

## Supporting Information

### A Novel BODIPY-Schiff base-based Colorimetric and Fluorometric Dosimeter for Hg<sup>2+</sup>, Fe<sup>3+</sup> and Au<sup>3+</sup>

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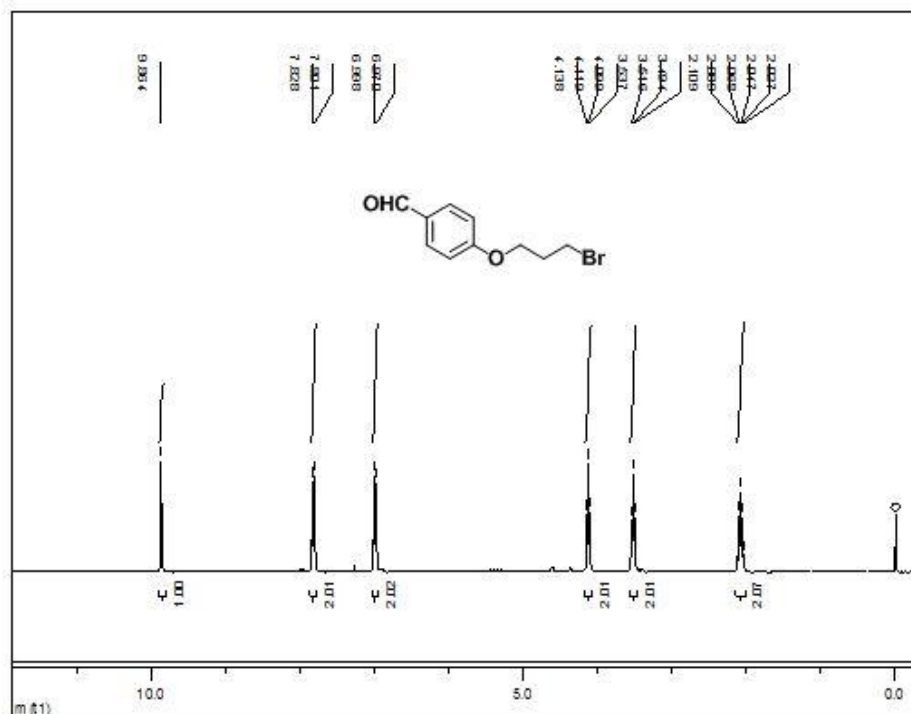
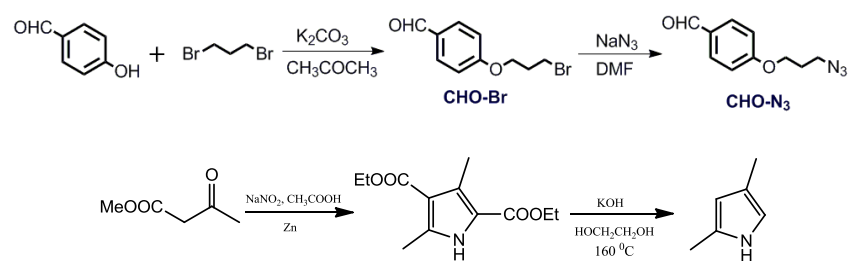
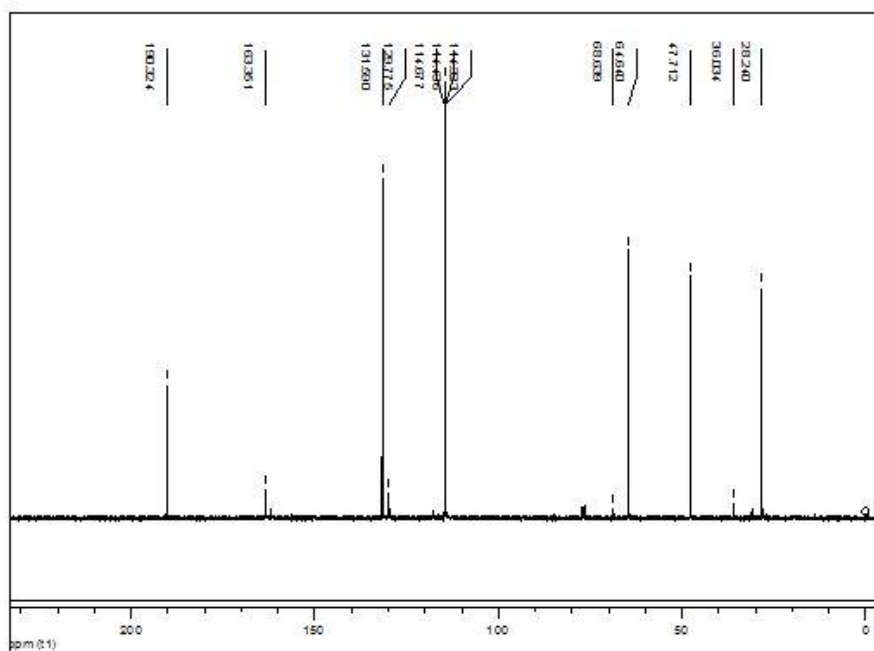
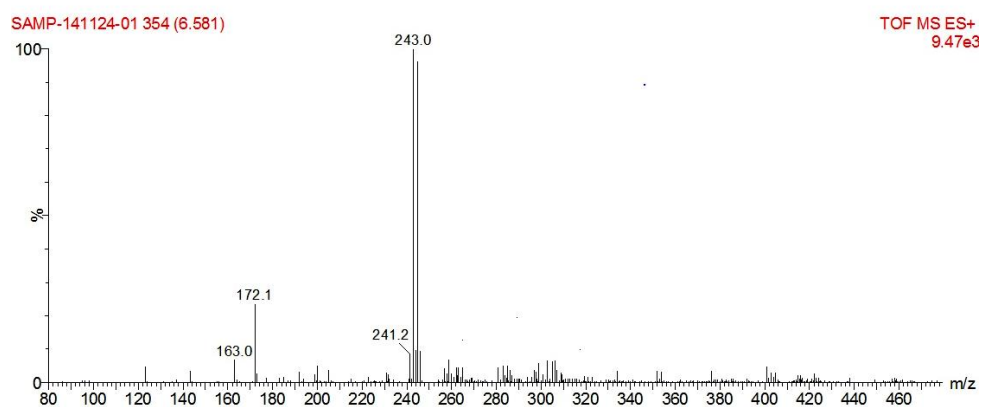


