

Supporting Information

Singlet Oxygen Generation with Chemical Excitation of an Erythro-sine-Luminol Conjugate

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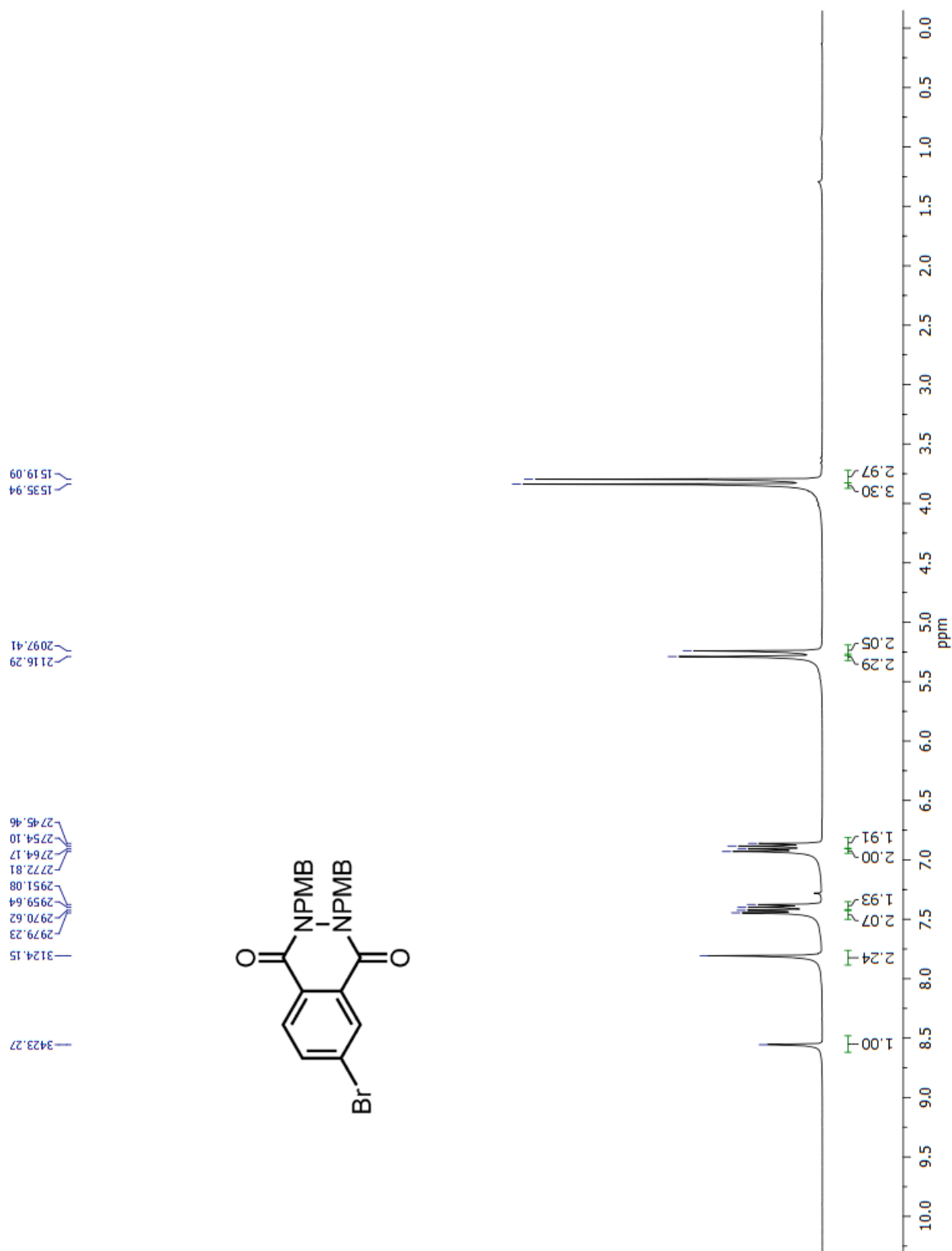


