

Supporting Information

for

**Synthesis and characterization of fluorinated
azadipyrromethene complexes as acceptors for
organic photovoltaics**

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NMR and MS data

This includes all ¹H, ¹³C, and ¹⁹F NMR as well as MALDI-TOF MS spectra for
the compounds in order of appearance in the experimental section in the main text.

L1-ADP

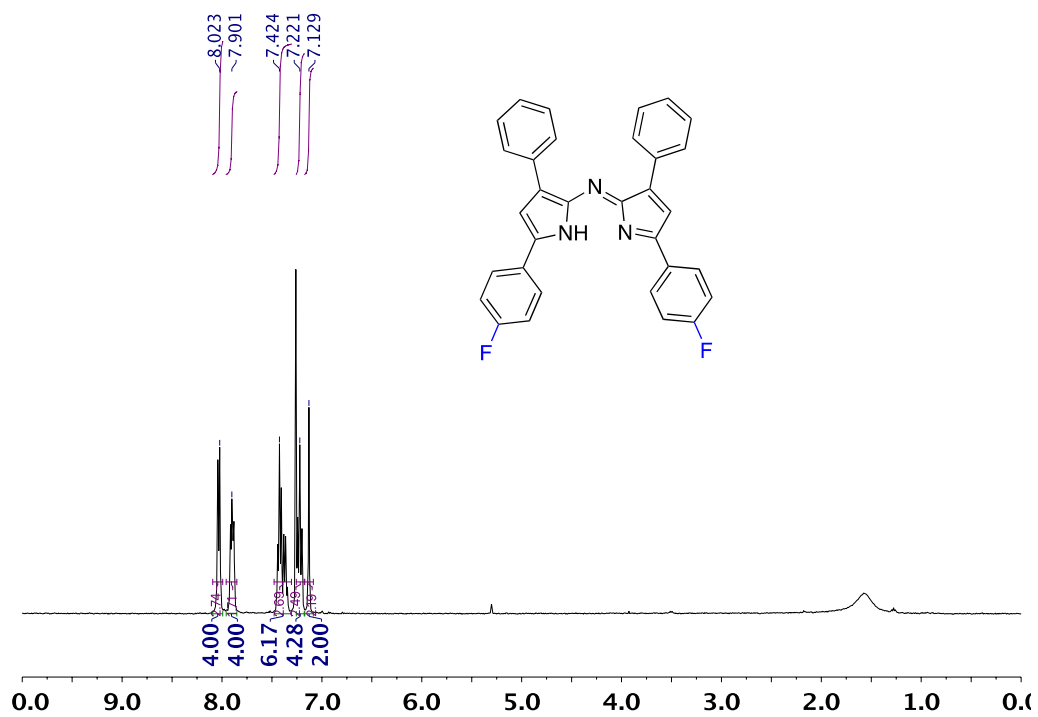


Figure S1 ¹H NMR of L1-ADP

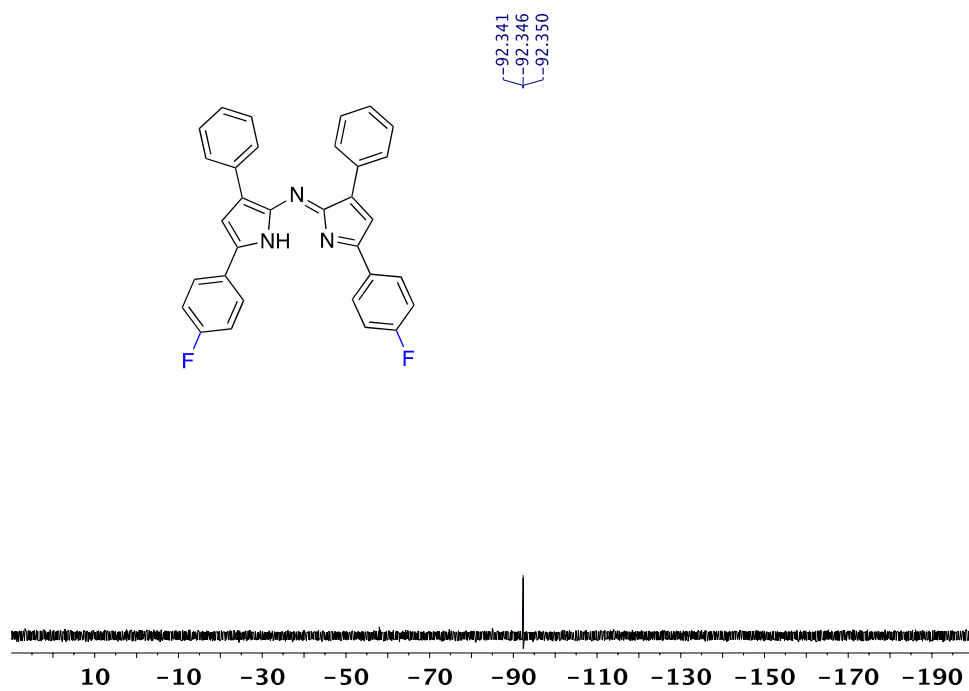


