

Electronic Supplementary Information (ESI)

Phenothiazine-functionalized push-pull Zn porphyrin photosensitizers for efficient dye-sensitized solar cells

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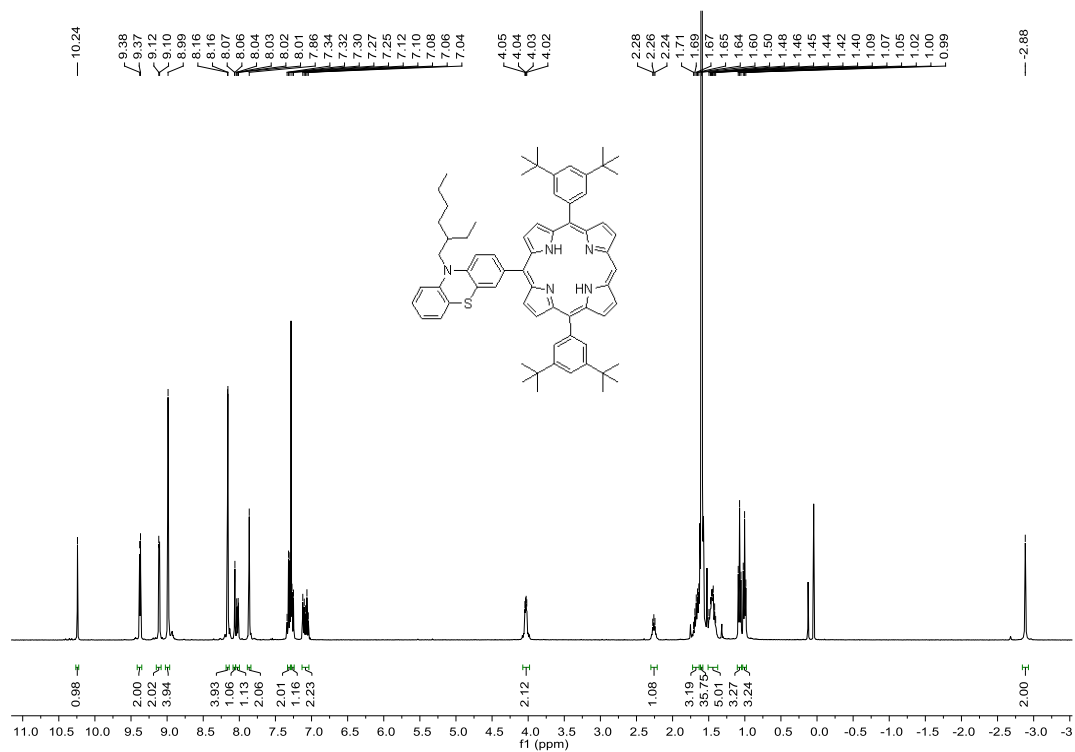


Fig. S1 $^1\text{H NMR}$ of compound 3a in CDCl_3 .

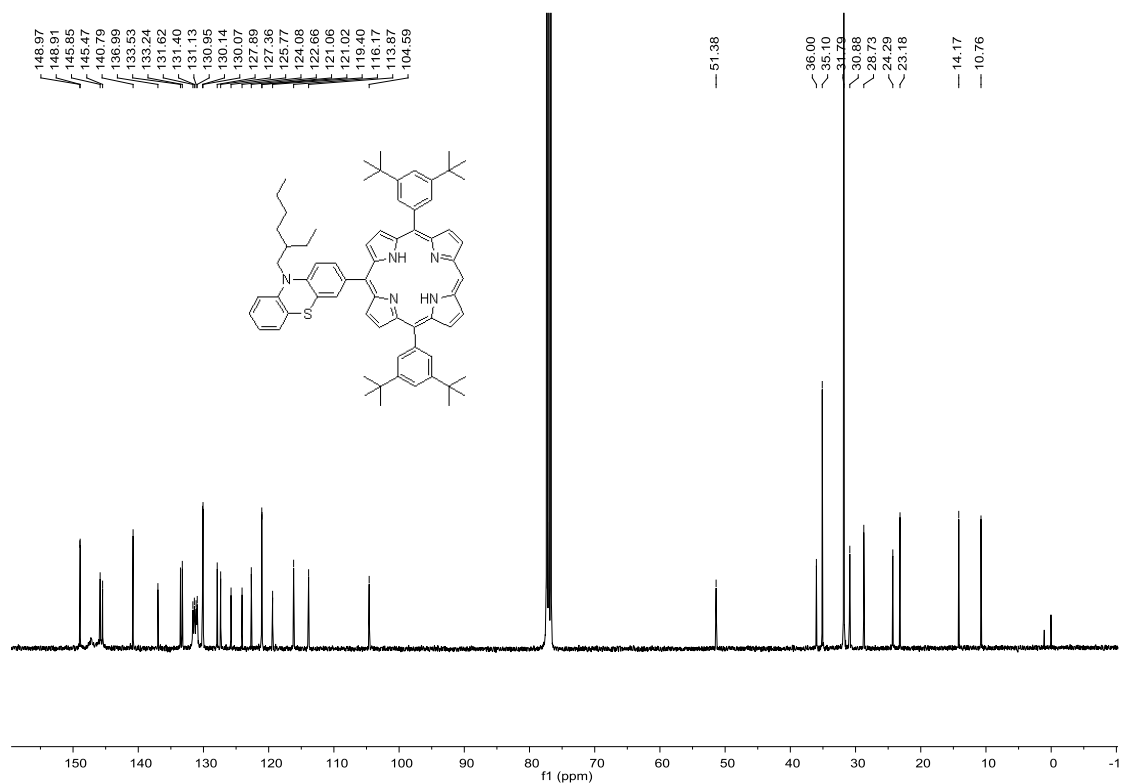


Fig. S2 $^{13}\text{C NMR}$ of compound 3a in CDCl_3 .

