

## Synthesis, Characterization, *in vitro* and Computational Assessment of New Xanthene Hydrazone Derivatives as Promising Vasorelaxant Agents

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***I. Chemical reagents and instruments***

All chemicals, solvents and reagents used were of analytical grade and used without further purification. The chemicals were purchased from commercial suppliers: Fluorescein(98.0 %), hydrazine (99.0 %), Ethanol ( $\geq 99.5$  %), (99.8%), 4-methoxybenzaldehyde (98.0 %), Benzaldehyde (98.0 %), 4-nitrobenzaldehyde (98.0 %), Ethyl bromoacetate (99.8%), Dimethylformamide (99.8 %), Potassium carbonate ( $\geq 98.0$  %), Tetrabutylammonium bromide ( $\geq 98.0$  %), Hexane ( $\geq 95$ %), Acetate d'ethyle ( $\geq 98\%$ ).

## II. NMR $^1\text{H}$ Spectra of FH, F1-F7

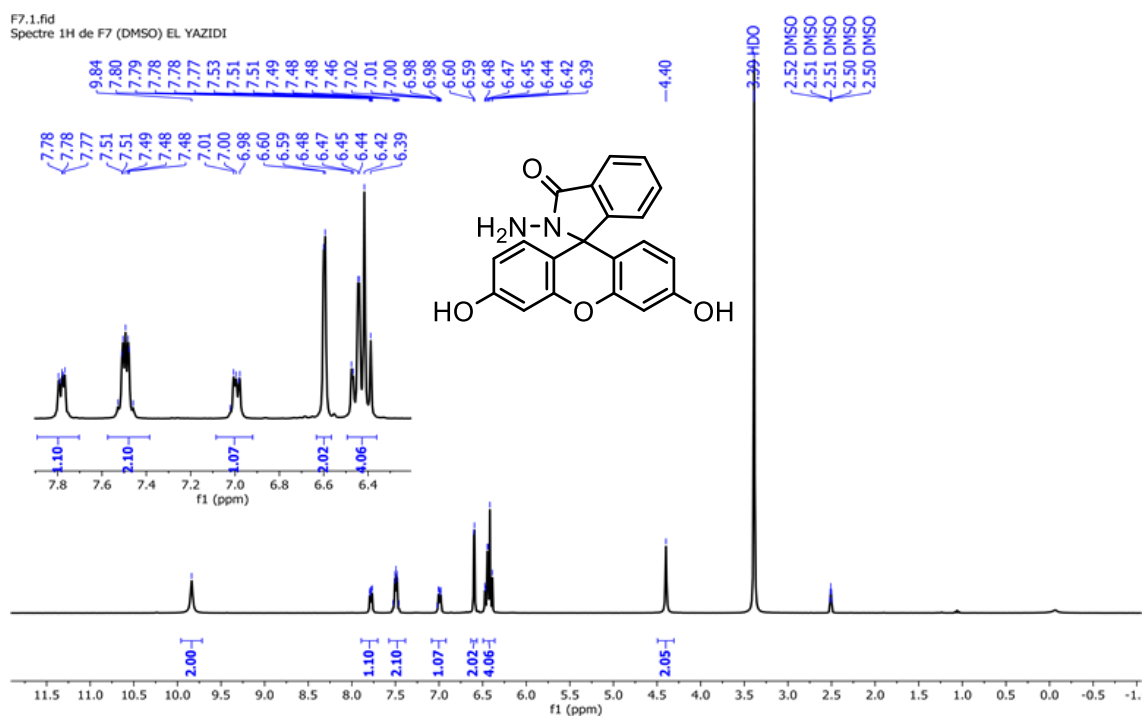


Figure S 1.  $^1\text{H}$  NMR spectrum (300 MHz, DMSO- $d_6$ ) of FH

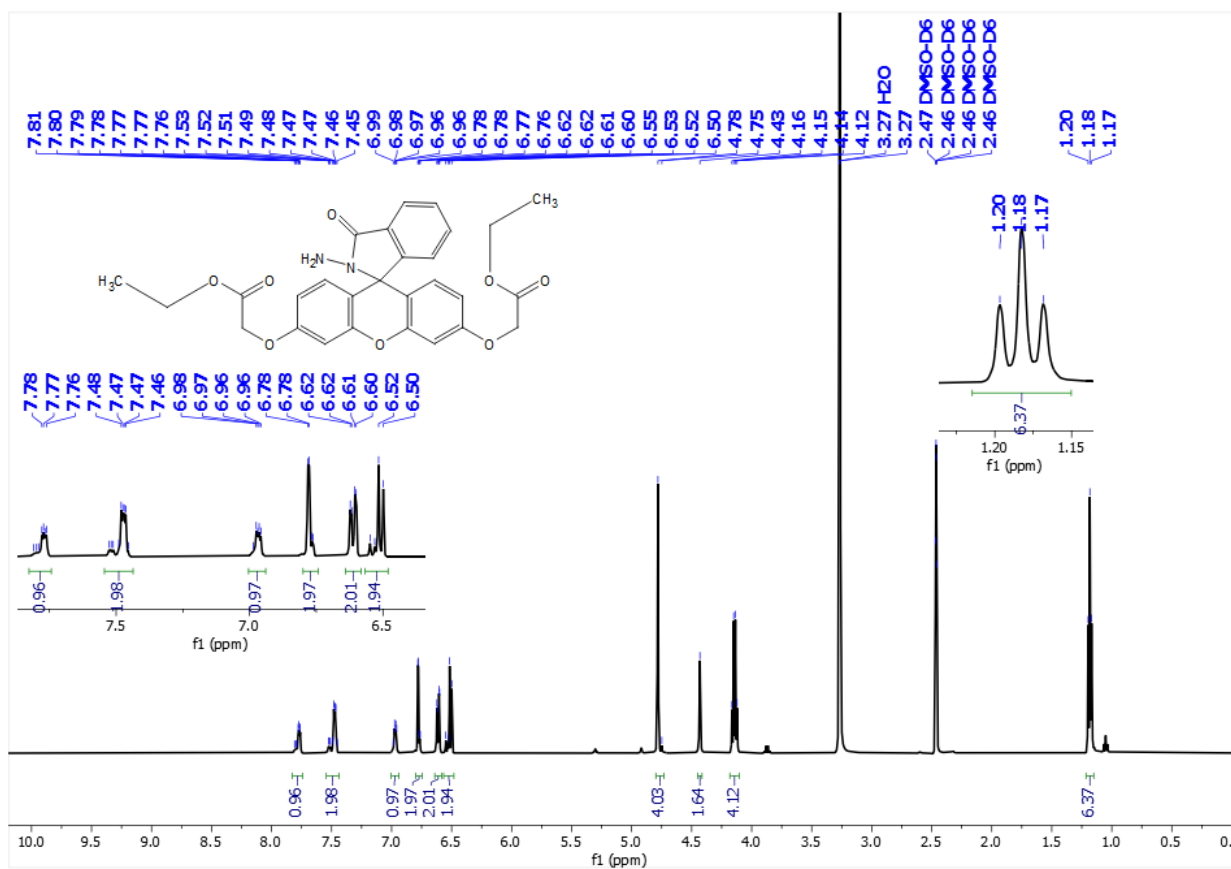
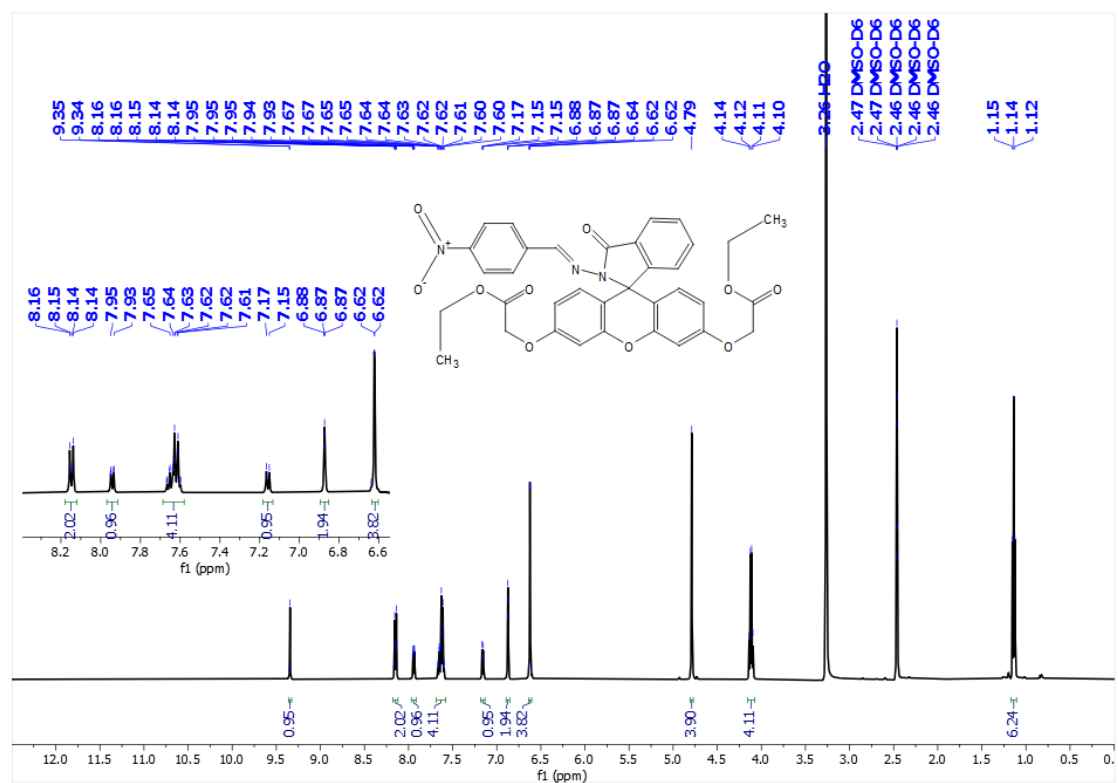
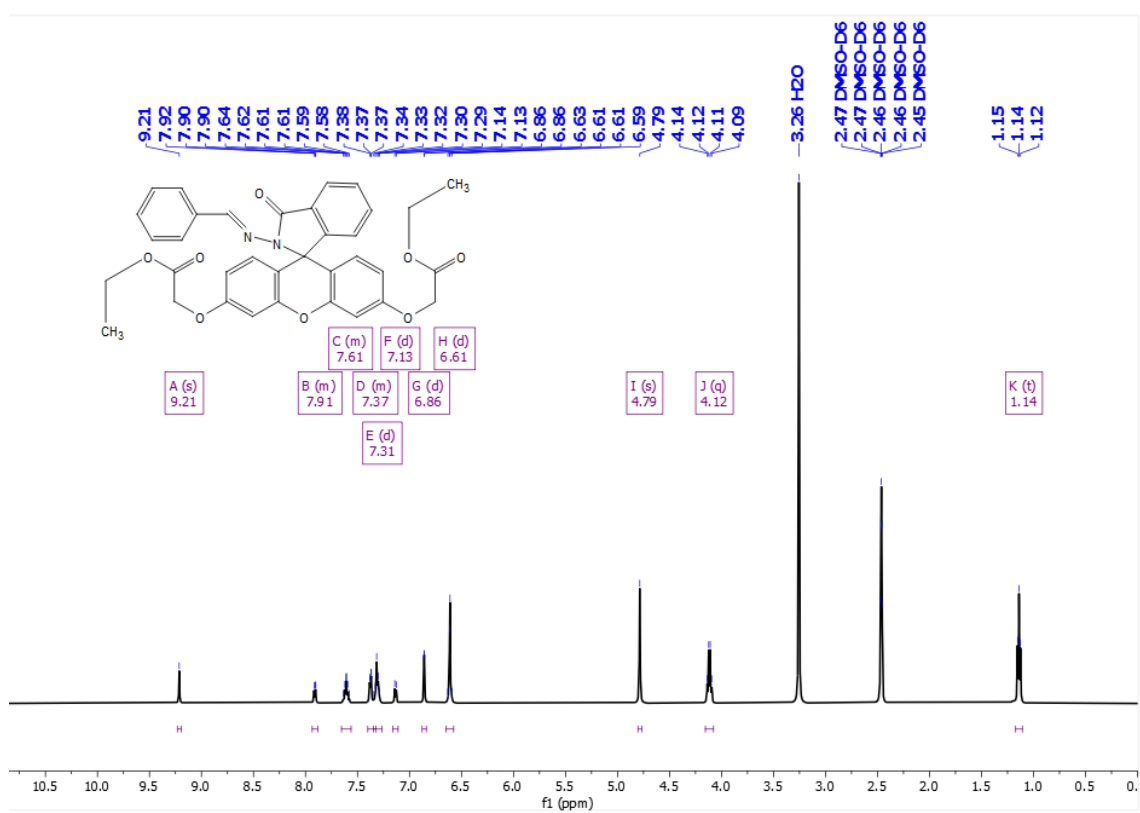