Figure S1. ¹H NMR Spectrum of Compound 3

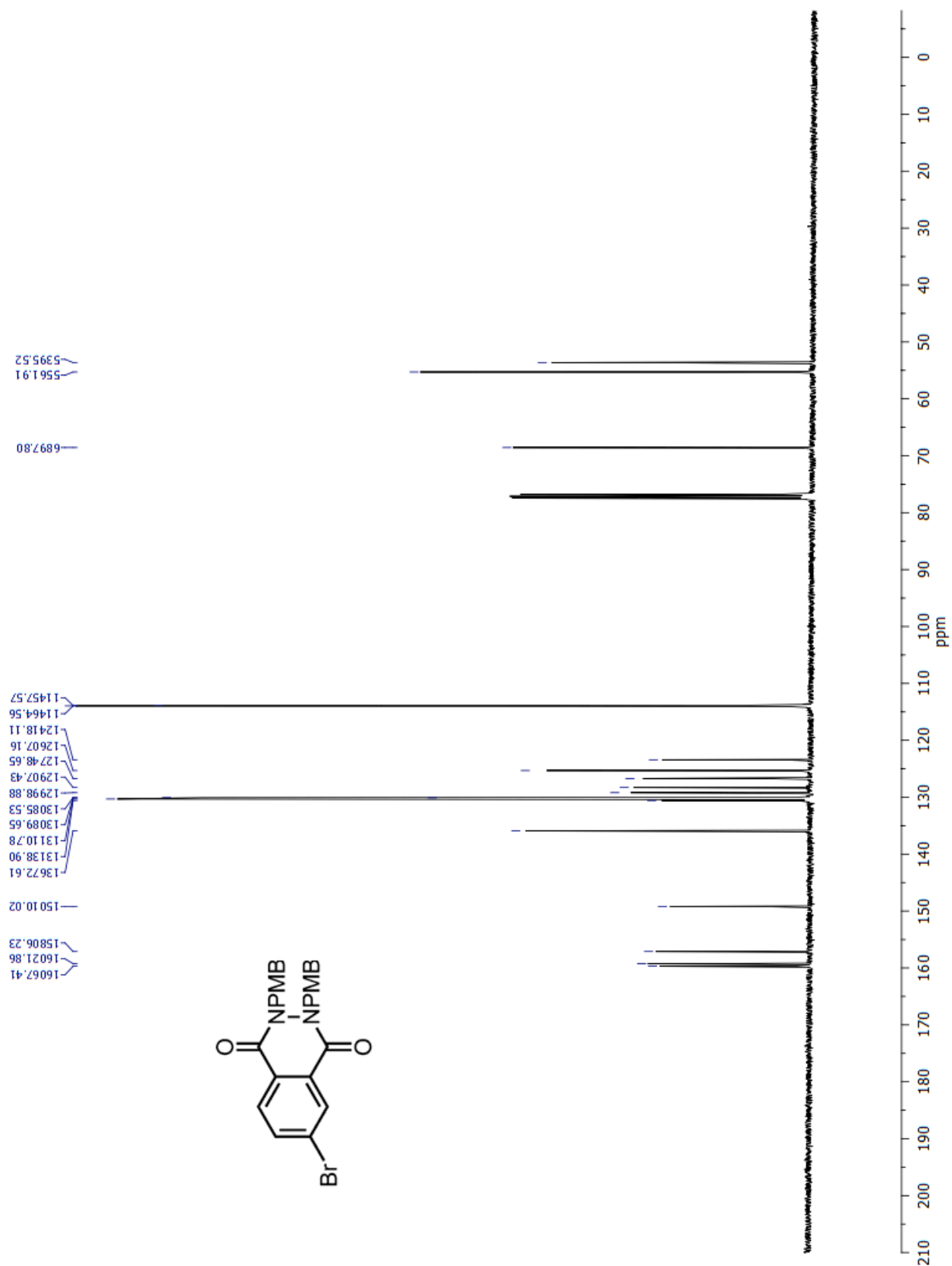


Figure S2. ^{13}C NMR Spectrum of Compound 3

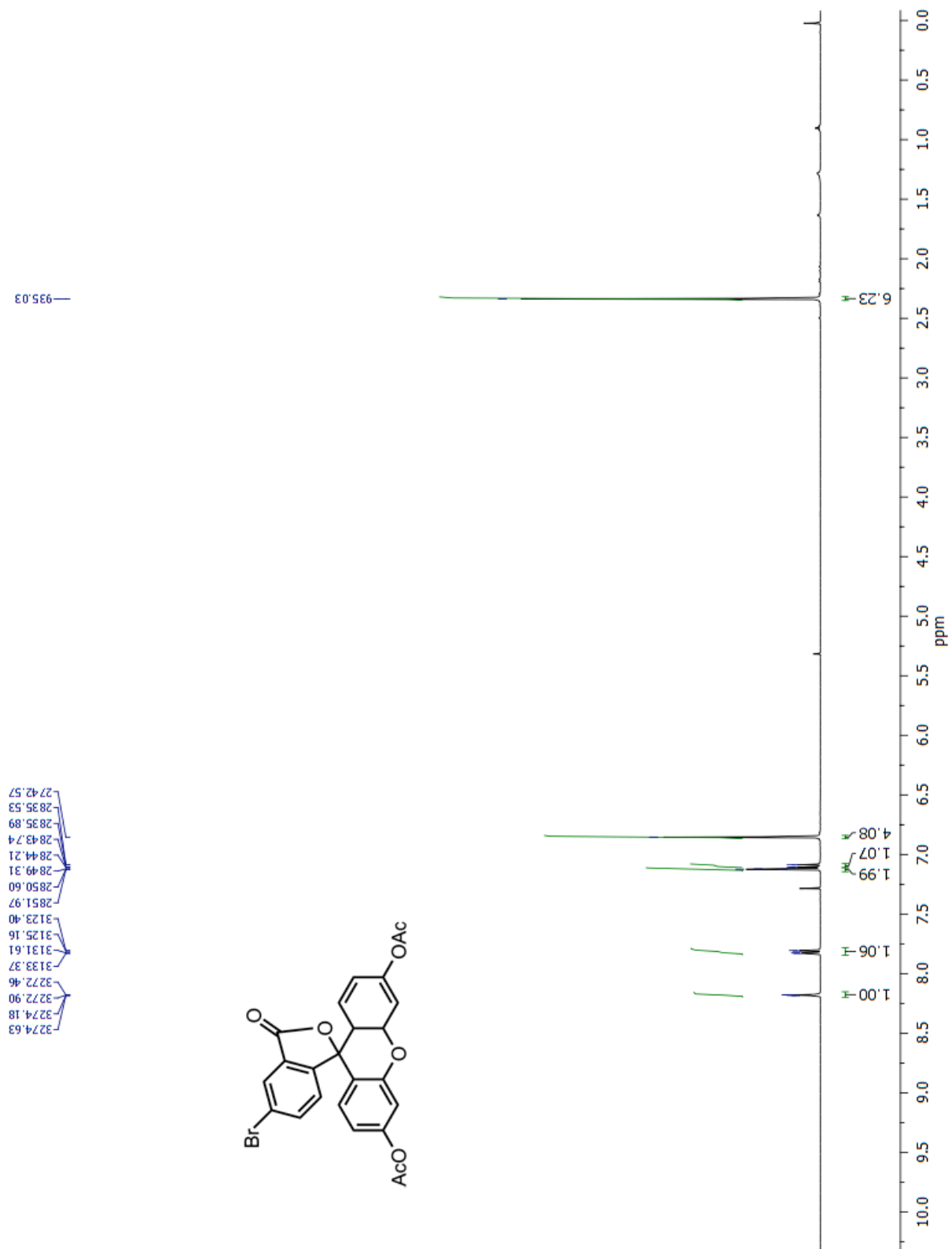


Figure S3. ¹H NMR Spectrum of Compound 6

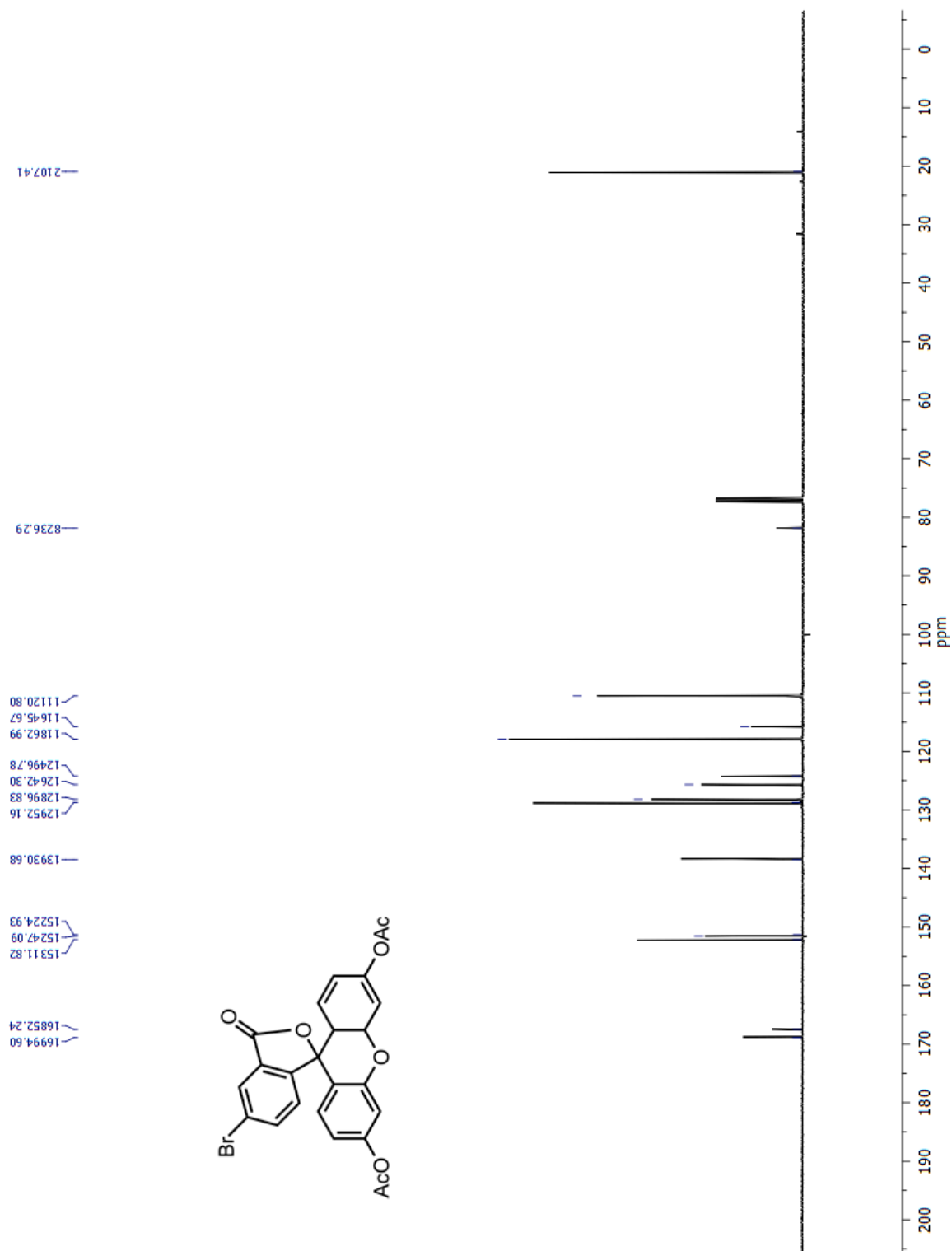


Figure S4. ^{13}C NMR Spectrum of Compound 6

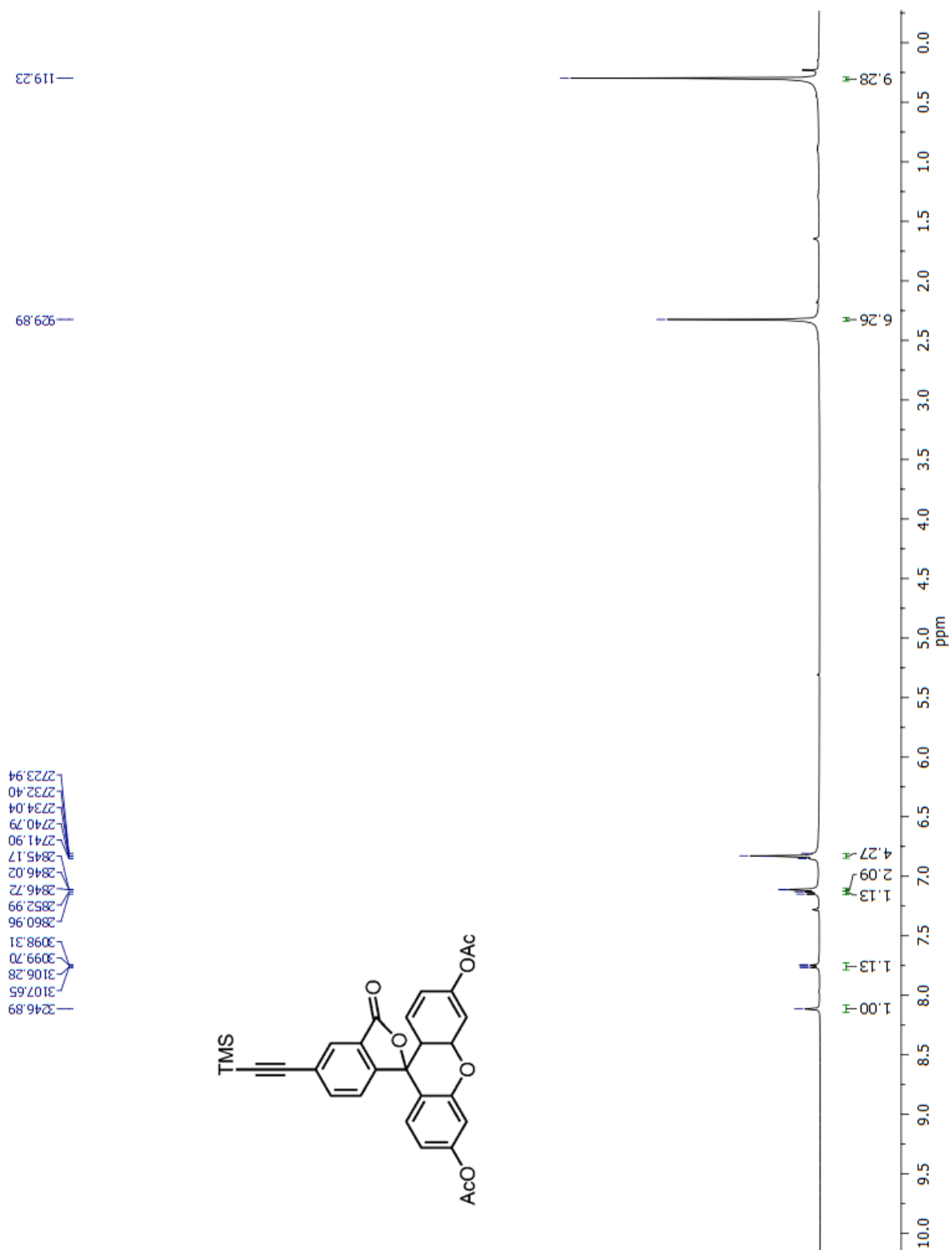


Figure S5. ¹H NMR Spectrum of Compound 7