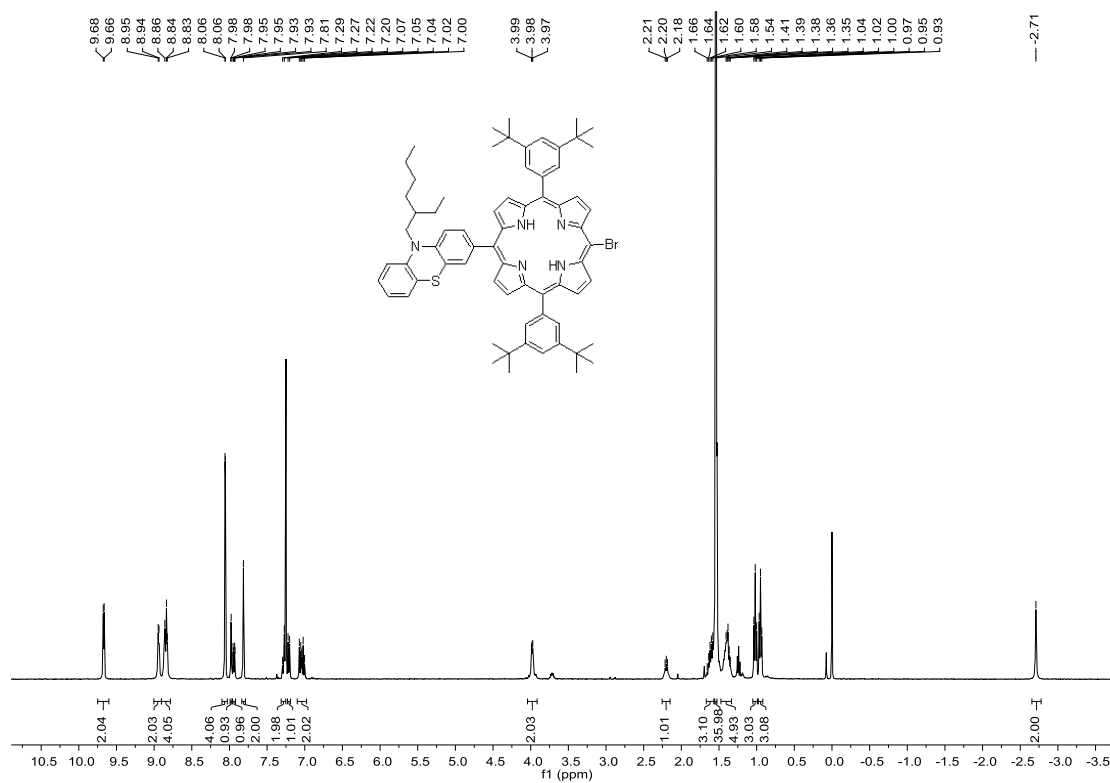


Fig. S3 ¹H NMR of compound **3b** in CDCl₃.

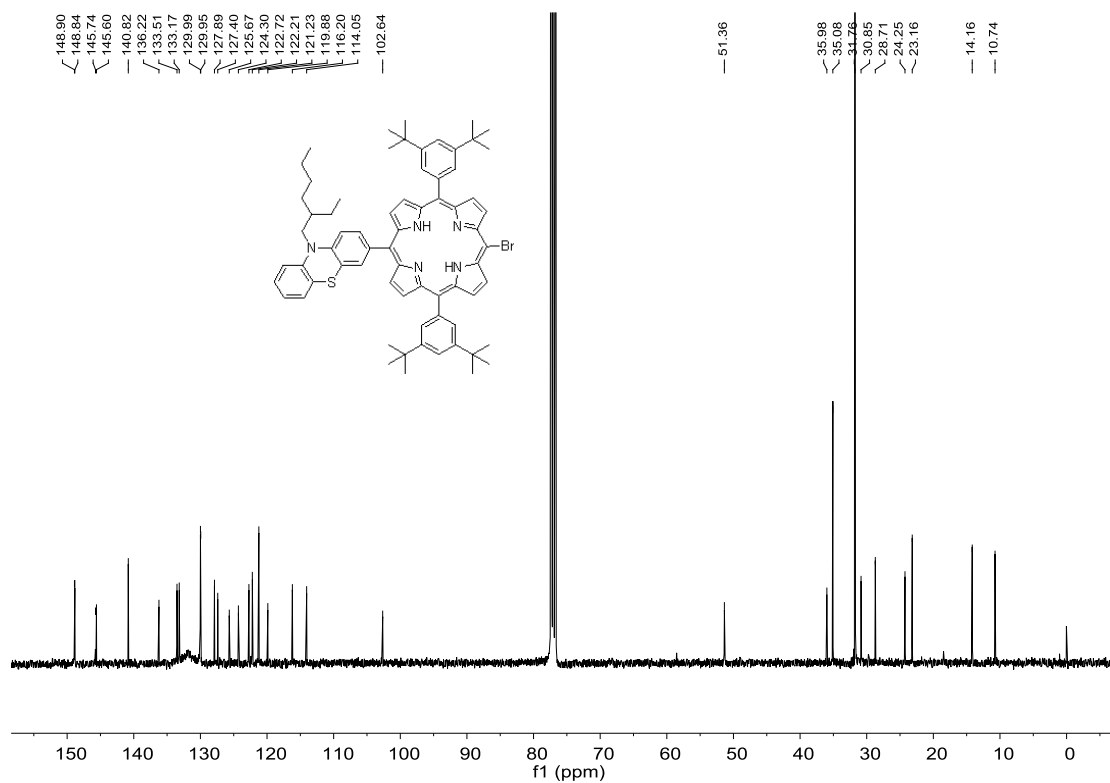


Fig. S4 ¹³C NMR of compound **3b** in CDCl₃.

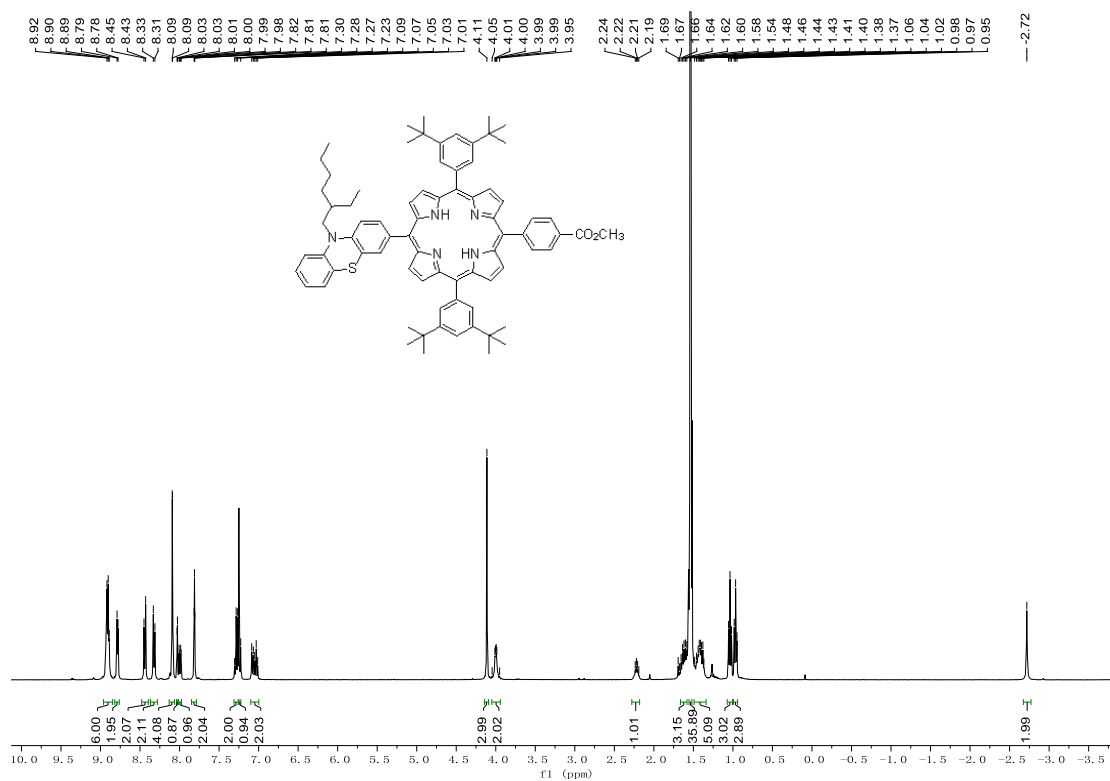


Fig. S5 ¹H NMR of compound 4a in CDCl₃.