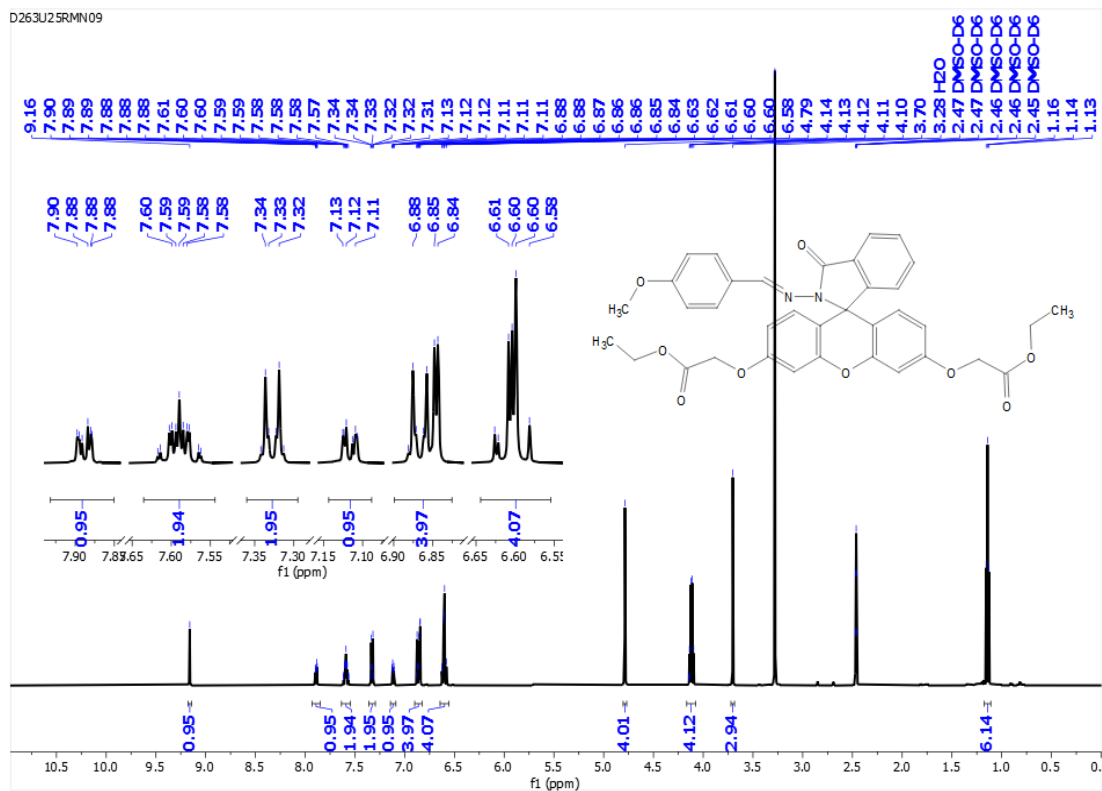
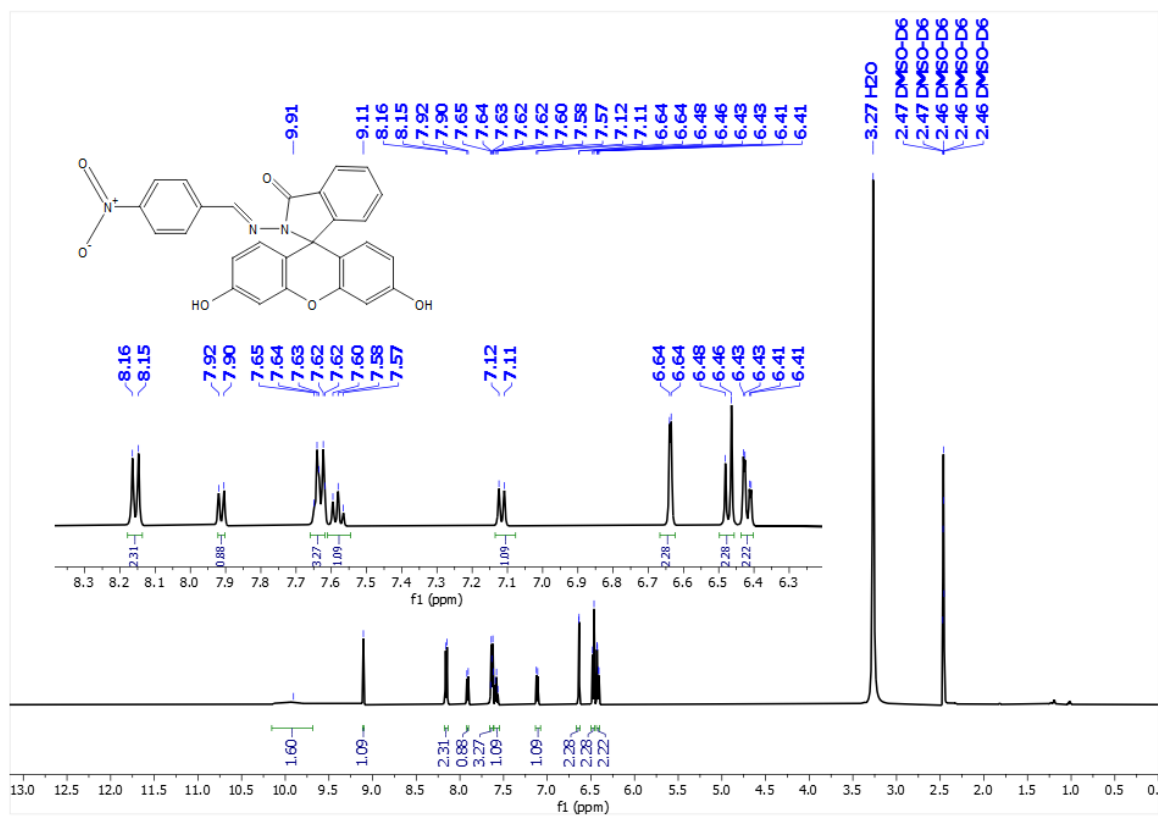
Figure S 2.  $^1\text{H}$  NMR spectrum (500 MHz, DMSO- $d_6$ ) of F1