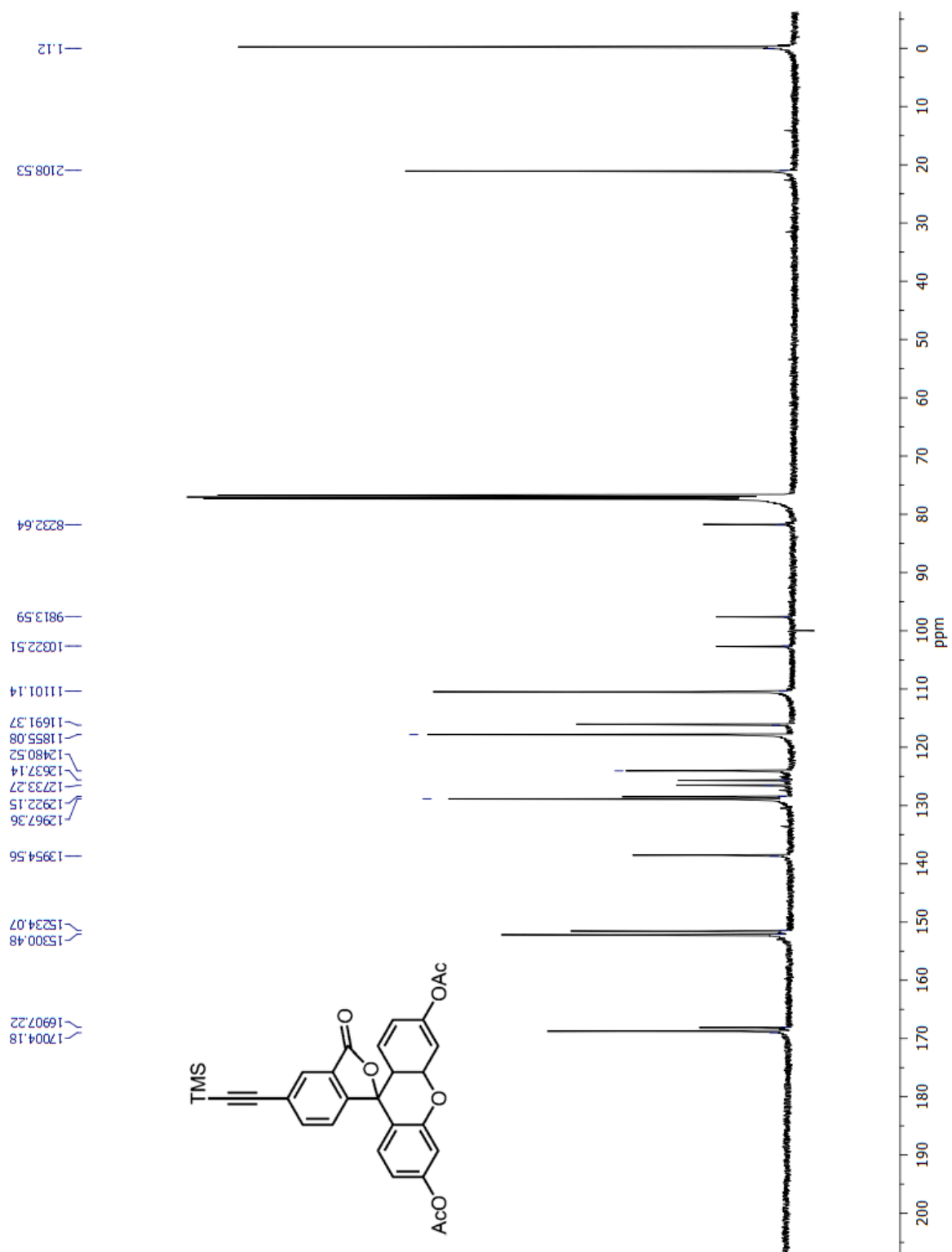


Figure S6. ^{13}C NMR Spectrum of Compound 7

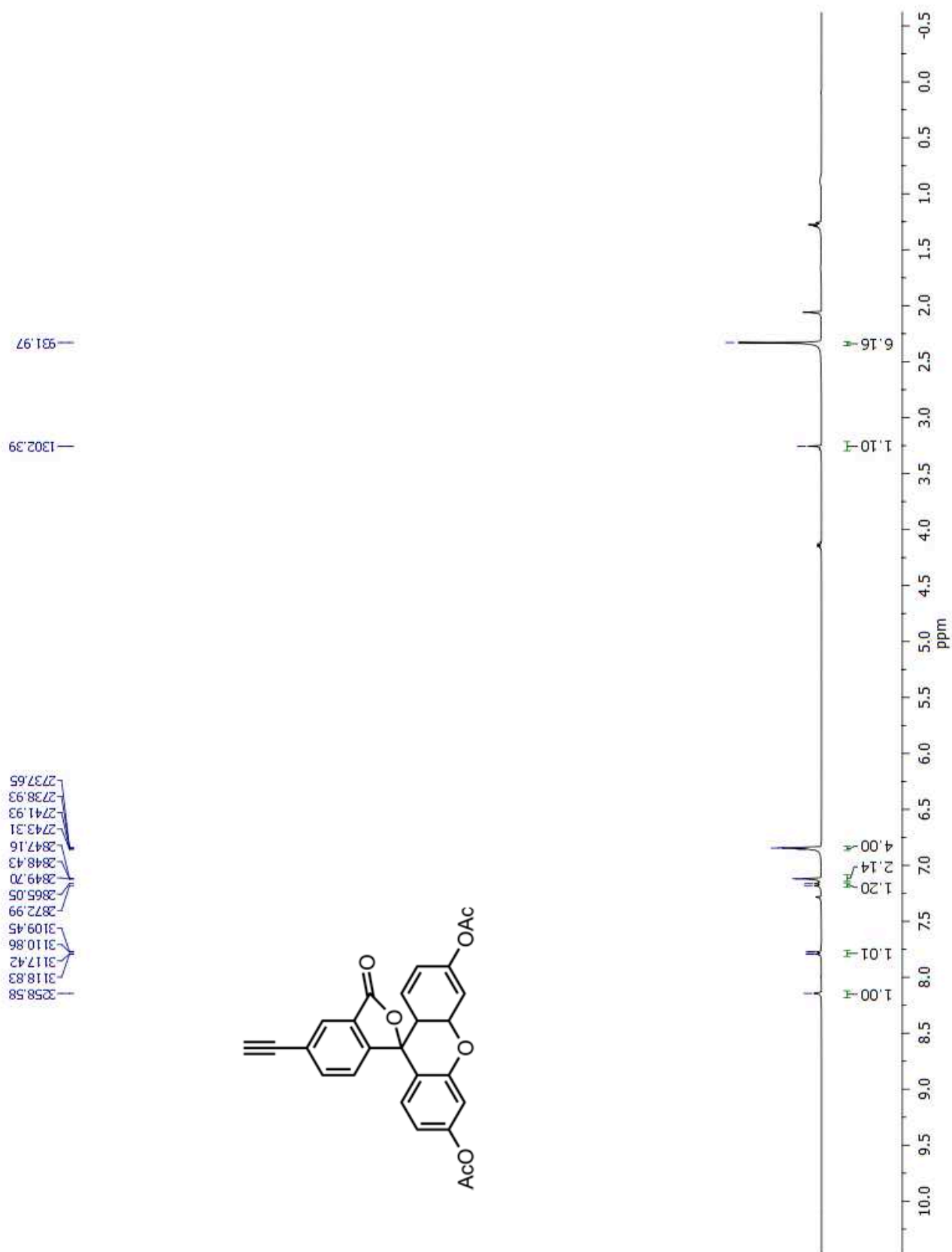


Figure S7. ¹H NMR Spectrum of Compound 8

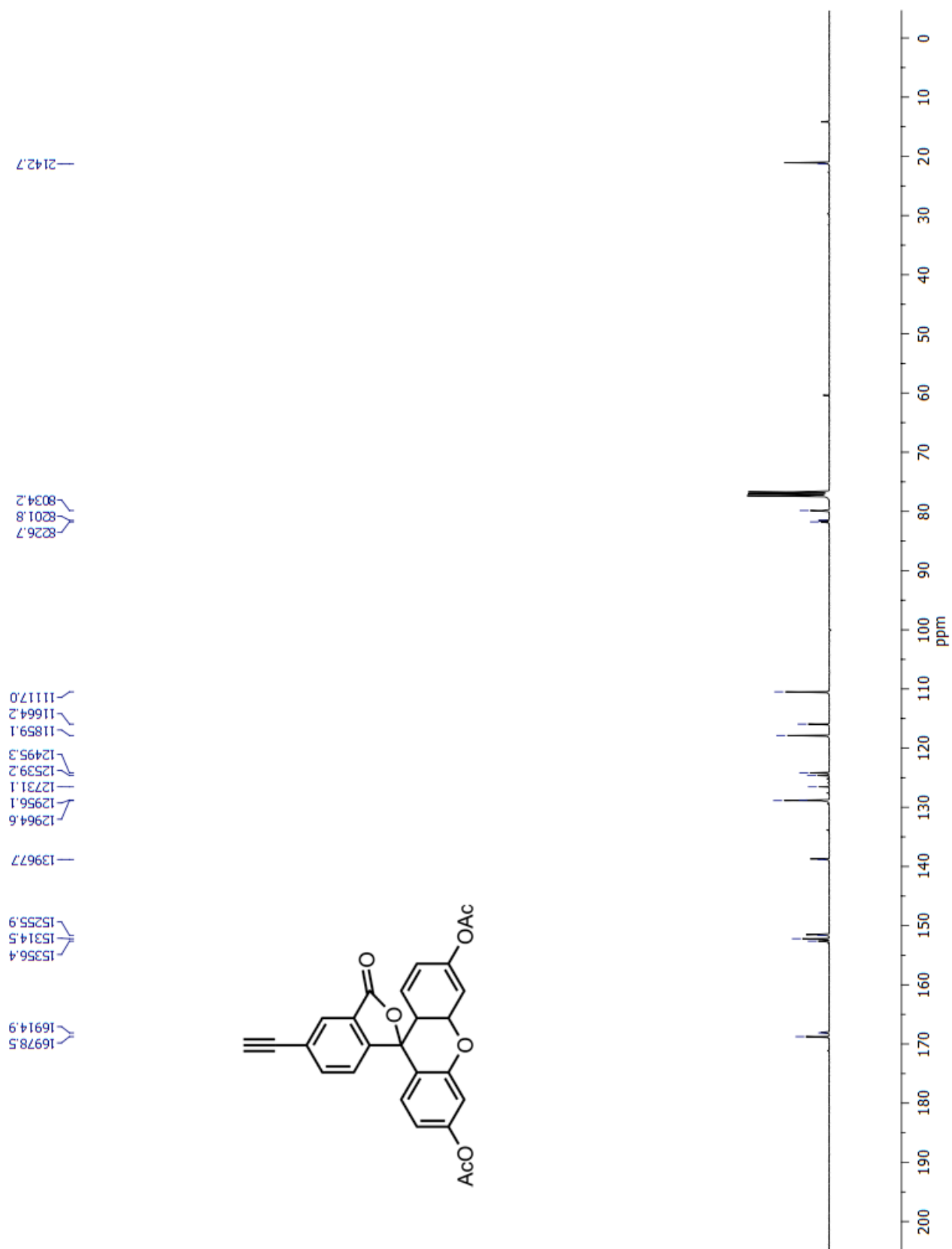


Figure S8. ^{13}C NMR Spectrum of Compound **8**

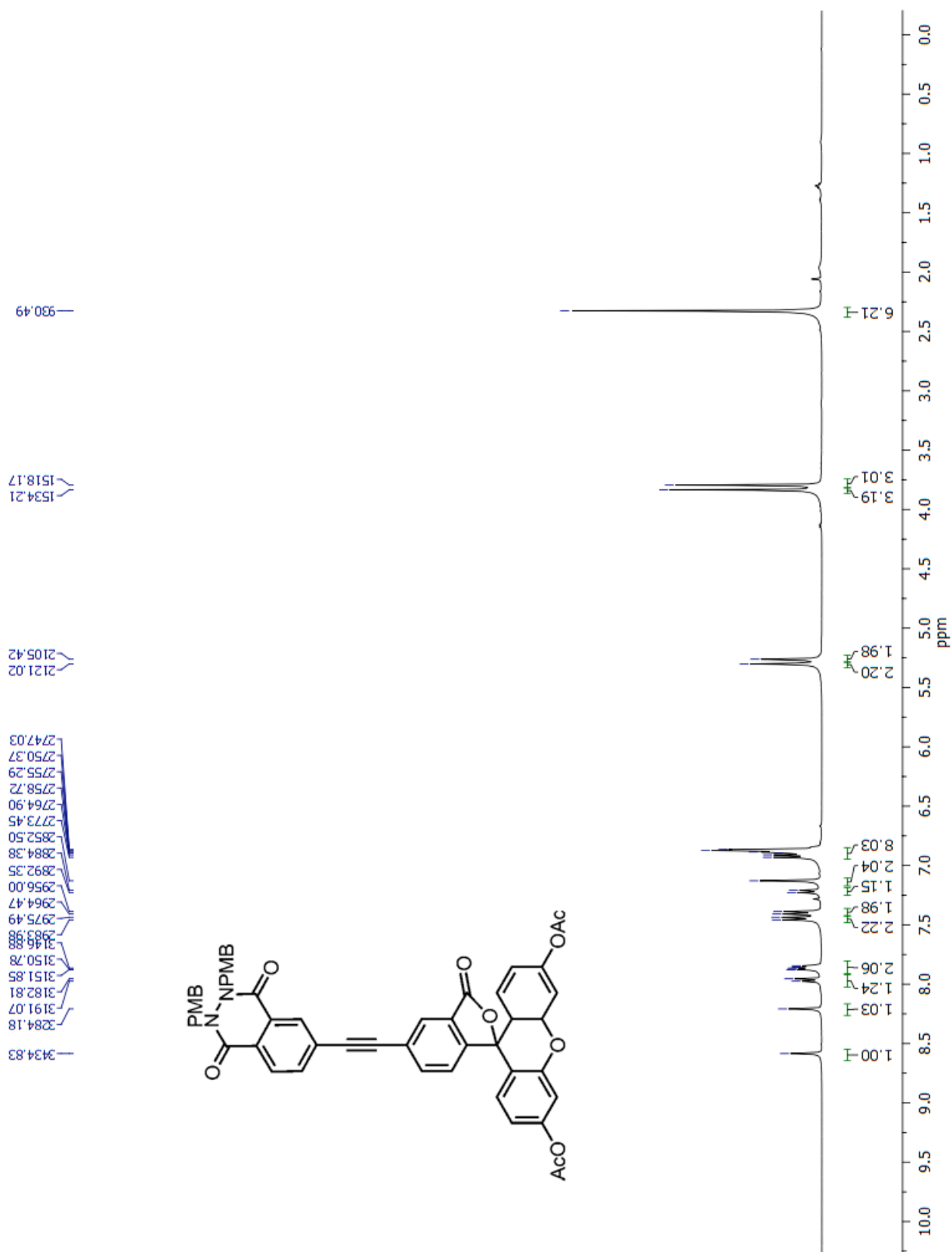


Figure S9. ^1H NMR Spectrum of Compound 9

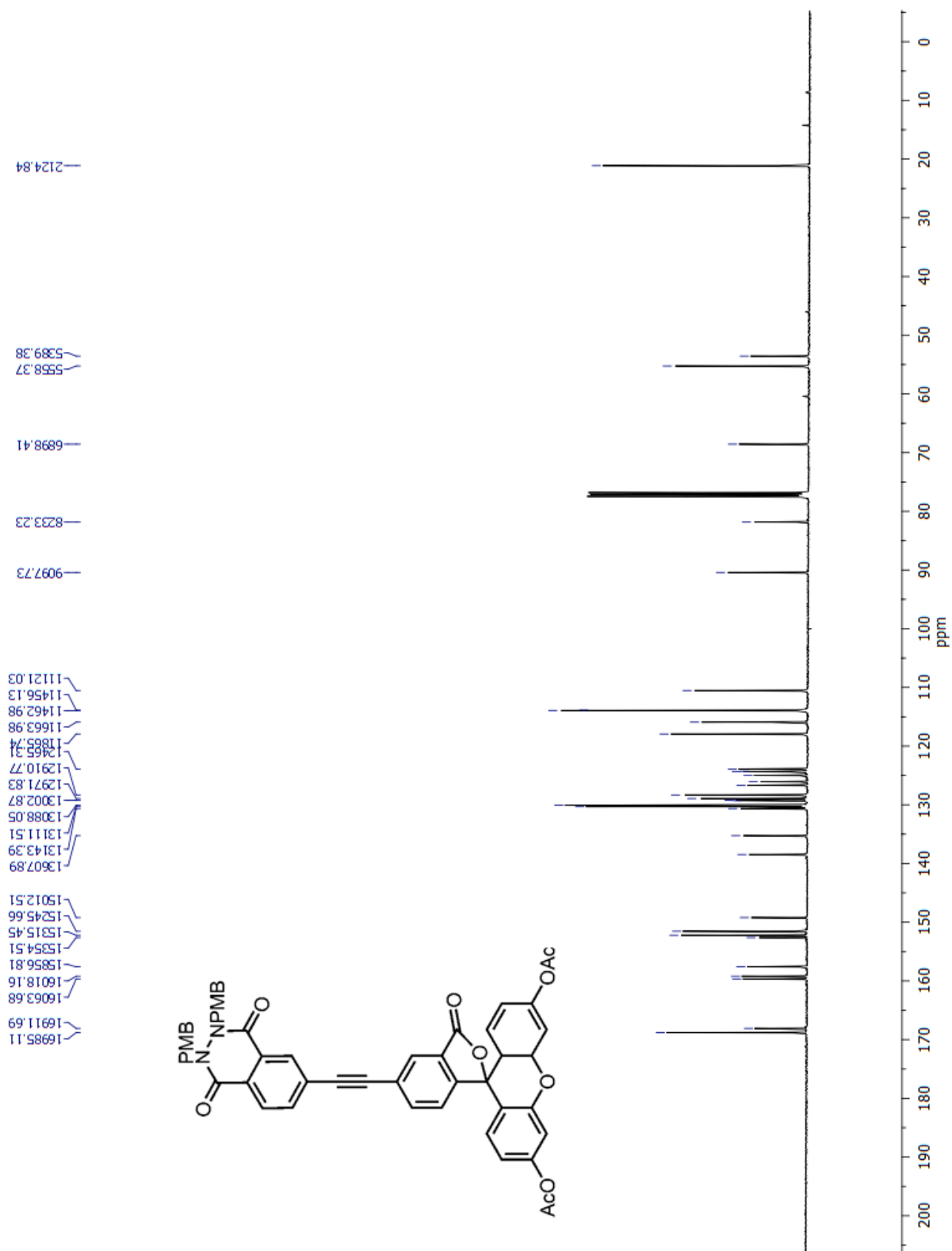