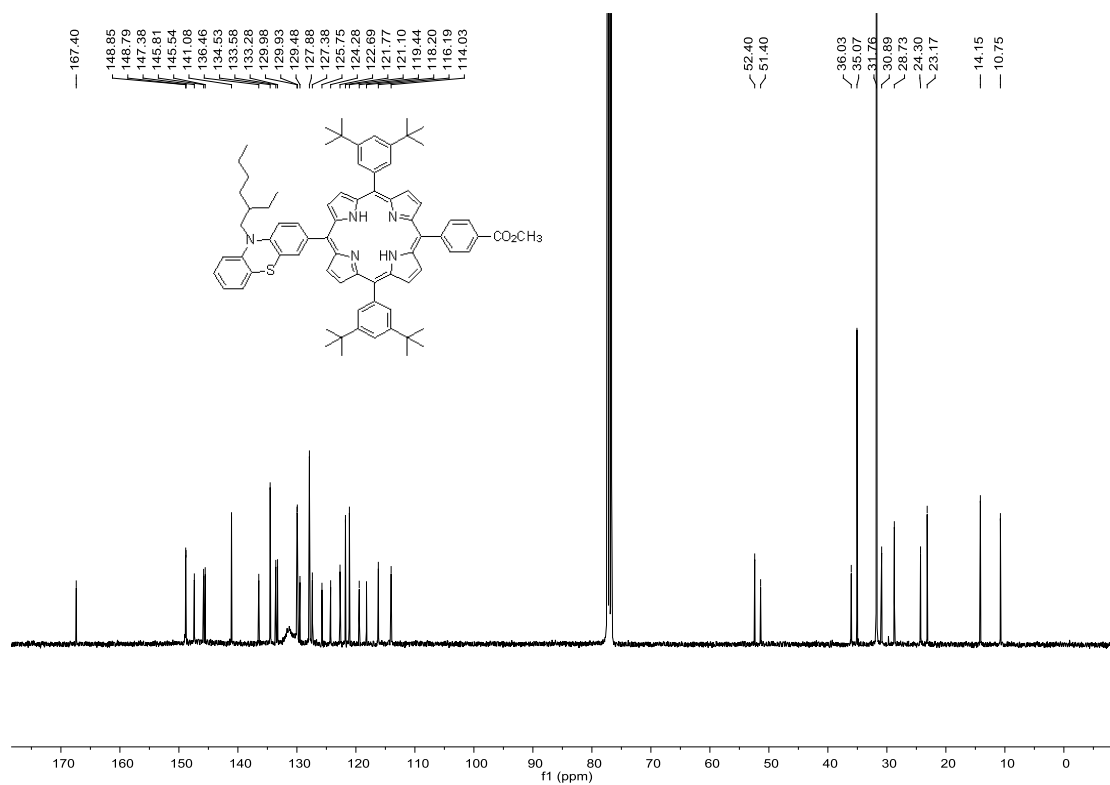


Fig. S6 ¹³C NMR of compound 4a in CDCl₃.

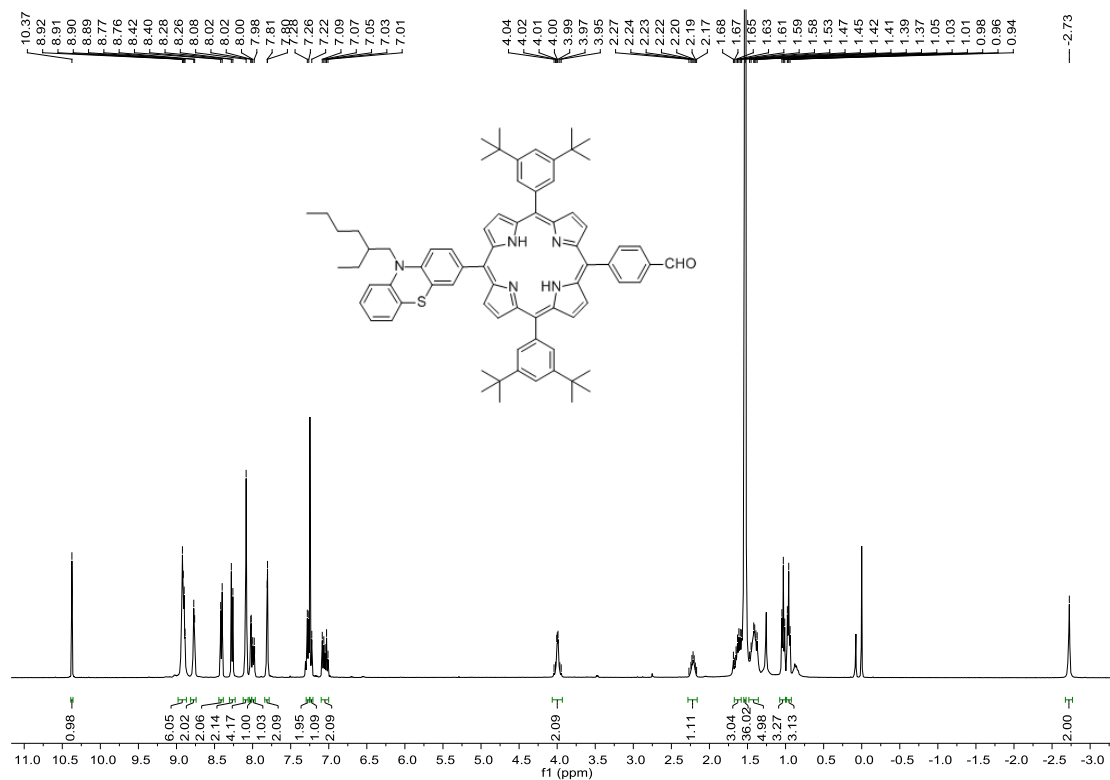


Fig. S7 ^1H NMR of compound **4b** in CDCl_3 .

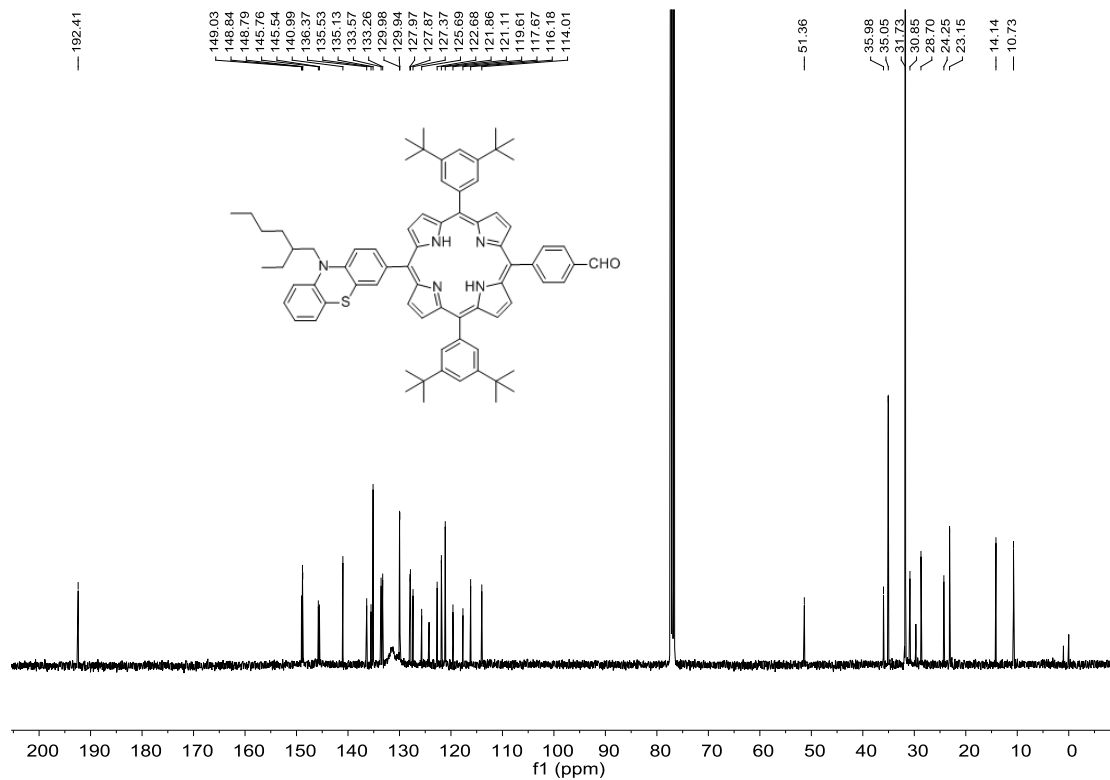


Fig. S8 ^{13}C NMR of compound **4b** in CDCl_3 .