Figure S2 ¹⁹F NMR of L1-ADP

L2-ADP

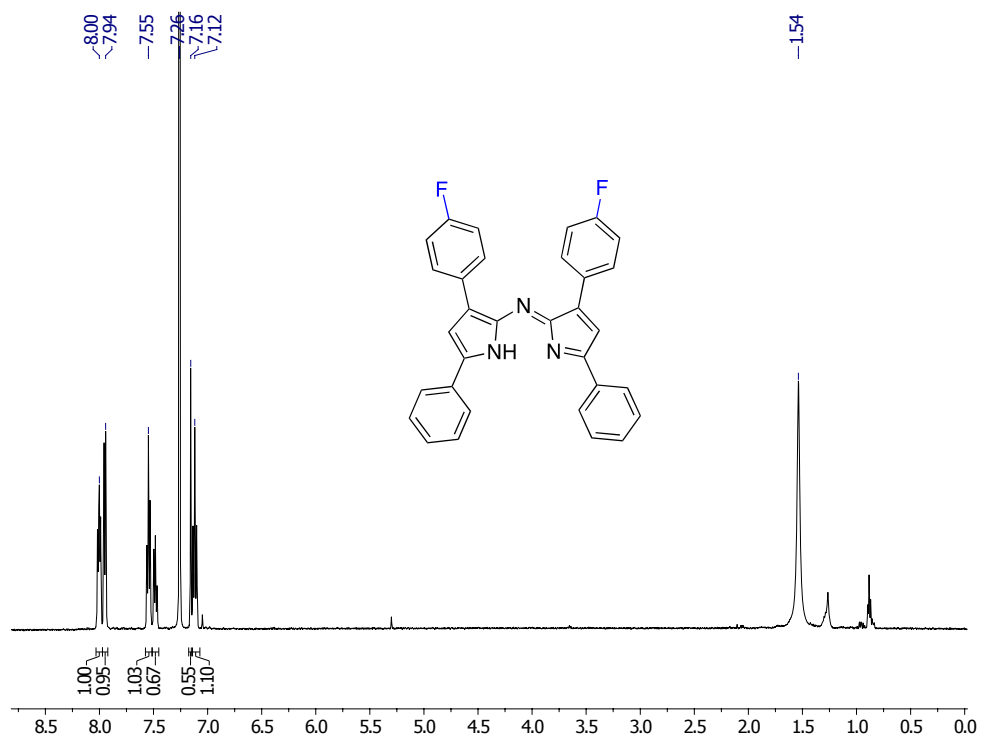


Figure S3 ¹H NMR of L2-ADP

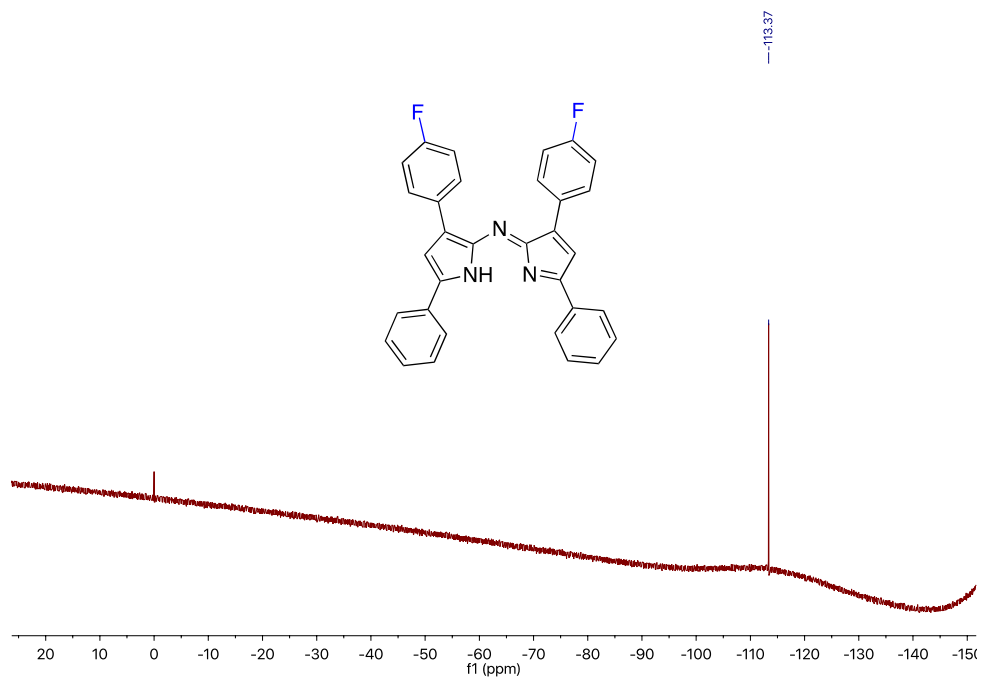


Figure S4 ¹⁹F NMR of L2-ADP

L1-ADPI₂

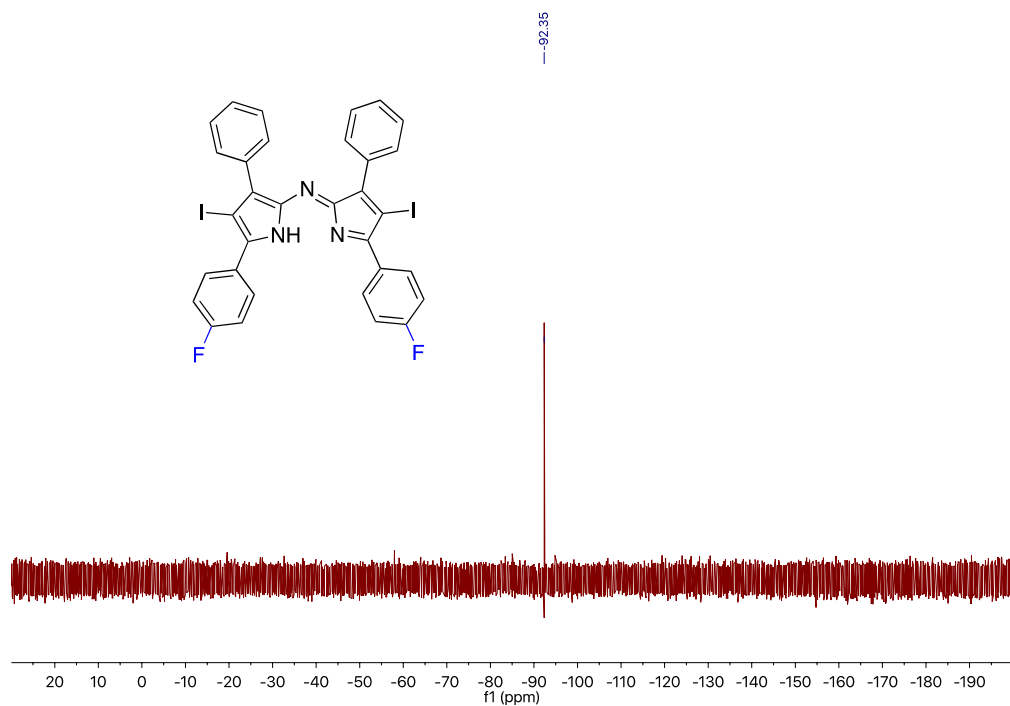


Figure S5 ¹⁹F NMR of L1-ADPI₂

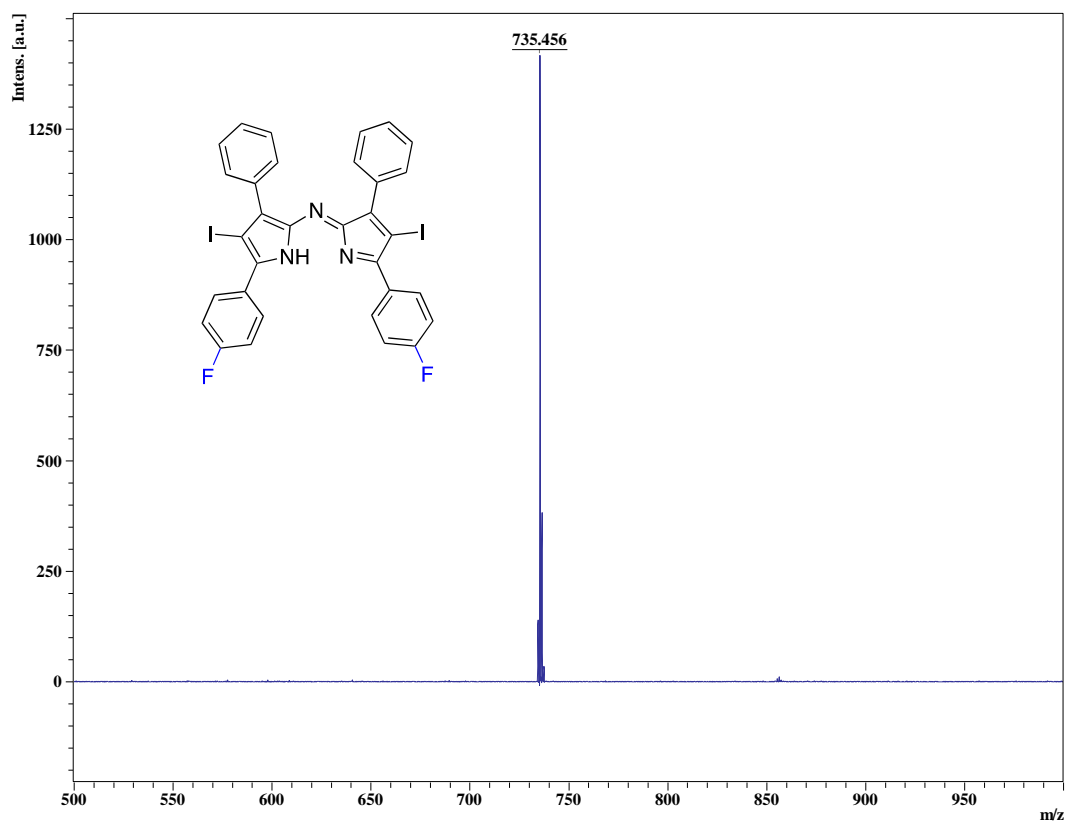


Figure S6 MALDI-TOF MS of L1-ADPI₂

L2-ADPI₂

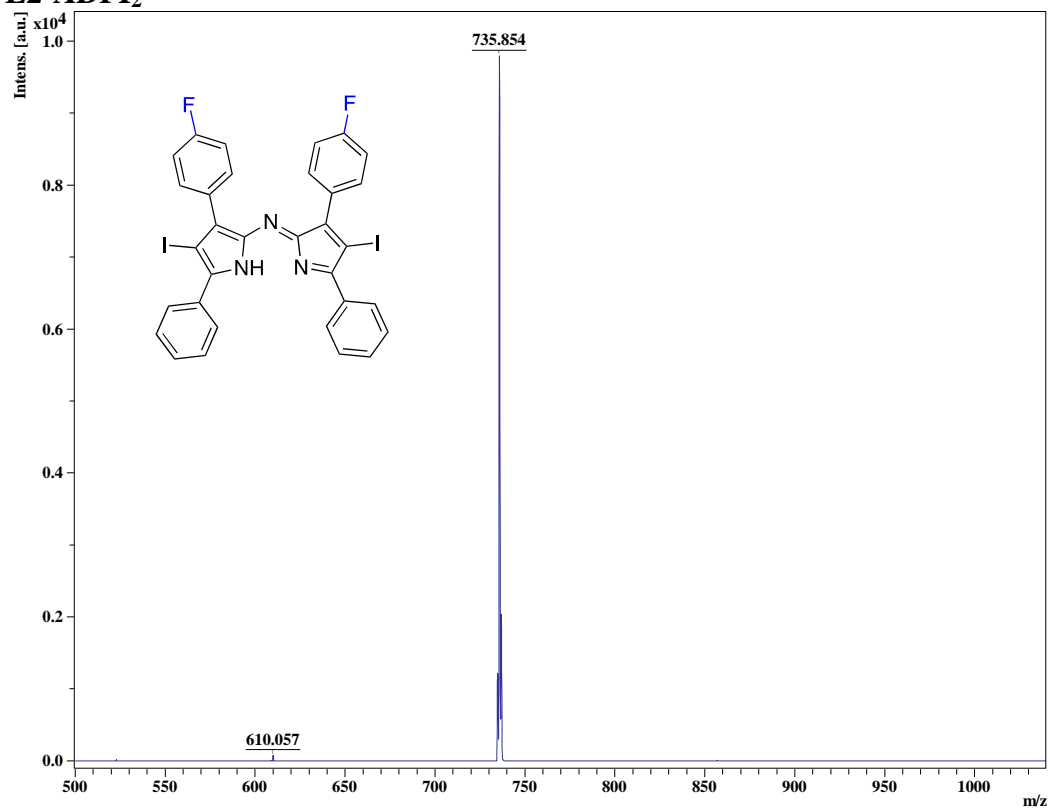


Figure S7 MALDI-TOF MS of L2-ADPI₂

L1

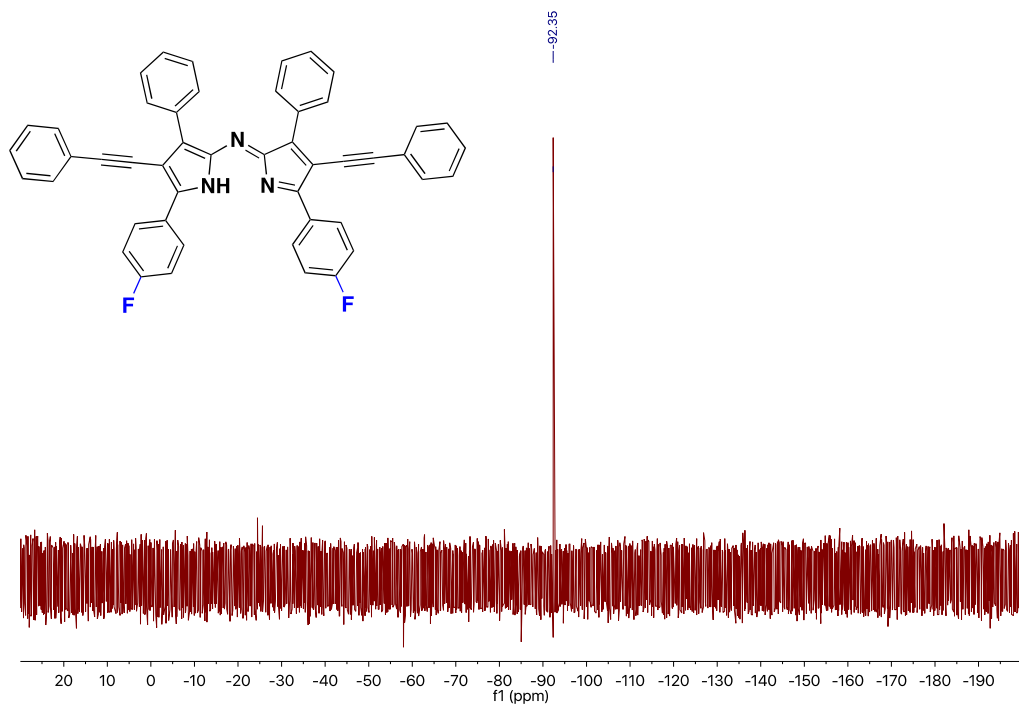