Fig. S1 <sup>1</sup>H NMR spectrum of compound CHO-Br



**Fig. S2**  $^{13}\text{C}$  NMR spectrum of compound **CHO-Br**



**Fig. S3** Mass Spectrum of compound **CHO-Br**

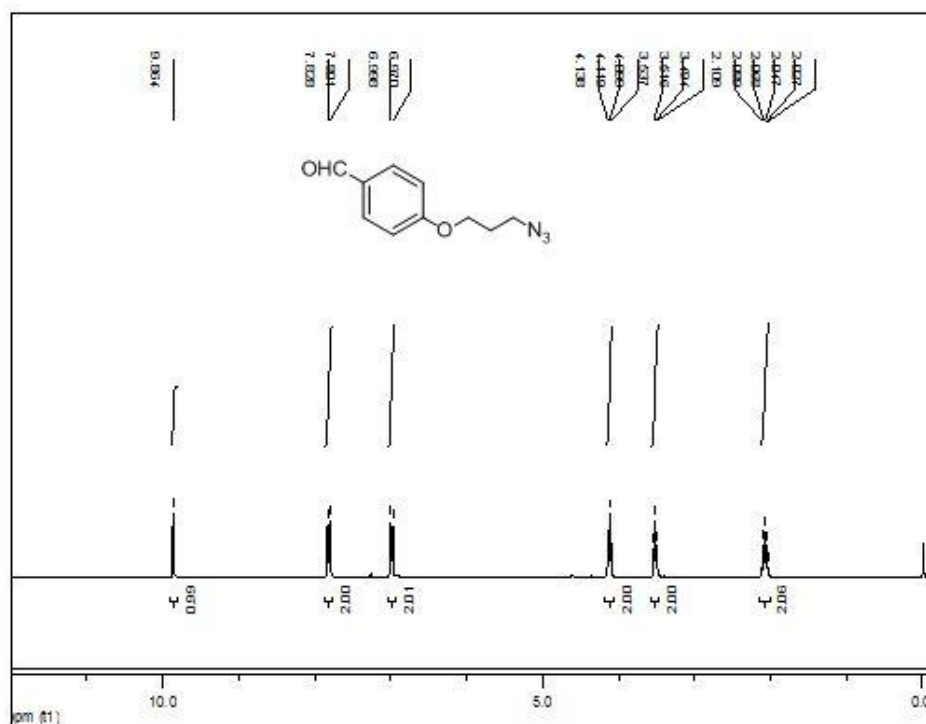