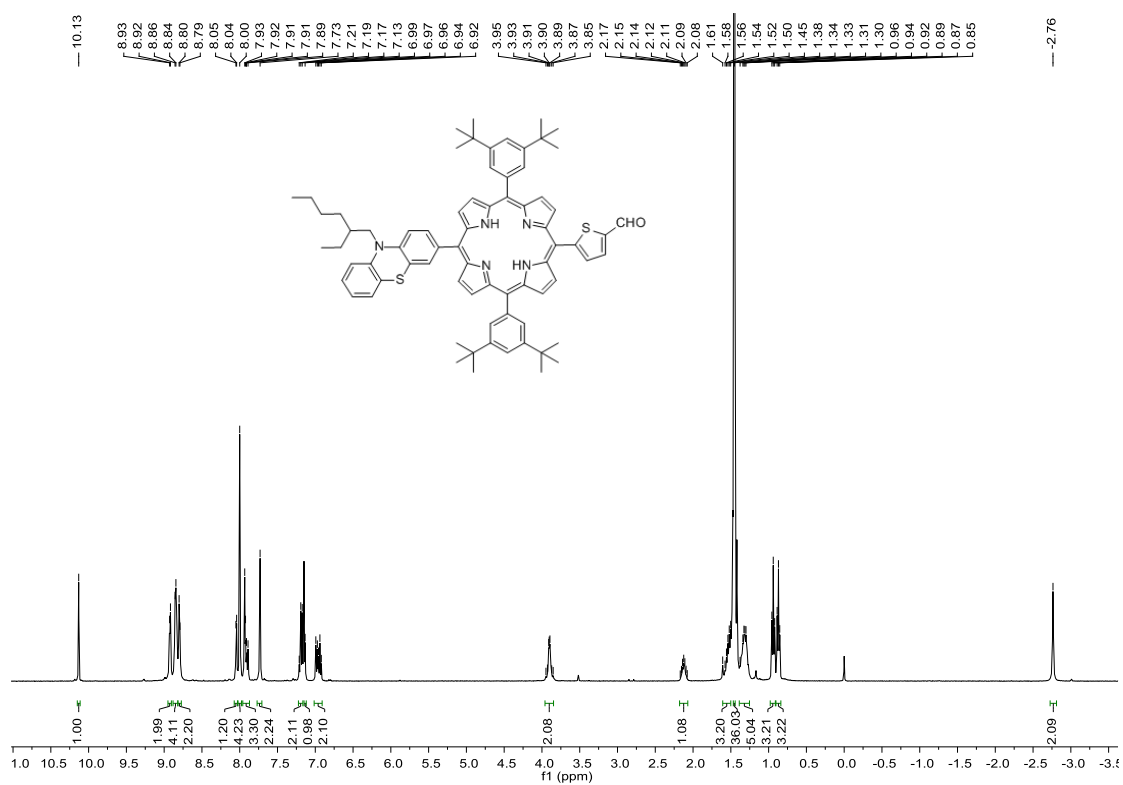


Fig. S9 ^1H NMR of compound **4c** in CDCl_3 .

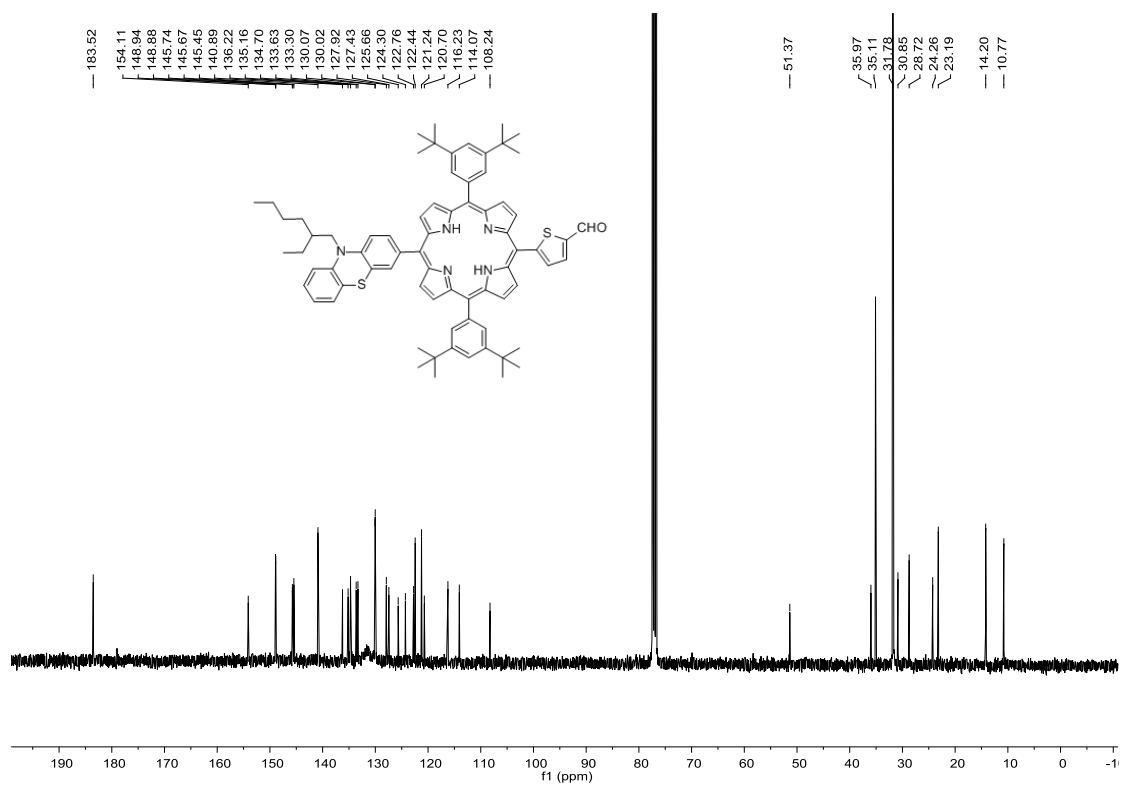


Fig. S10 ^{13}C NMR of compound **4c** in CDCl_3 .