Figure S8 ^{19}F NMR of L1

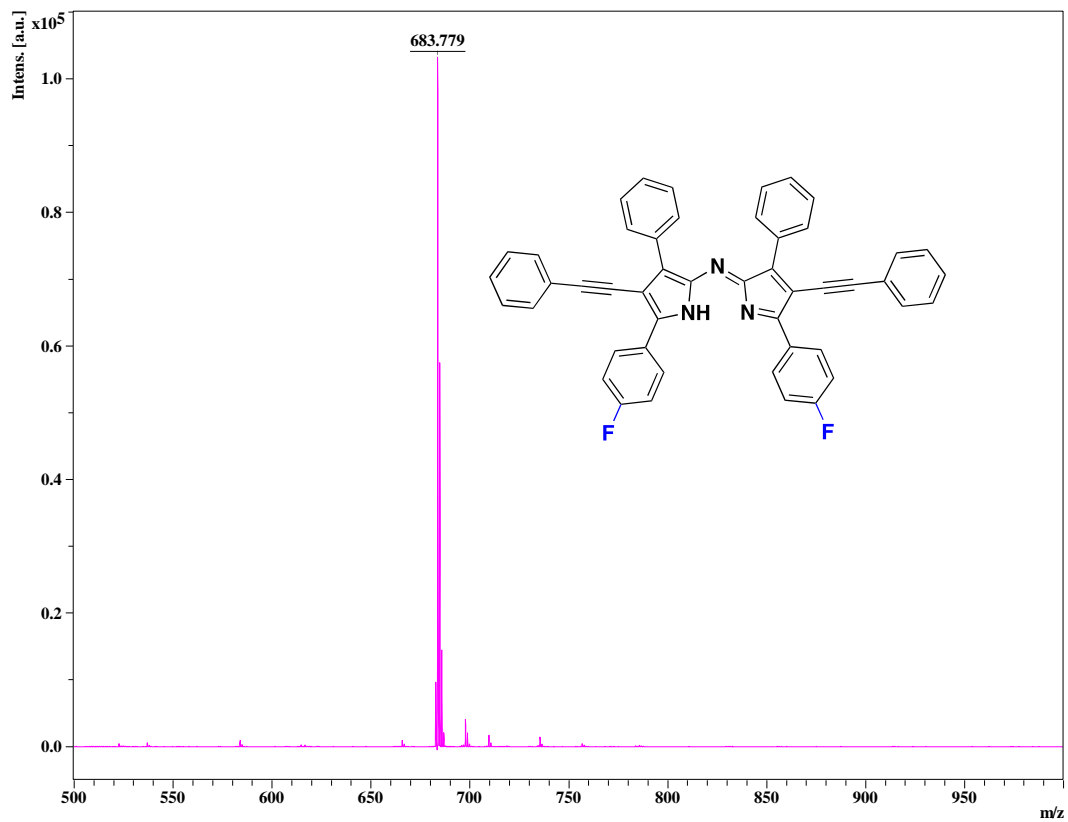


Figure S9 MALDI-TOF MS of L1

L2

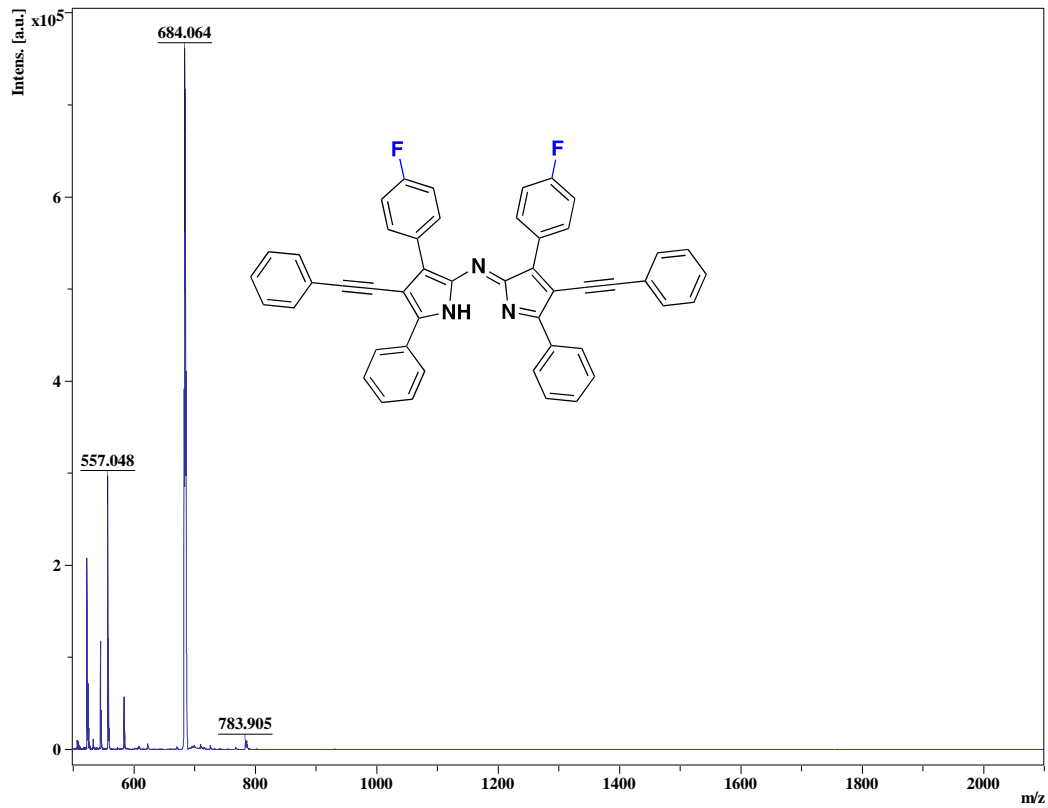


Figure S10 MALDI-TOF MS of L2

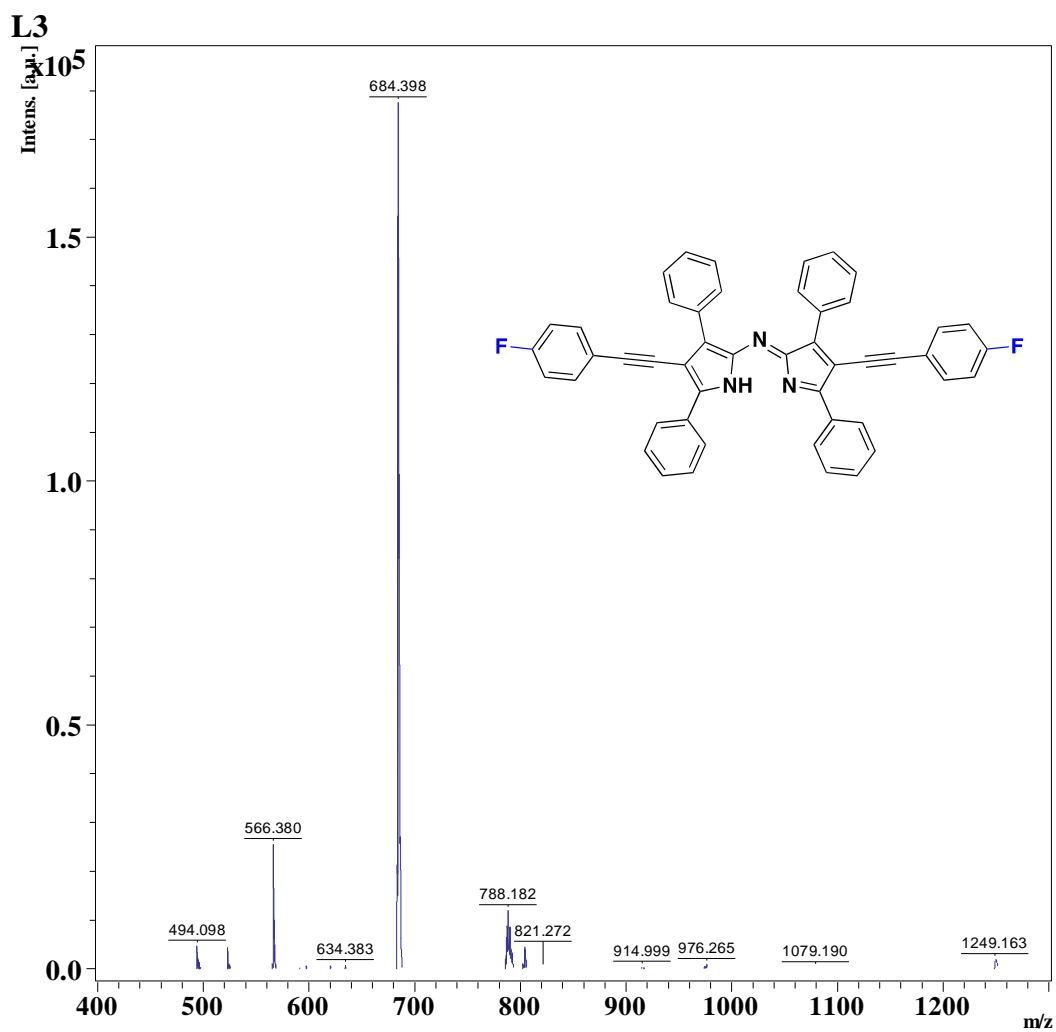


Figure S11 MALDI-TOF MS of L3

L4

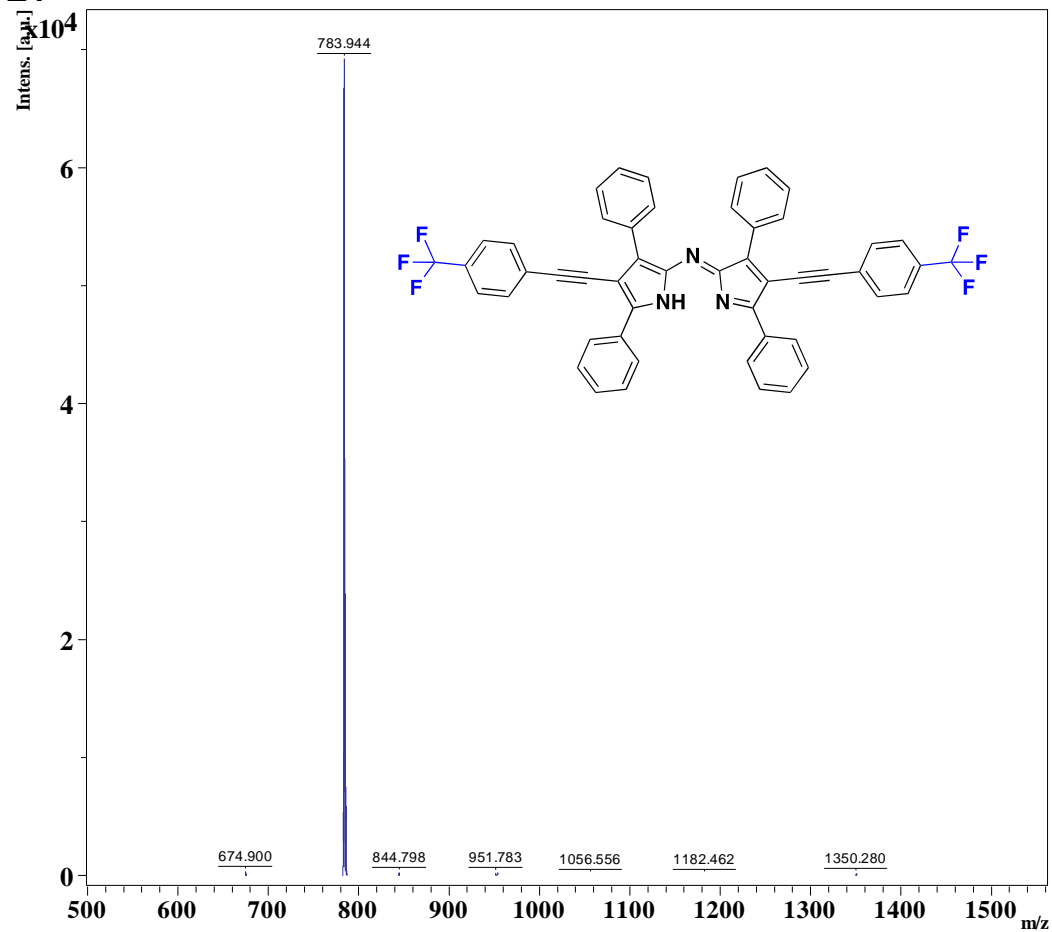


Figure S12 MALDI-TOF MS of L4

BF₂(L1)

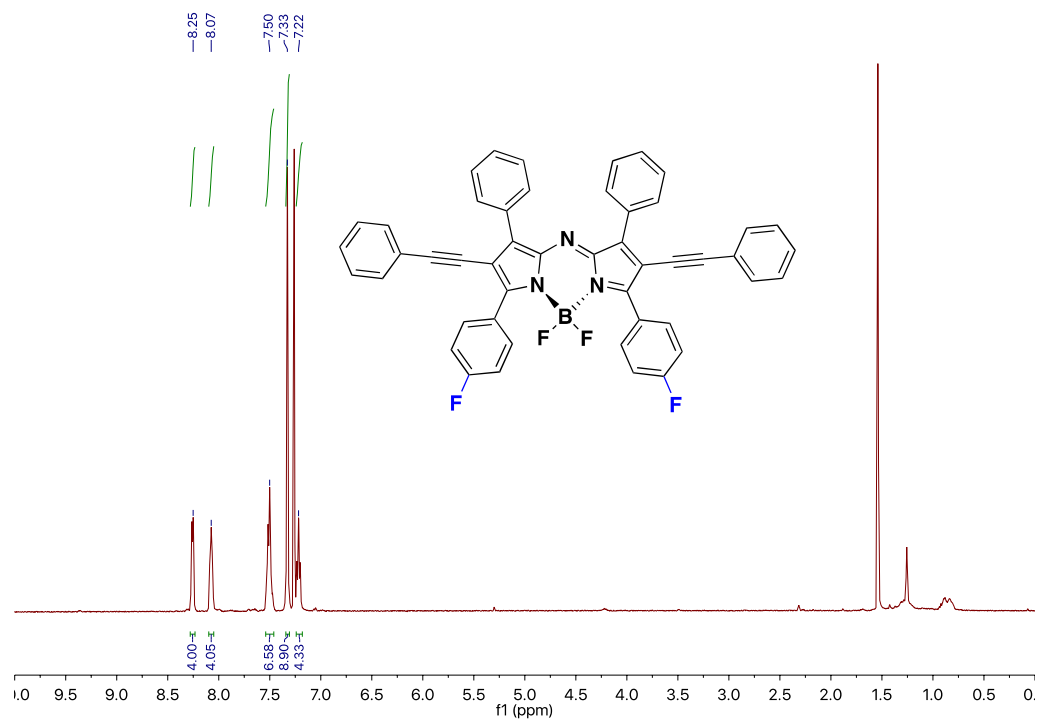


Figure S13 ¹H NMR of BF₂(L1)

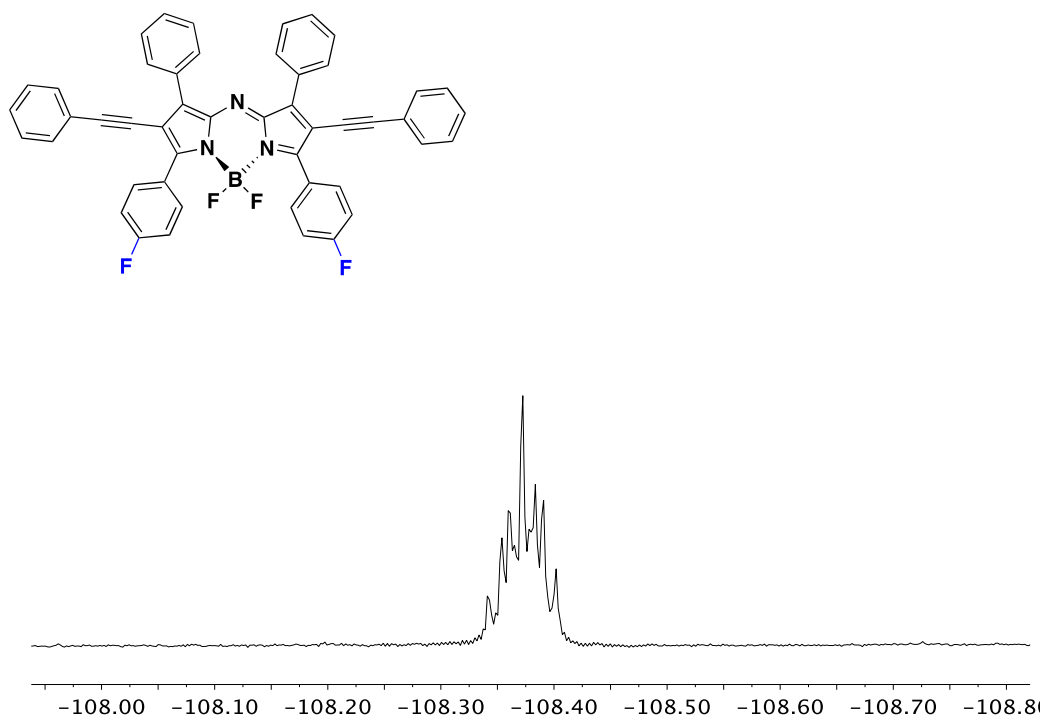


Figure S14 ¹⁹F NMR of BF₂(L1)

