

Electronic Supplementary Information

Synthesis and photophysical properties of porphyrin-BODIPY dyad and porphyrin-*o*-carborane-BODIPY triad

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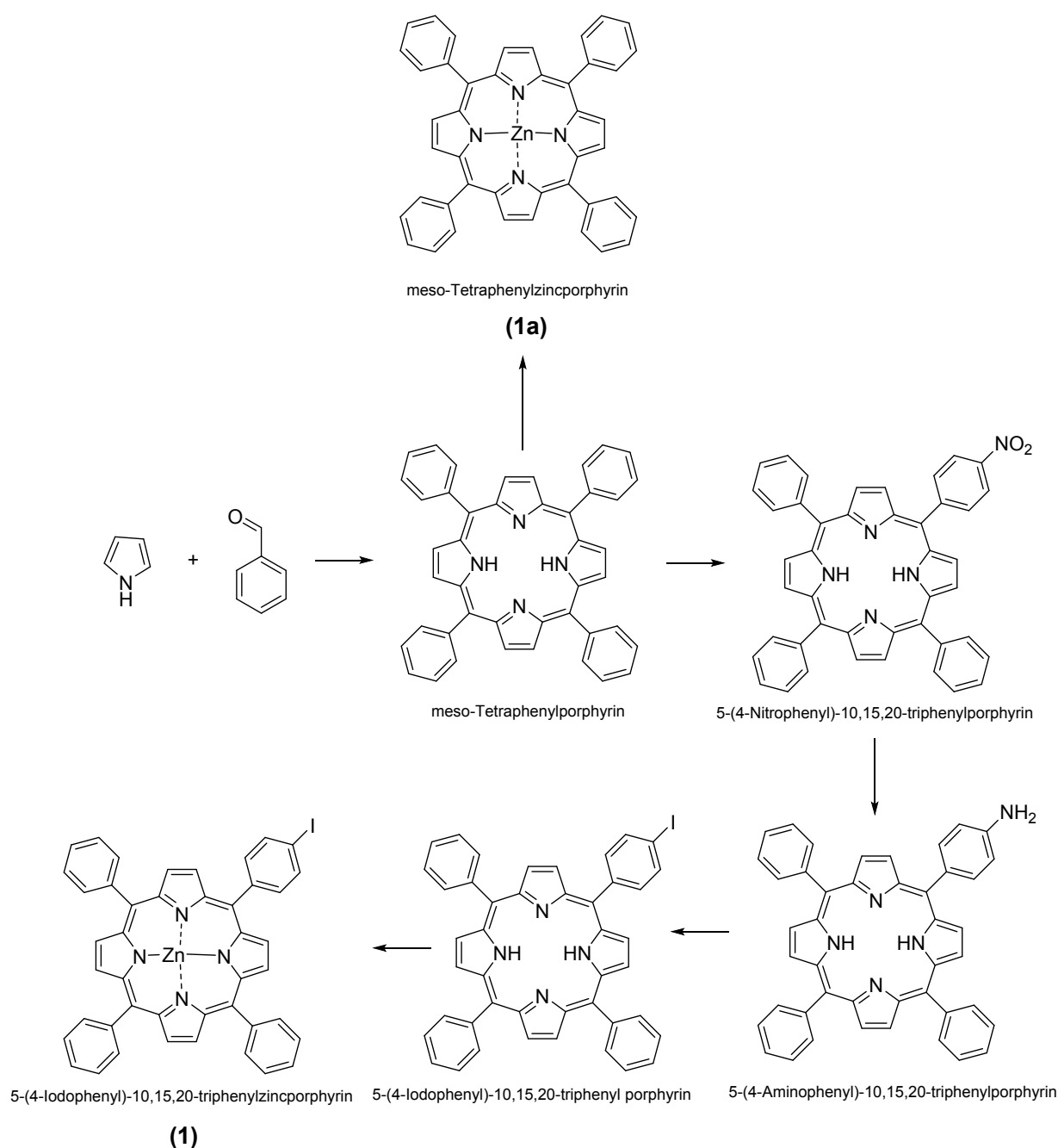
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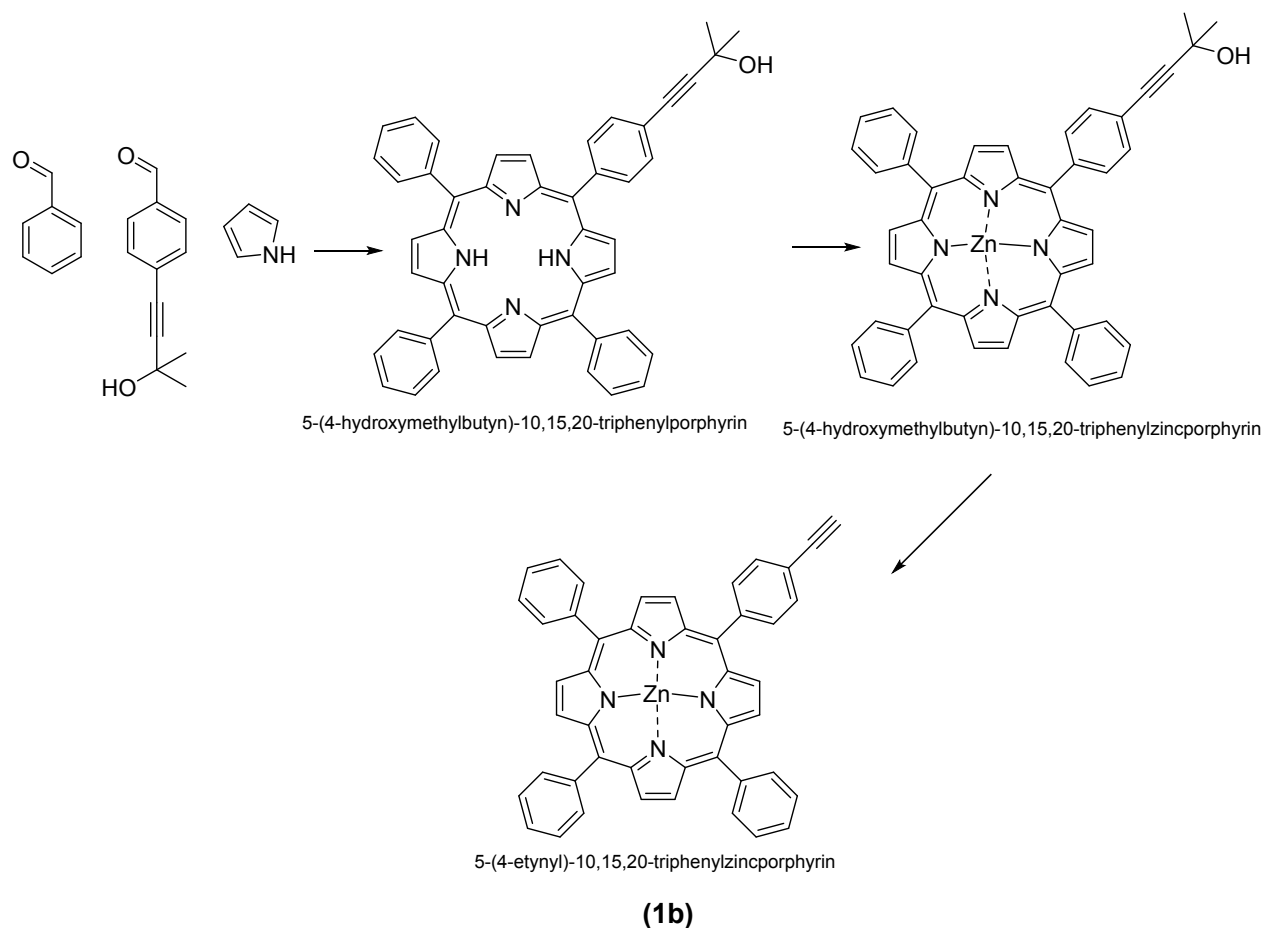
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Experimental section