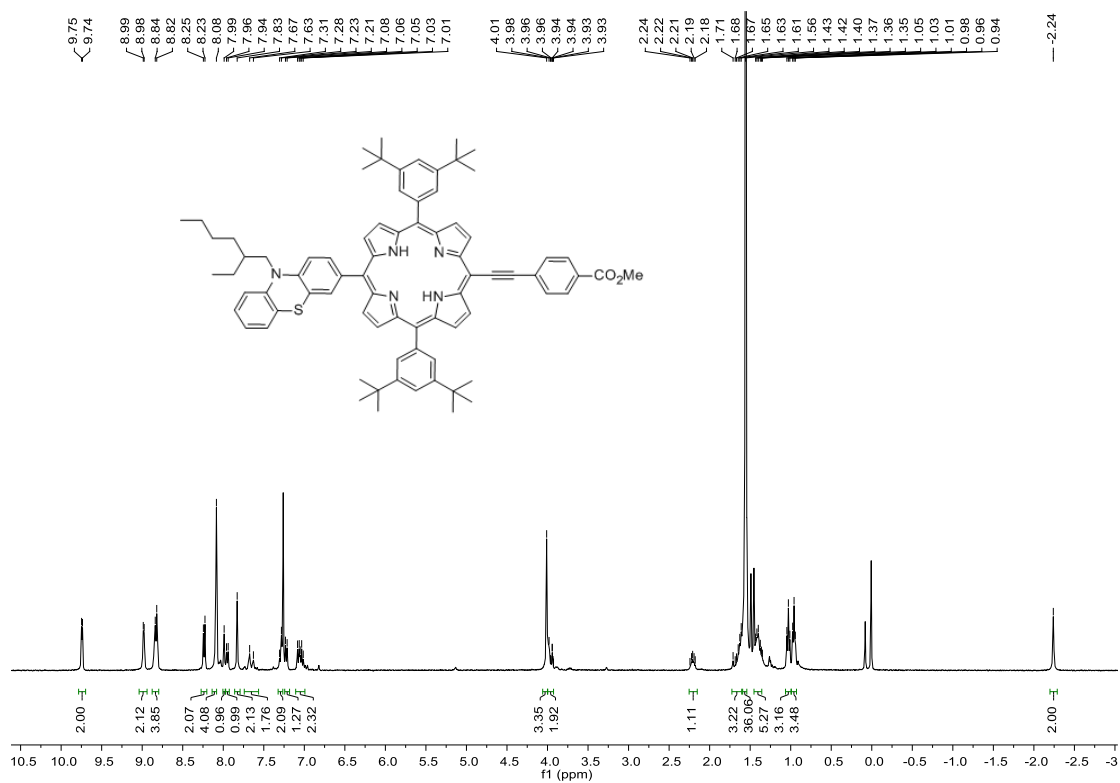


Fig. S11 ^1H NMR of compound **5** in CDCl_3 .

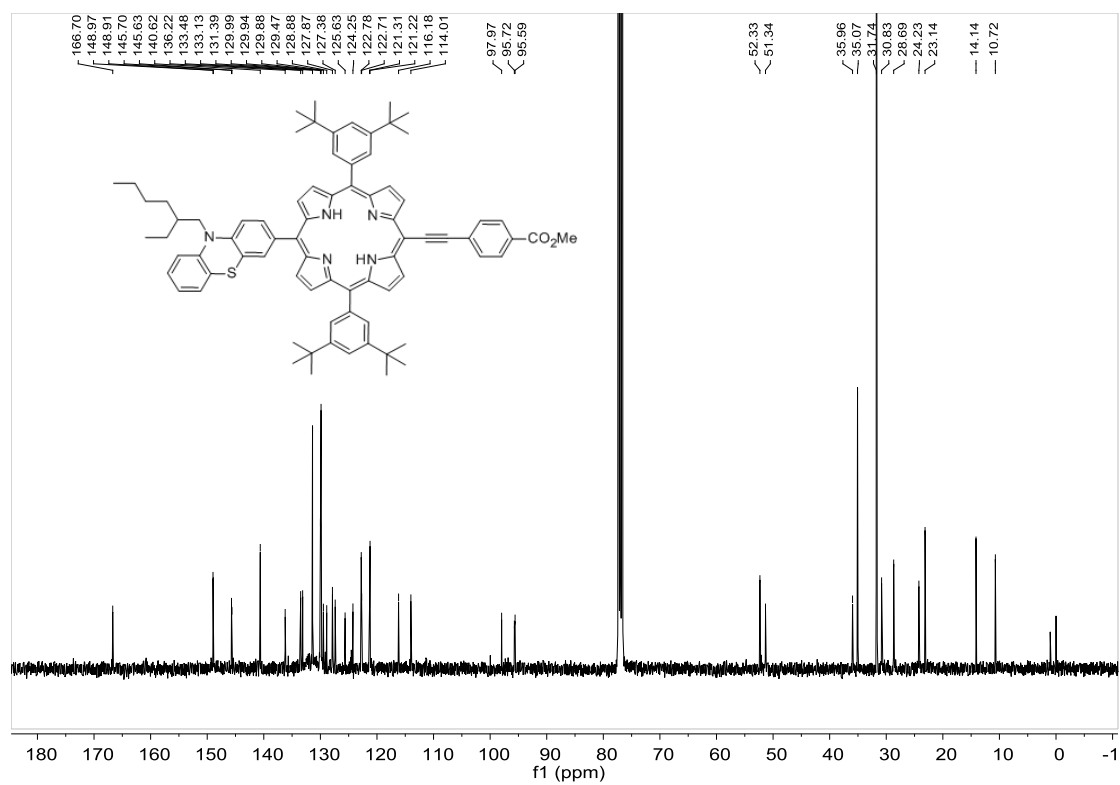


Fig. S12 ^{13}C NMR of compound **5** in CDCl_3 .