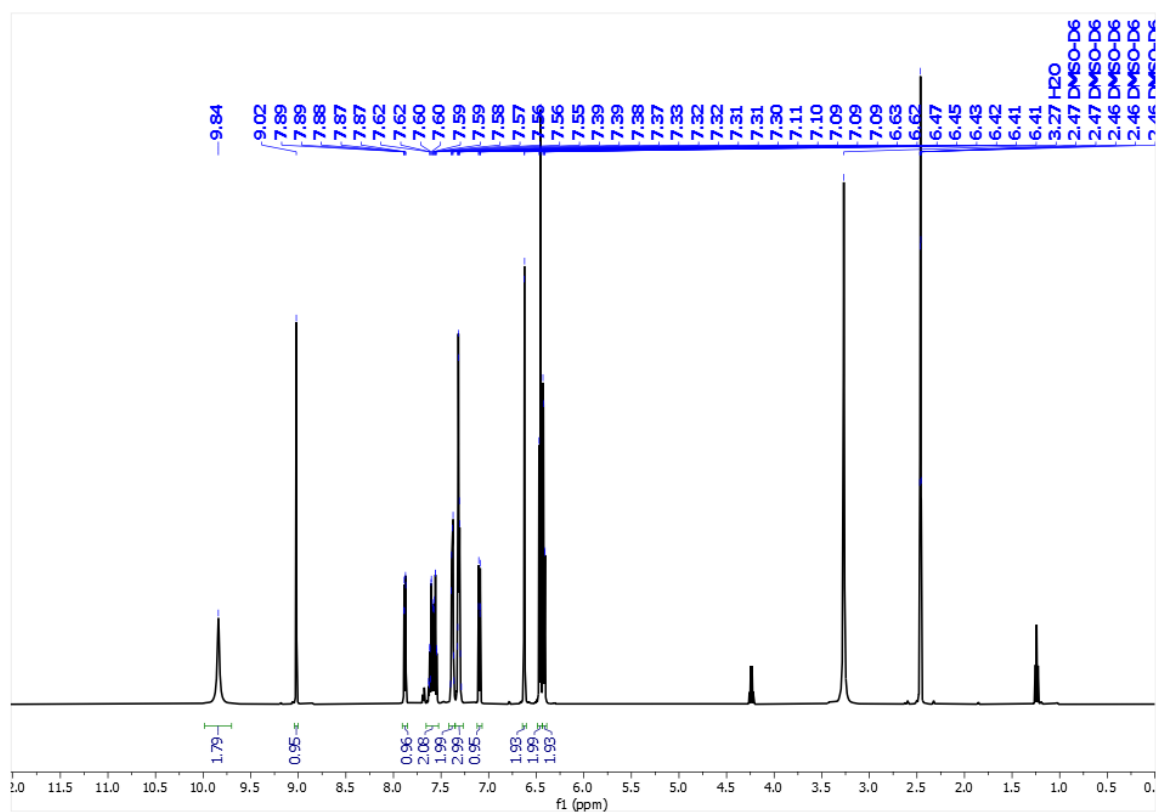
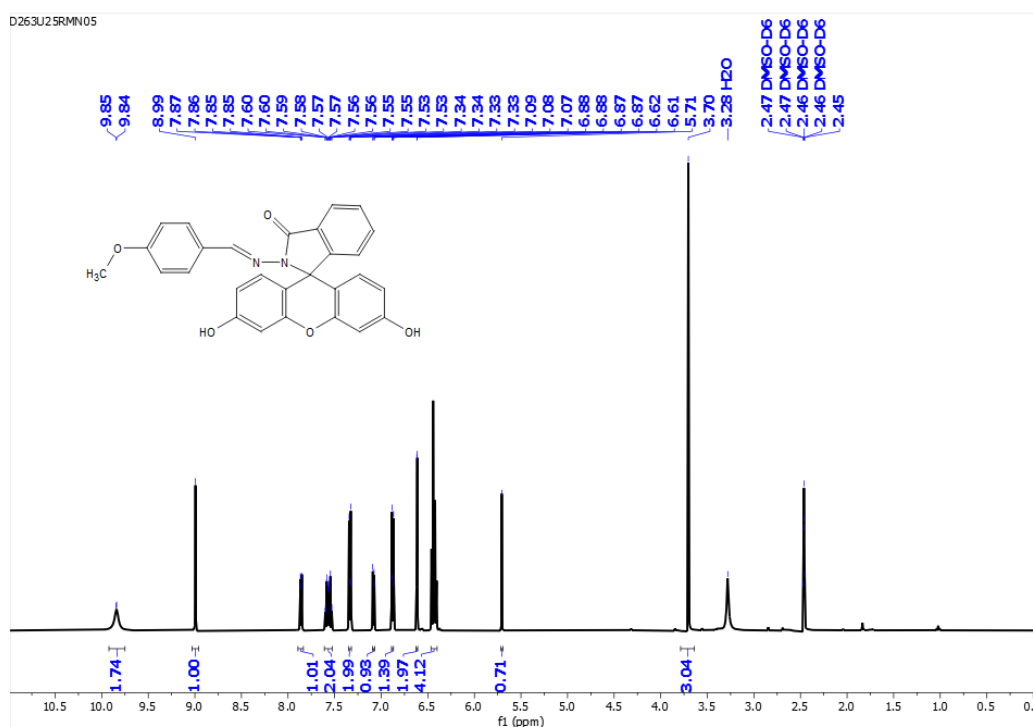


**Figure S 3. <sup>1</sup>H NMR spectrum (500 MHz, DMSO-d<sub>6</sub>) of F2**



**Figure S 4. <sup>1</sup>H NMR spectrum (500 MHz, DMSO-d<sub>6</sub>) of F3**

Figure S 5. <sup>1</sup>H NMR spectrum (500 MHz, DMSO-d<sub>6</sub>) of F4Figure S 6. <sup>1</sup>H NMR spectrum (500 MHz, DMSO-d<sub>6</sub>) of F5

Figure S 7.  $^1\text{H}$  NMR spectrum (500 MHz, DMSO- $d_6$ ) of F6Figure S 8.  $^1\text{H}$  NMR spectrum (500 MHz, DMSO- $d_6$ ) of F7

