

Supporting Information

Synthesis and *in vitro* photodynamic activities of di- α -substituted zinc(II) phthalocyanine derivatives

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Fig. S1 ^1H NMR spectrum of **9b** in CDCl_3 with a trace amount of pyridine- d_5 .

Fig. S2 Electronic absorption spectra of **6a** and **9a** in the RPMI culture medium.

Fig. S3 Visualisation of intracellular fluorescence of HT29 after incubation with **6a-6d**
and **9a-9b**.

^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of all the new compounds

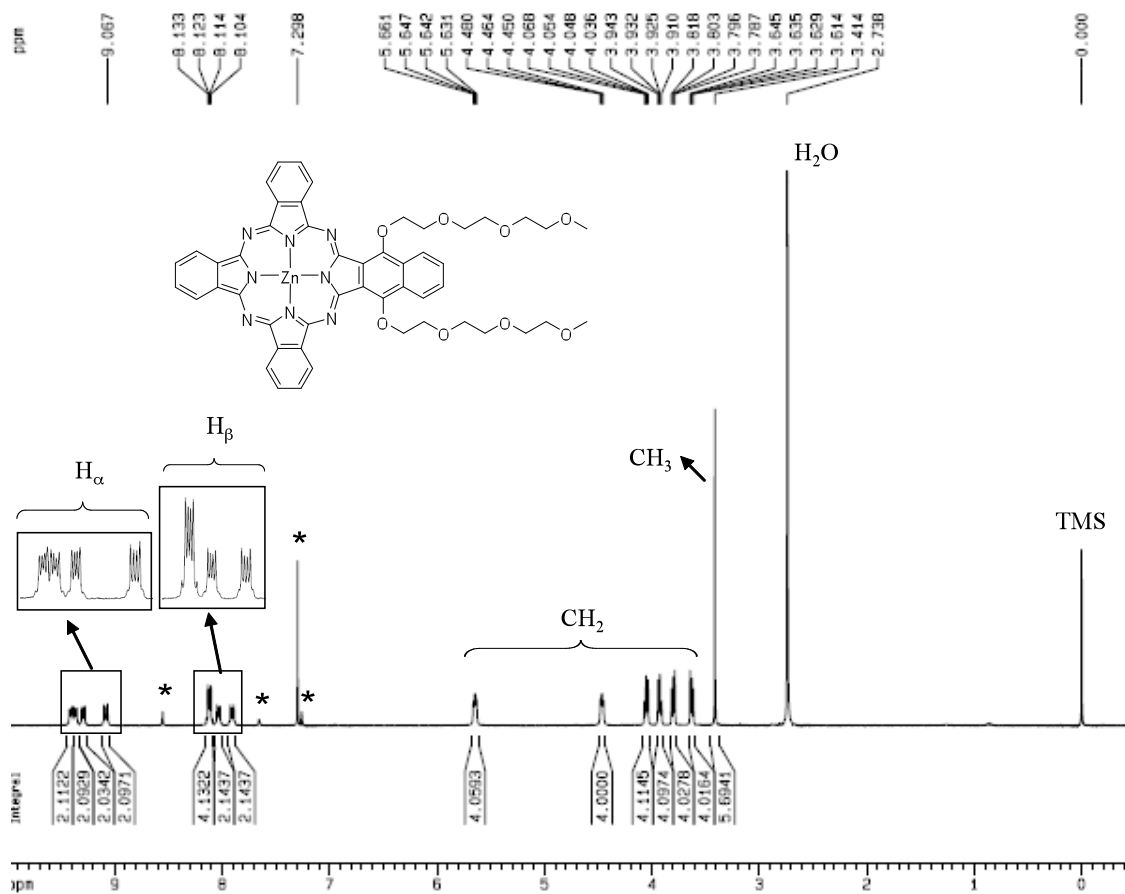


Fig. S1 ^1H NMR spectrum of **9b** in CDCl_3 with a trace amount of pyridine-d_5 . Signals for the residual solvents are marked with asterisks.

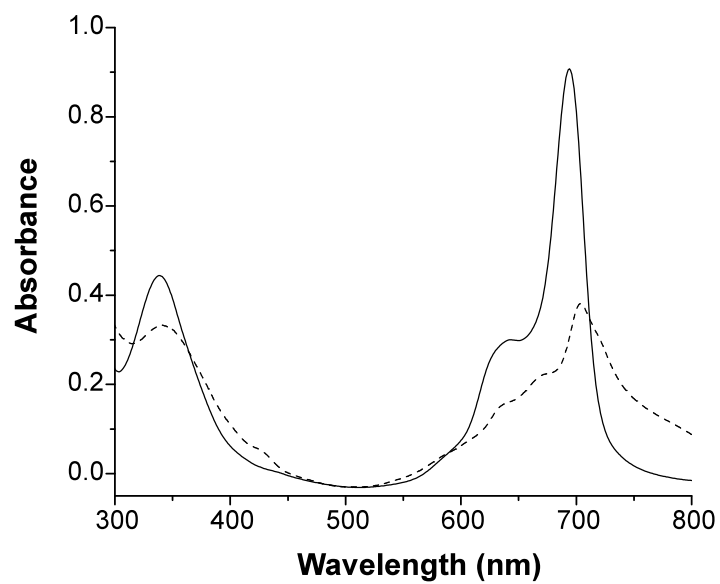


Fig. S2 Electronic absorption spectra of **6a** (—) and **9a** (-----), formulated with Cremophor EL, in the RPMI culture medium (both at 8 μ M).