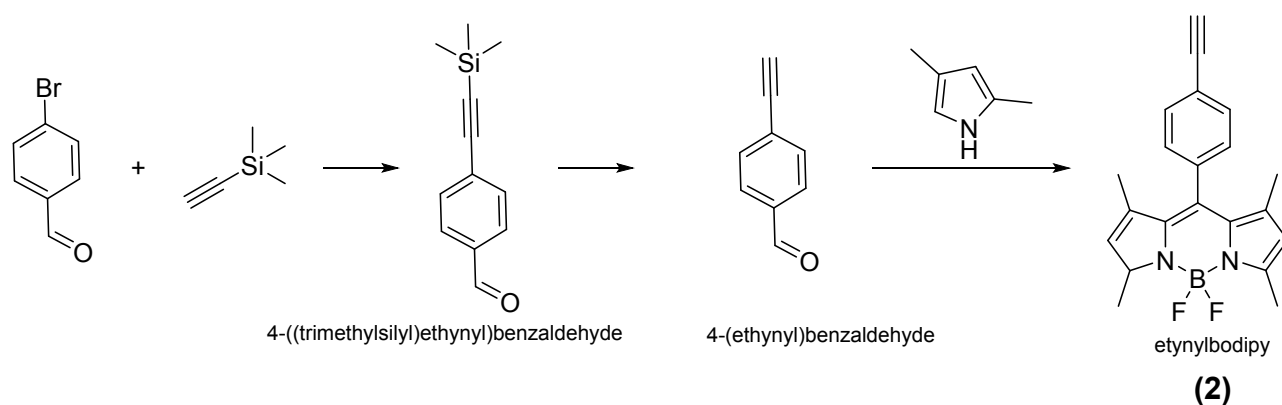
Scheme S1: Synthetic routes for the preparation of **1**.

meso-Tetraphenylporphyrin ¹, meso-Tetraphenylzincporphyrin (**1a**)², 5-(4-Nitrophenyl)-10,15,20-triphenylporphyrin³, 5-(4-Aminophenyl)-10,15,20-triphenylporphyrin³, 5-(4-Iodophenyl)-10,15,20-triphenyl porphyrin ⁴ and 5-(4-Iodophenyl)-10,15,20-triphenylzincporphyrin (**1**)⁴ were synthesized according to literature methods.



Scheme S2: Synthetic routes for the preparation of **1b**.

5-(4-hydroxymethylbutyn)-10,15,20-triphenylporphyrin,⁵ 5-(4-hydroxymethylbutyn)-10,15,20-triphenylzincporphyrin⁵ and 5-(4-ethynyl)-10,15,20-triphenylzincporphyrin (**1b**)⁵ were synthesized according to literature methods.



Scheme S3: Synthetic routes for the preparation of **2**.

4-((trimethylsilyl)ethynyl)benzaldehyde (**2a**)⁶, 4-(ethynyl)benzaldehyde (**2b**)⁶, etynylbodipy (**2**)⁶ were synthesized according to literature methods.

FTIR, UV-vis, Emission, NMR and Mass spectra of 3 and 4.

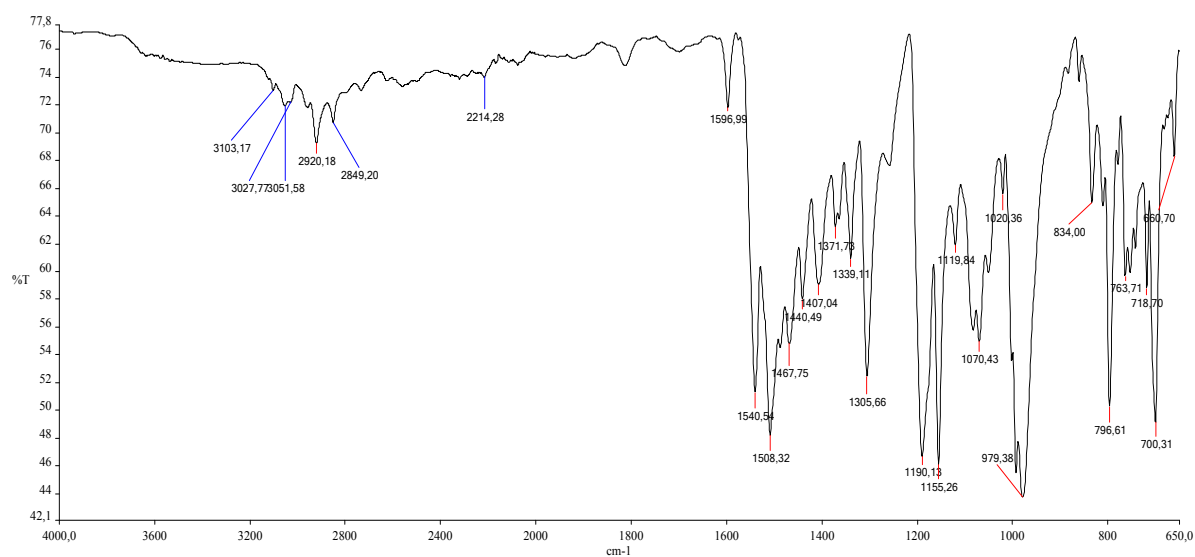


Figure S1: FTIR spectrum of 3.

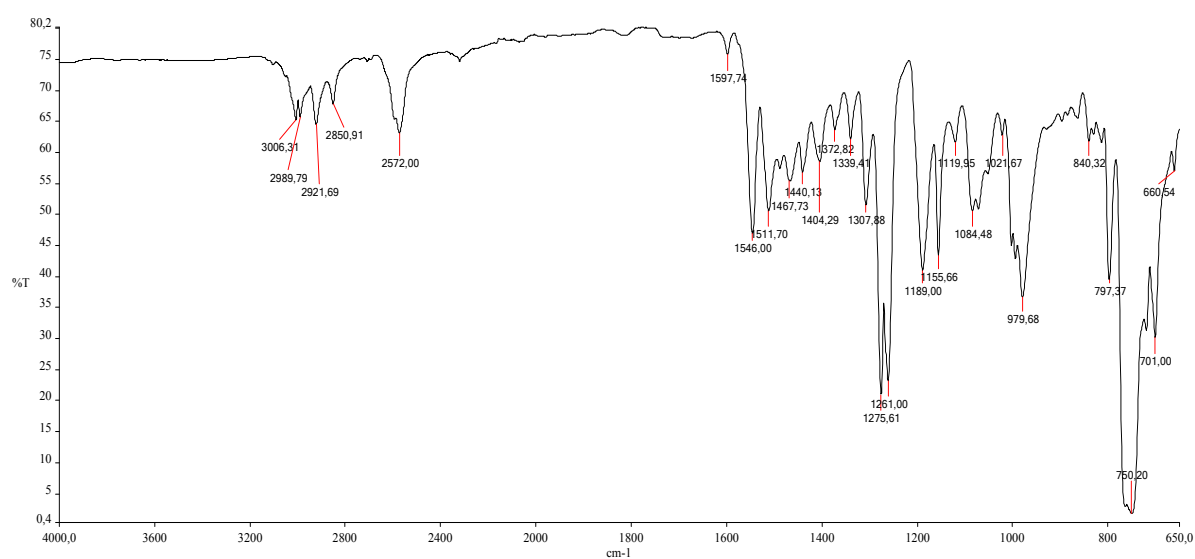


Figure S2: FTIR spectrum of 4.

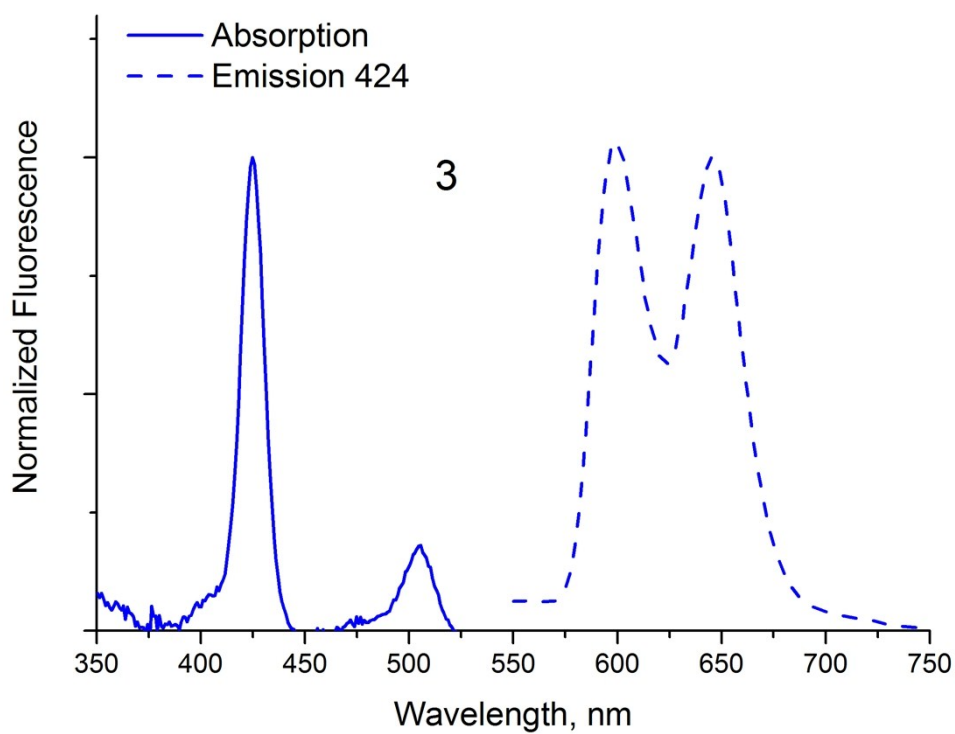


Figure S3: Normalized UV-vis and emission spectra of **3**. (Excited at 424 nm.)