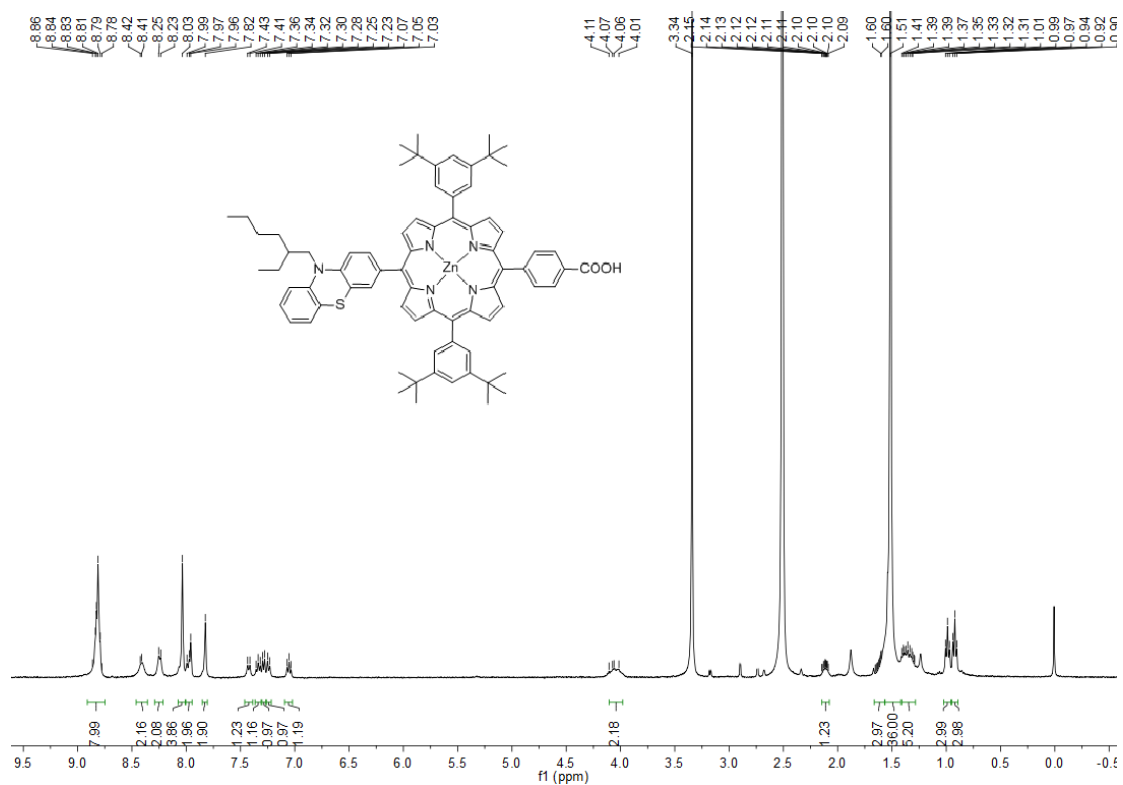


Fig. S13 ¹H NMR of compound **JY24** in DMSO-*d*₆.

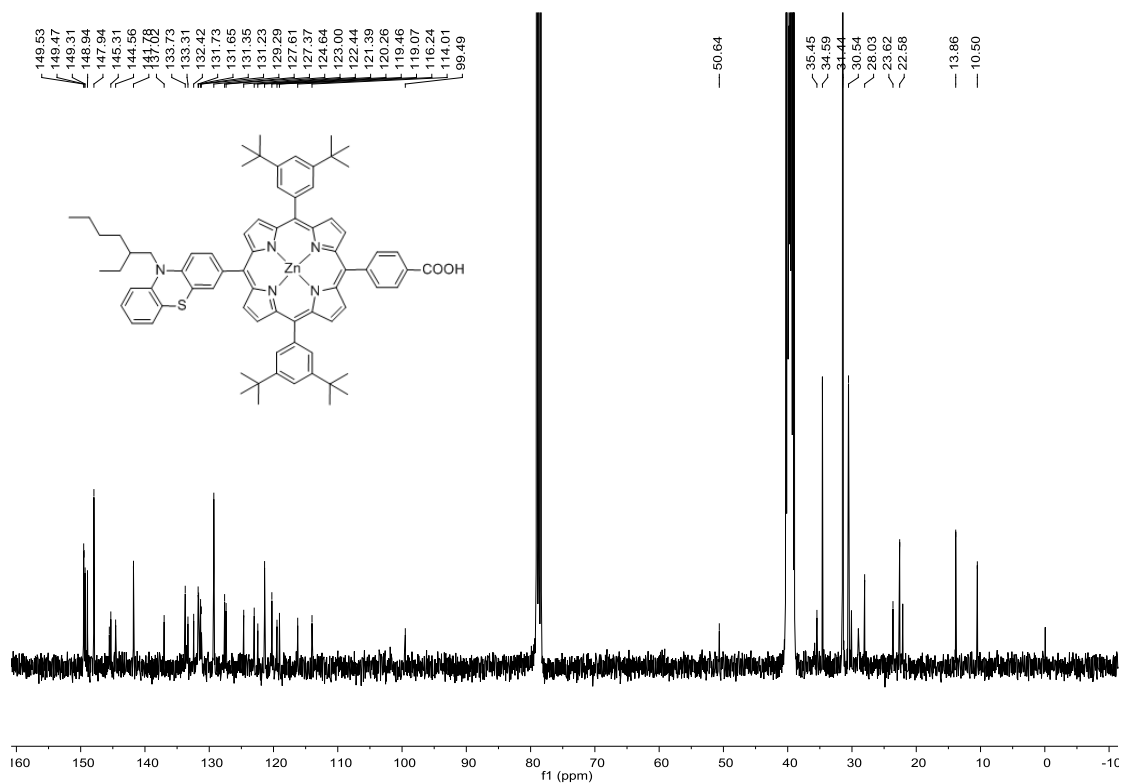


Fig. S14 ¹³C NMR of compound **JY24** in DMSO-*d*₆.

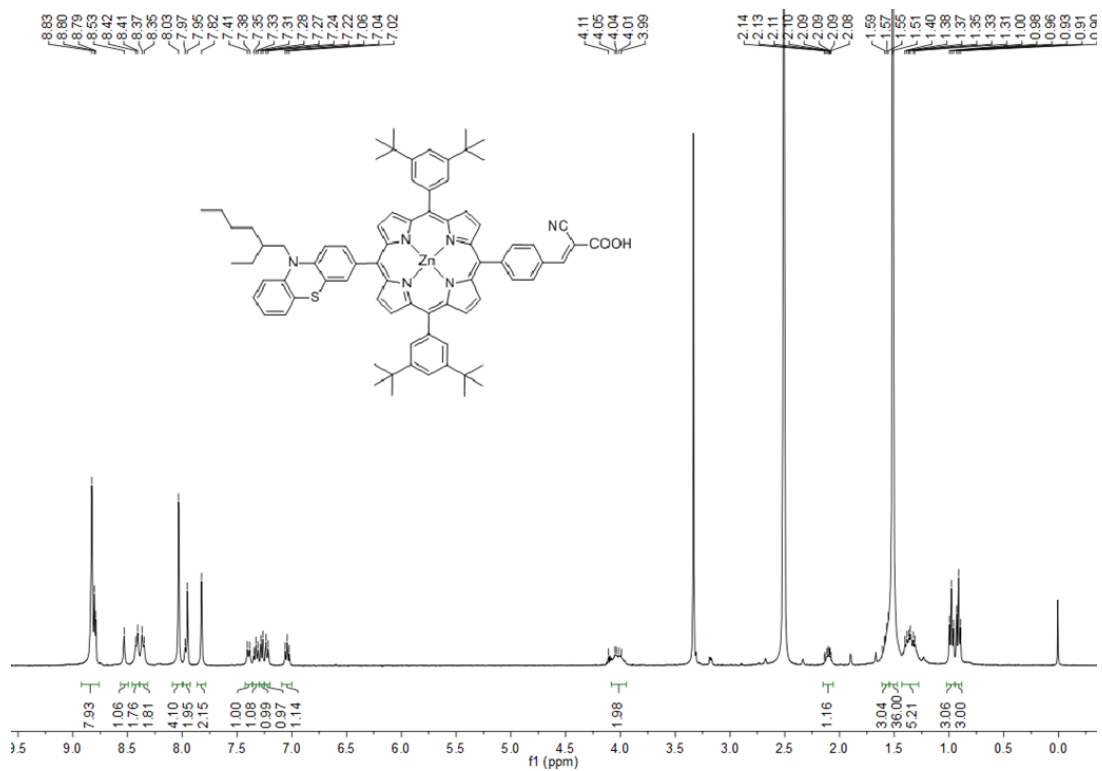


Fig. S15 ^1H NMR of compound JY25 in DMSO- d_6 .