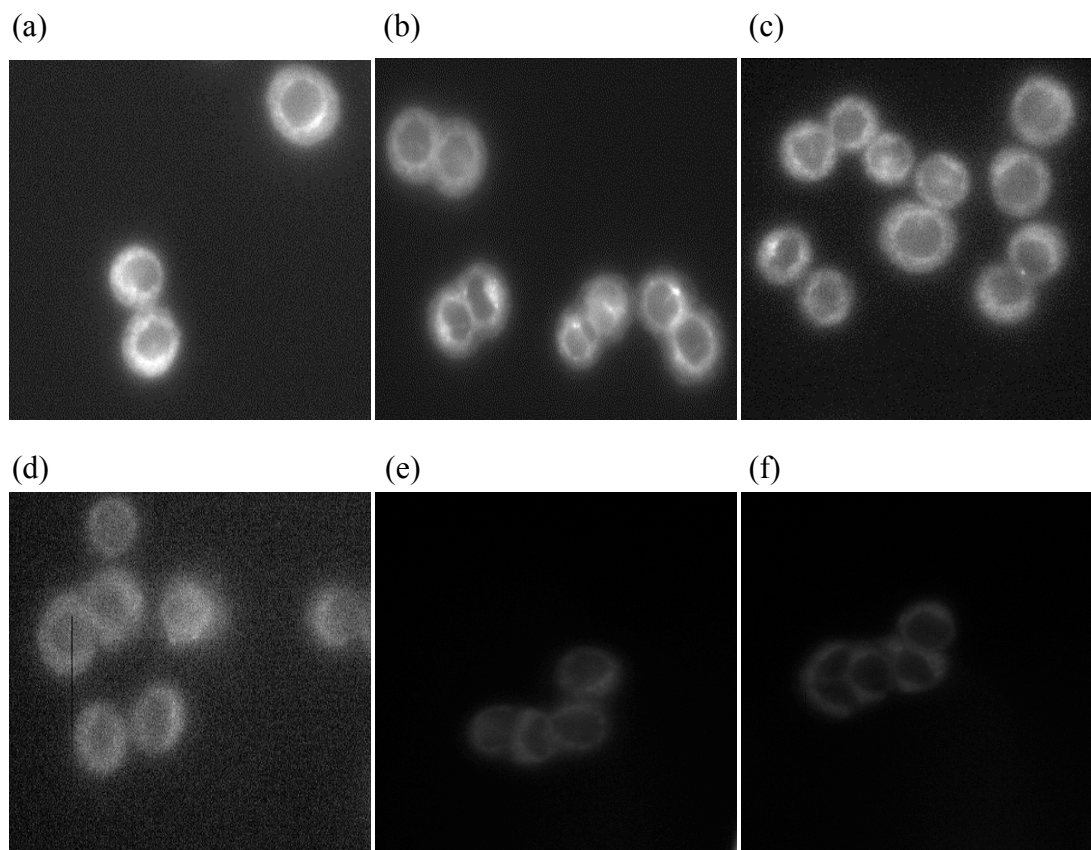
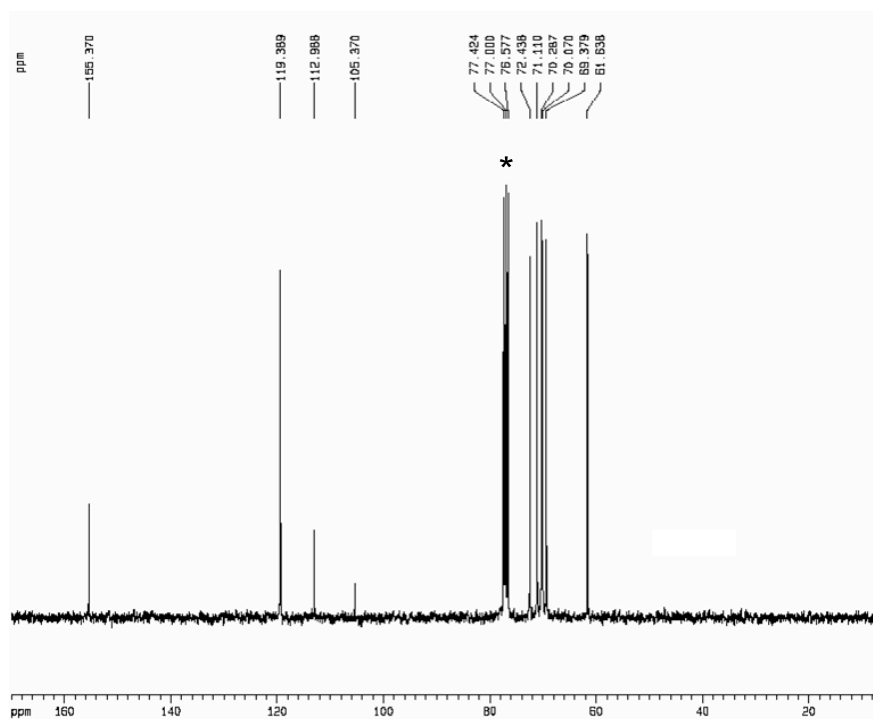