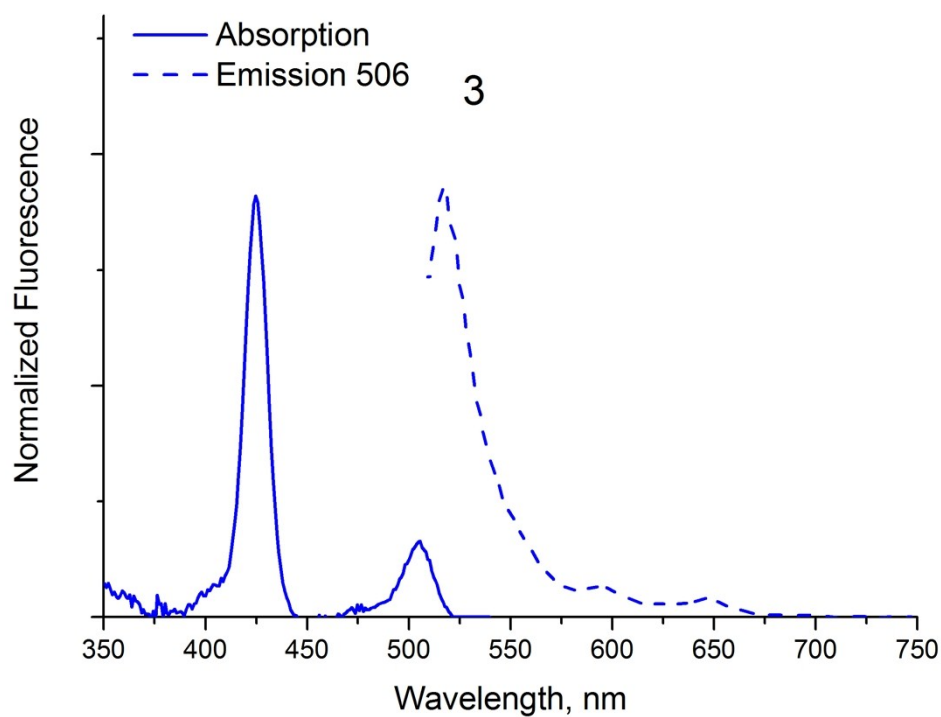


Figure S4: Normalized UV-vis and emission spectra of **3**. (Excited at 506 nm.)

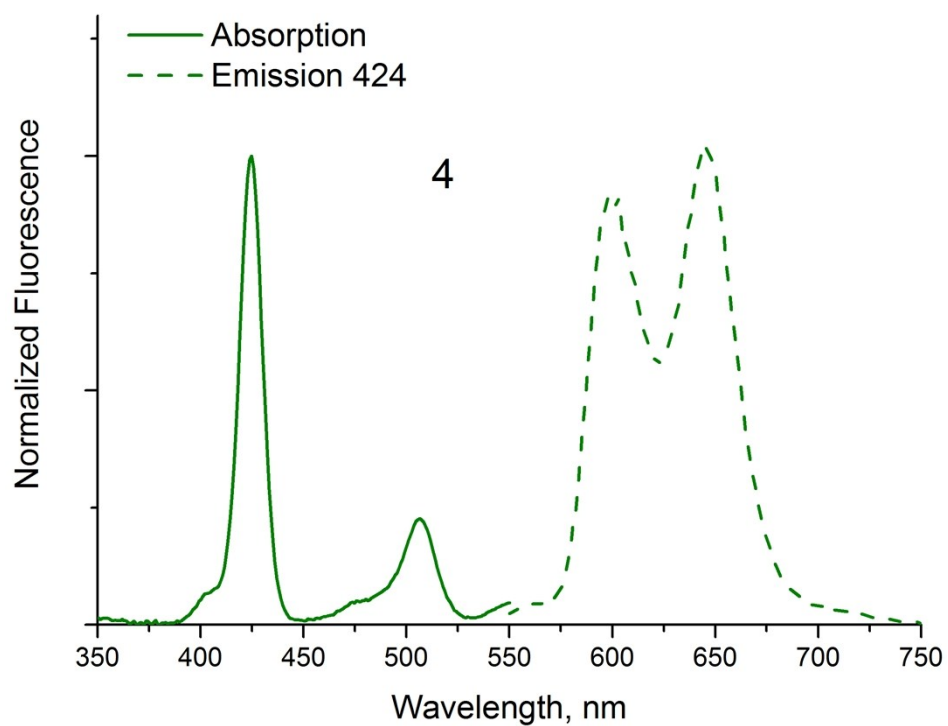


Figure S5: Normalized UV-vis and emission spectra of **4**. (Excited at 424 nm.)

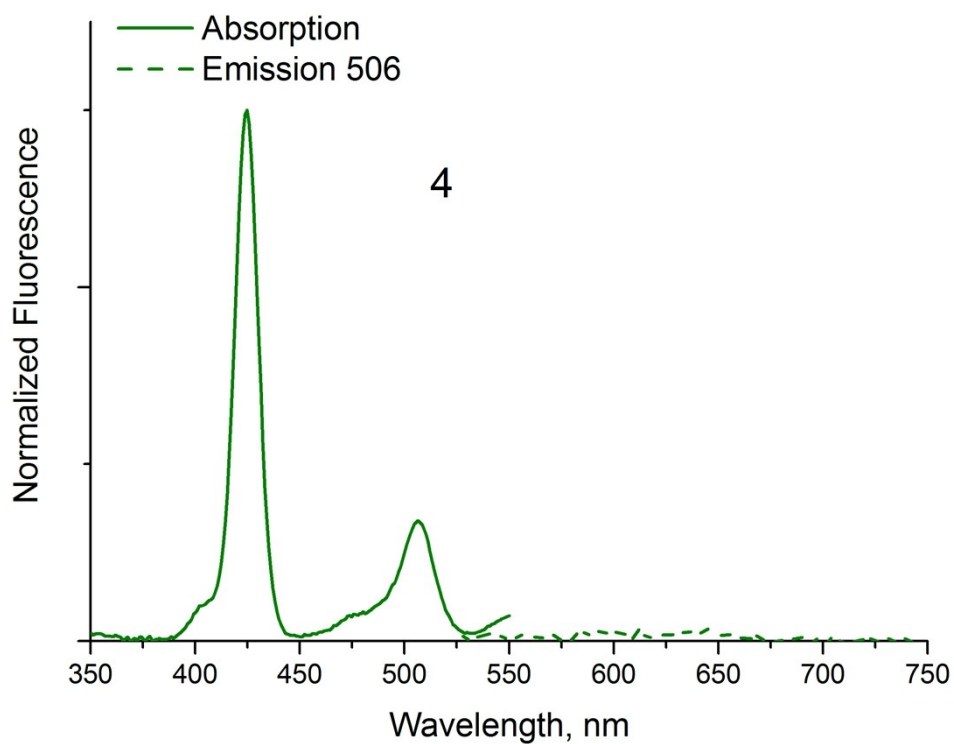


Figure S6: Normalized UV-vis and emission spectra of **4**. (Excited at 506 nm.)

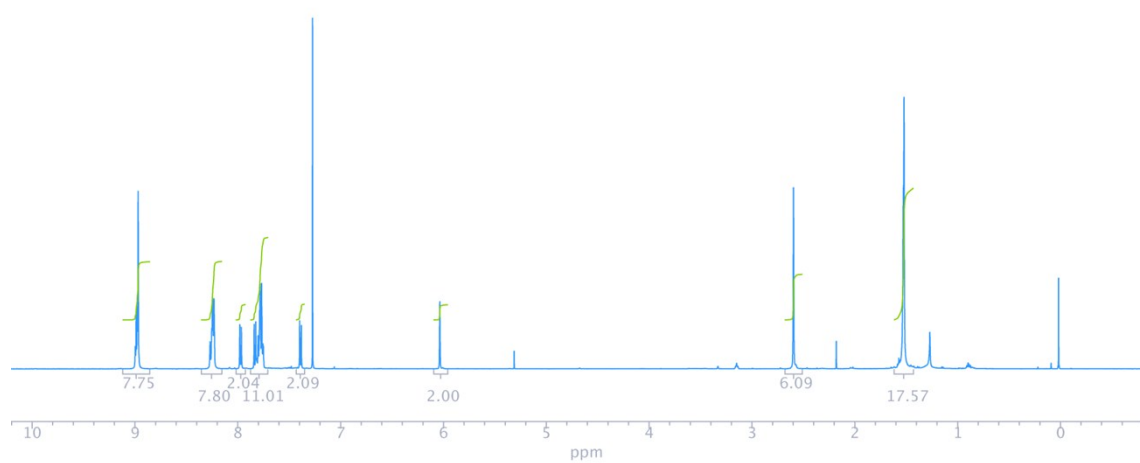


Figure S7: ^1H NMR spectrum of **3** in CDCl_3 .