Fig. S4 <sup>1</sup>H NMR spectrum of compound CHO-N<sub>3</sub>

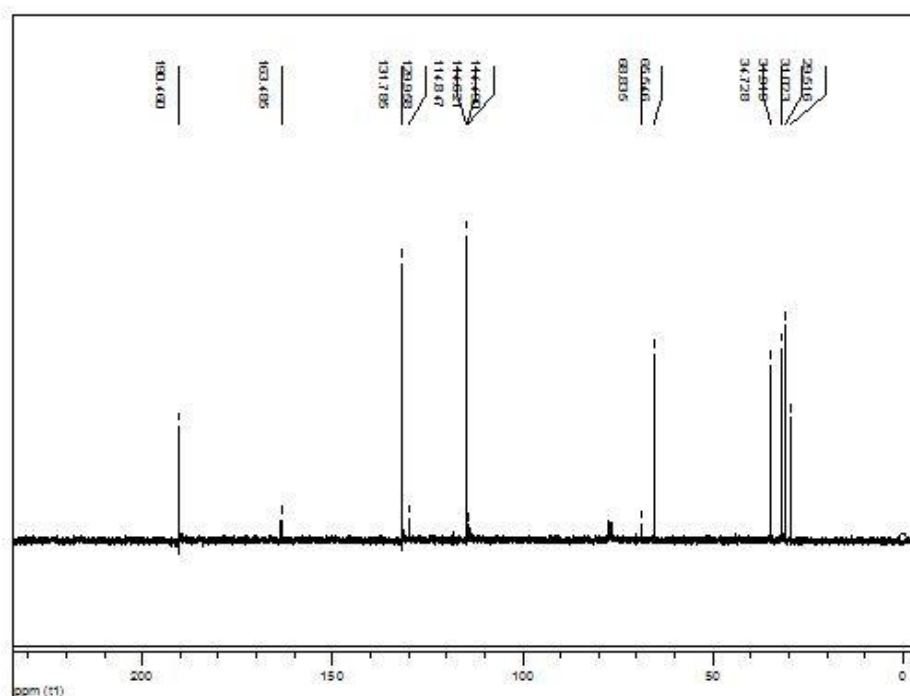
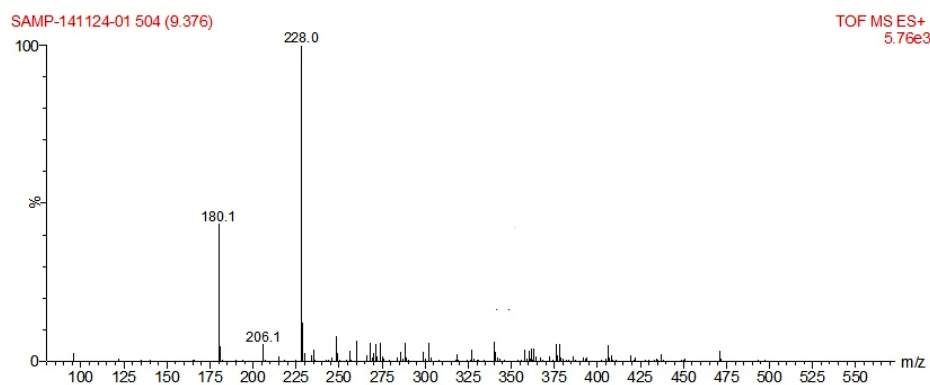
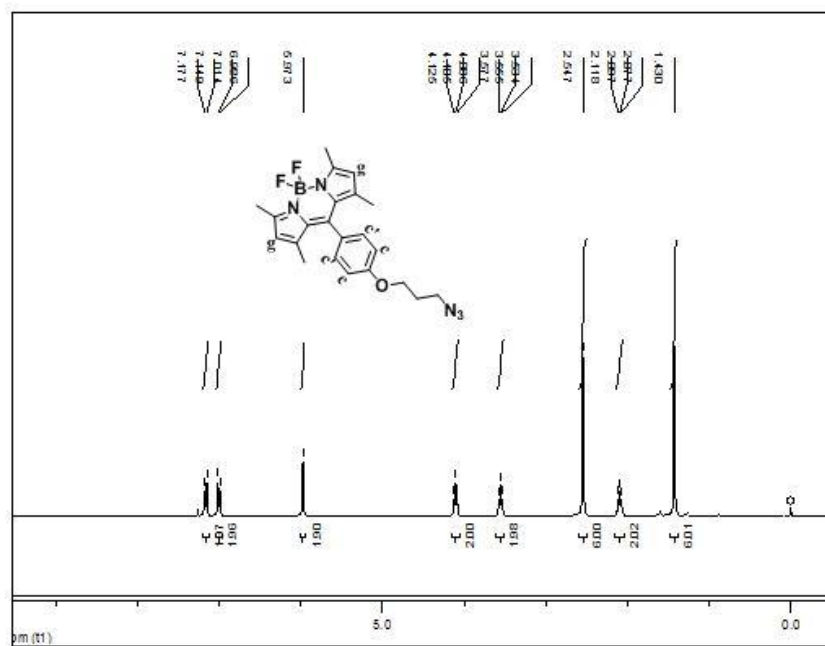