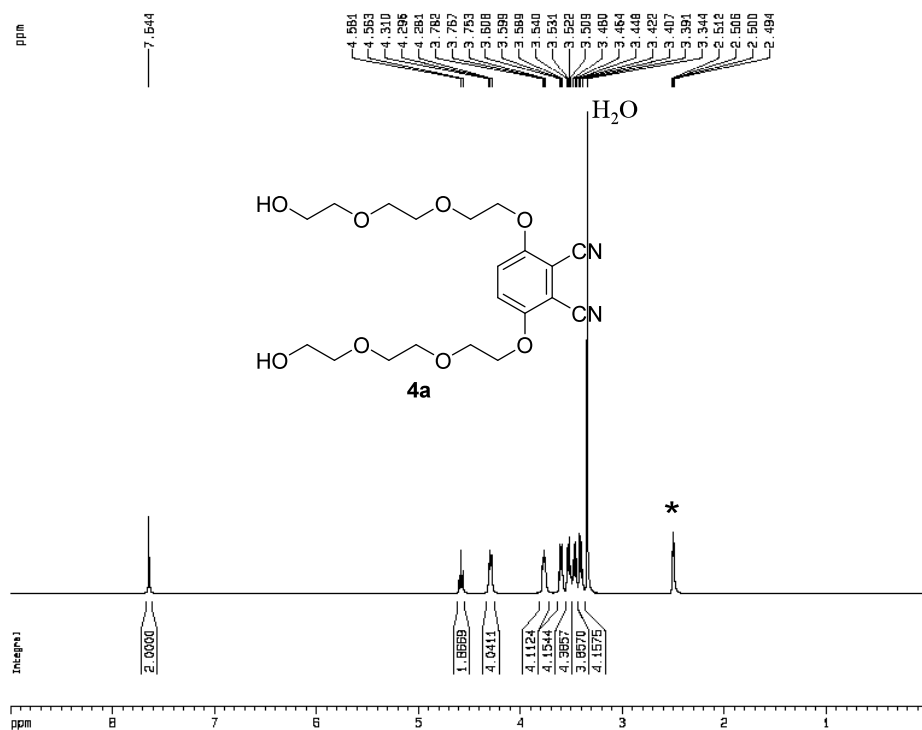
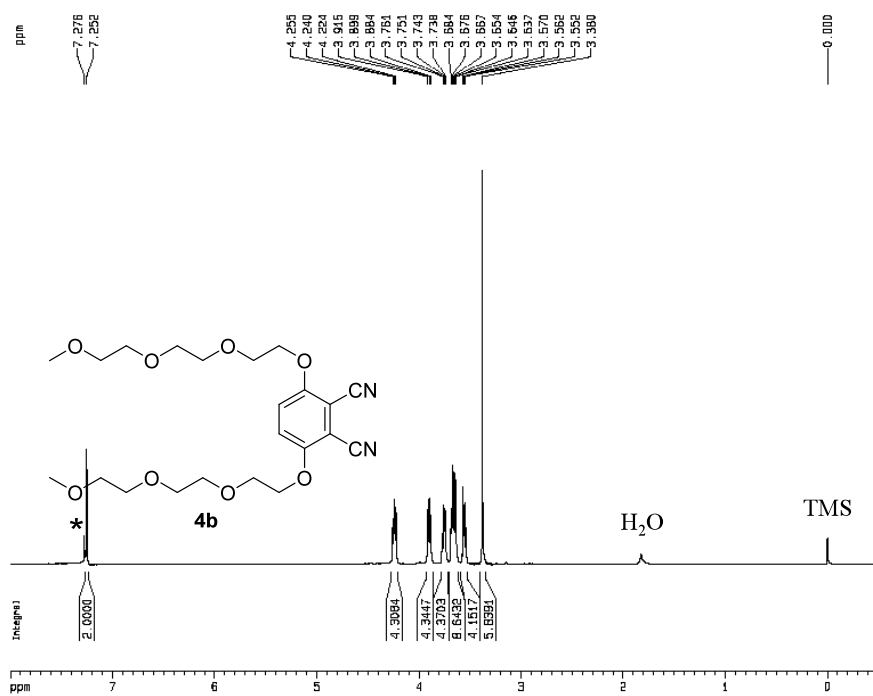