Figure S10. ^{13}C NMR Spectrum of Compound 9

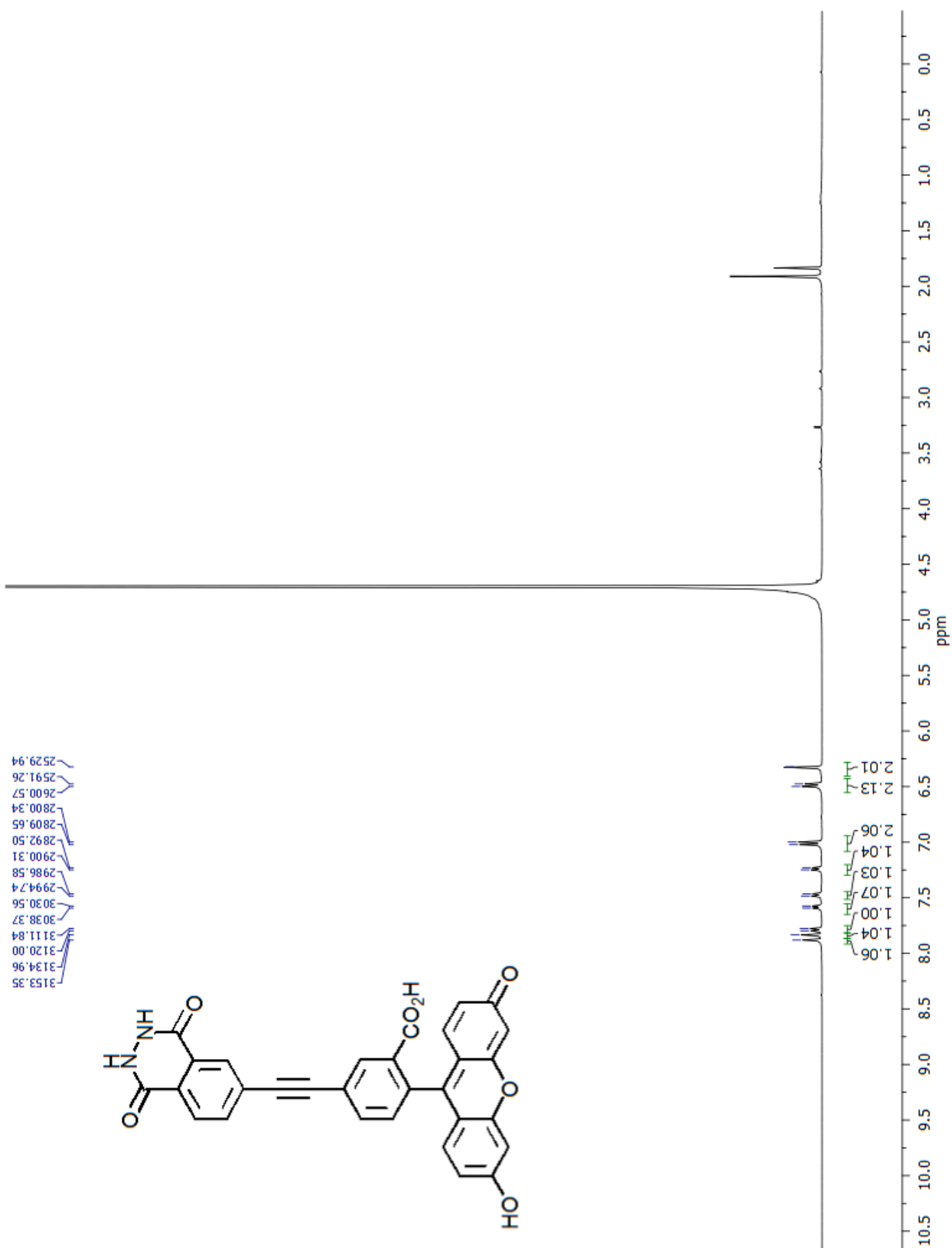


Figure S11. ^1H NMR Spectrum of Compound 10

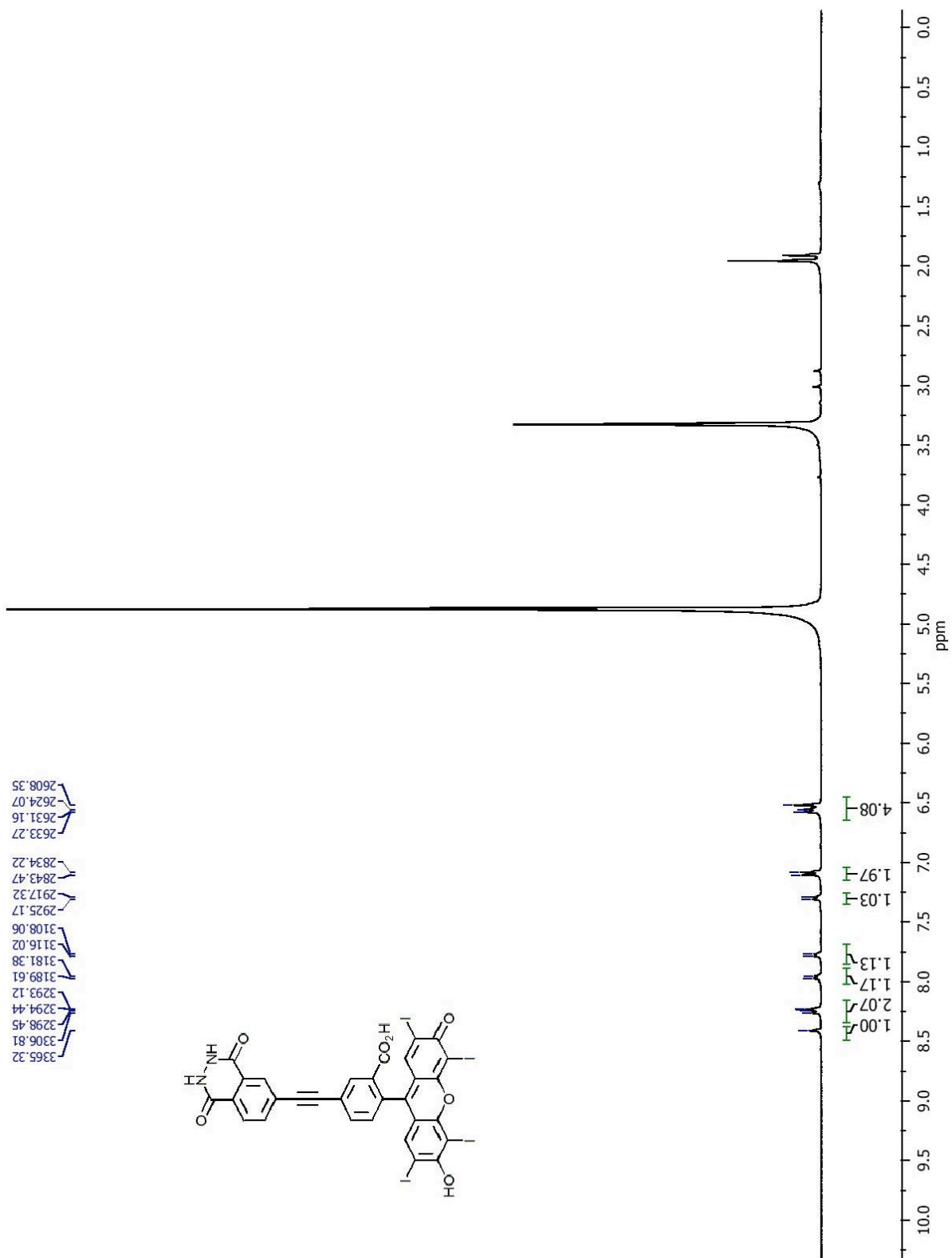


Figure S12. ^1H NMR Spectrum of Compound 11

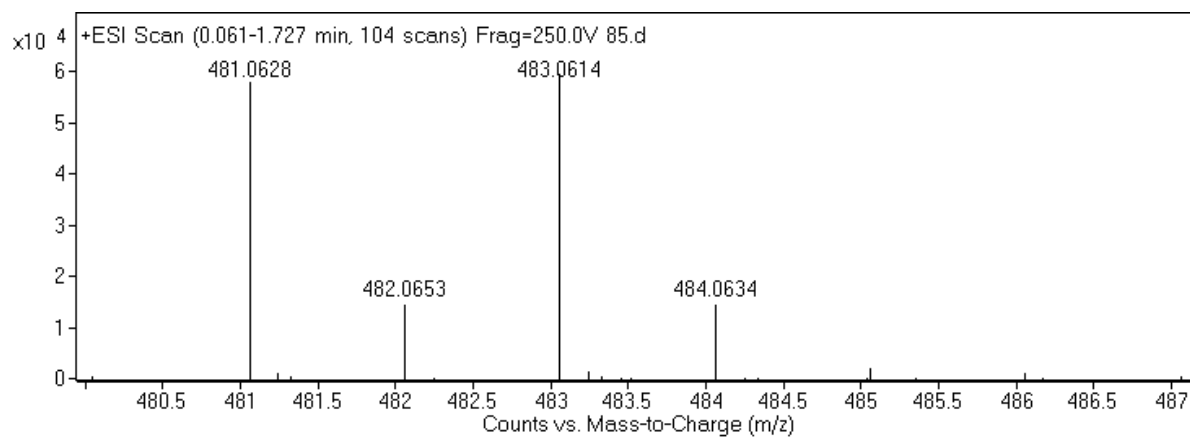


Figure S13. ESI-HRMS of Compound 3

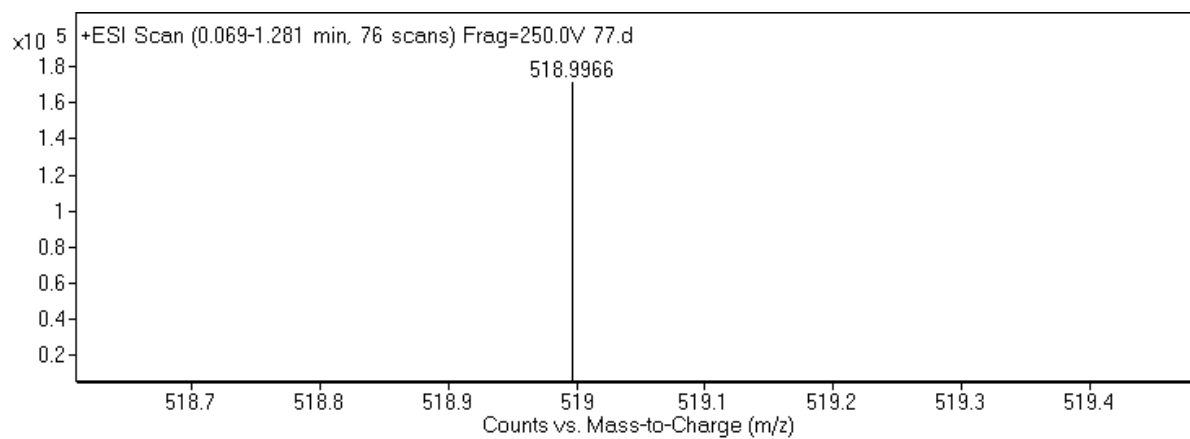


Figure S14. ESI-HRMS of Compound 6