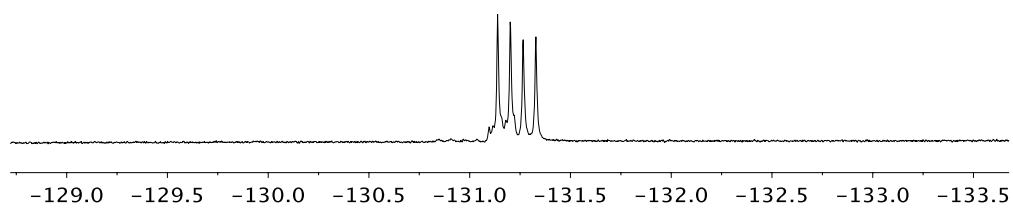
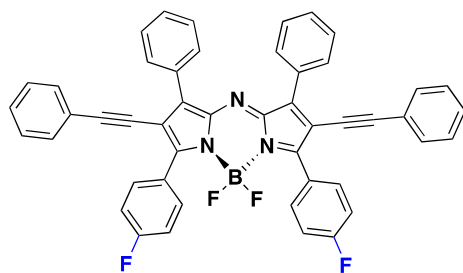


Figure S15 ^{19}F NMR of $\text{BF}_2(\text{L1})$, BF_2 peaks

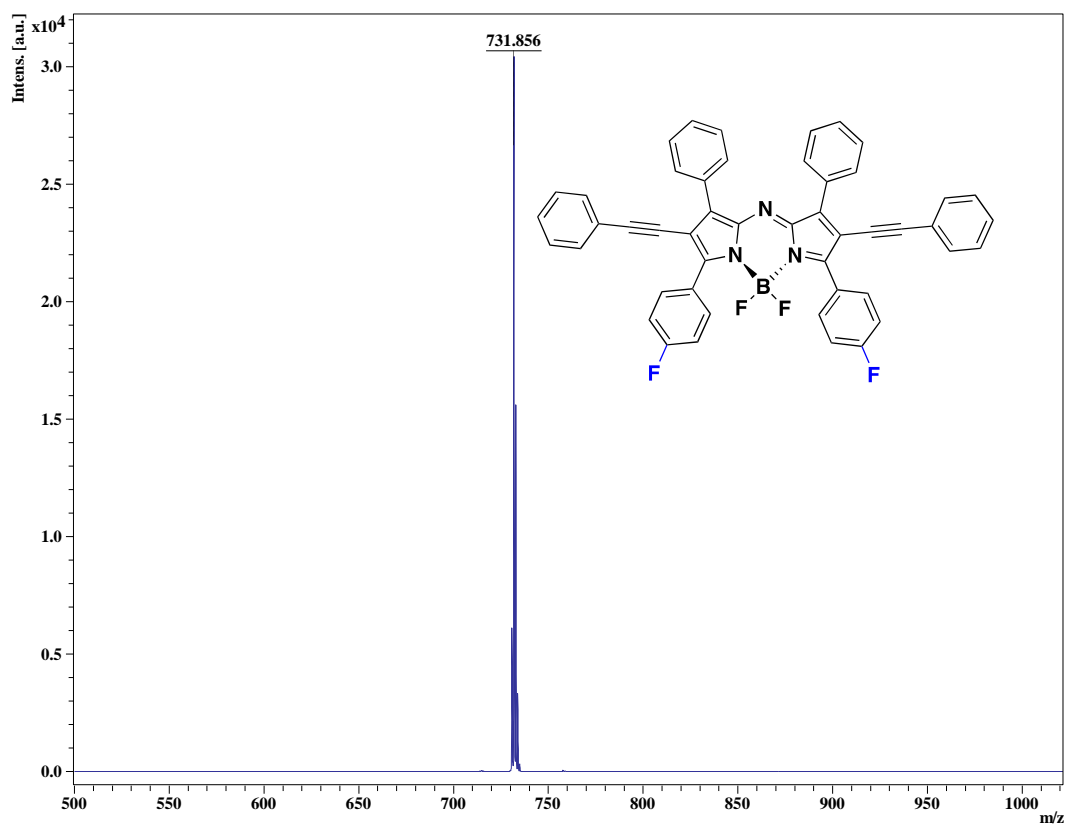


Figure S16 MALDI-TOF MS of $\text{BF}_2(\text{L1})$

BF₂(L3)

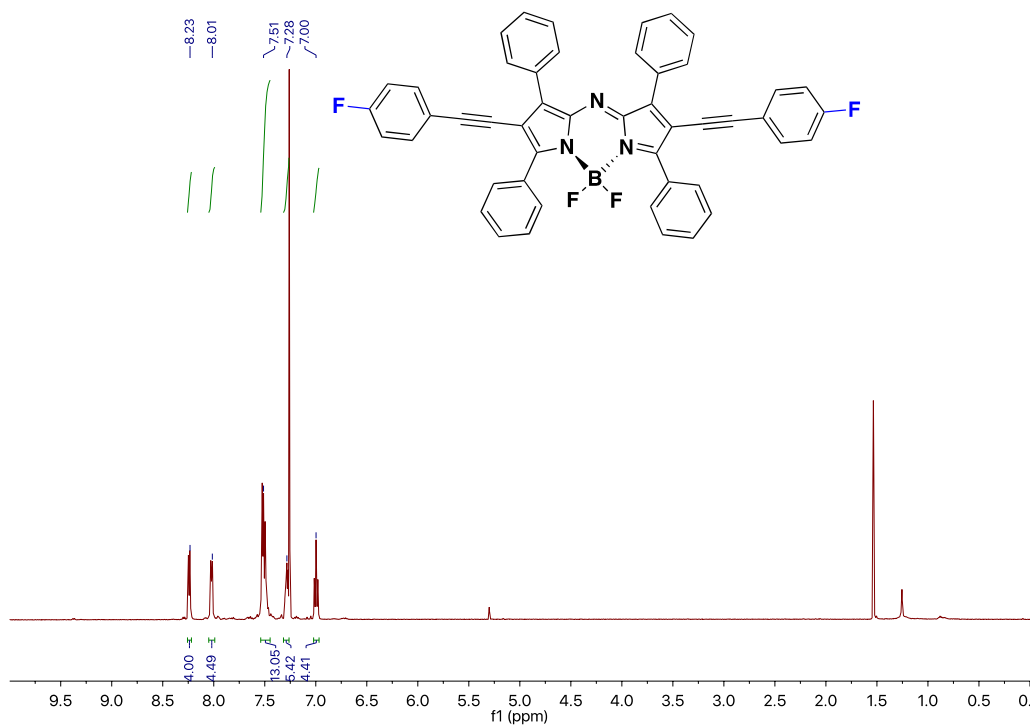


Figure S17 ¹H NMR of BF₂(L3)

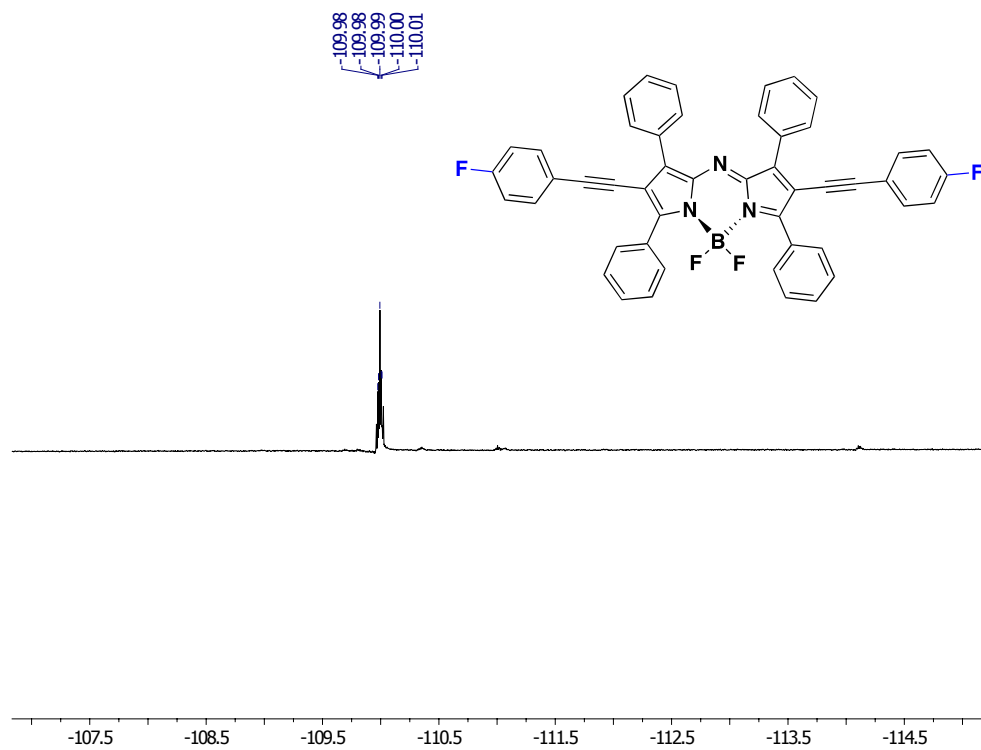


Figure S18 ¹⁹F NMR of BF₂(L3)