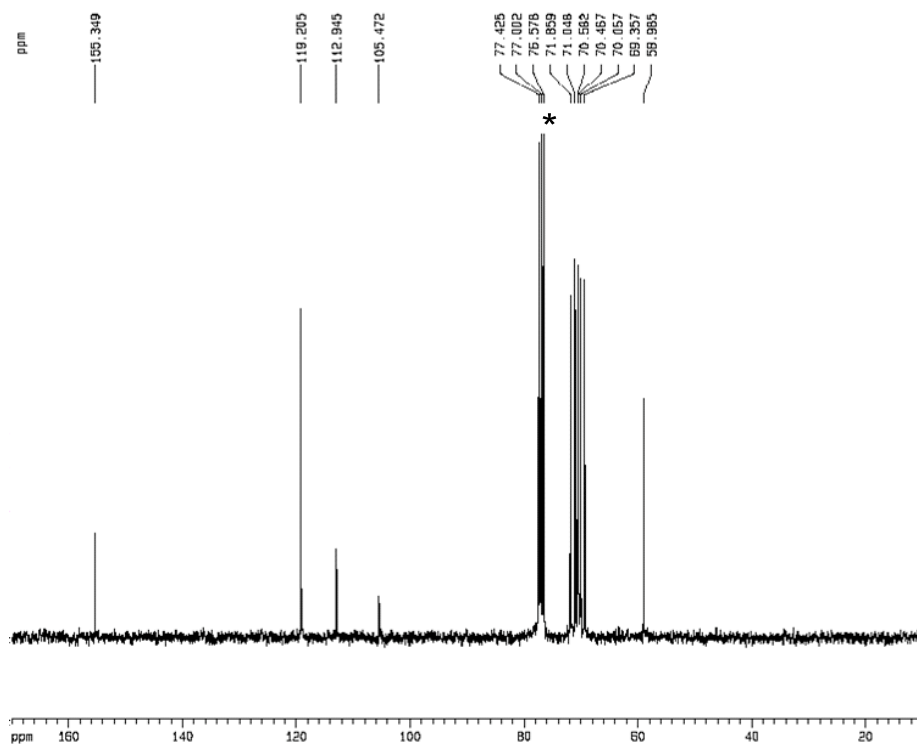
Fig. S3 Visualisation of intracellular fluorescence of HT29 after incubation with (a) **6a**, (b) **6b**, (c) **6c**, (d) **6d**, (e) **9a** and (f) **9b** for 2 h.