### III. NMR $^{13}\text{C}$ Spectra of FH, F1-F7

F7.2.fid

Spectre 13C de F7 (DMSO) EL YAZIDI

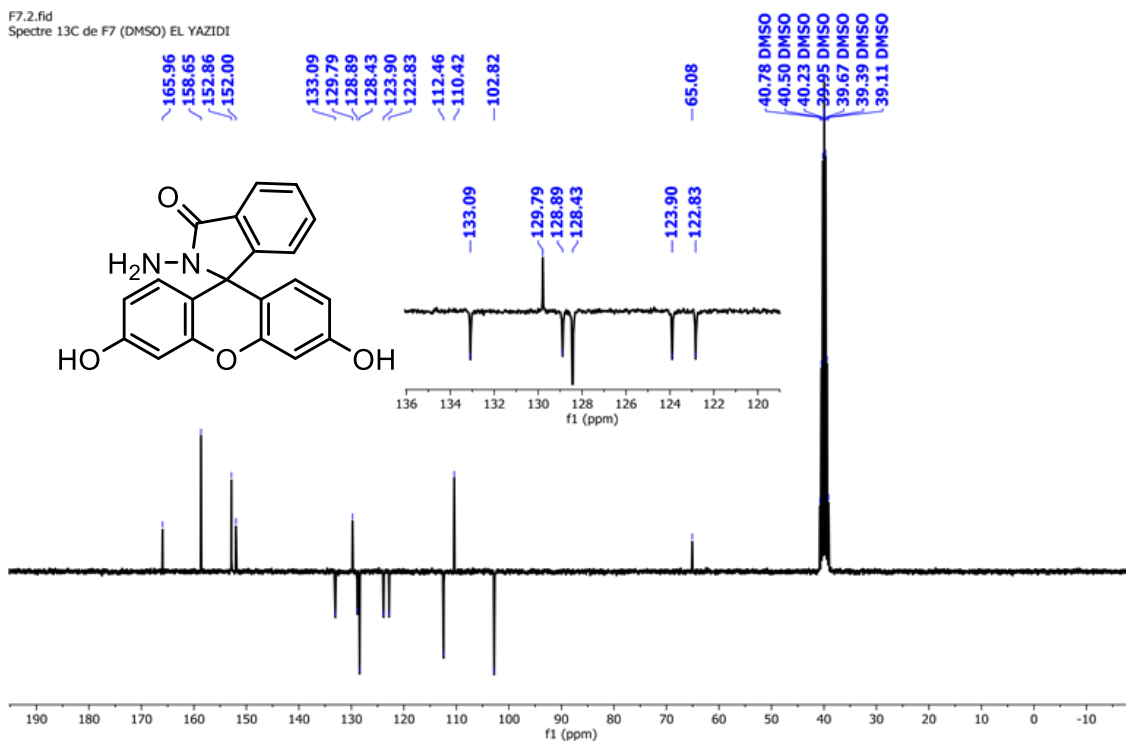


Figure S 9.  $^{13}\text{C}$  NMR spectrum (300 MHz, DMSO-d<sub>6</sub>) of FH

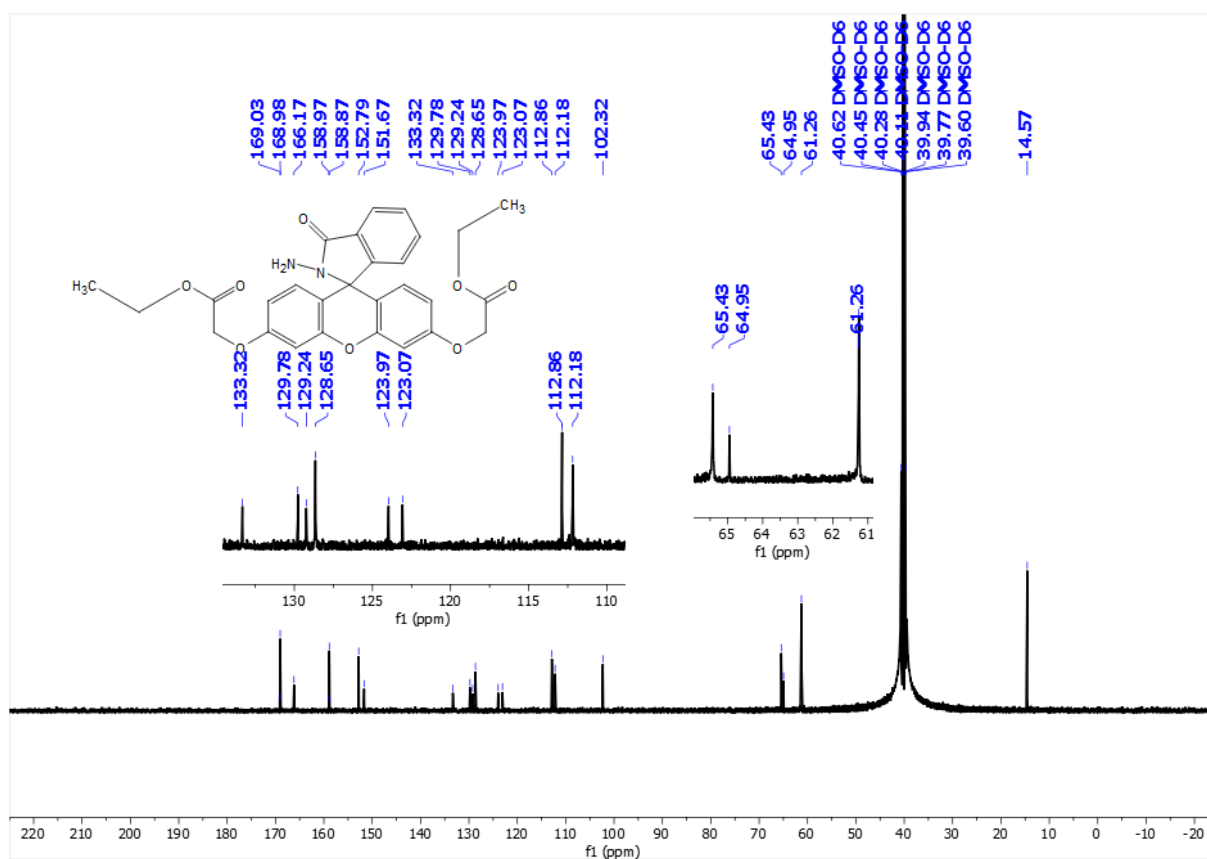