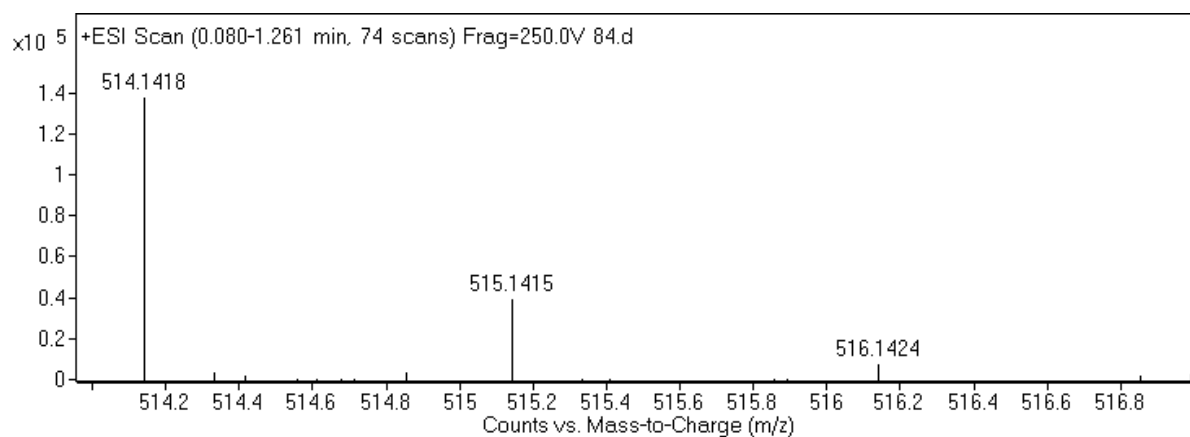


Figure S15. ESI-HRMS of Compound 7

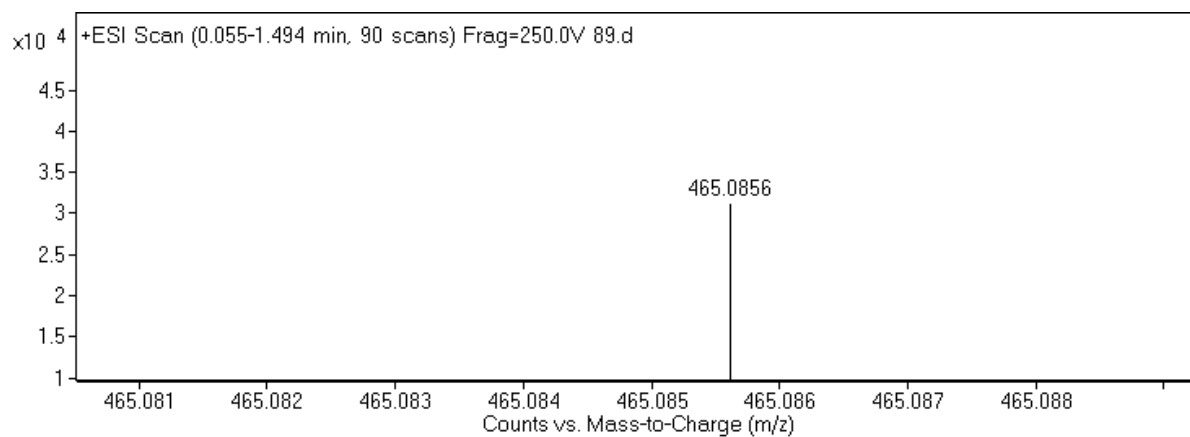


Figure S16. ESI-HRMS of Compound 8

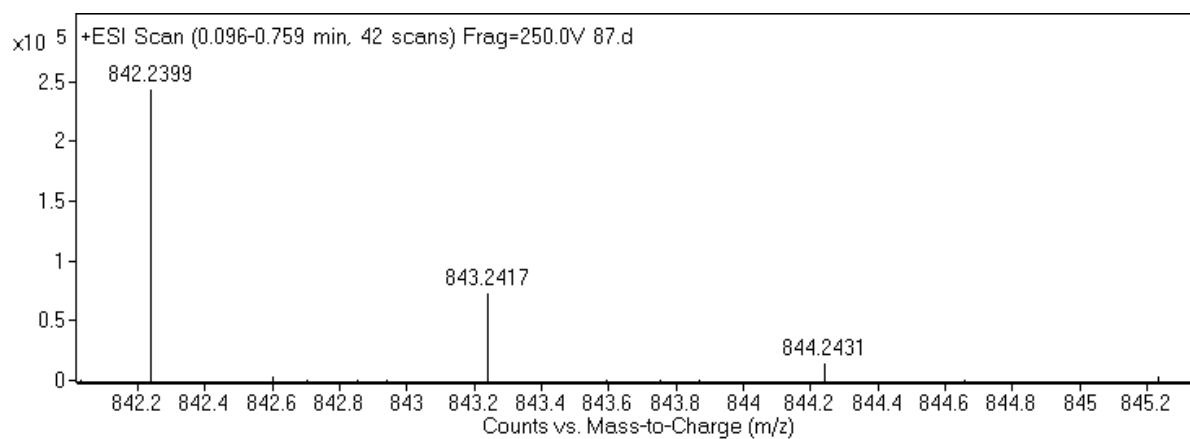


Figure S17. ESI-HRMS of Compound 9

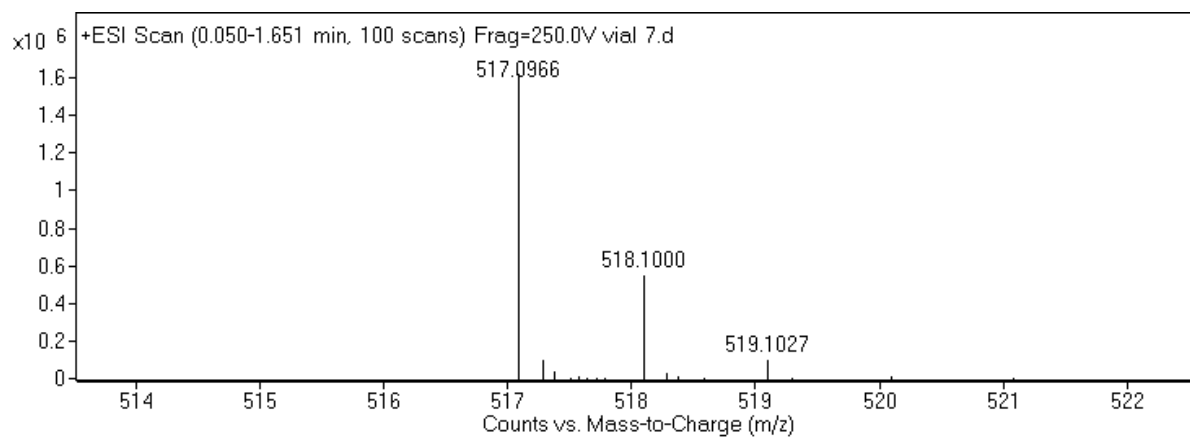


Figure S18. ESI-HRMS of Compound 10

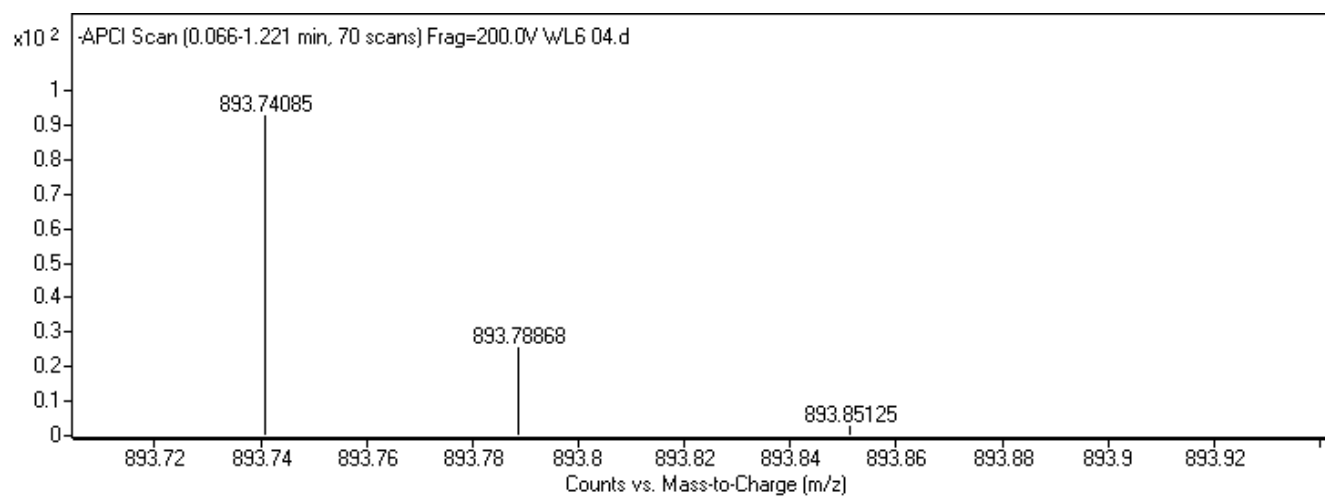
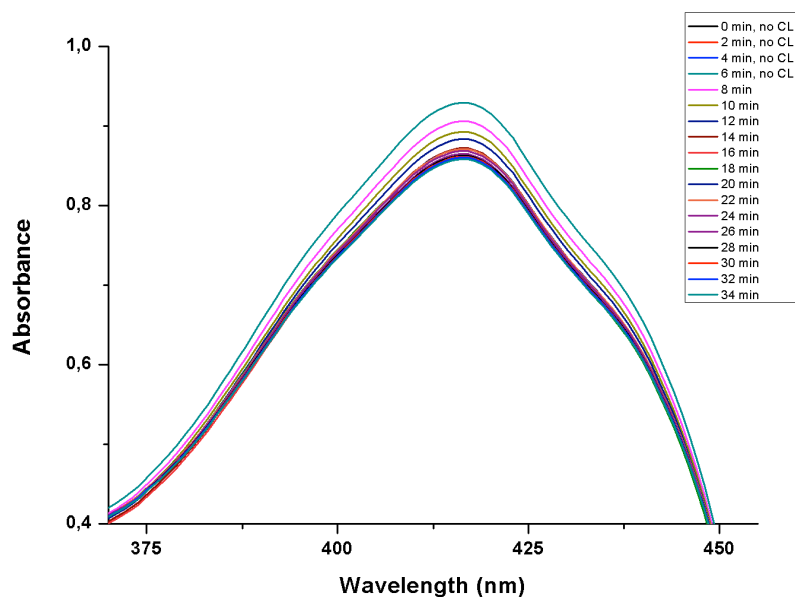