In all of the following spectra, residual solvent signals are marked with asterisks

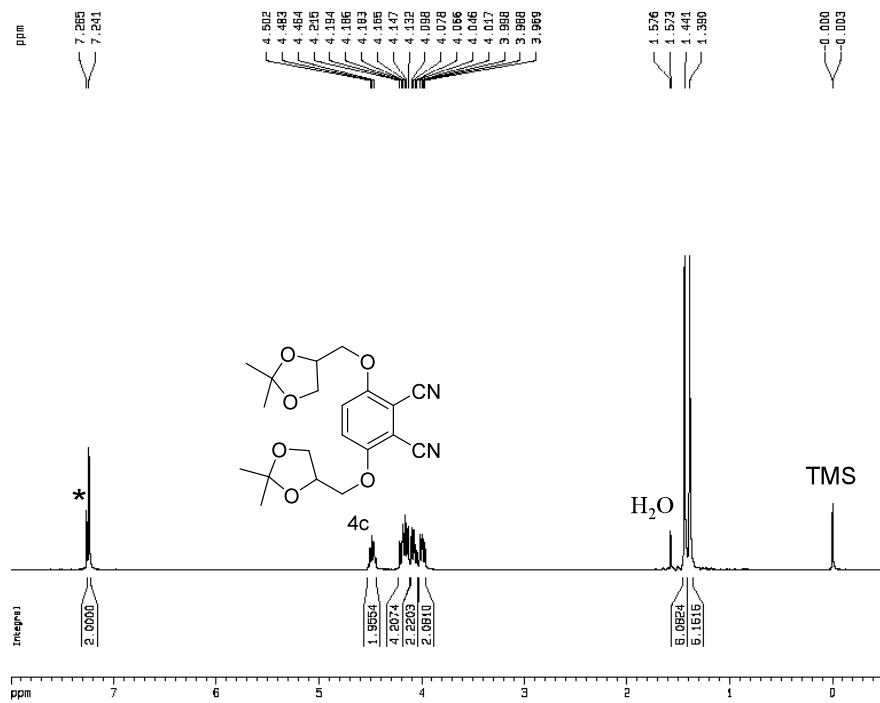




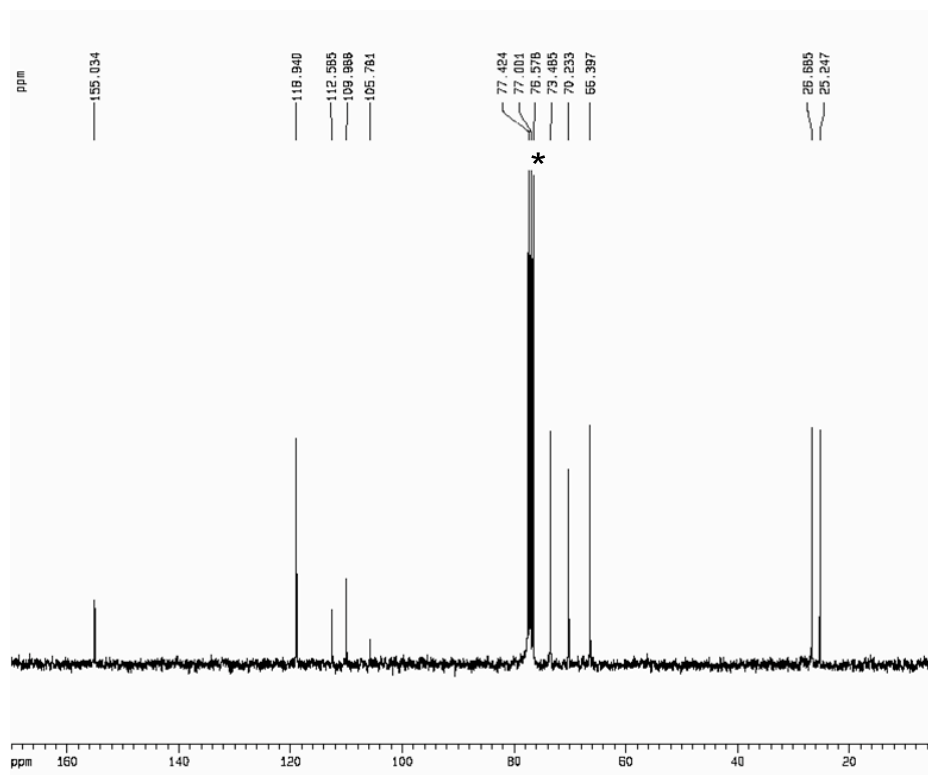
¹H NMR spectrum of **4b** in CDCl₃.



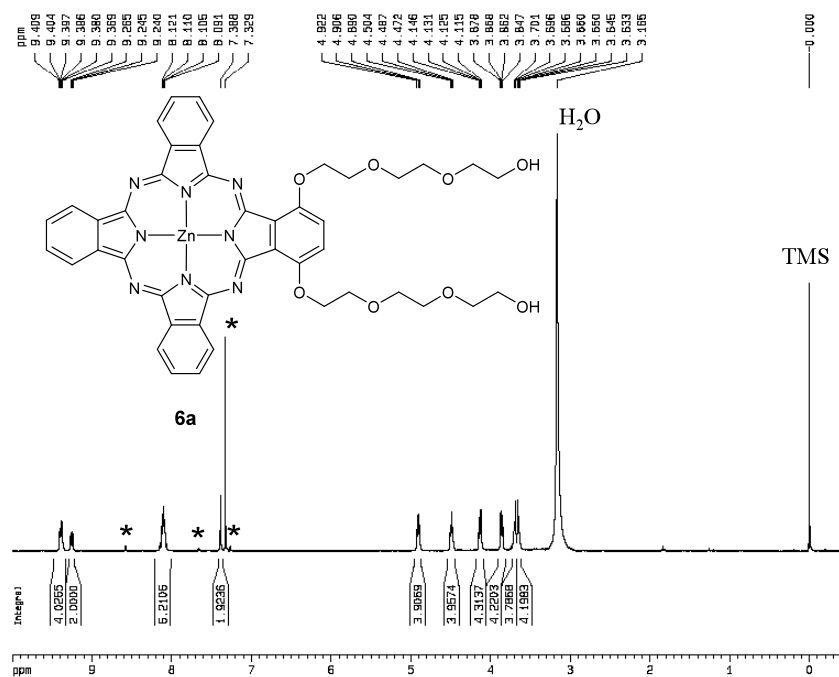
¹³C{¹H} NMR spectrum of **4b** in CDCl₃.