Figure S 10.  $^{13}\text{C}$  NMR spectrum (300 MHz, DMSO-d<sub>6</sub>) of F1

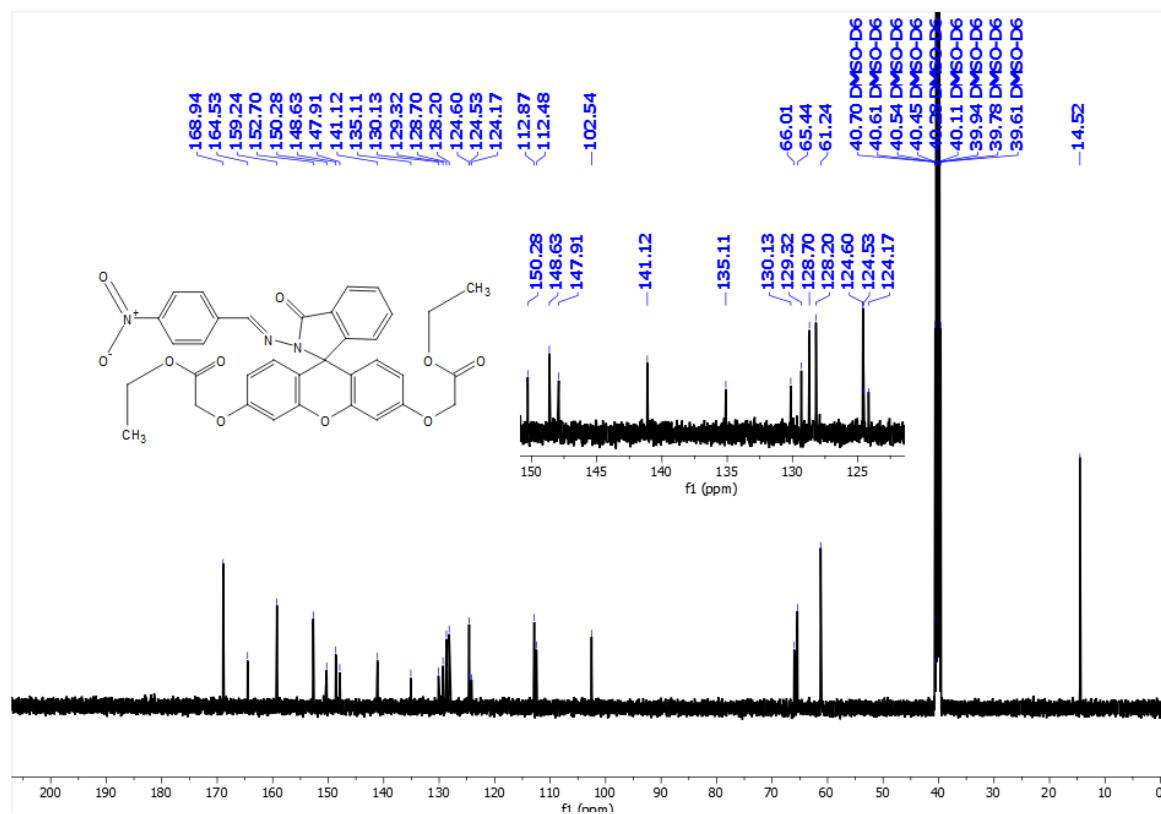


Figure S 11.  $^{13}\text{C}$  NMR spectrum (300 MHz, DMSO-d<sub>6</sub>) of F2

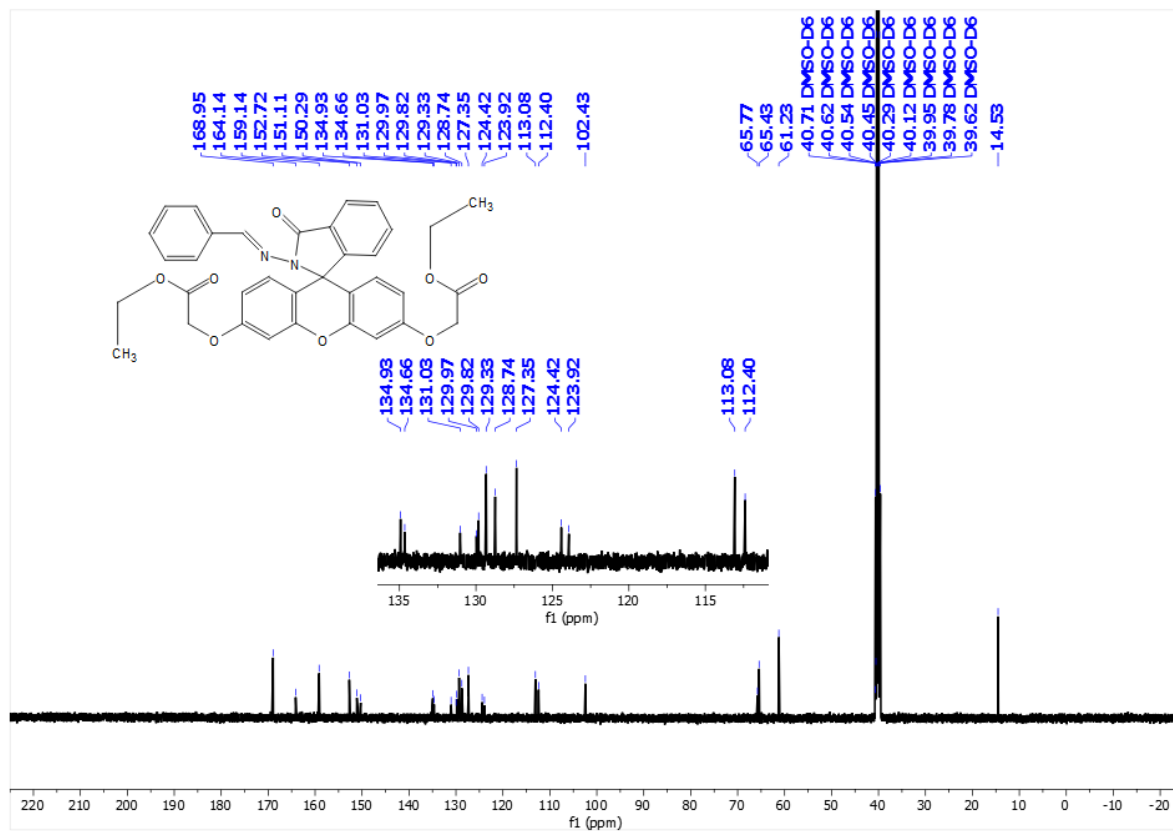
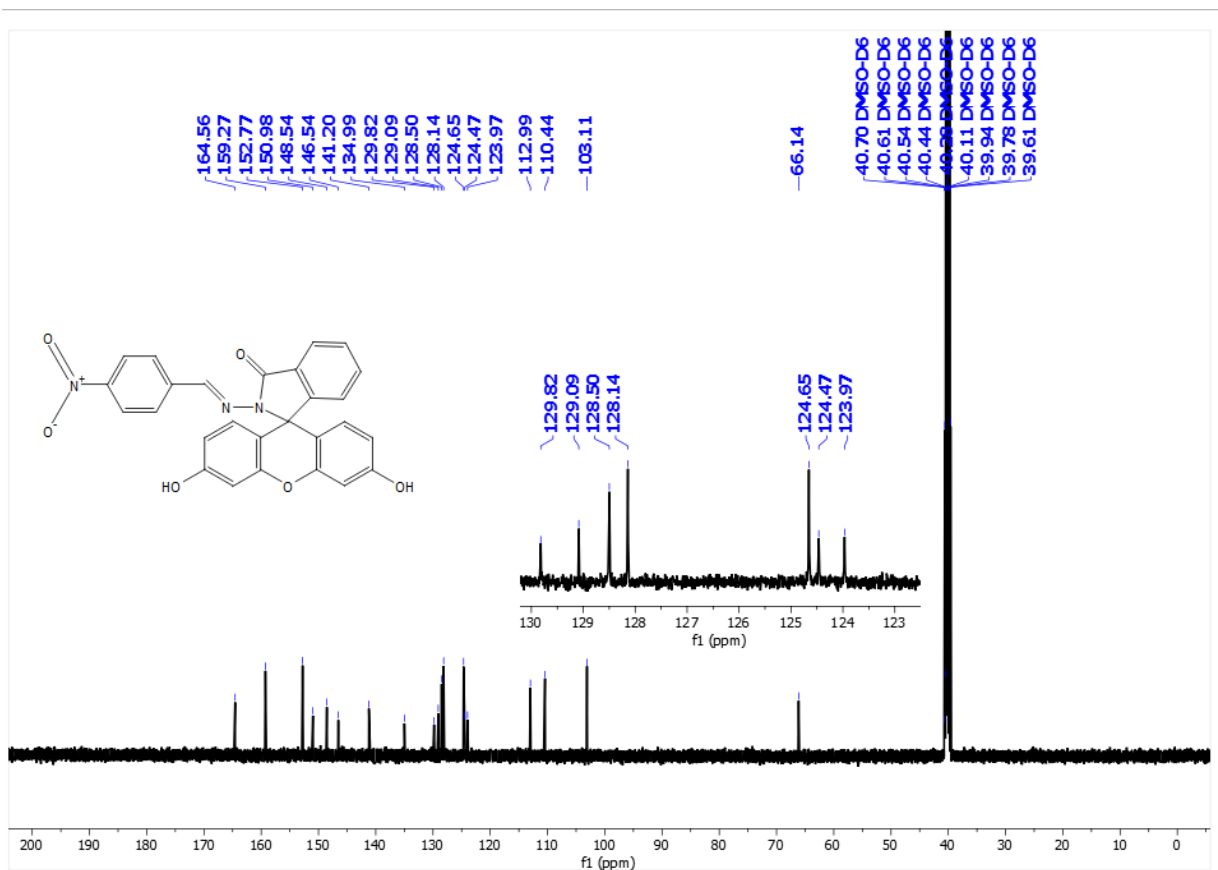
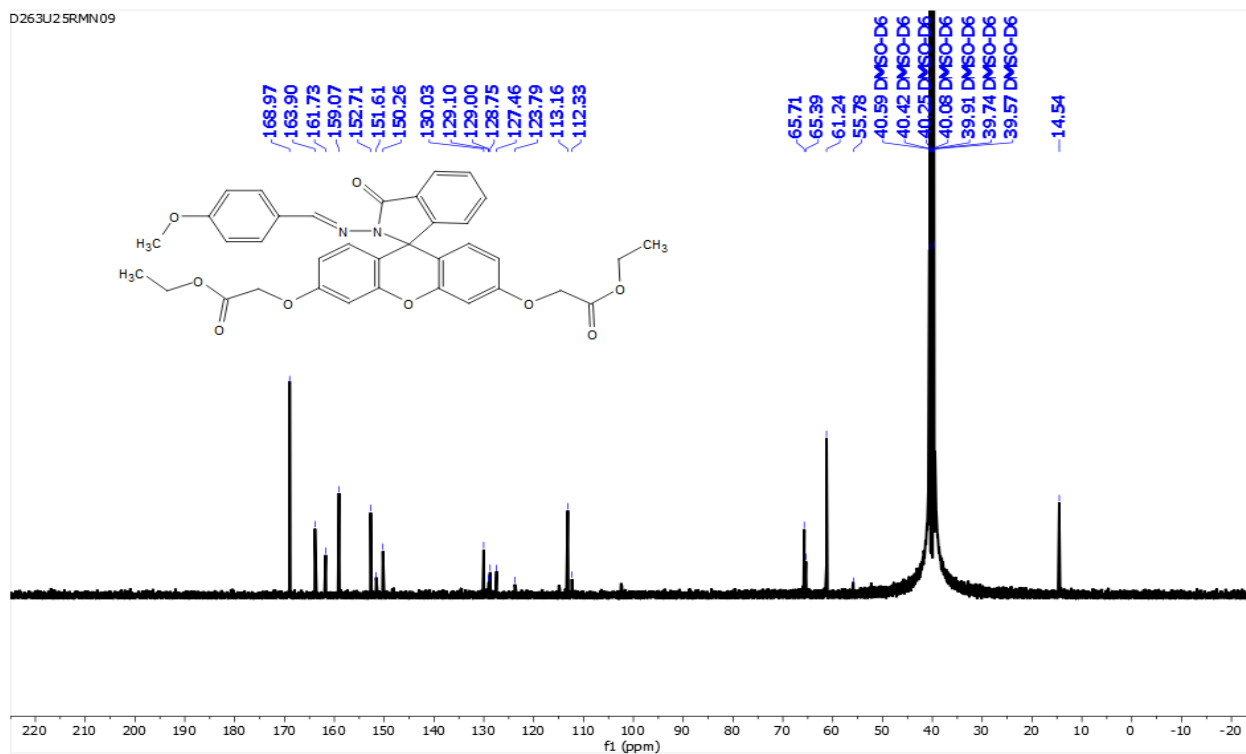