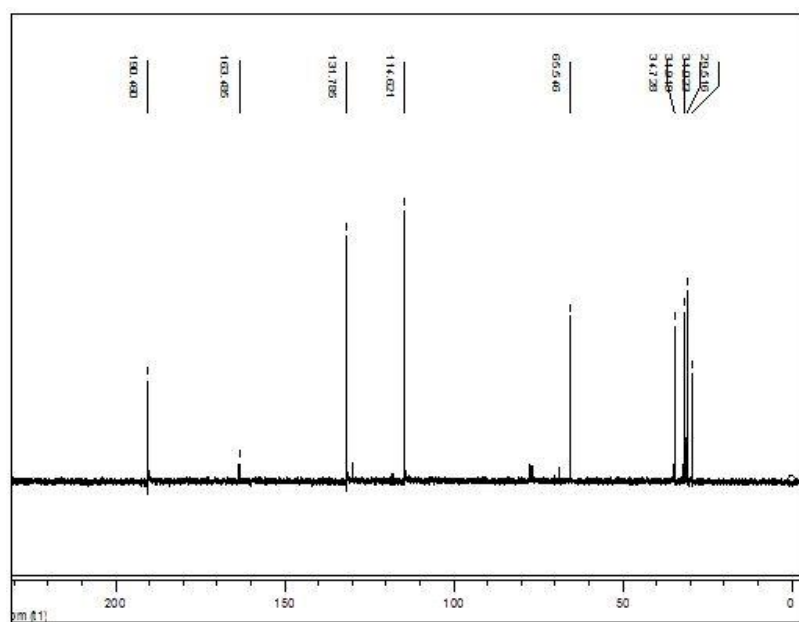
Fig. S5 <sup>13</sup>C NMR spectrum of compound CHO-N<sub>3</sub>



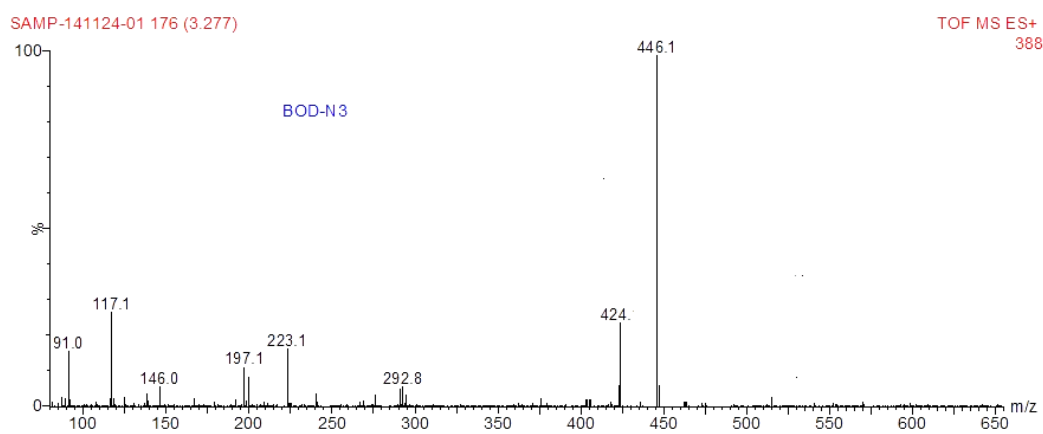
**Fig. S6** Mass Spectrum of compound **CHO-N<sub>3</sub>**