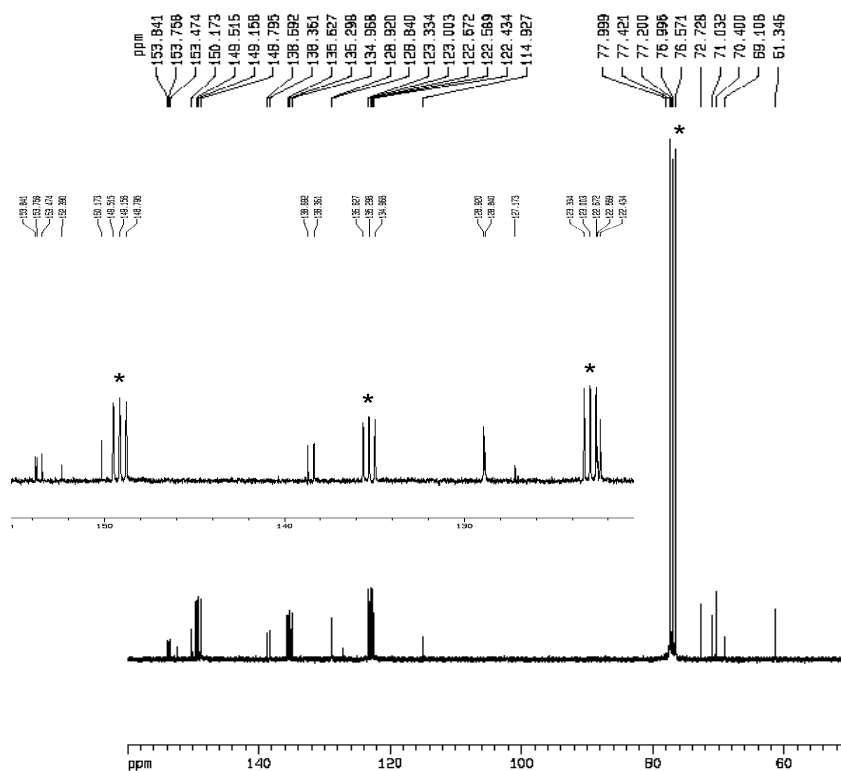
¹H NMR spectrum of **4c** in CDCl₃.



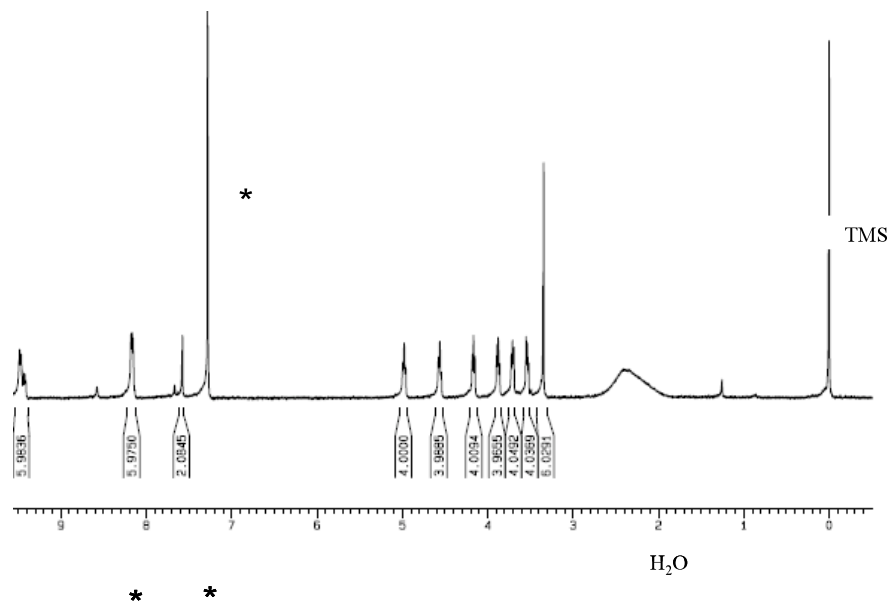
¹³C{¹H} NMR spectrum of **4c** in CDCl₃.



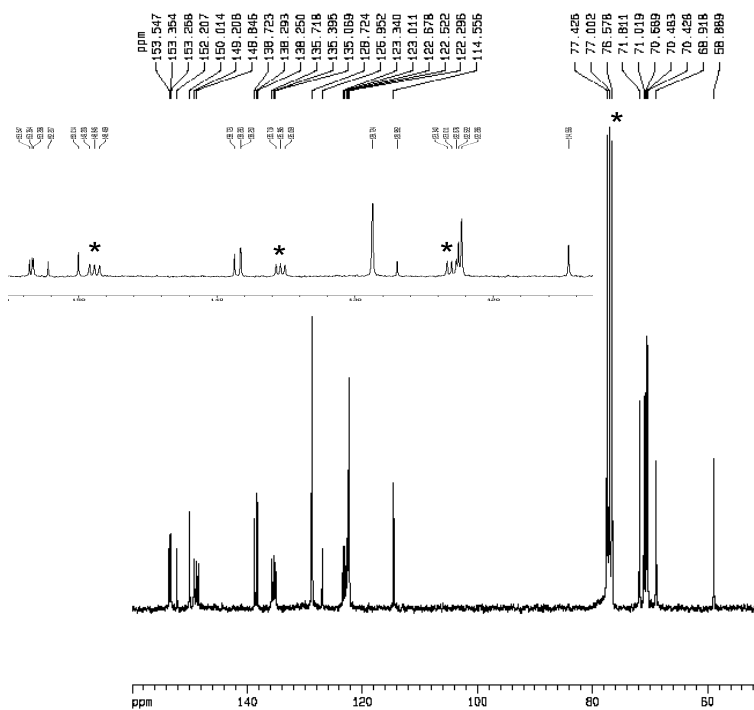
¹H NMR spectrum of **6a** in CDCl₃ with a trace amount of pyridine-d₅.