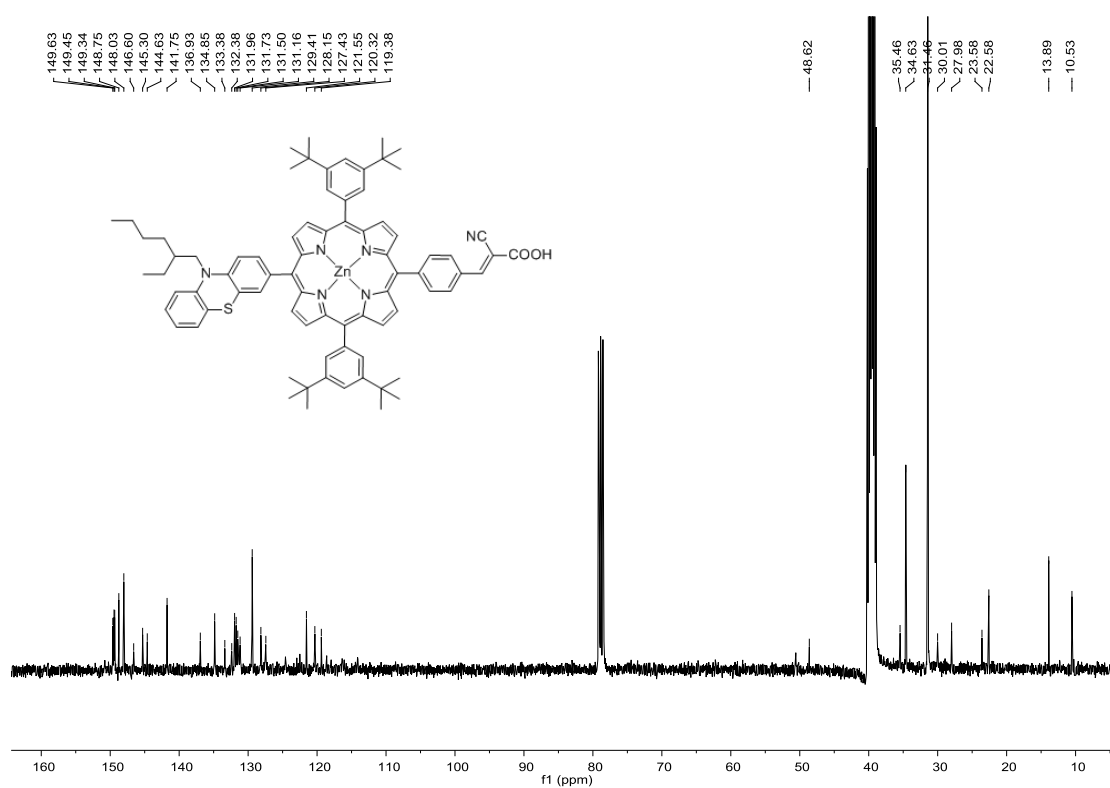


Fig. S16 ^{13}C NMR of compound JY25 in DMSO- d_6 .

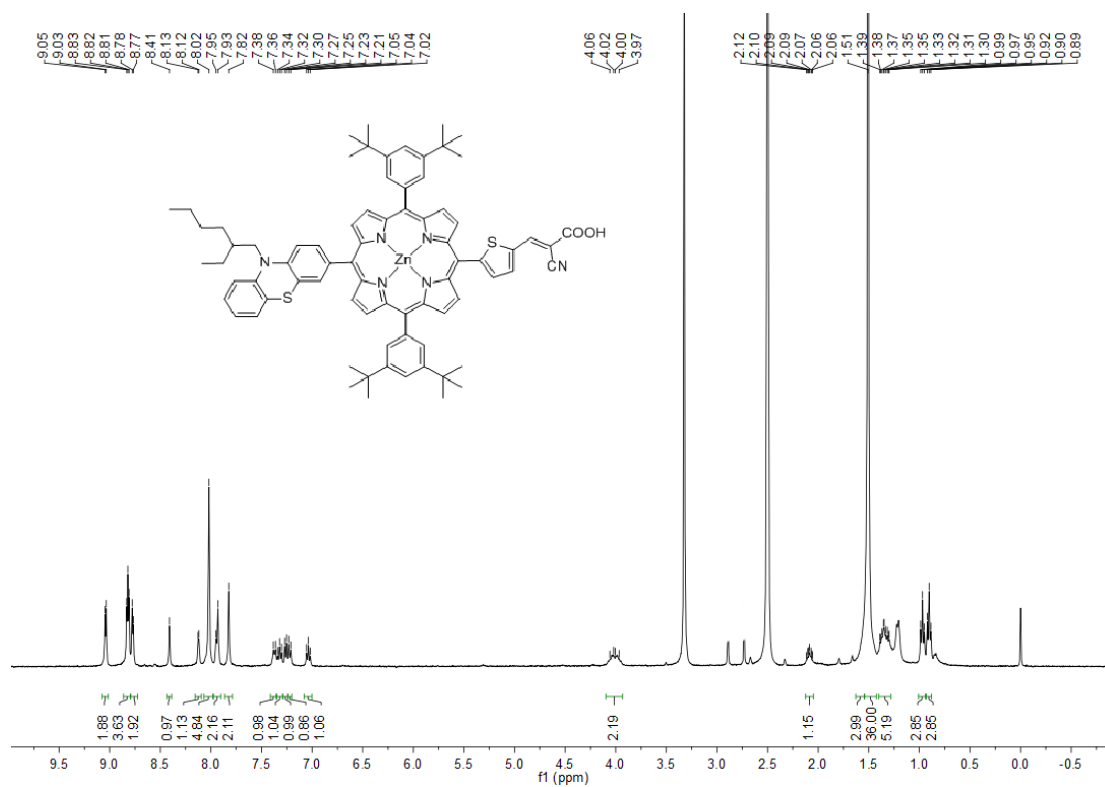


Fig. S17 ¹H NMR of compound **JY26** in DMSO-*d*₆.