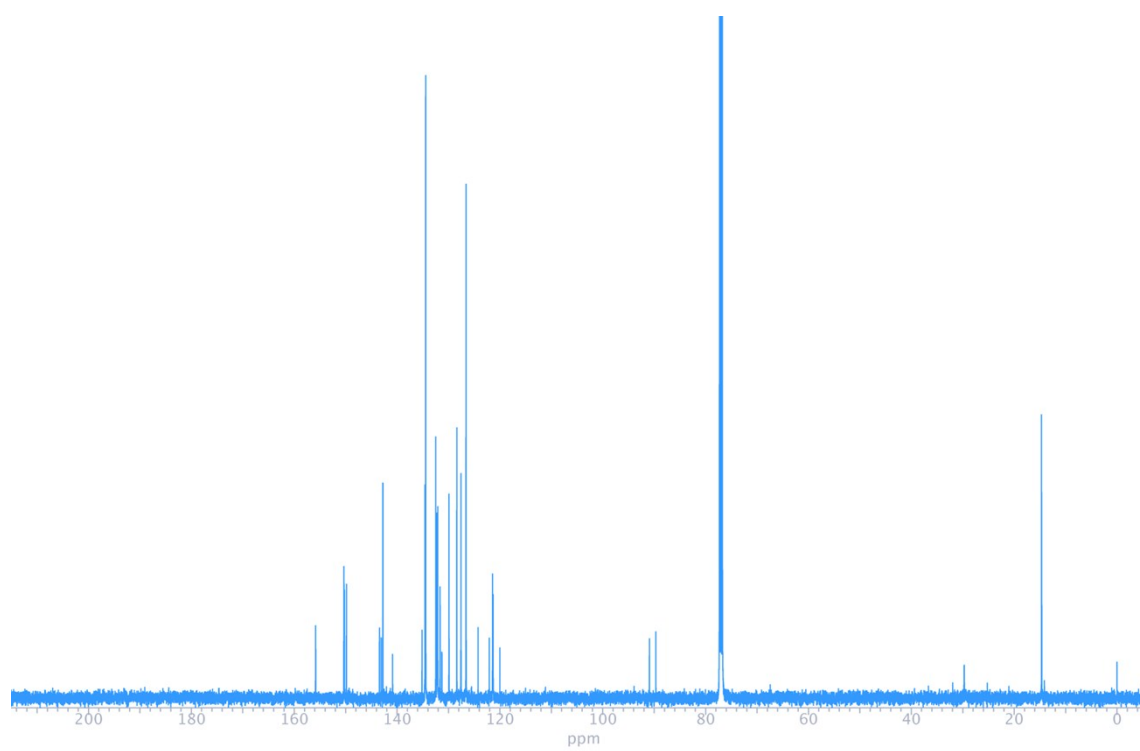


Figure S8: ^{13}C NMR spectrum of **3** in CDCl_3 .

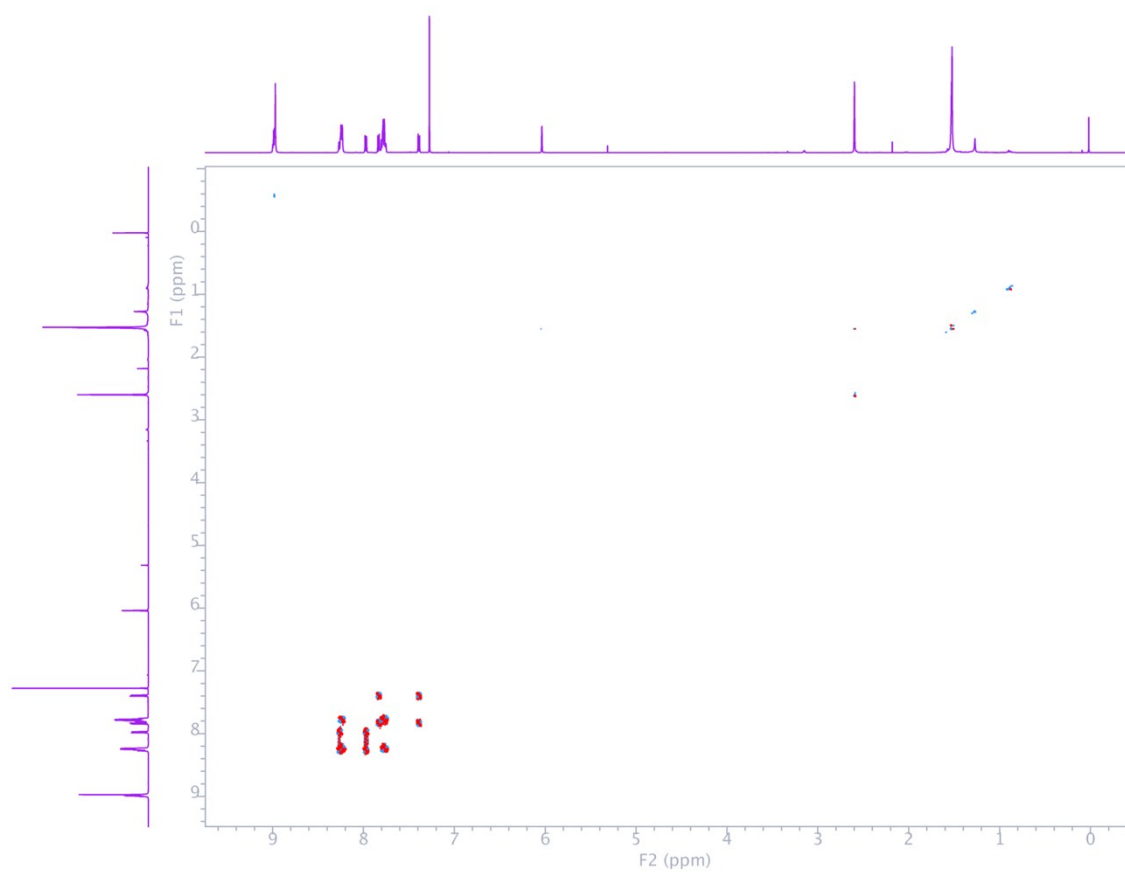


Figure S9: COSY spectrum of **3** in CDCl₃.

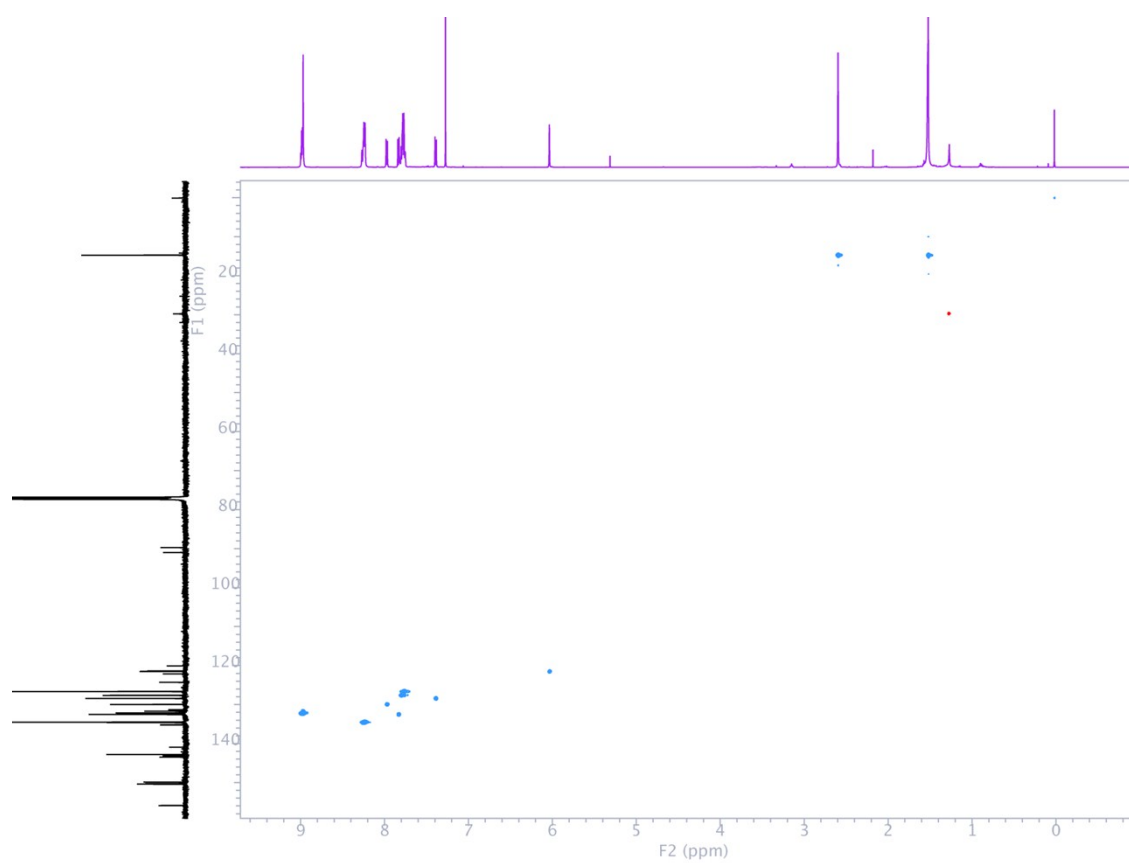


Figure S10: HSQC spectrum of **3** in CDCl₃.