Figure S 12.  $^{13}\text{C}$  NMR spectrum (125 MHz, DMSO-d<sub>6</sub>) of F3



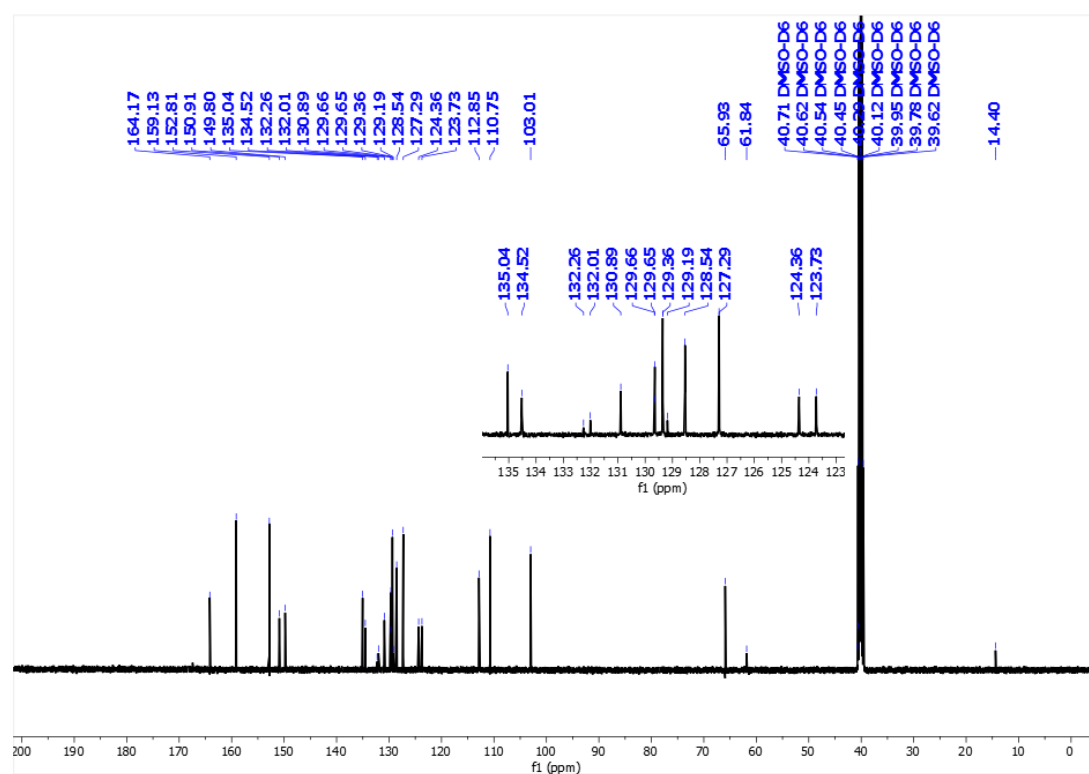


Figure S 15.  $^{13}\text{C}$  NMR spectrum (125 MHz, DMSO-d<sub>6</sub>) of F6

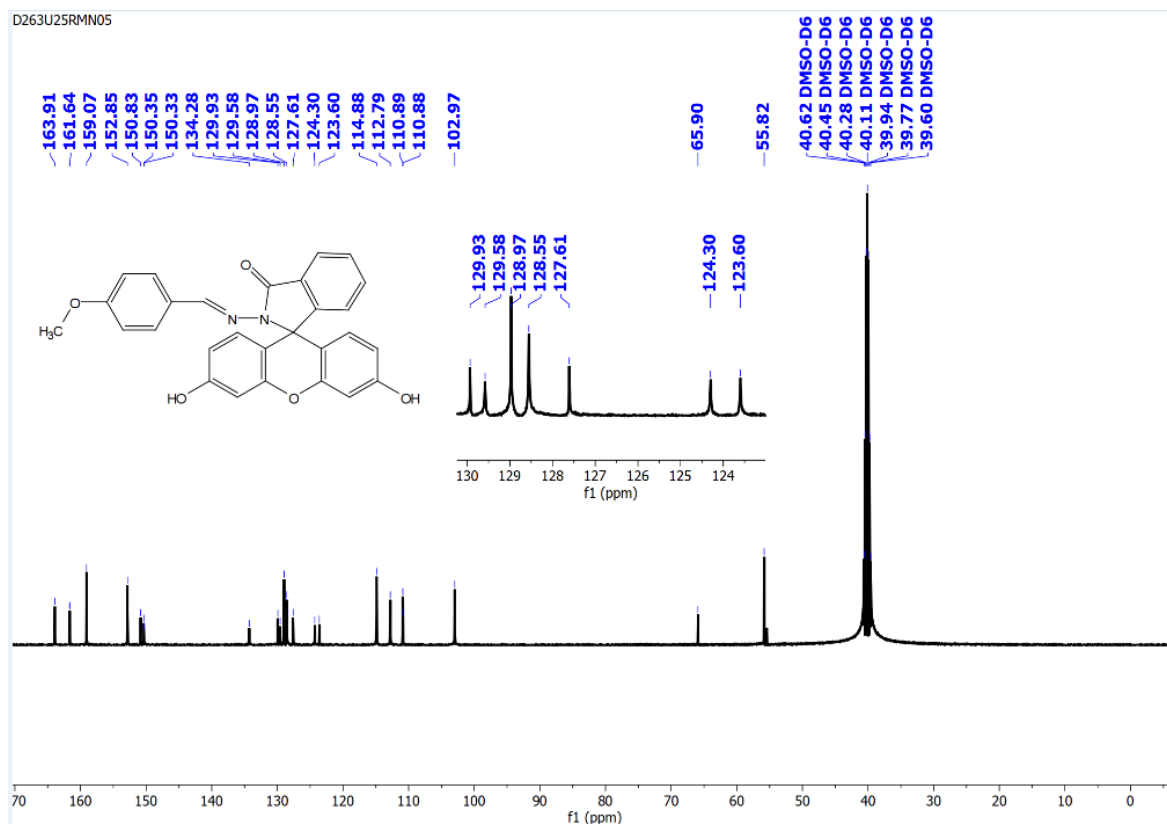


Figure S 16.  $^{13}\text{C}$  NMR spectrum (125 MHz, DMSO-d<sub>6</sub>) of F7