Figure S19. ESI-HRMS of Compound 11

a.



b.

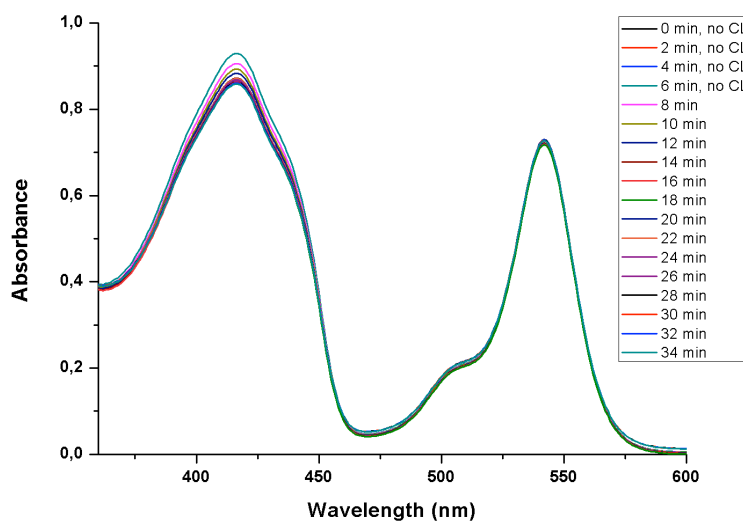


Figure S20. Bleaching of 47 μM DPBF in DMSO in the presence of 104 μM of compound 11. (Figure S20a) The sample solutions contain 300 μl of pH=10 buffer solution (Na_2CO_3 and NaHCO_3). After 6 minutes, chemiluminescence is induced by 300 μl of $1.5 \times 10^{-3} \text{M}$ CuSO_4 and $2 \times 