**Fig. S7** <sup>1</sup>H NMR spectrum of compound **BODIPY-1**



**Fig. S8**  $^{13}\text{C}$  NMR spectrum of compound **BODIPY-1**



**Fig. S9** Mass Spectrum of compound **BODIPY-1**

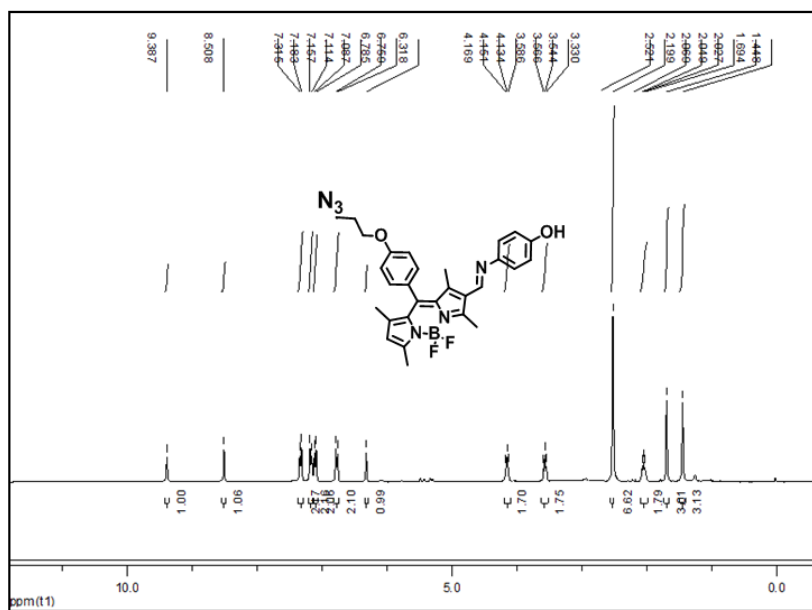