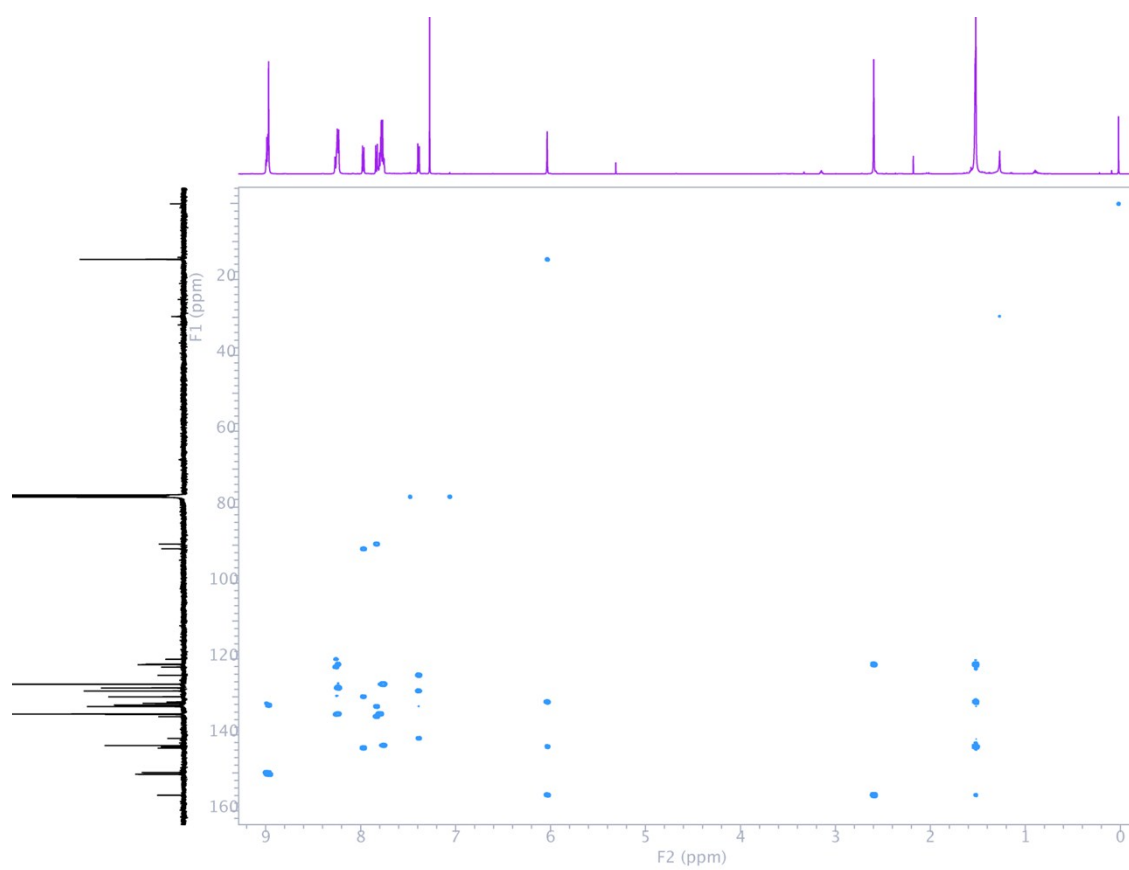


Figure S11: HMBC spectrum of **3** in CDCl₃.

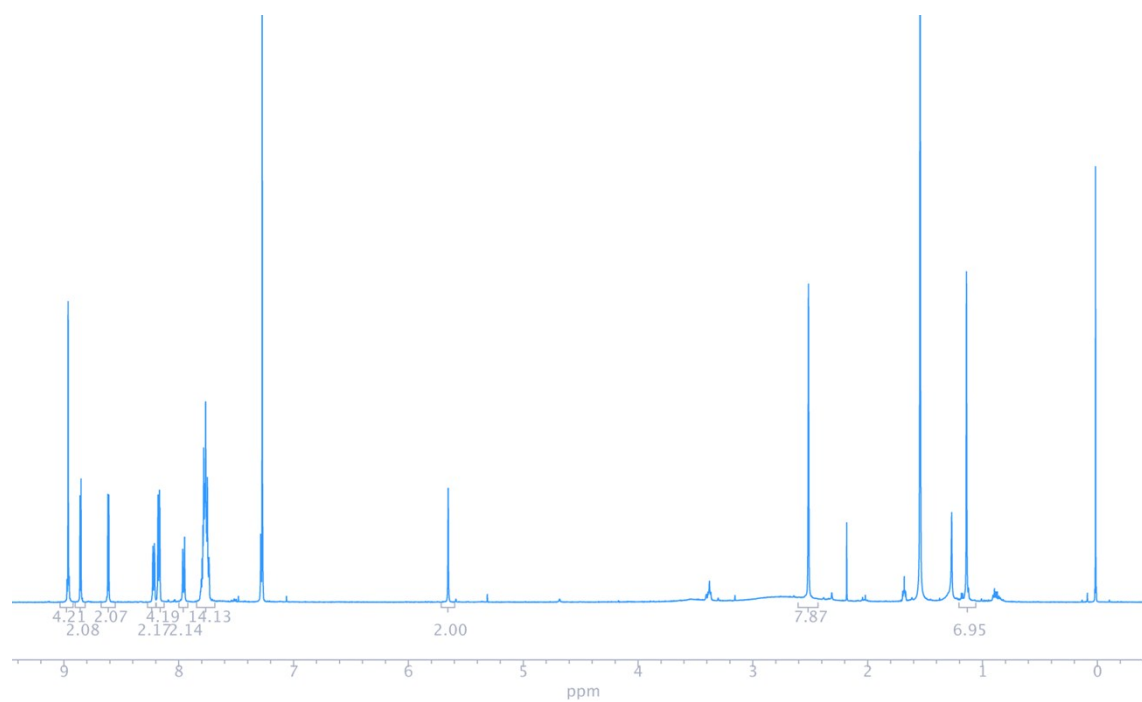


Figure S12: ¹H NMR spectrum of **4** in CDCl₃.