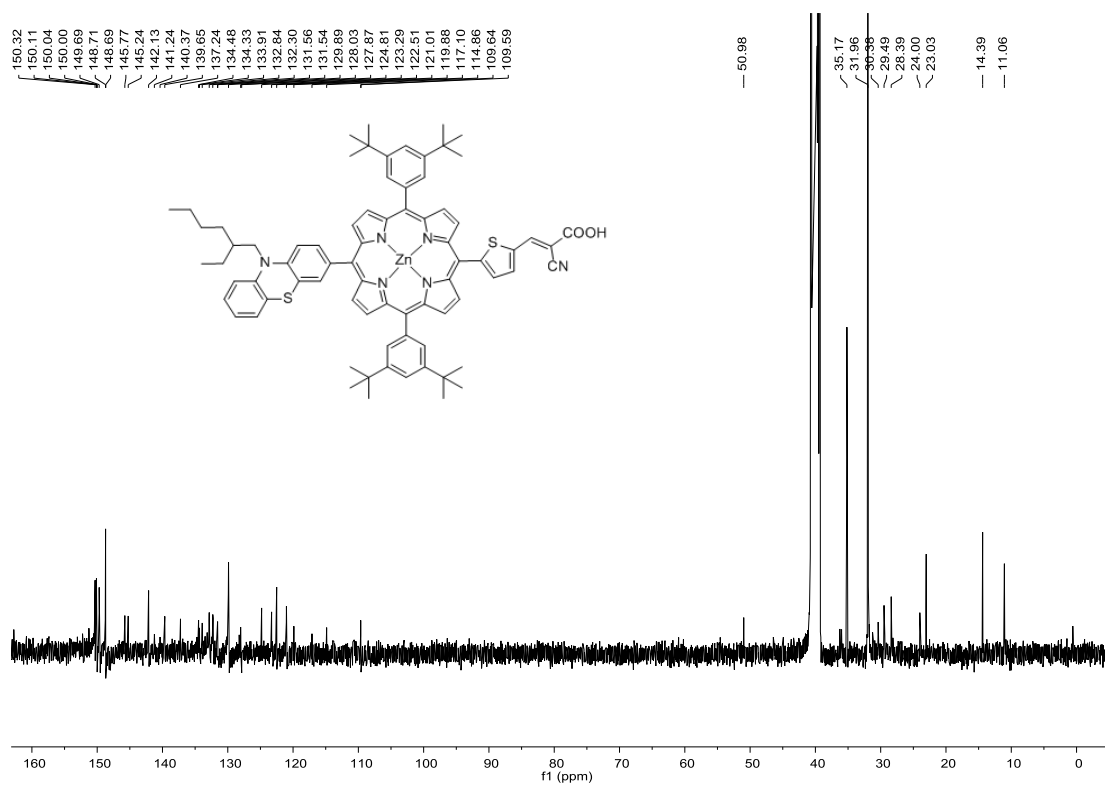


Fig. S18 ¹³C NMR of compound **JY26** in DMSO-*d*₆.

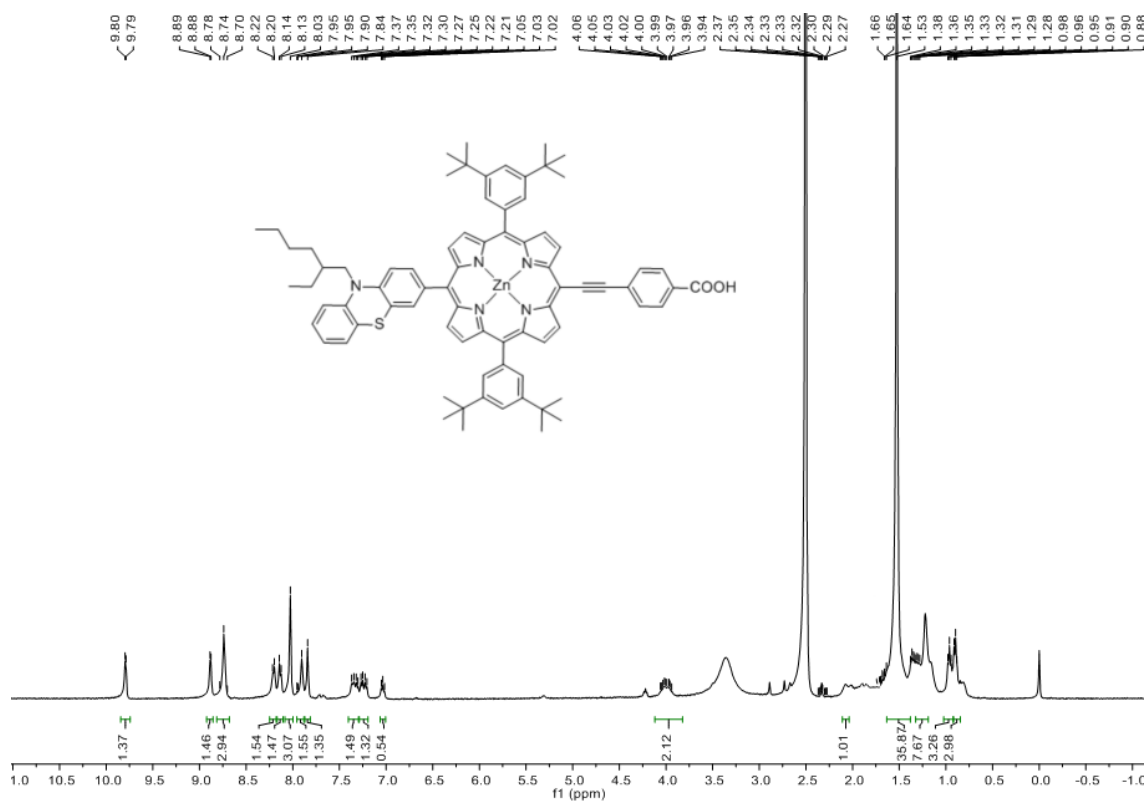


Fig. S19 ¹H NMR of compound **JY27** in DMSO-*d*₆.

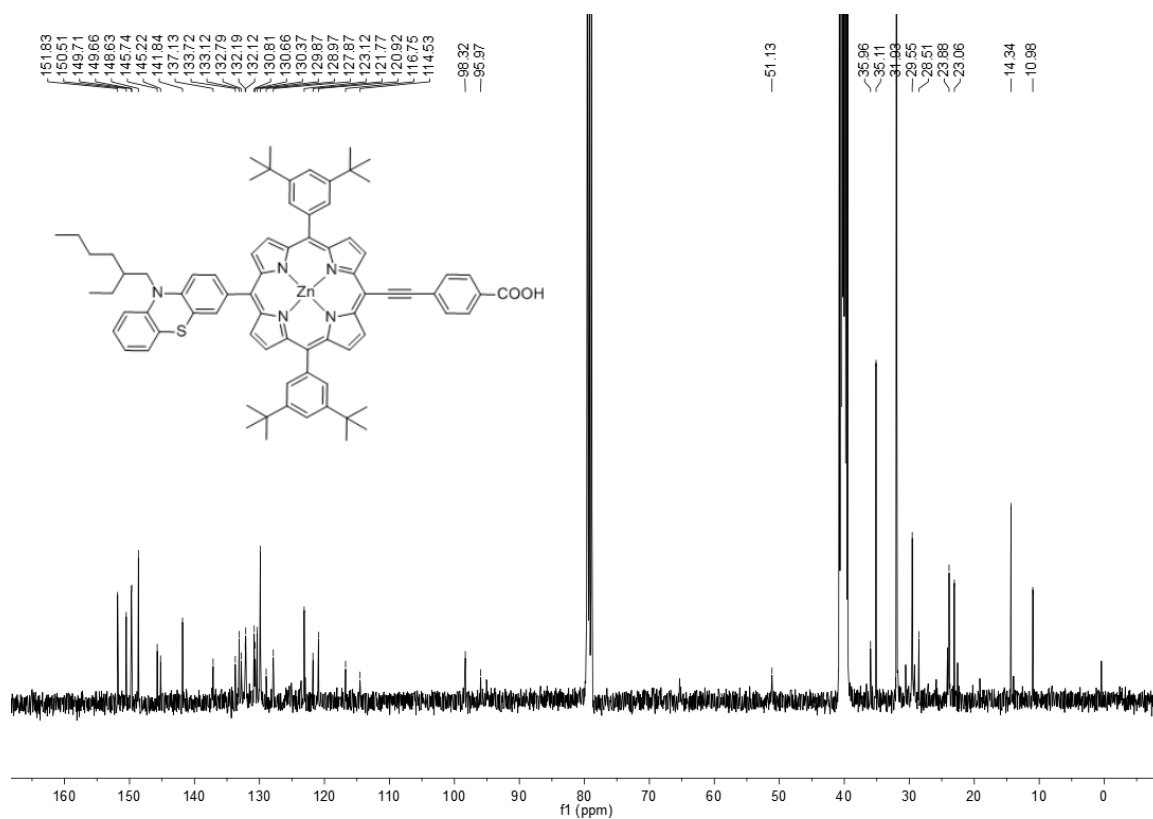


Fig. S20 ¹³C NMR of compound **JY27** in DMSO-*d*₆.