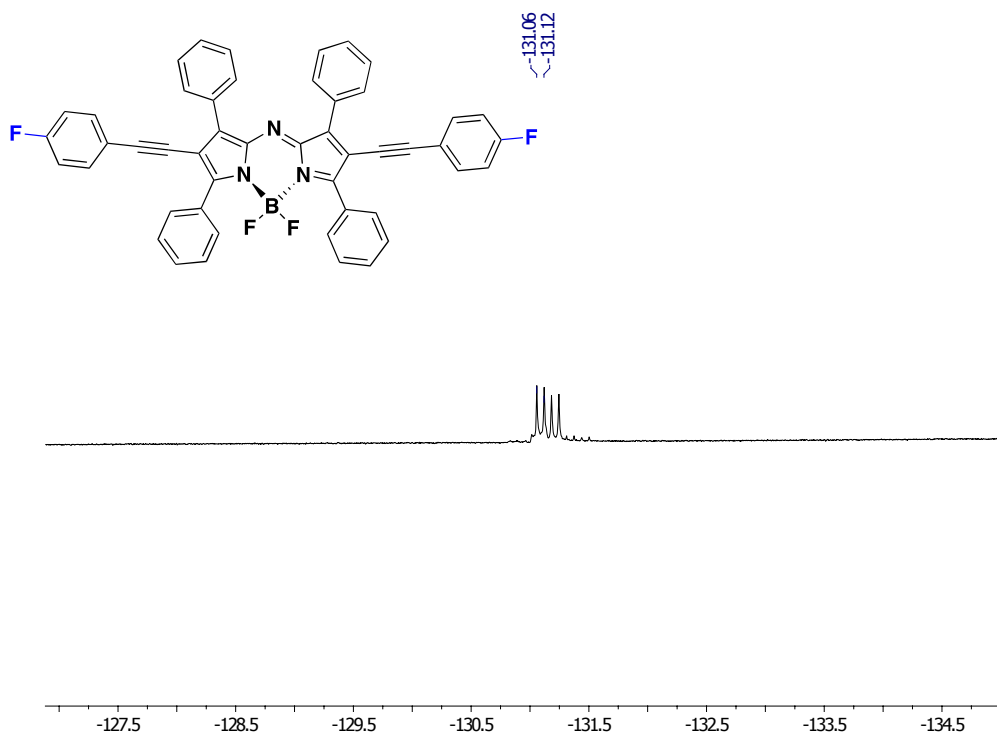


Figure S19 ¹⁹F NMR of BF₂(L3), BF₂ peaks

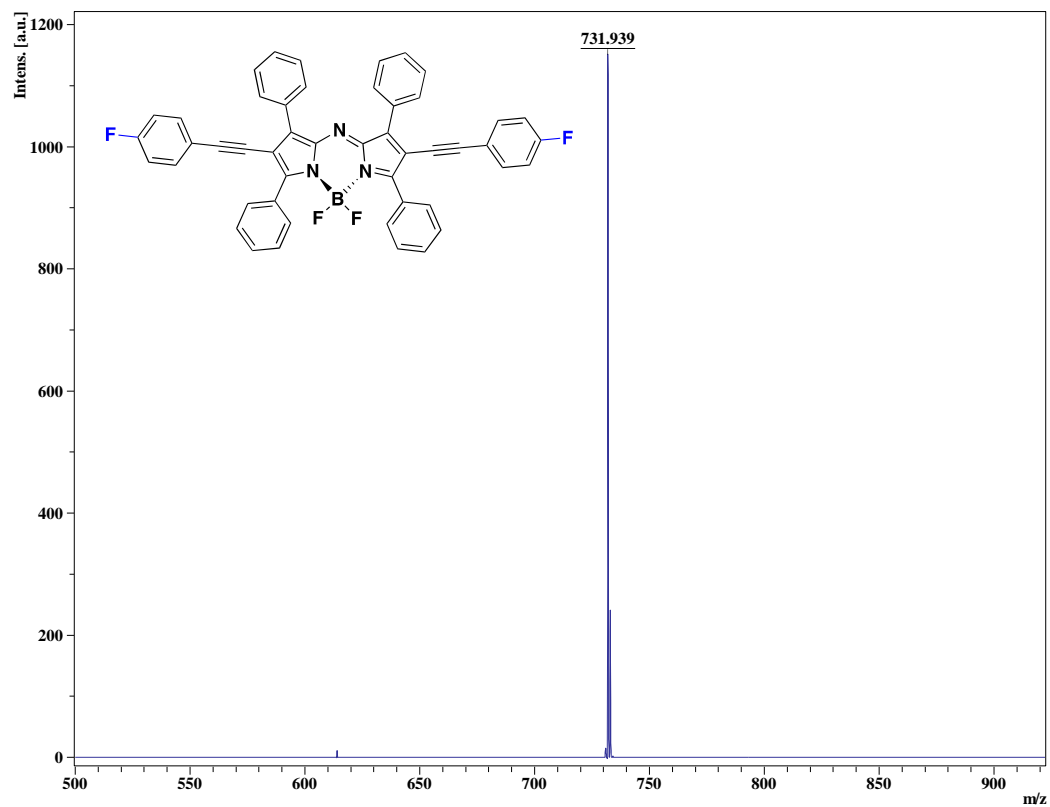


Figure S20 MALDI-TOF MS of BF₂(L3)

BF₂(L4)

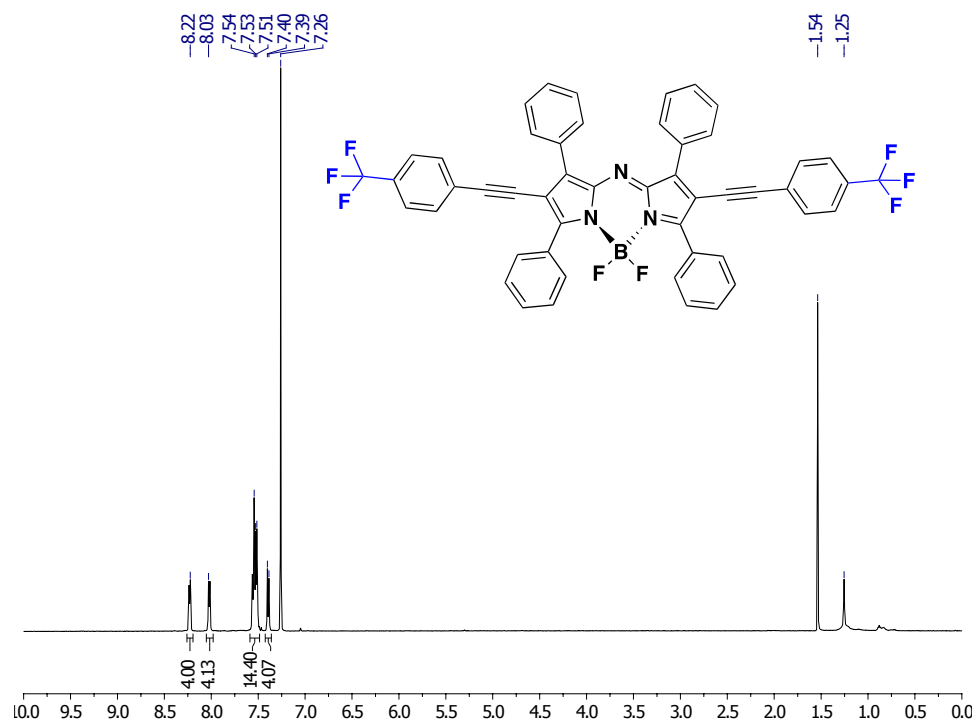


Figure S21 ¹H NMR of BF₂(L4)

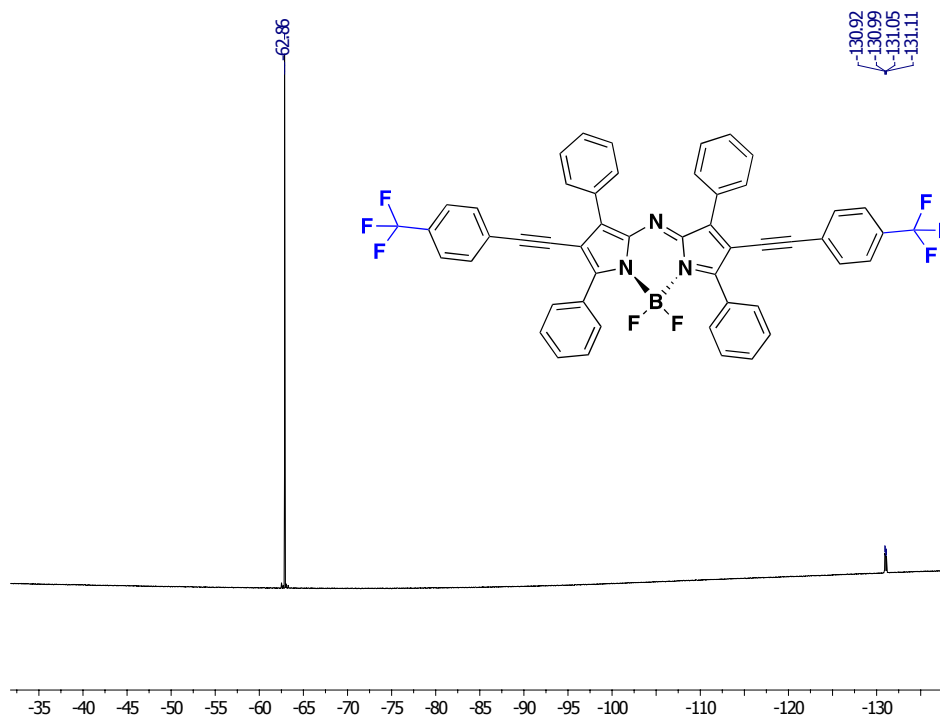


Figure S22 ¹⁹F NMR of BF₂(L4)

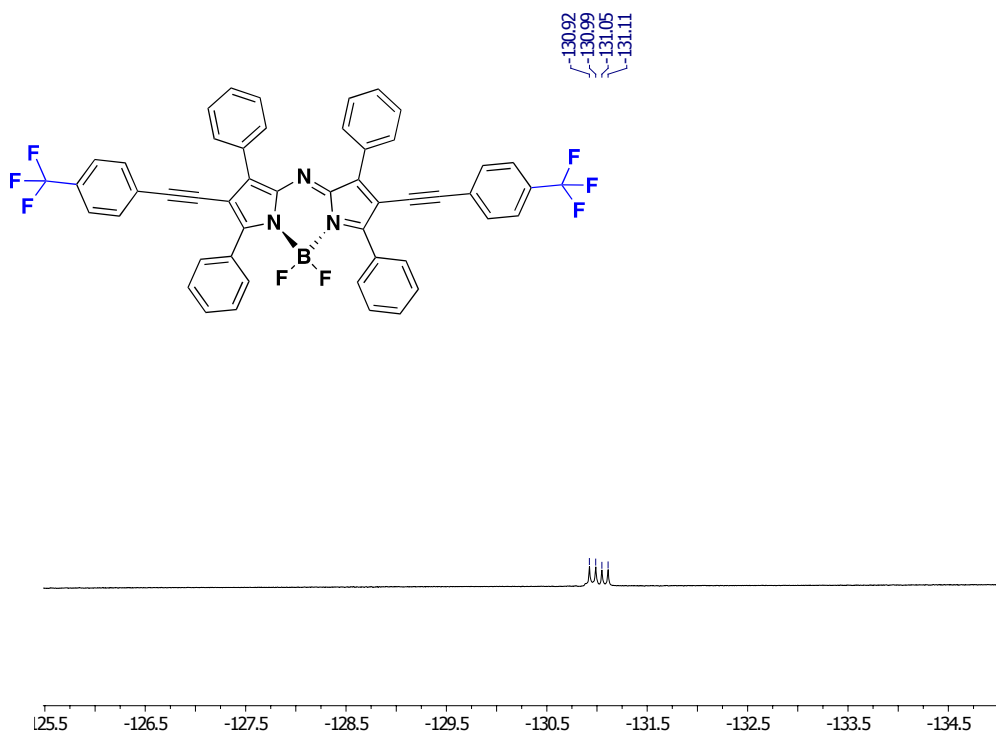


Figure S23 ¹⁹F NMR of BF₂(L4), BF₂ peaks

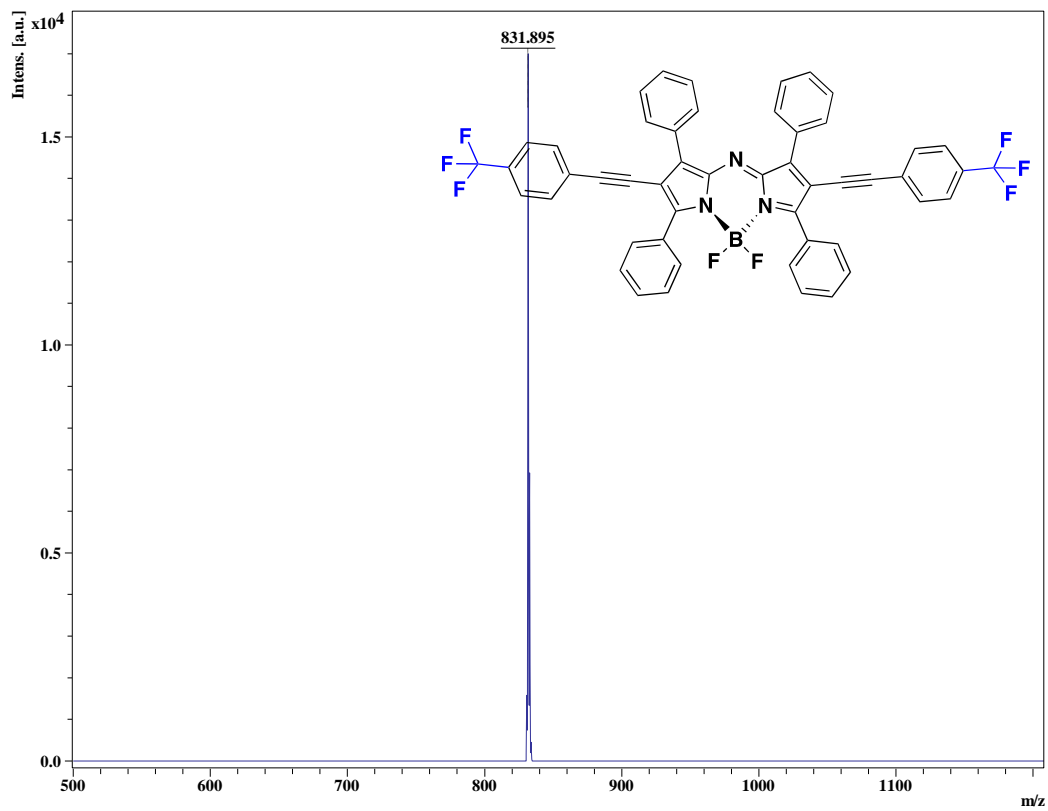


Figure S24 MALDI-TOF MS of BF₂(L4)