10^{-3} \text{M}$ H_2O_2 . Absorbance was measured in 2 minutes intervals. During bleaching of DPBF, no change is observed in absorption spectrum of compound 11. (Figure S20b)

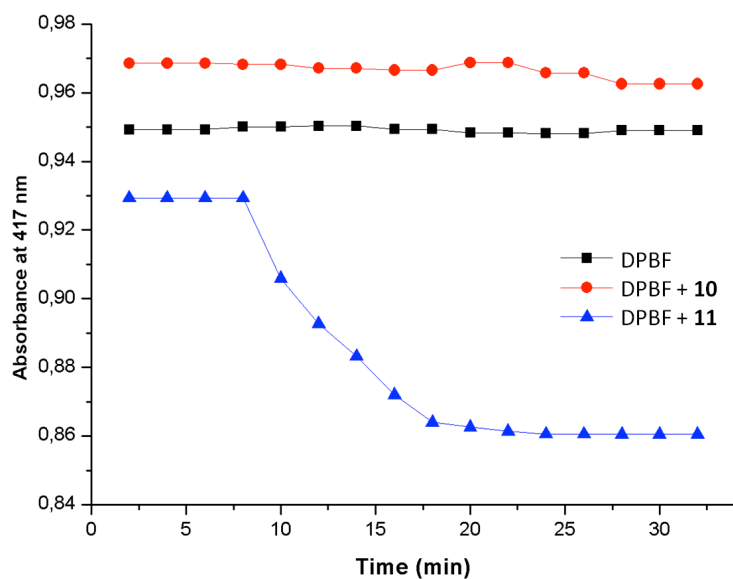


Figure S21. Absorbance of DPBF in DMSO at 417 nm without compound 11 or 10 (square), in the presence of compound 10 (circle), in the presence of compound 11 (triangle).

