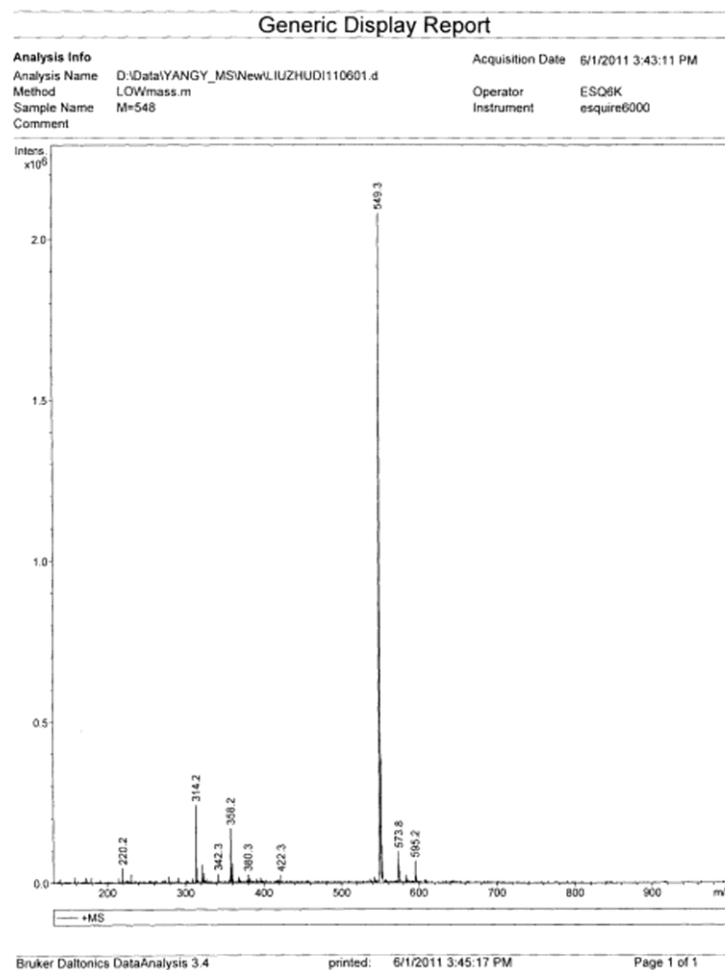


Fig. S13 Mass spectra of **L**

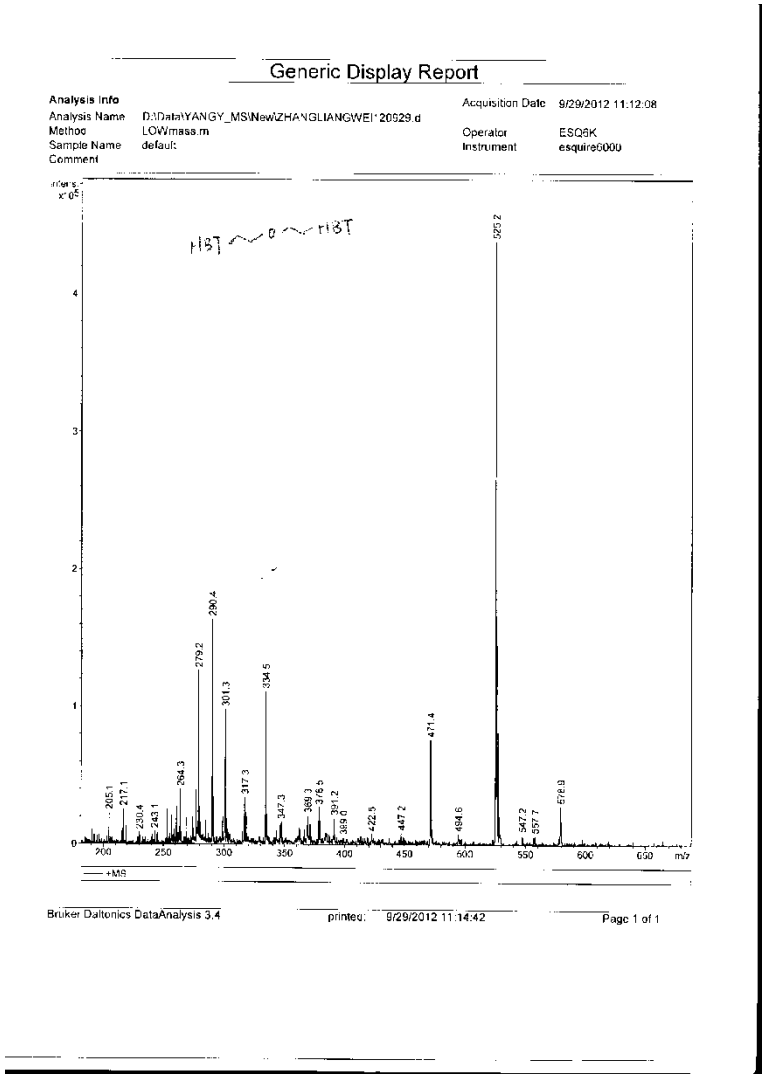
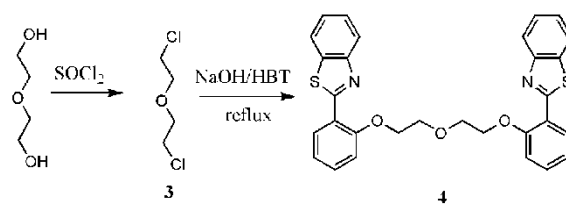