Zn(L1)₂

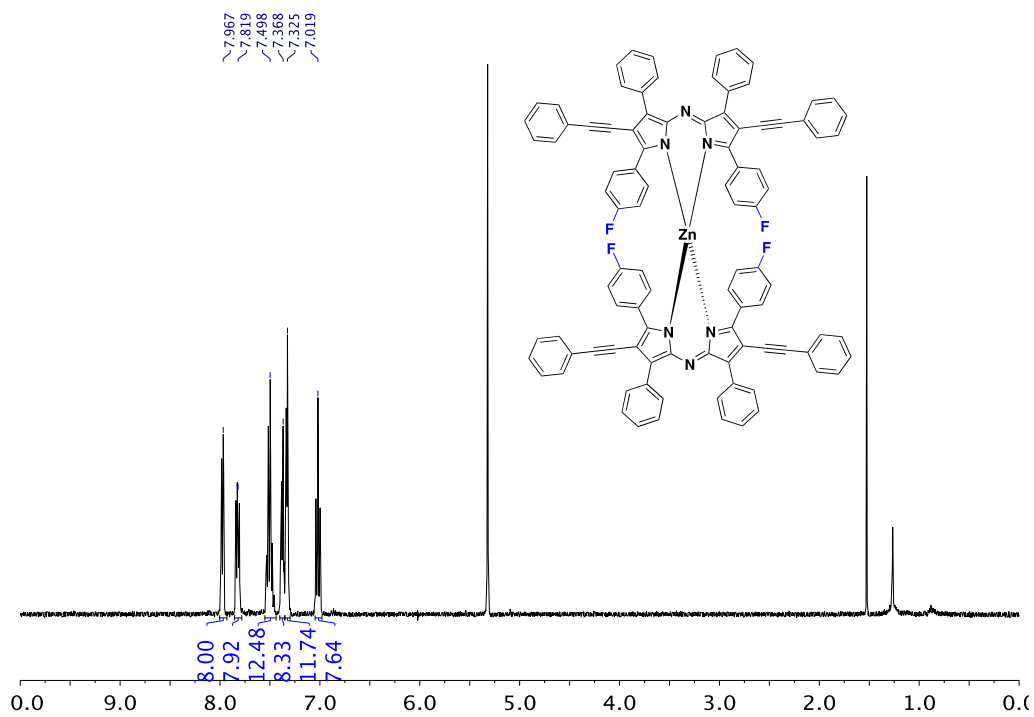


Figure S25 ¹H NMR of Zn(L1)₂

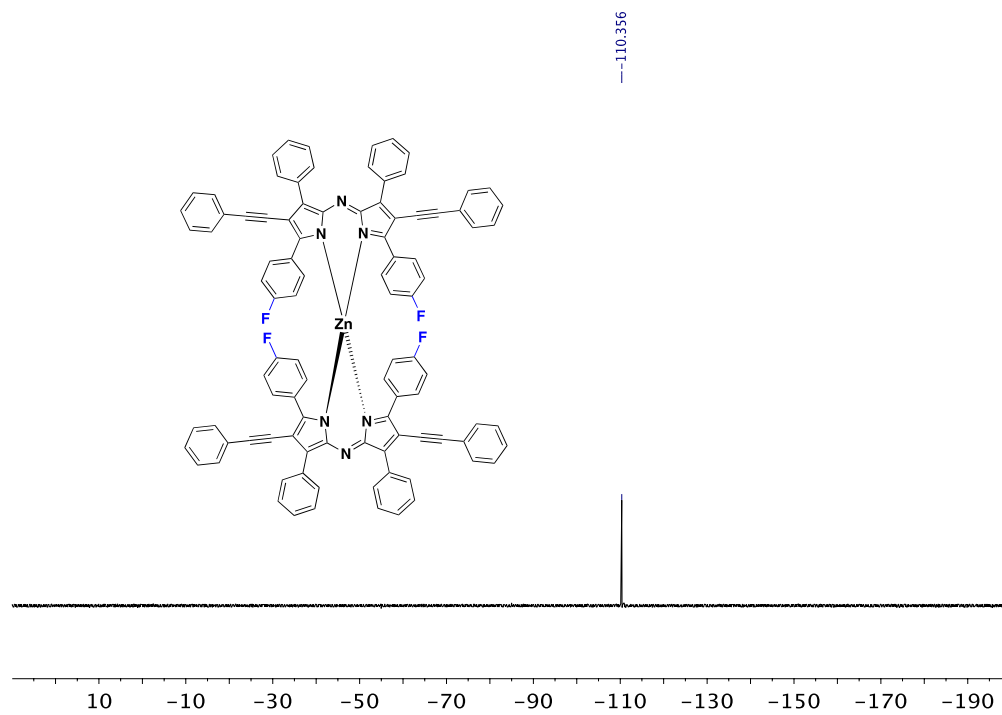


Figure S26 ¹⁹F NMR of Zn(L1)₂

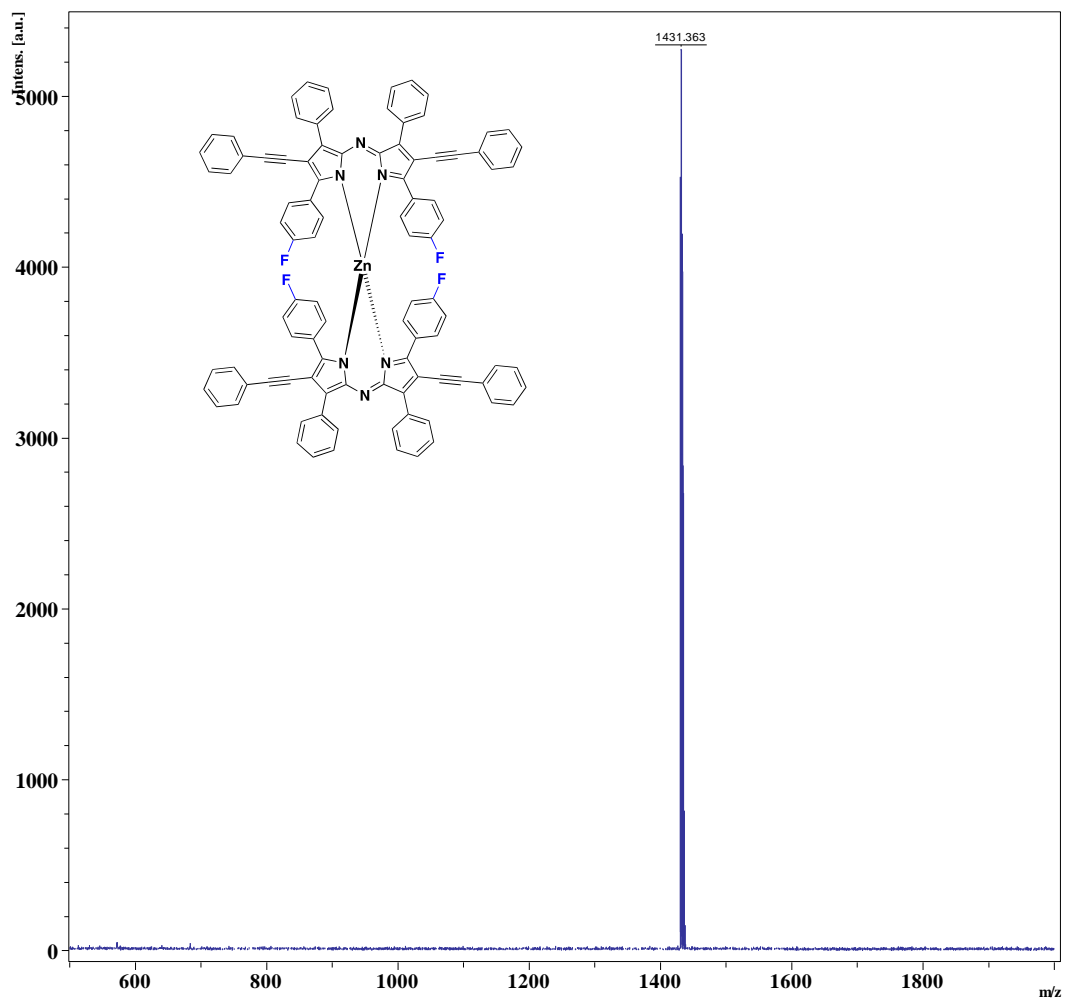


Figure S27 MALDI-TOF MS of Zn(L1)₂

Zn(L2)₂

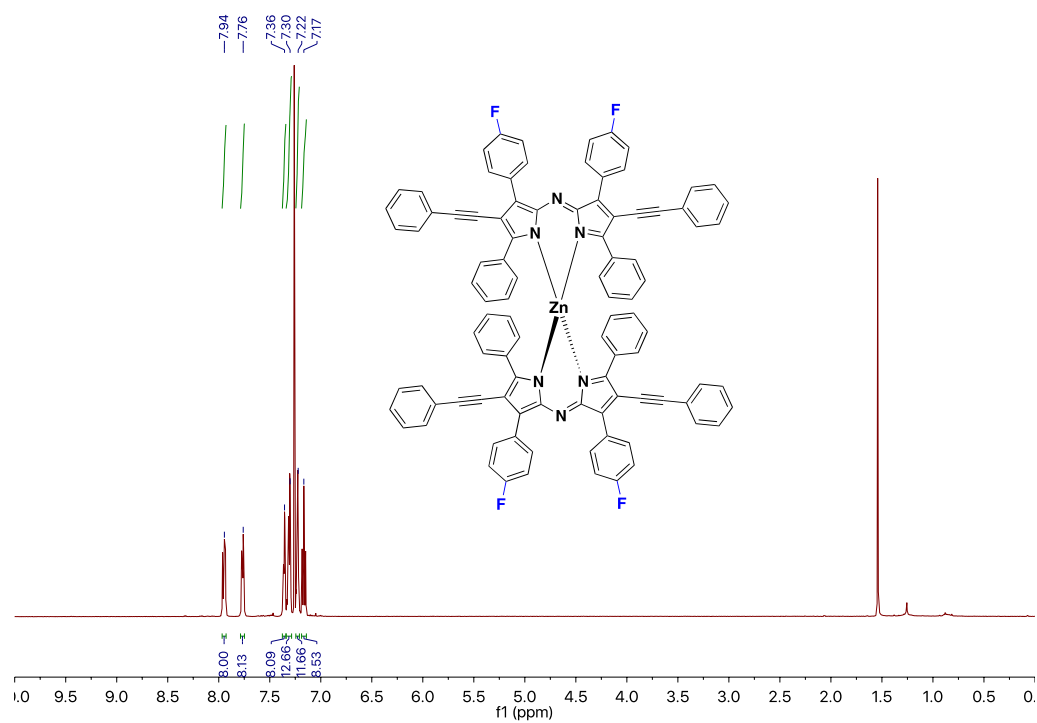


Figure S28 ¹H NMR of Zn(L2)₂

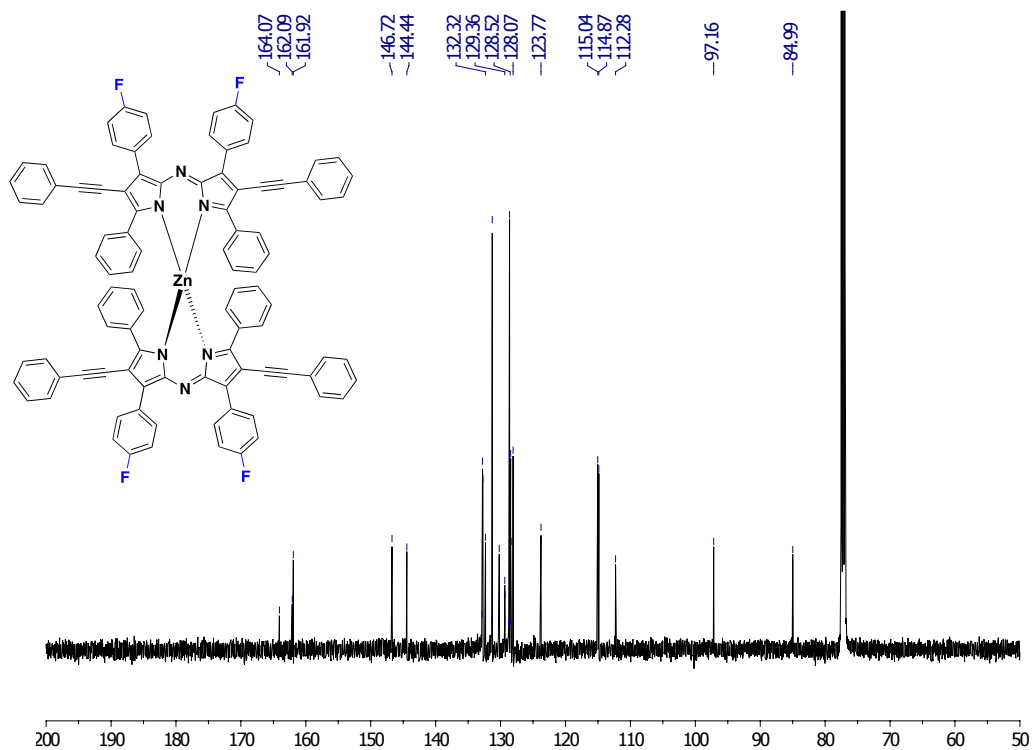


Figure S29 ¹³C NMR of Zn(L2)₂