## IV. HRMS spectra

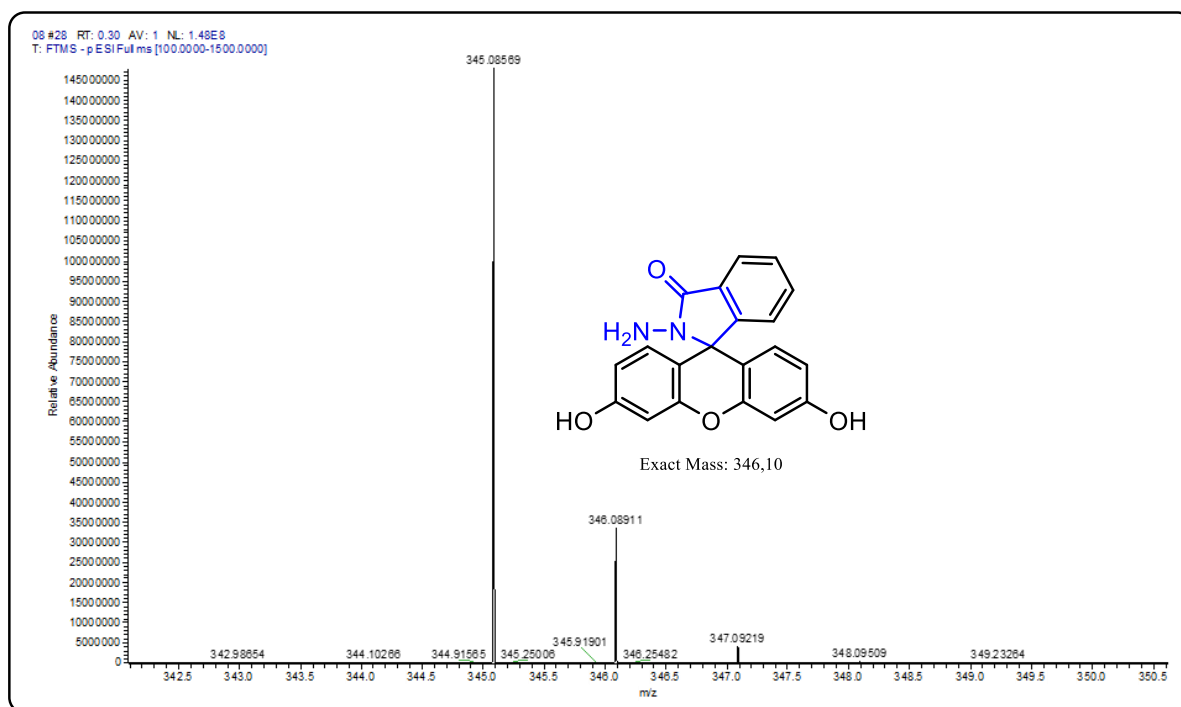


Figure S 17. Mass spectrum of FH

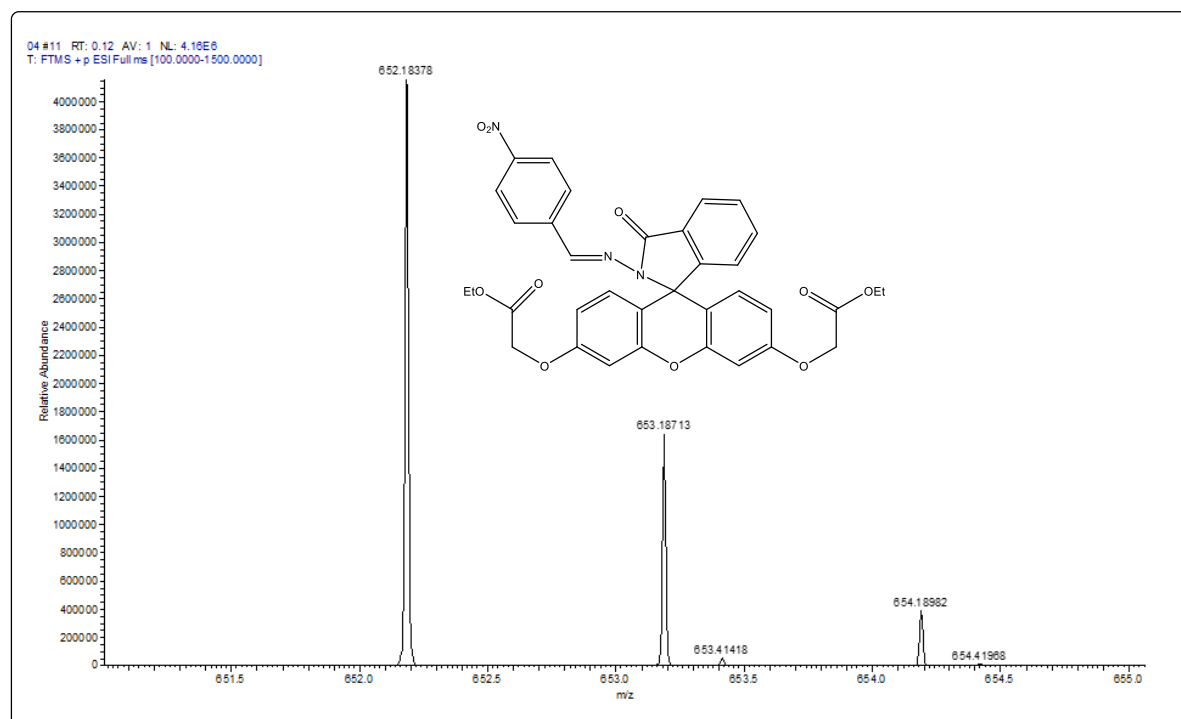


Figure S 18. Mass Spectrum of F2

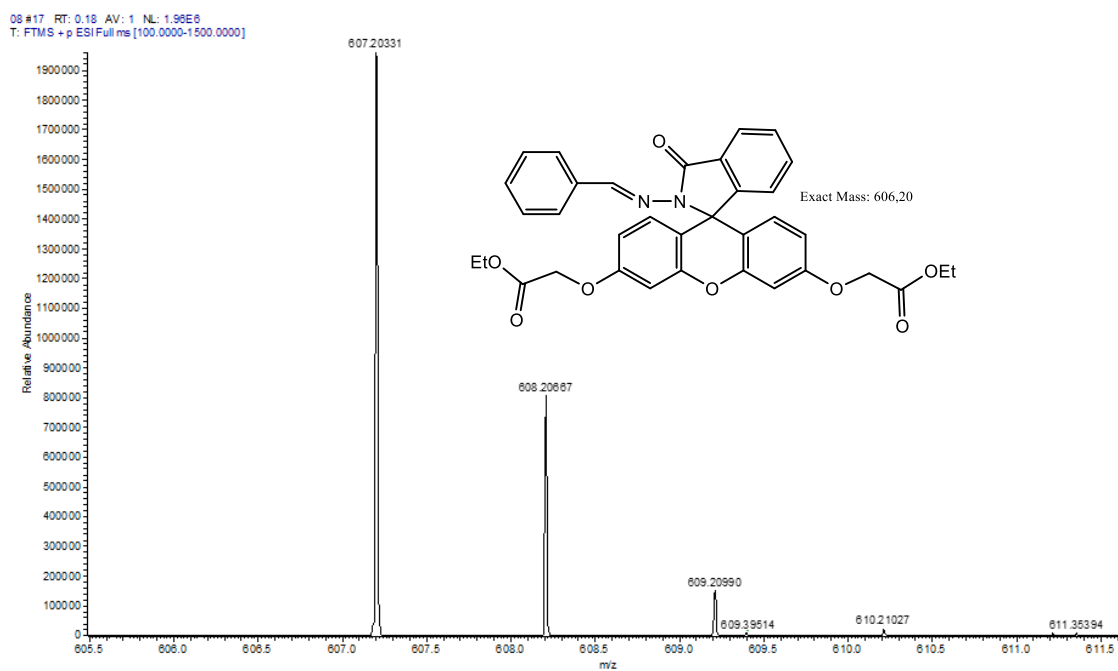


Figure S 19. Mass Spectrum of F3