Fig. S14 Mass spectra of 4



Scheme S1 Synthesis of compound **4**

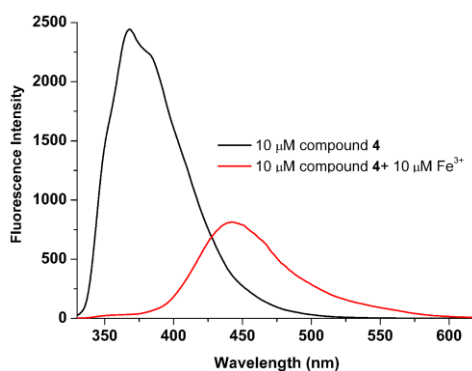


Fig. S15 Fluorescence emission spectra of compound **4** (10 μM) in acetonitrile upon the addition of $\text{Fe}(\text{ClO}_4)_3$ (10 μM) with an excitation of 319 nm.

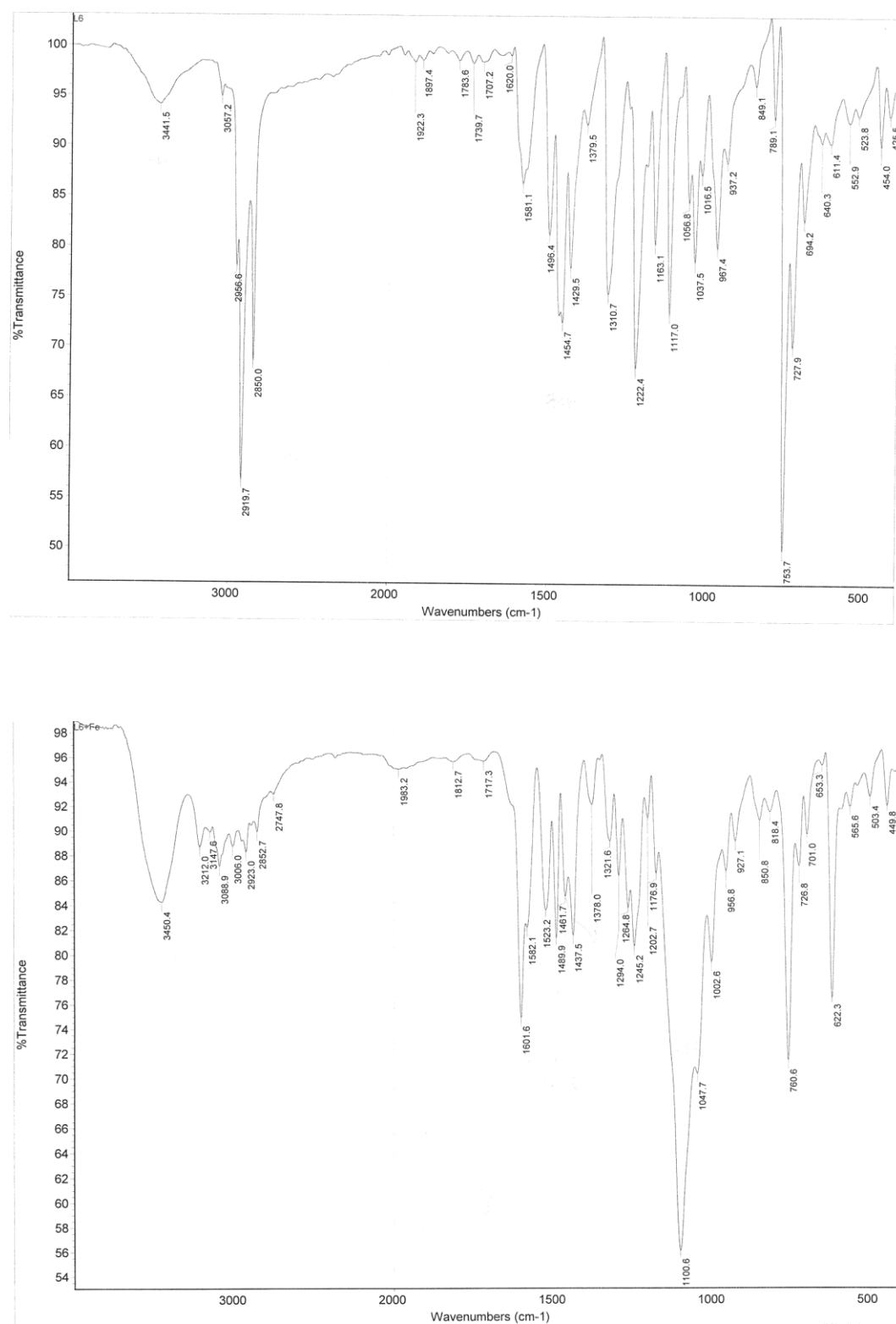


Fig. S16 IR spectra of **L** and **L-Fe³⁺** complexes

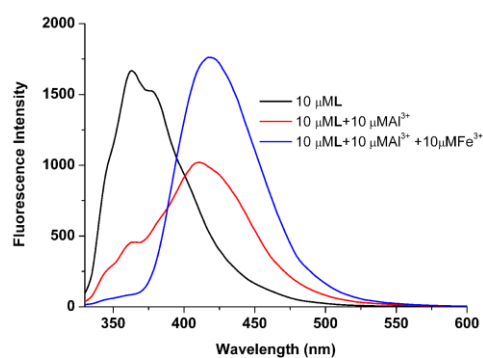


Fig.S17 Fluorescence emission spectra of **L** (10 μM) in the presence of (10 μM) Al³⁺ and followed by addition of 10 μM Fe³⁺.