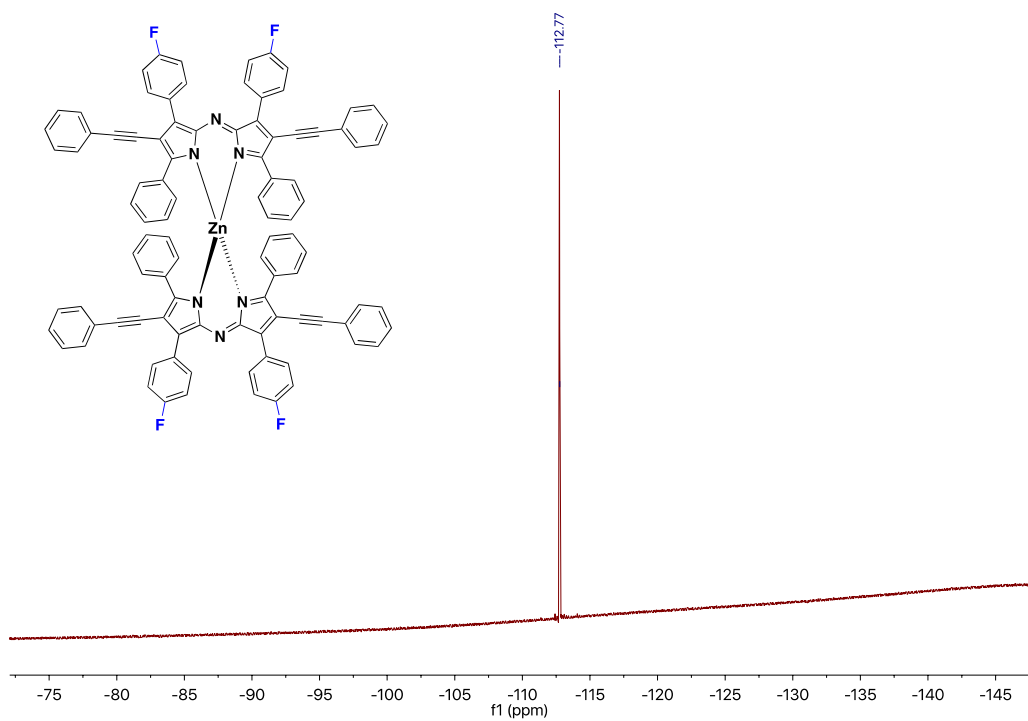


Figure S30 ^{19}F NMR of $Zn(L2)_2$

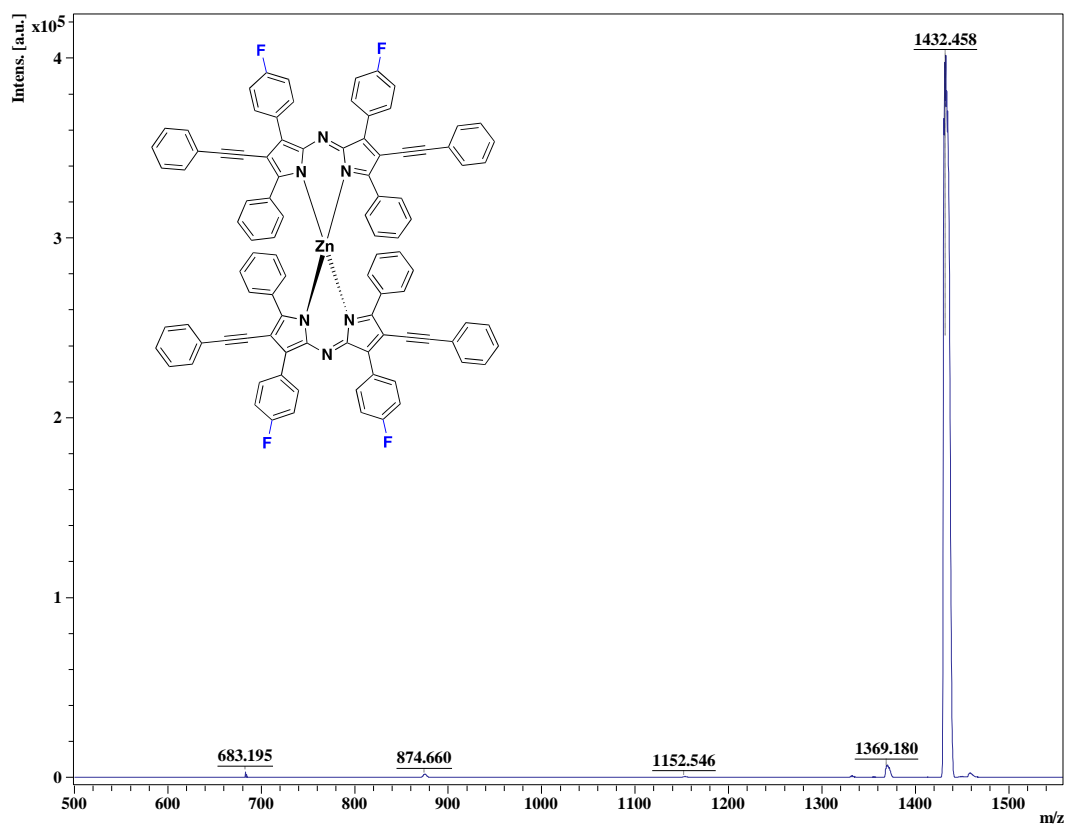


Figure S31 MALDI-TOF MS of $Zn(L2)_2$

Zn(L3)₂

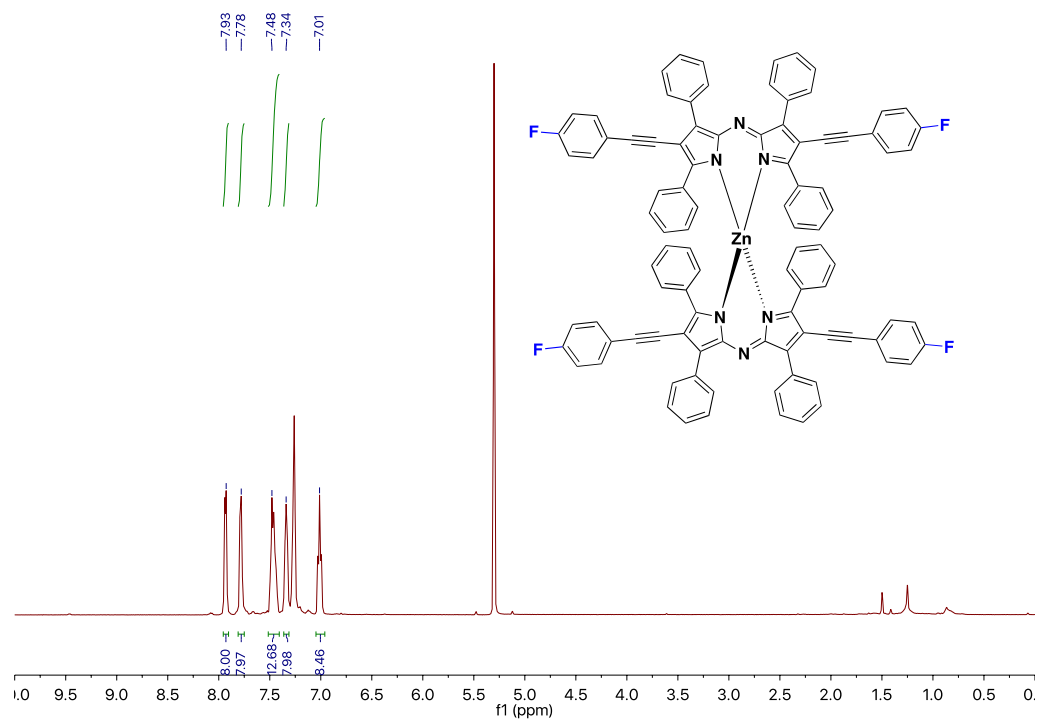


Figure S32 ¹H NMR of Zn(L3)₂

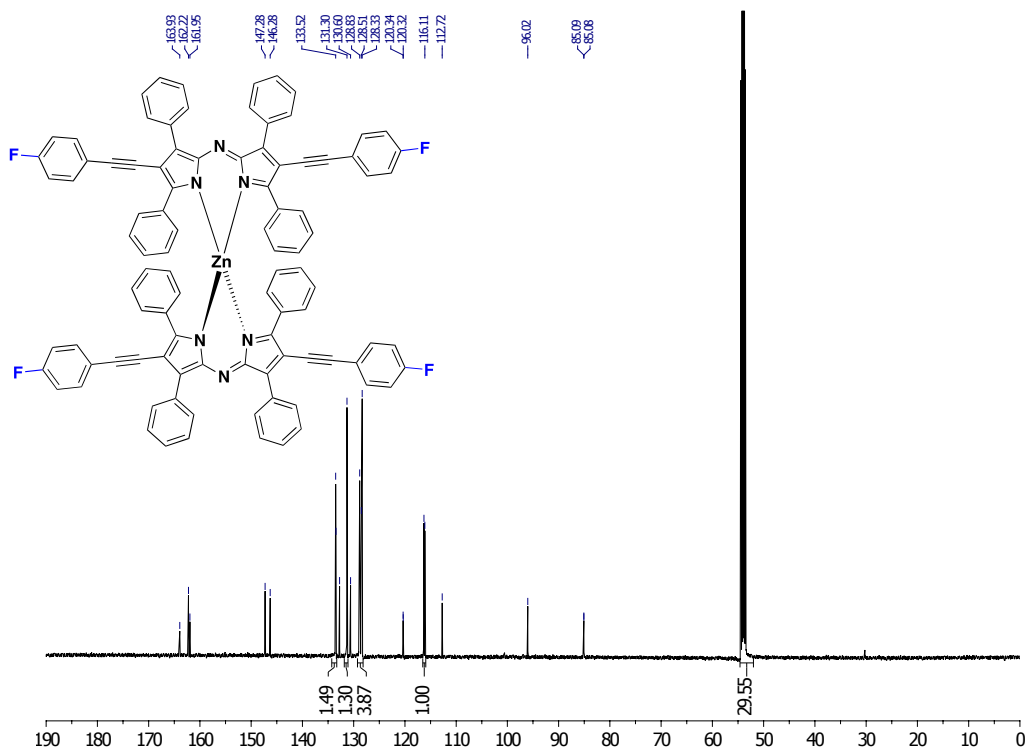


Figure S33 ¹³C NMR of Zn(L3)₂

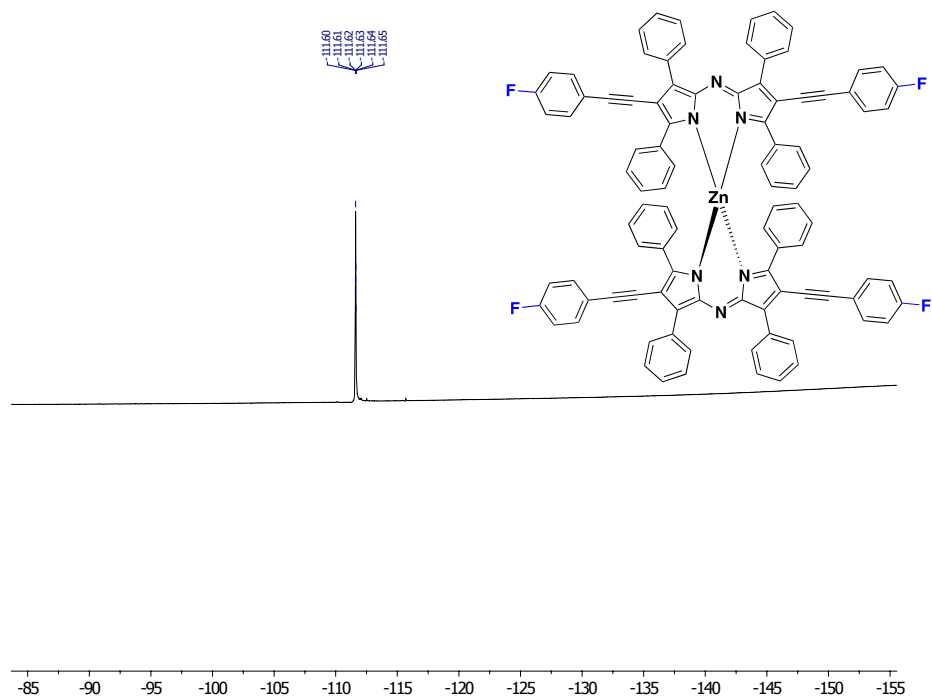


Figure S34 ^{19}F NMR of $\text{Zn}(\text{L}3)_2$