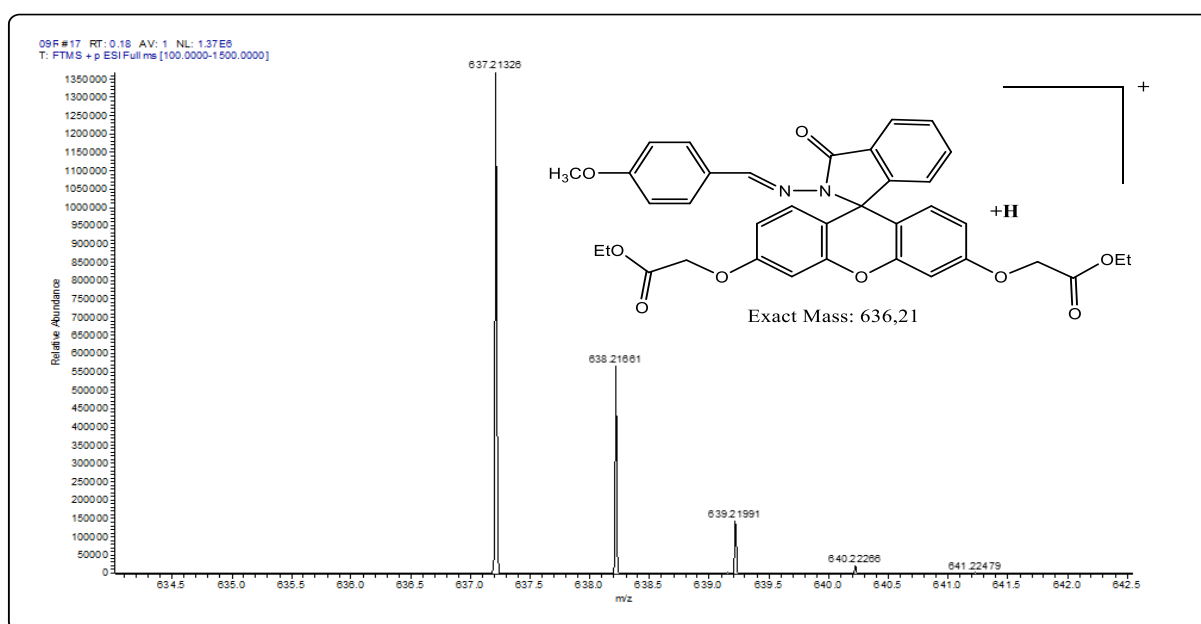
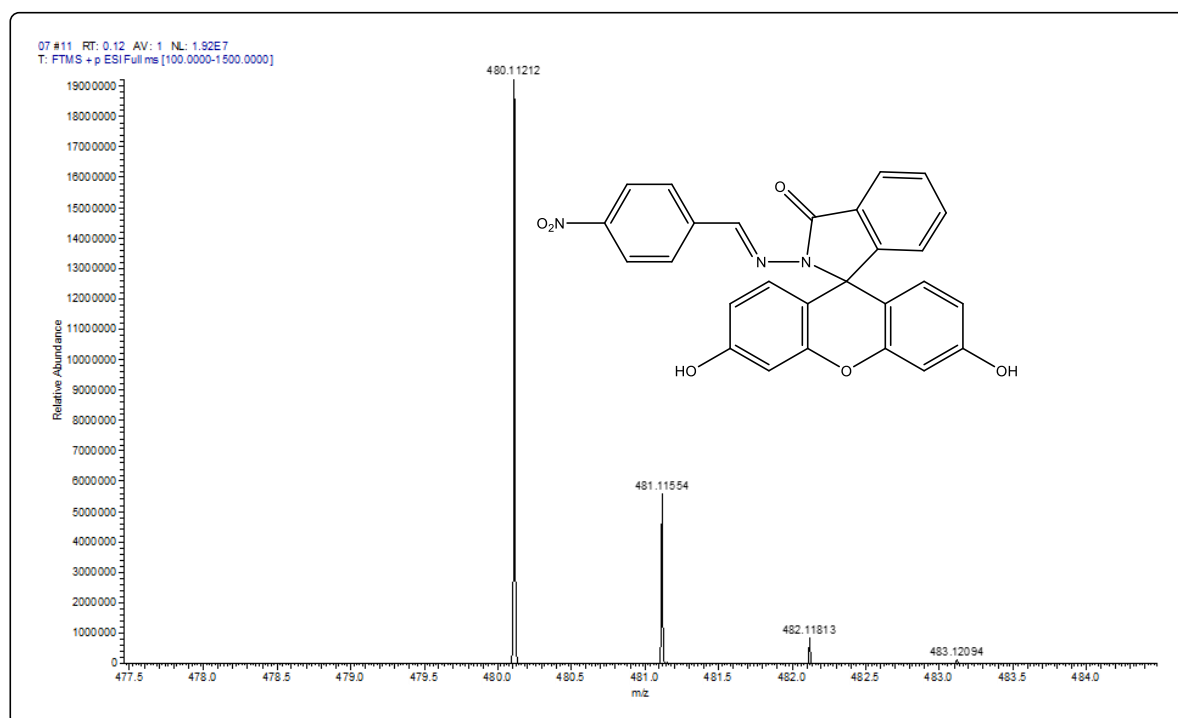
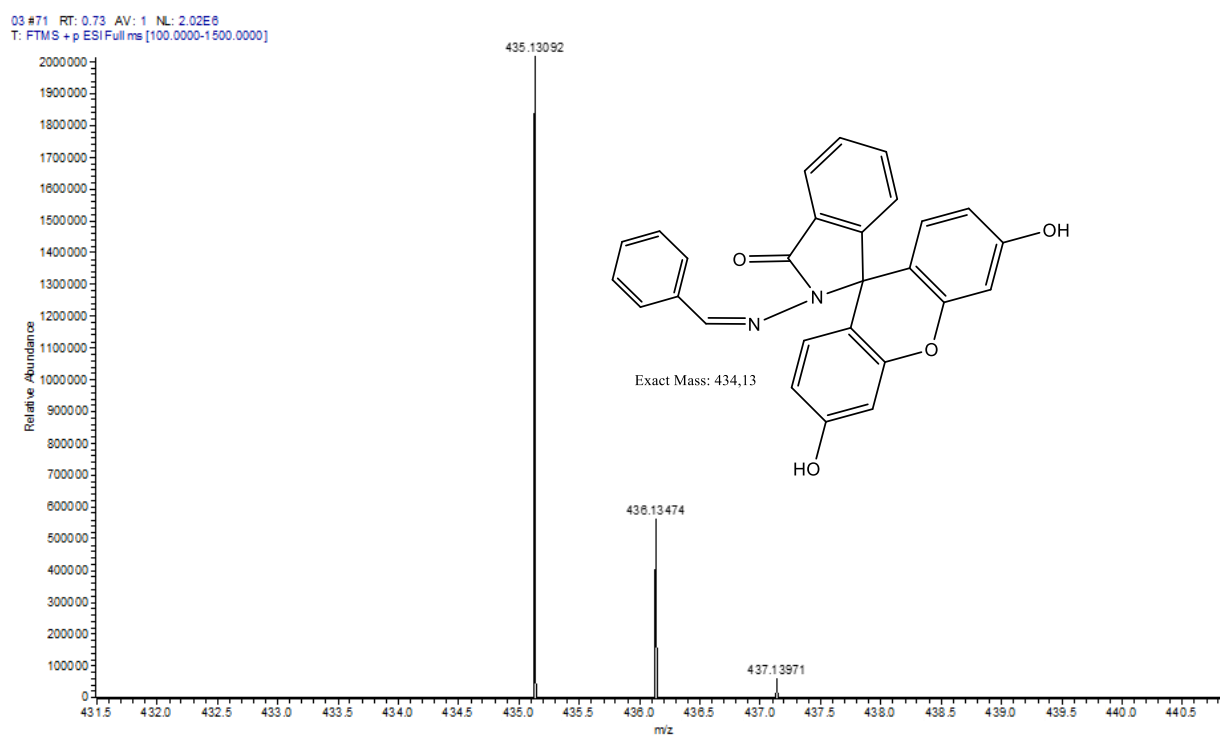


Figure S 20. Mass Spectrum of F4

**Figure S 21. Mass Spectrum of F5****Figure S 22. Mass Spectrum of F6**

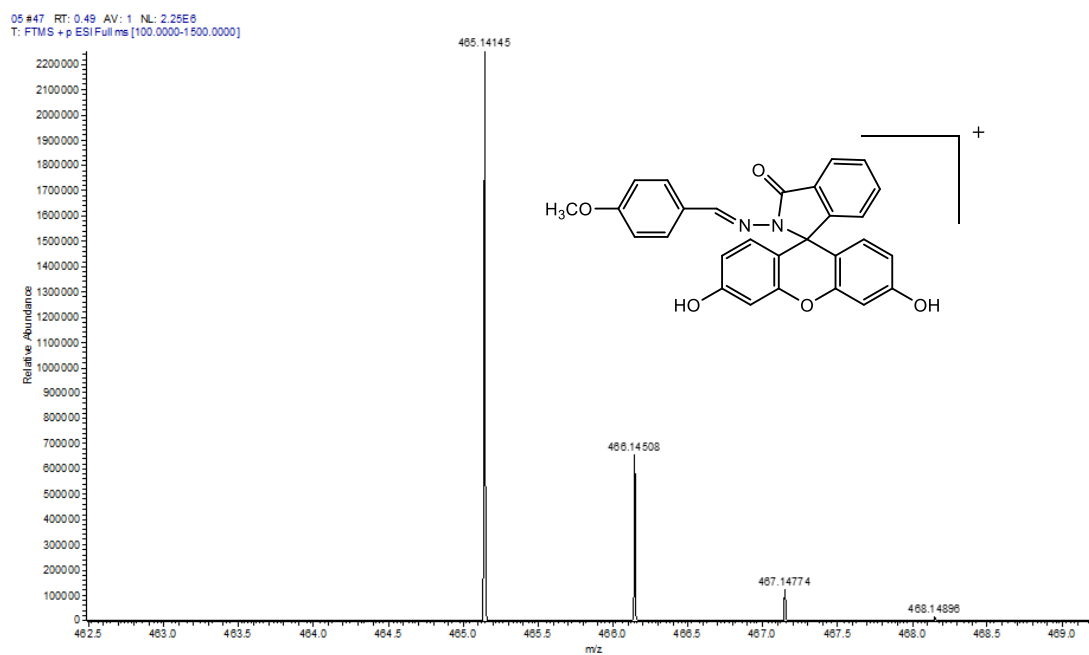


Figure S 23. Mass Spectrum of F7