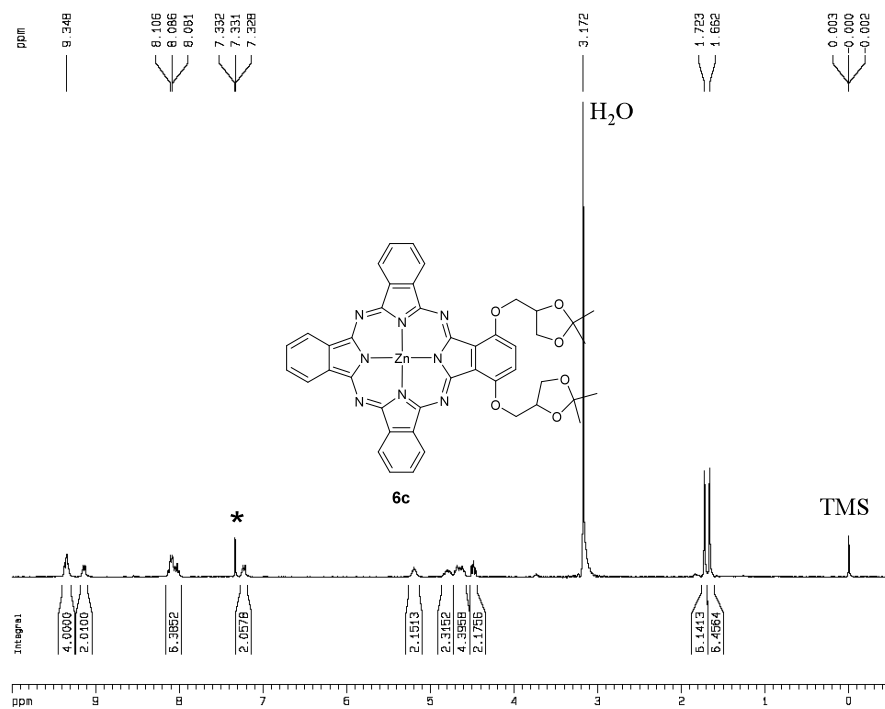
¹³C{¹H} NMR spectrum of **6a** in CDCl₃ with a trace amount of pyridine-d₅.



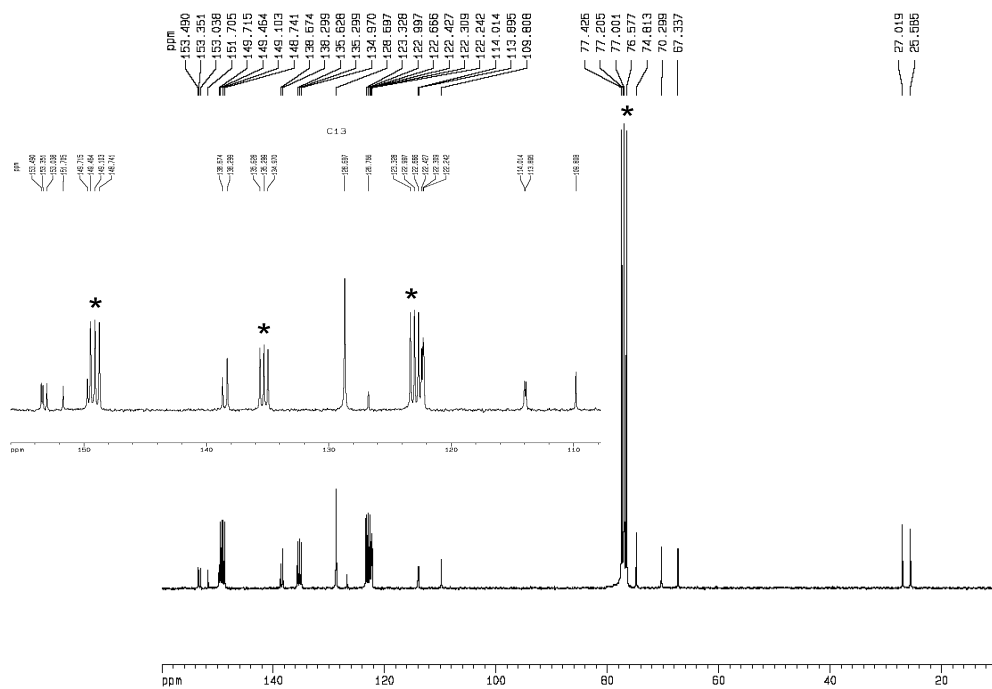
^1H NMR spectrum of **6b** in CDCl_3 with a trace amount of pyridine- d_5 .