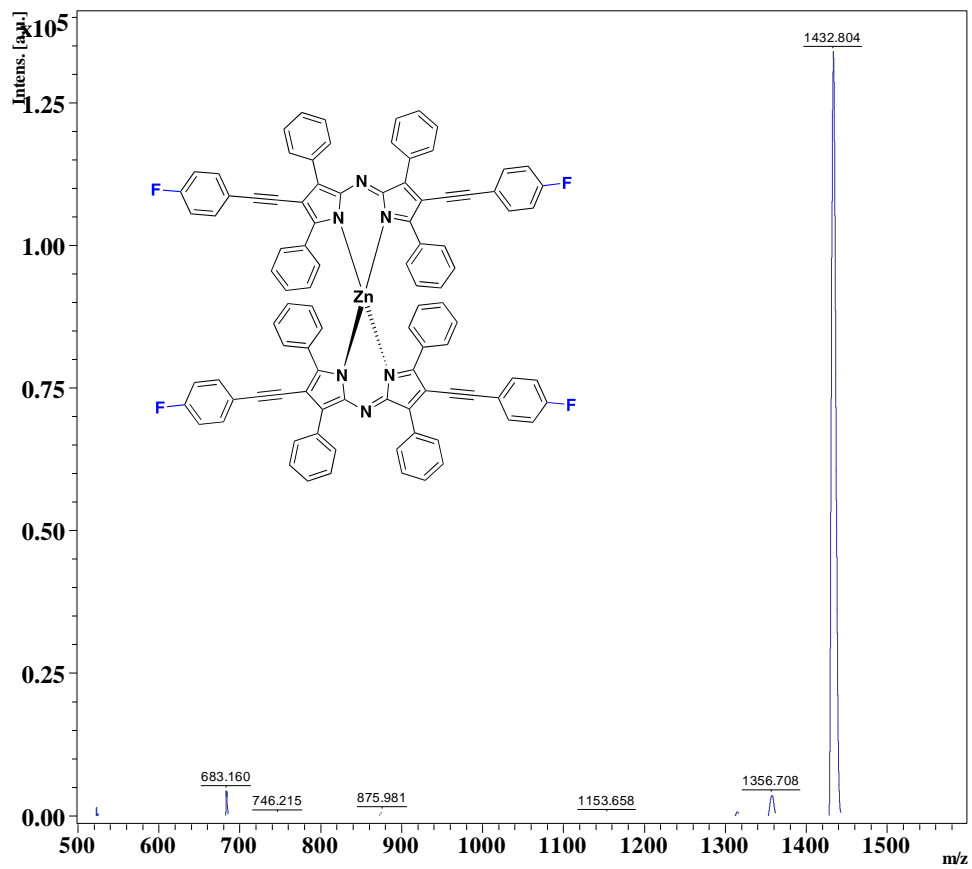


Figure S35 MALDI-TOF MS of $\text{Zn}(\text{L}3)_2$

Zn(L4)₂

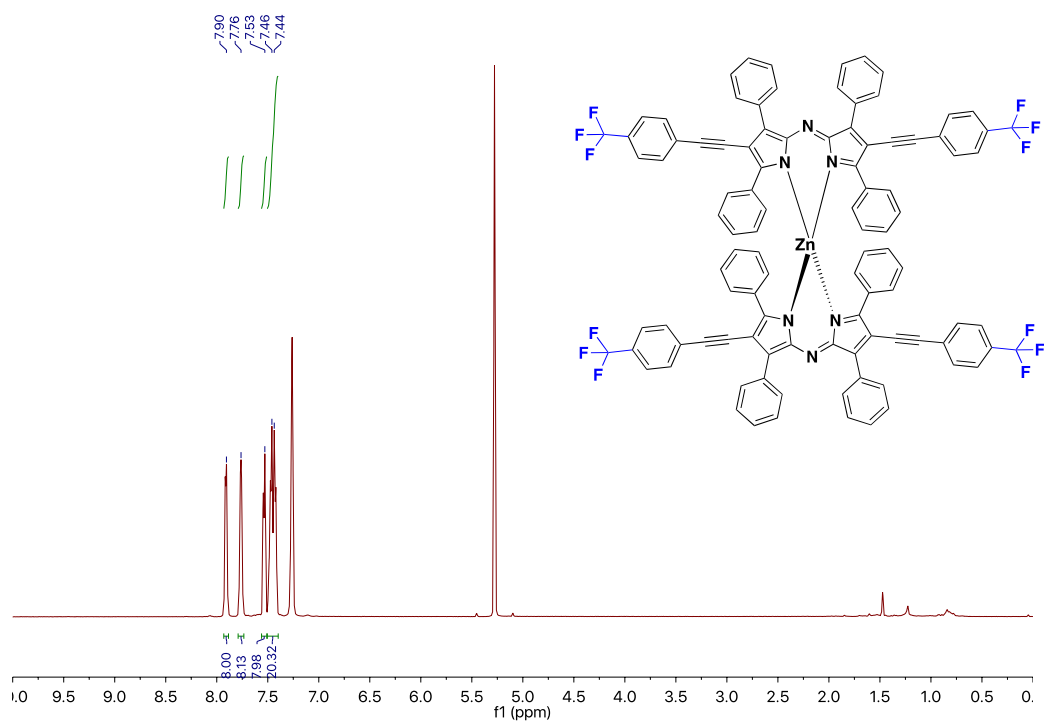


Figure S36 ¹H NMR of Zn(L4)₂

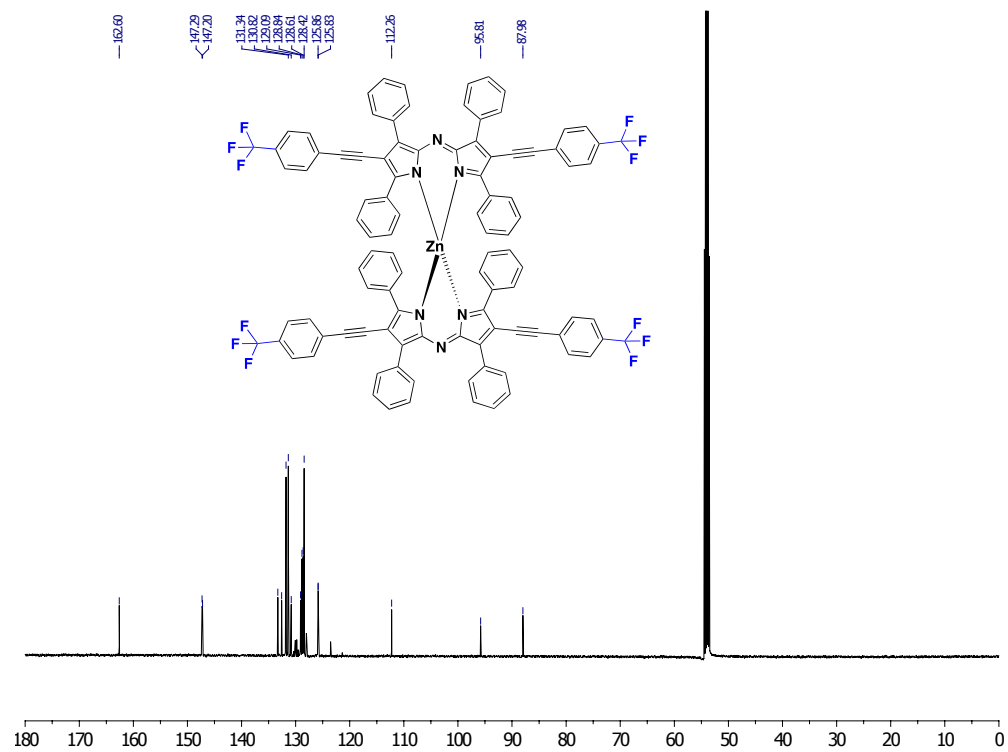


Figure S37 ¹³C NMR of Zn(L4)₂

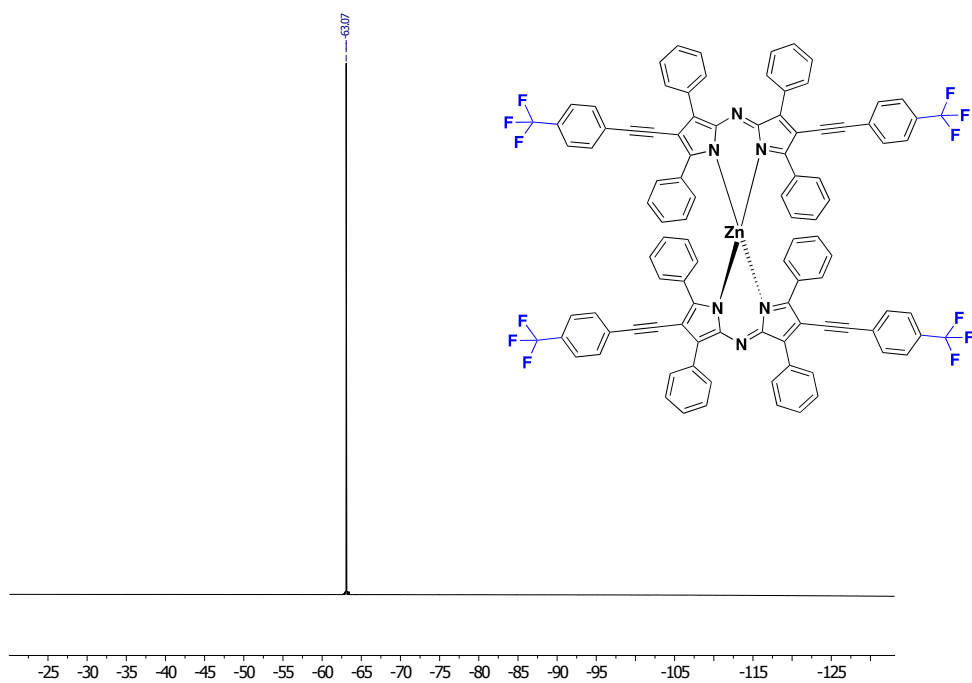


Figure S38 ¹⁹F NMR of Zn(L4)₂

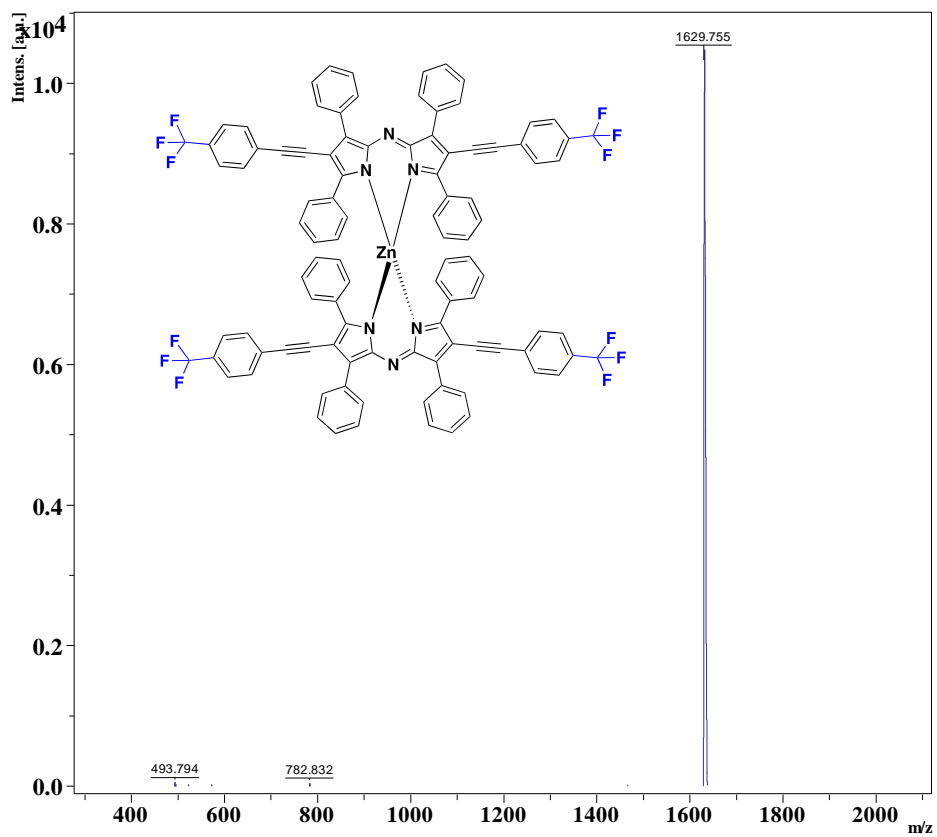


Figure S39 MALDI-TOF MS of Zn(L4)₂