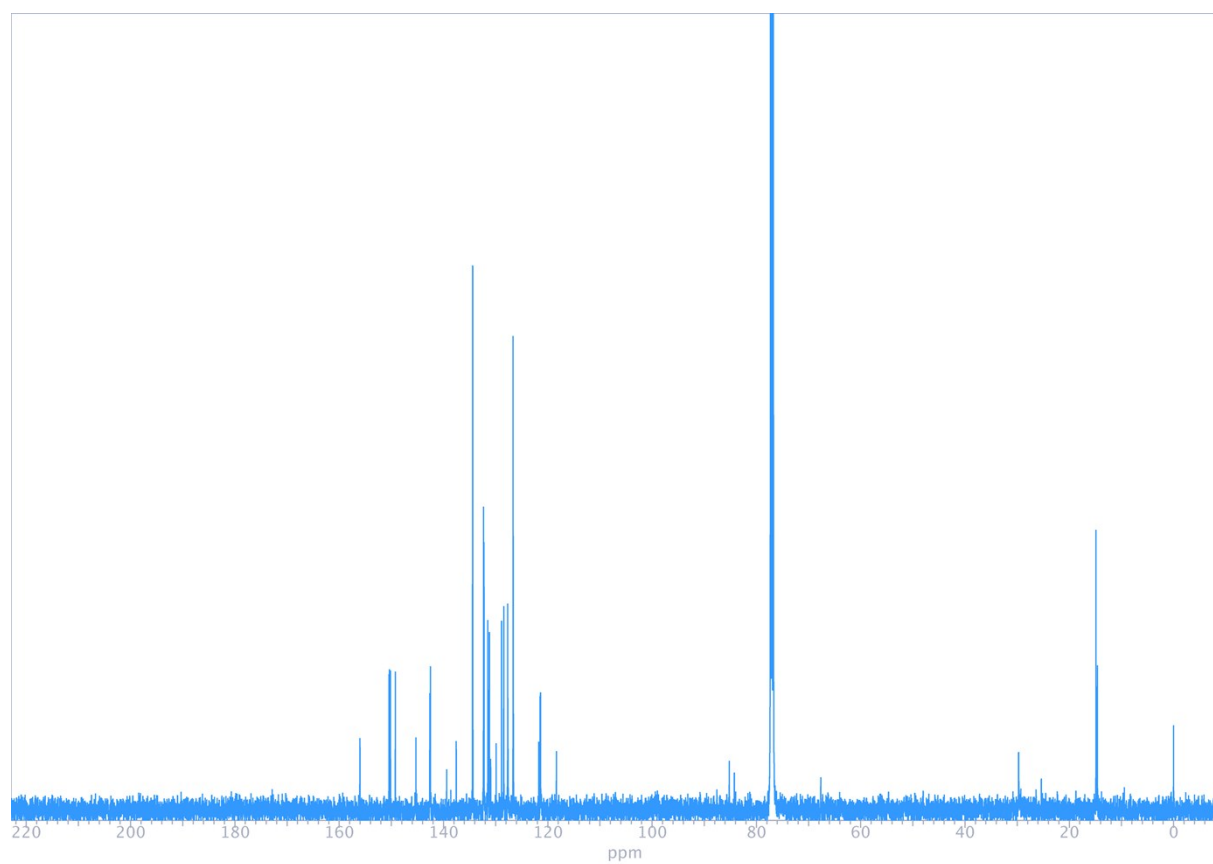


Figure S13: ¹³C NMR spectrum of **4** in CDCl₃.

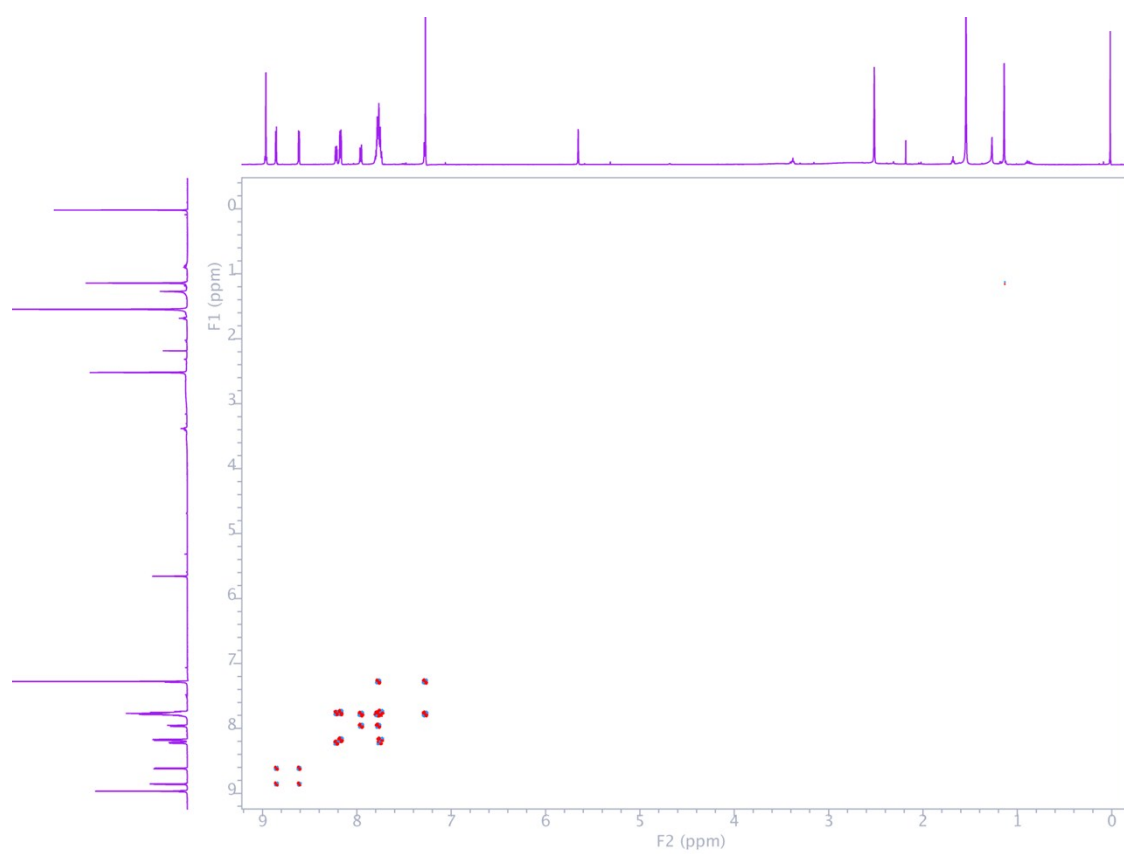


Figure S14: COSY spectrum of **4** in CDCl₃.

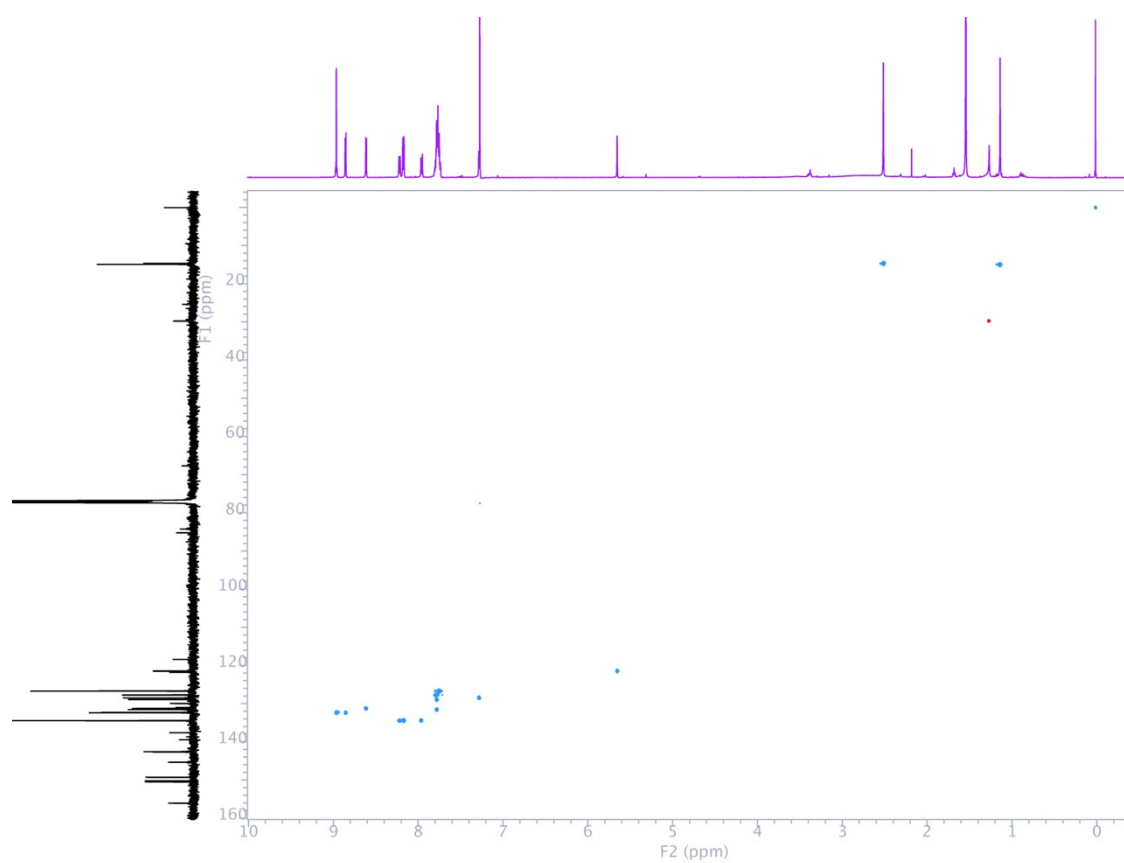


Figure S15: HSQC spectrum of **4** in CDCl_3 .