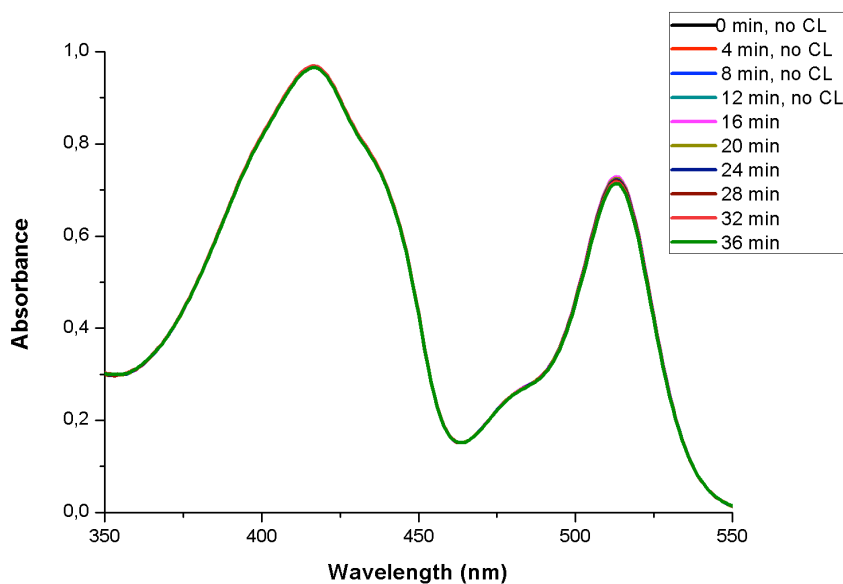


Figure S22. Bleaching of 47 μM DPBF in DMSO in the presence of 104 μM of compound 10. The sample solutions contain 300 μl of pH=10 buffer solution (Na_2CO_3 and NaHCO_3). After 12 minutes, chemiluminescence is induced by 300 μl of $1.5 \times 10^{-3} \text{M}$ CuSO_4 and $2 \times 10^{-3} \text{M}$ H_2O_2 . Absorbance was measured in 4 minutes intervals.

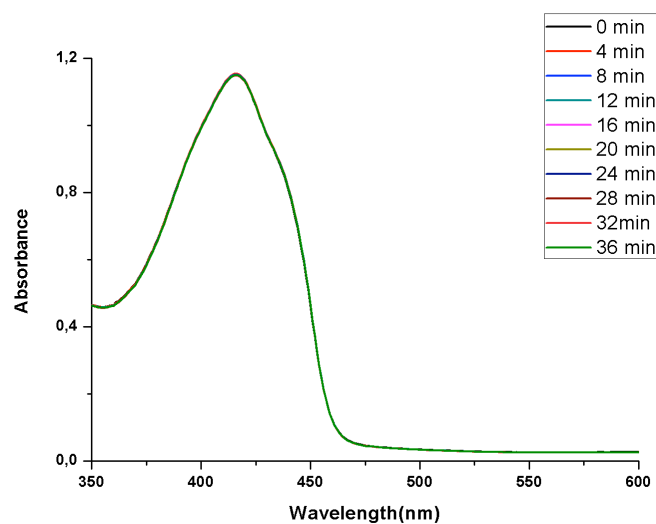
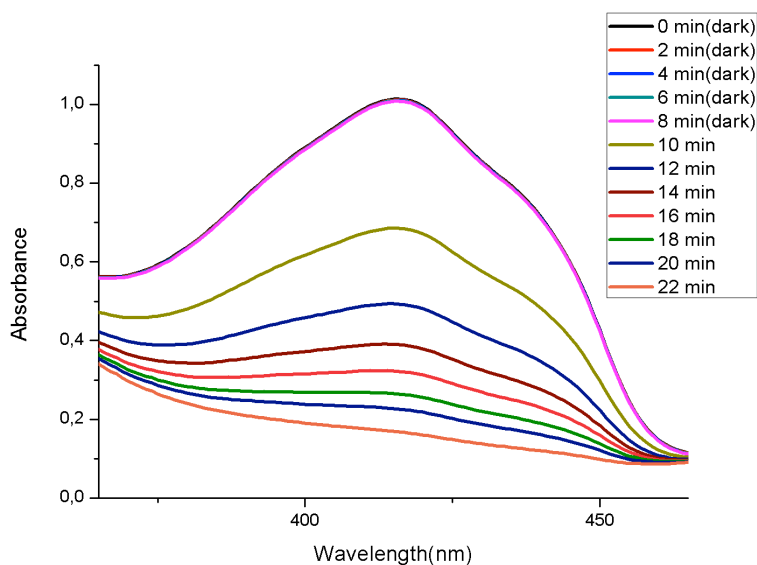


Figure S23. Absorbance of 47 μM DPBF in DMSO. The sample solutions contain 300 μl of pH=10 buffer solution (Na_2CO_3 and NaHCO_3) and 300 μl of $1.5 \times 10^{-3} \text{M}$ CuSO_4 and $2 \times 10^{-3} \text{M}$ H_2O_2 . Absorbance was measured in 4 minutes intervals.

a.



b.

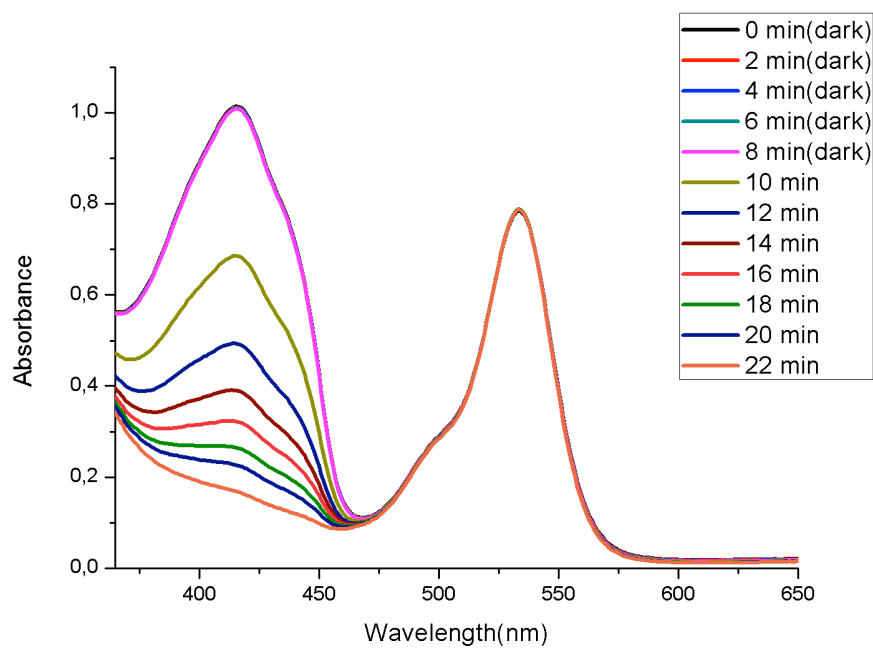


Figure S24. Bleaching of 47 μM DPBF in DMSO in the presence of compound 11. (Figure S24a) For the first 8 minutes sample was kept at dark, then irradiated with 530 nm light for 16 minutes. Absorbance was measured in 2 minutes intervals. During bleaching of DPBF, no change is observed in absorption spectrum of compound 11. (Figure S24 b)

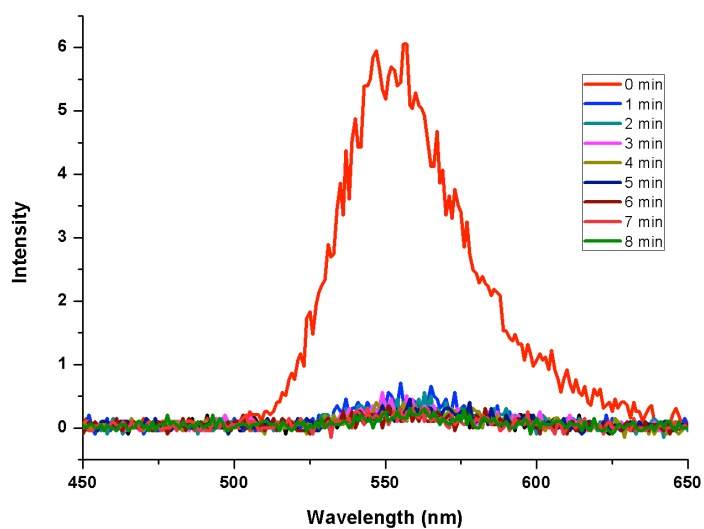


Figure S25. Chemiluminescence intensity of compound 10. Intensity was measured in 1 minute intervals.

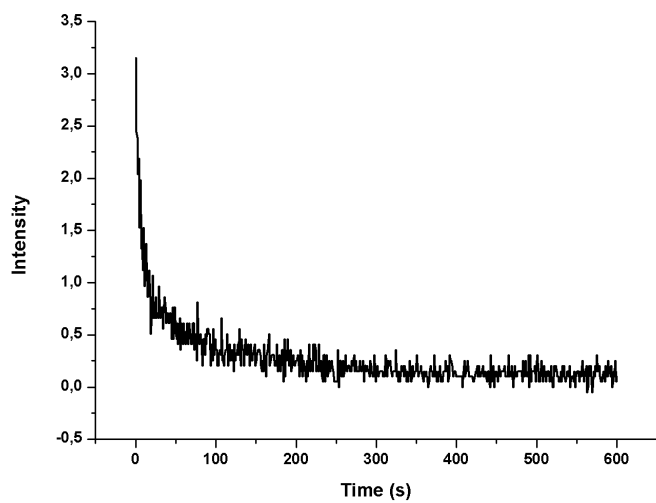


Figure S26. Chemiluminescence intensity decay curve of compound 10. Intensity was measured in 1 minute intervals.