Fig. S10 <sup>1</sup>H NMR spectrum of compound **BODIPY-OH**

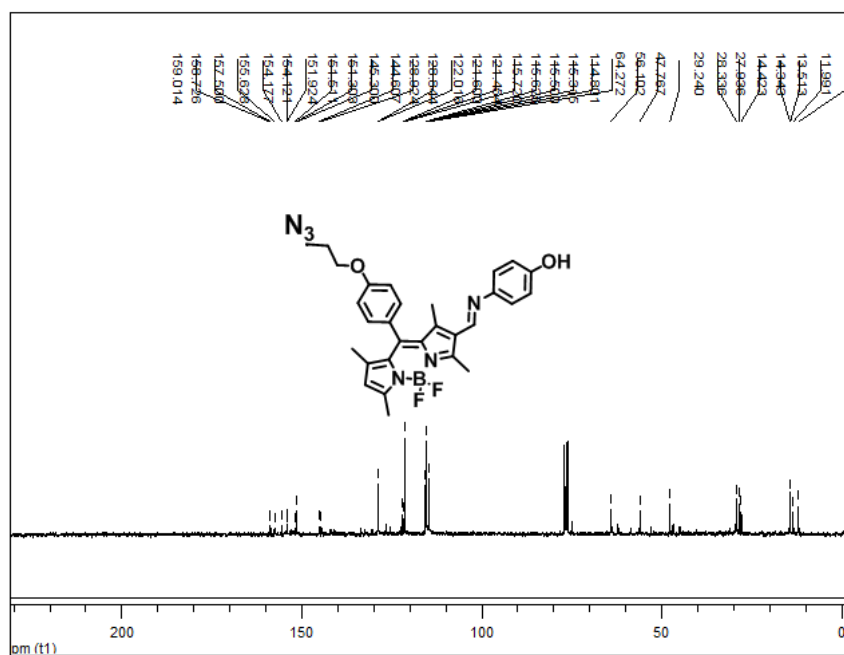
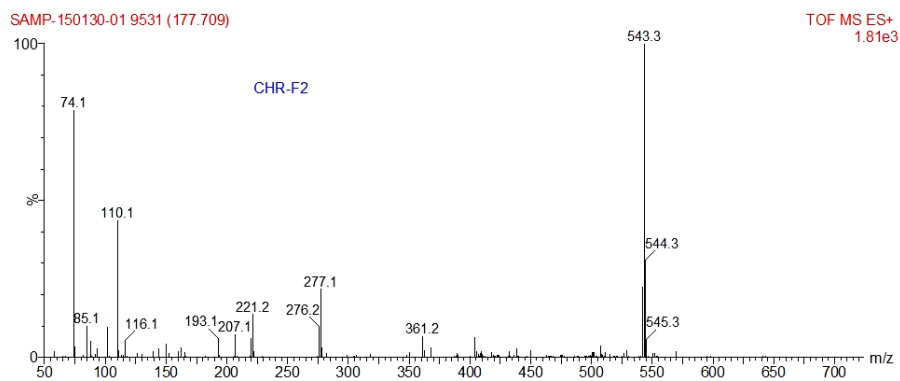
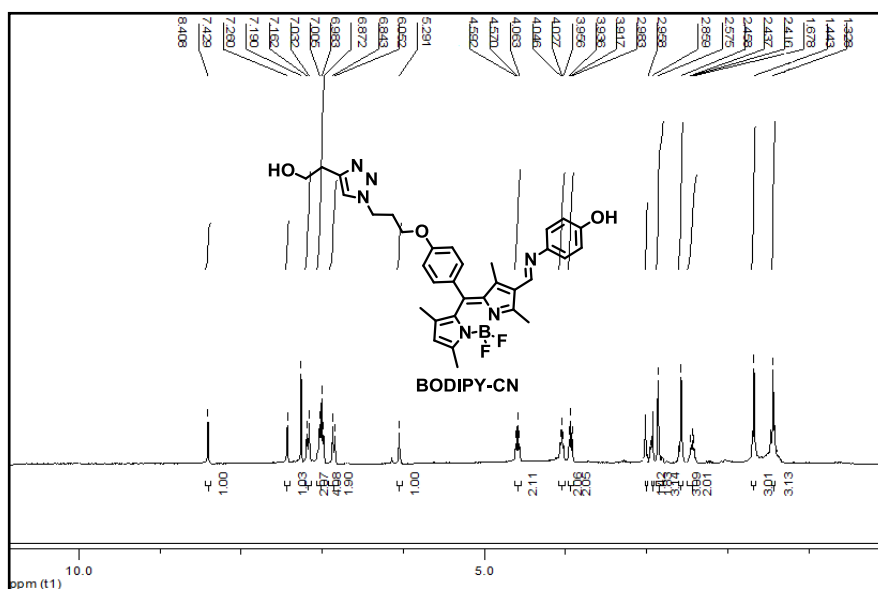