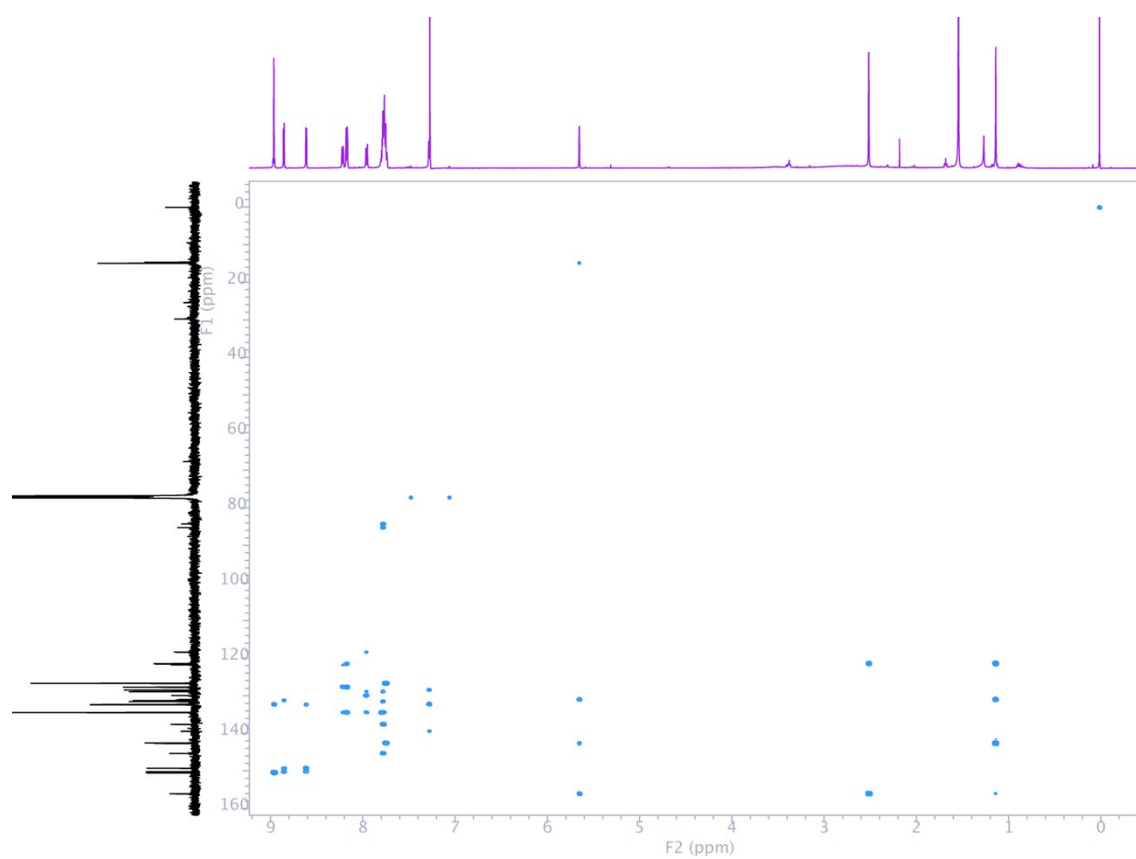


Figure S16: HMBC spectrum of **4** in CDCl_3 .

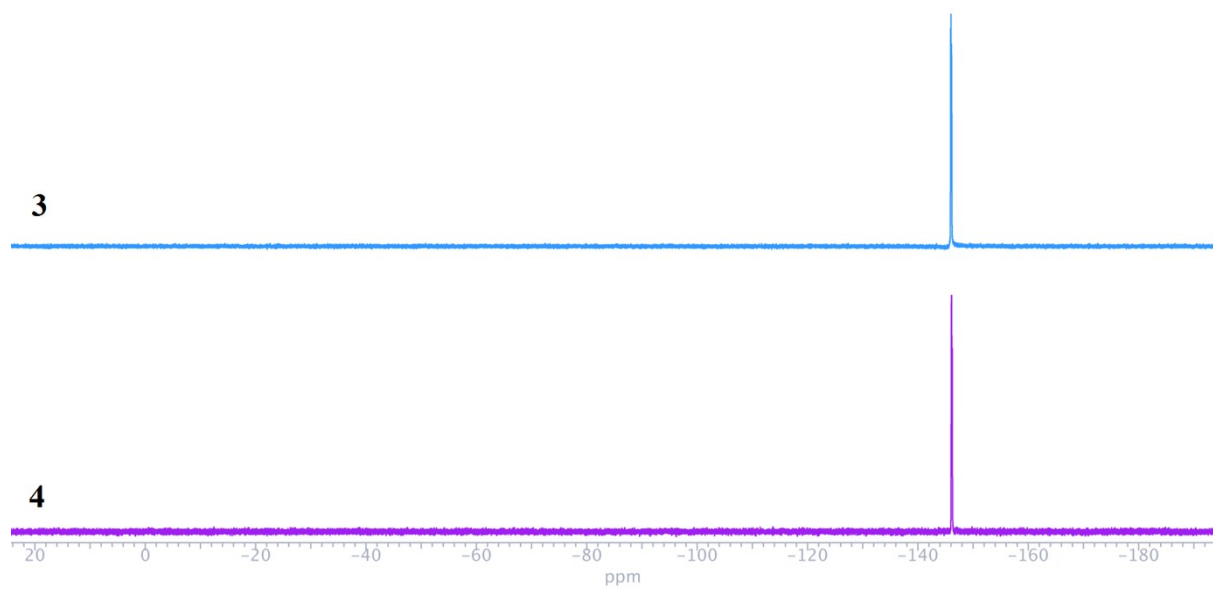


Figure S17: ^{19}F NMR spectrum of **3** and **4** in CDCl_3 .

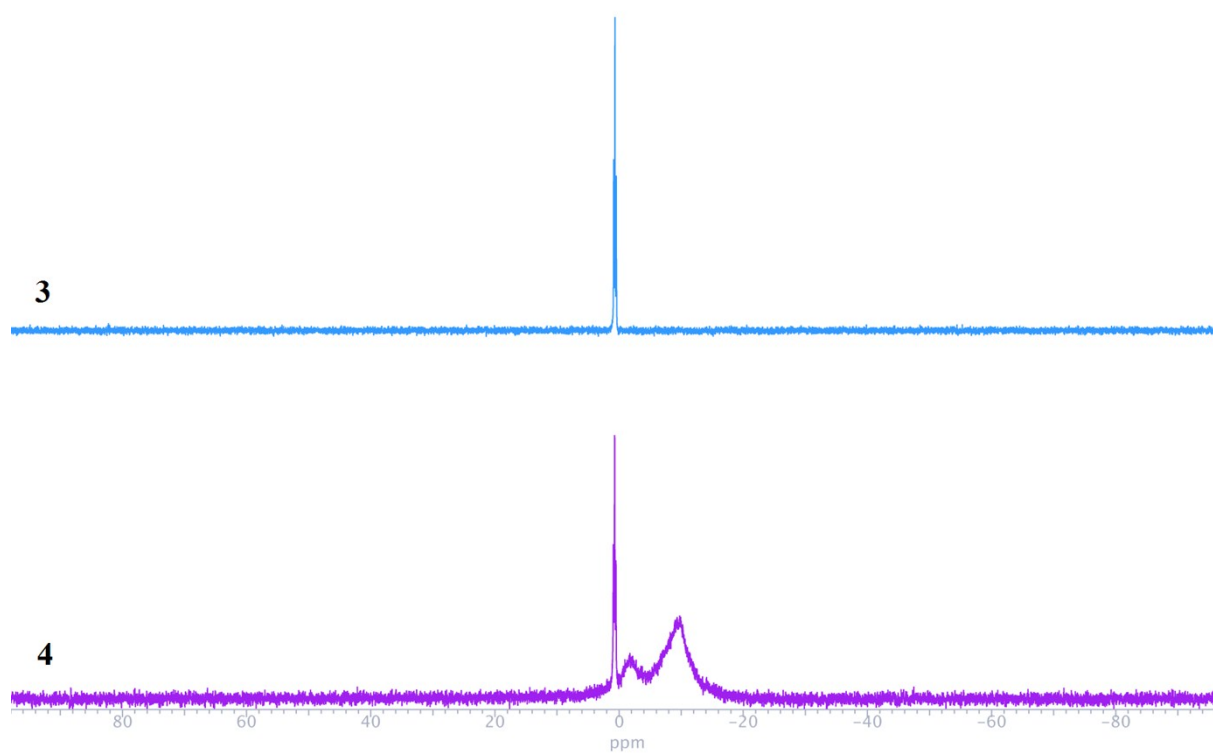


Figure S18: ^{11}B NMR spectrum of **3** and **4** in CDCl_3 .