Fig. S11 <sup>13</sup>C NMR spectrum of compound **BODIPY-OH**



**Fig. S12** Mass Spectrum of compound **BODIPY-OH**



**Fig. S13**  $^1\text{H}$  NMR spectrum of compound **BODIPY-TRIA**

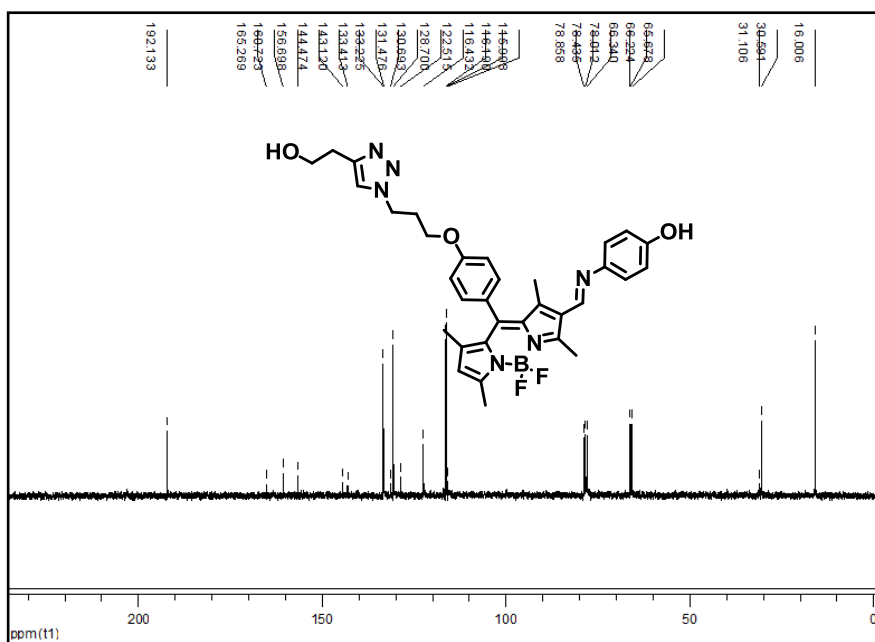


Fig. S14  $^{13}\text{C}$  NMR spectrum of compound **BODIPY-TRIA**

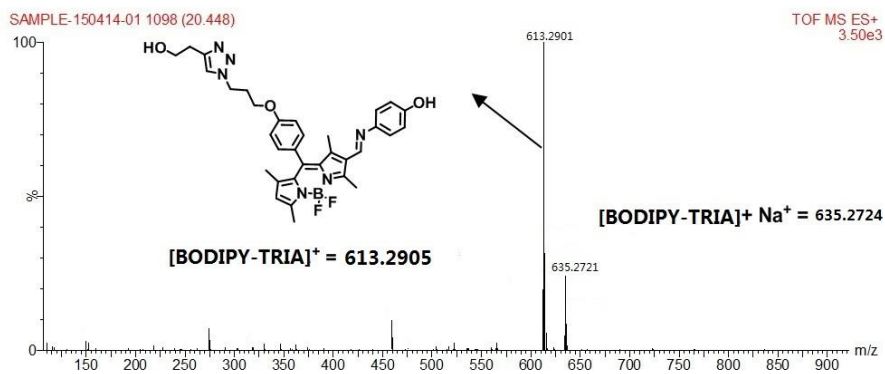
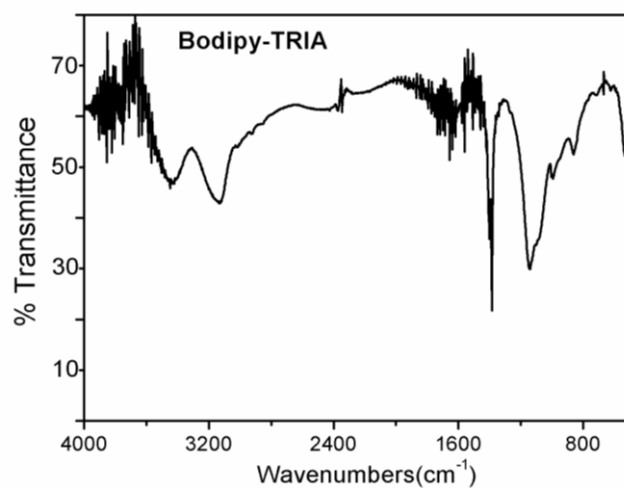
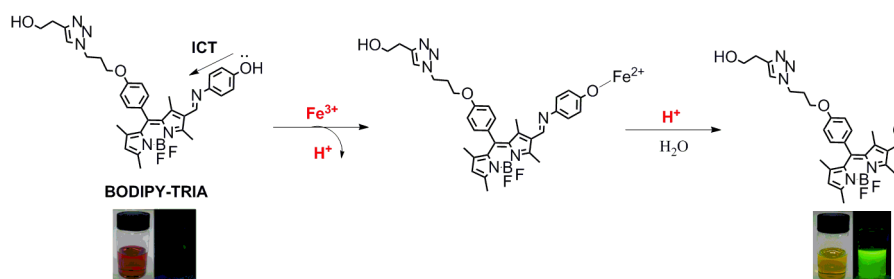


Fig. S15 Mass Spectrum of compound **BODIPY-TRIA**





**Fig. S16** FTIR spectra of compound **BODIPY-TRIA**



**Fig. S17** The possible mechanism of **BODIPY-TRIA** toward  $\text{Fe}^{3+}$  in THF.