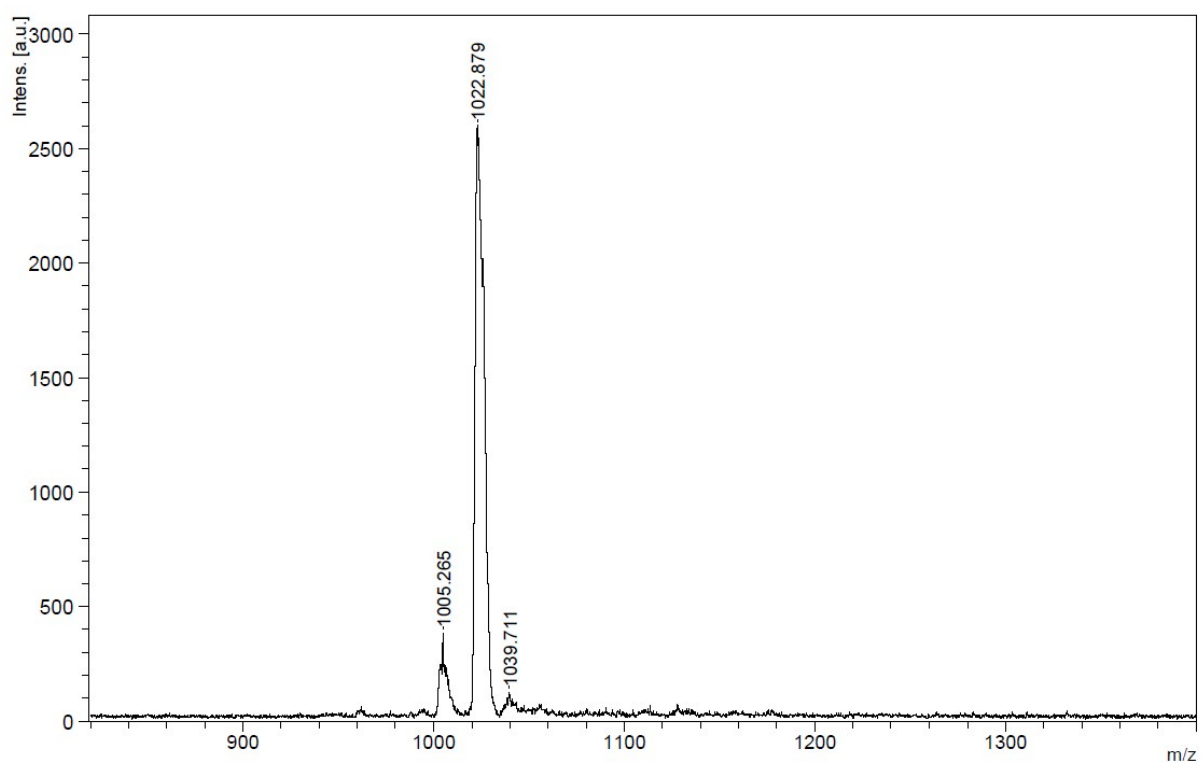


Figure S19: MALDI TOF mass spectrum of **3**.

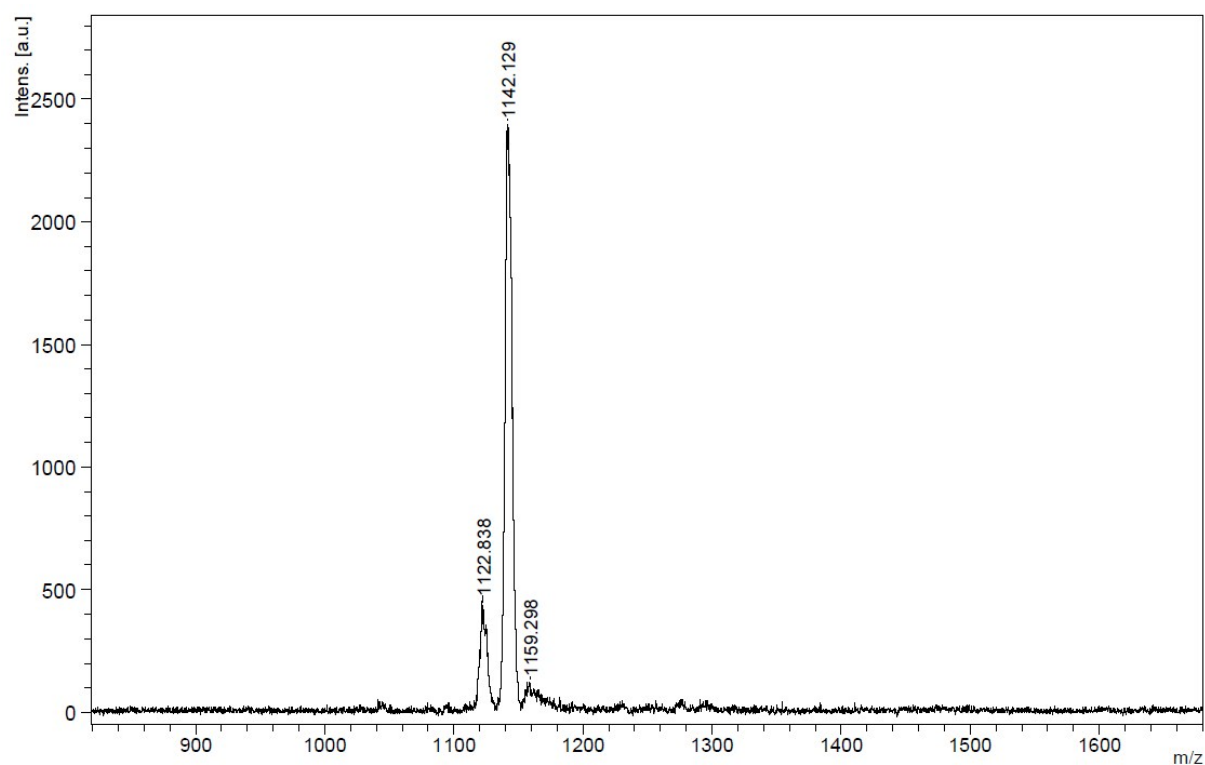


Figure S20: MALDI TOF mass spectrum of **4**.

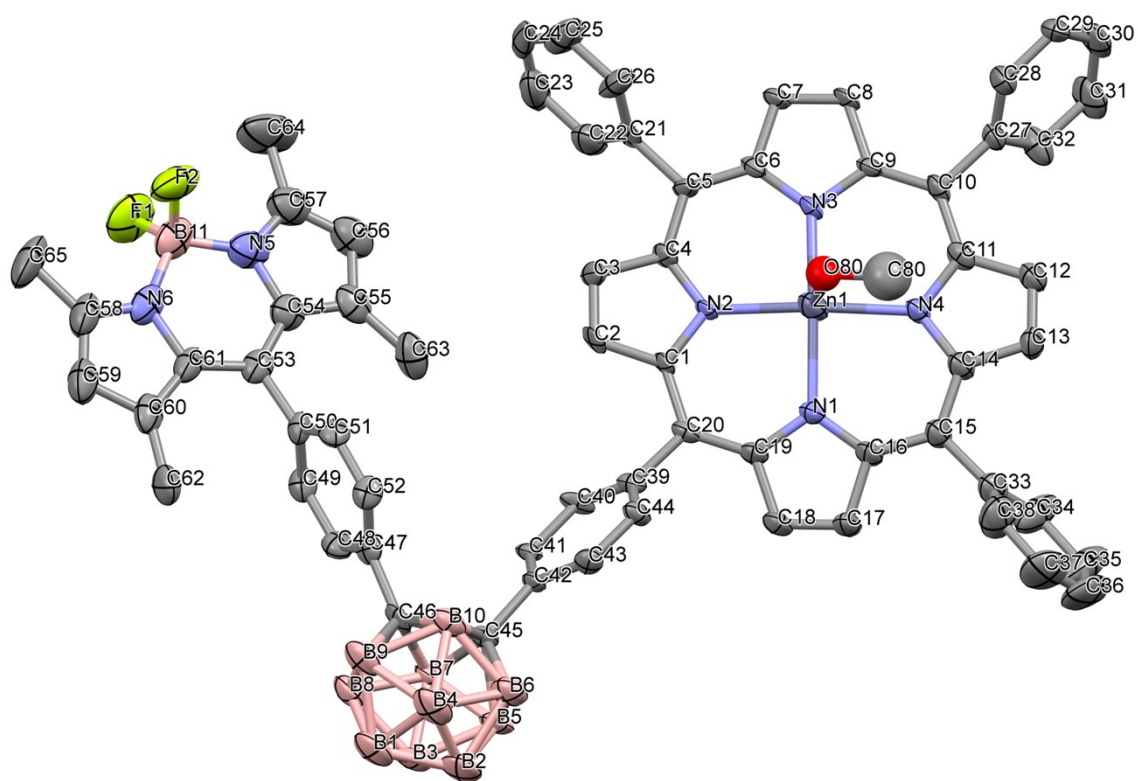


Figure S21: Molecular structure of **4**.

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