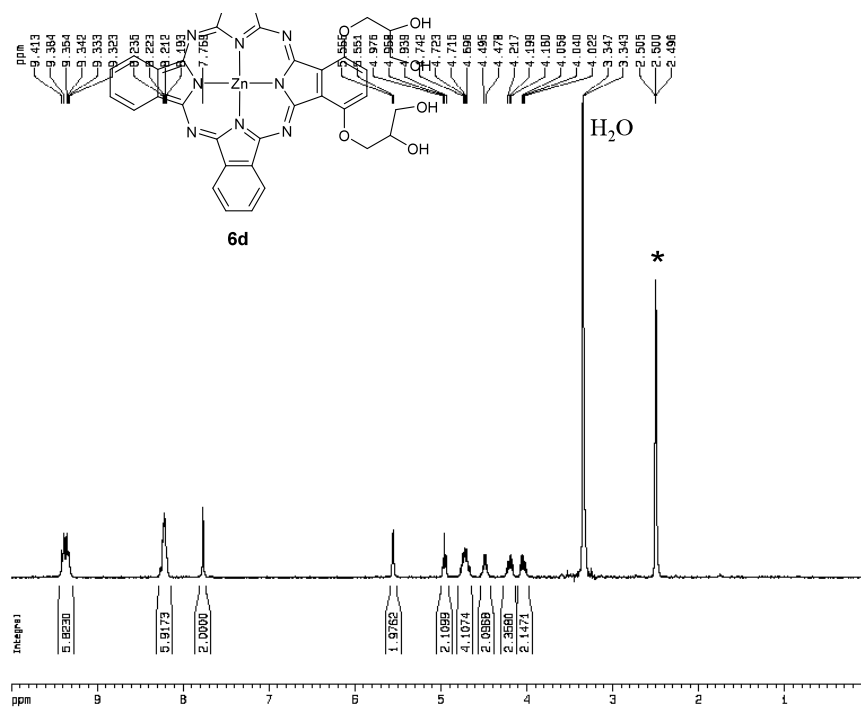
$^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **6b** in CDCl_3 with a trace amount of pyridine- d_5 .



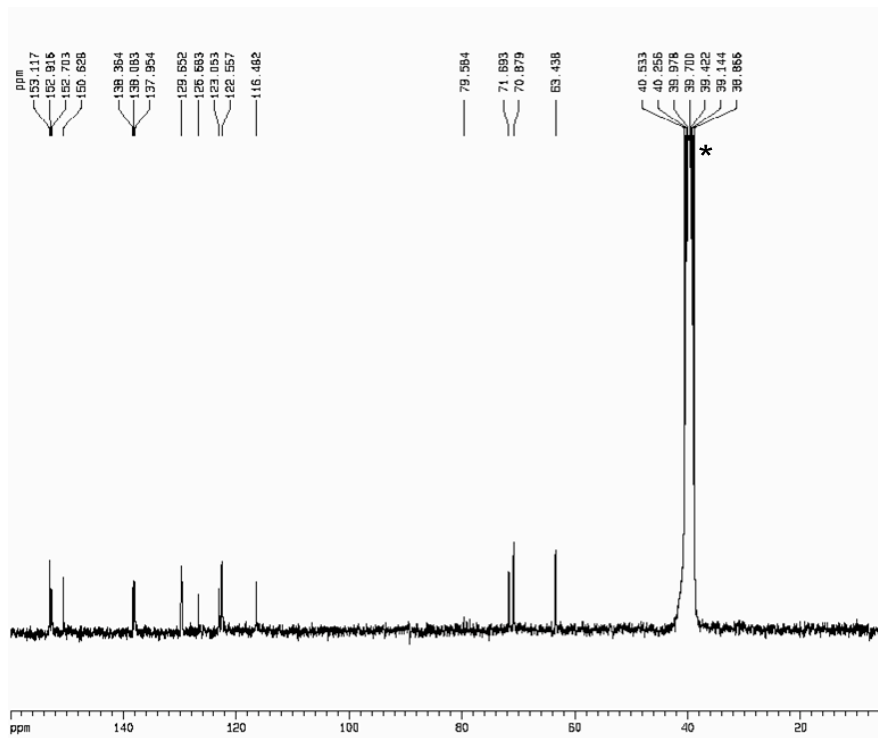
¹H NMR spectrum of 6c in CDCl₃ with a trace amount of pyridine-d₅.



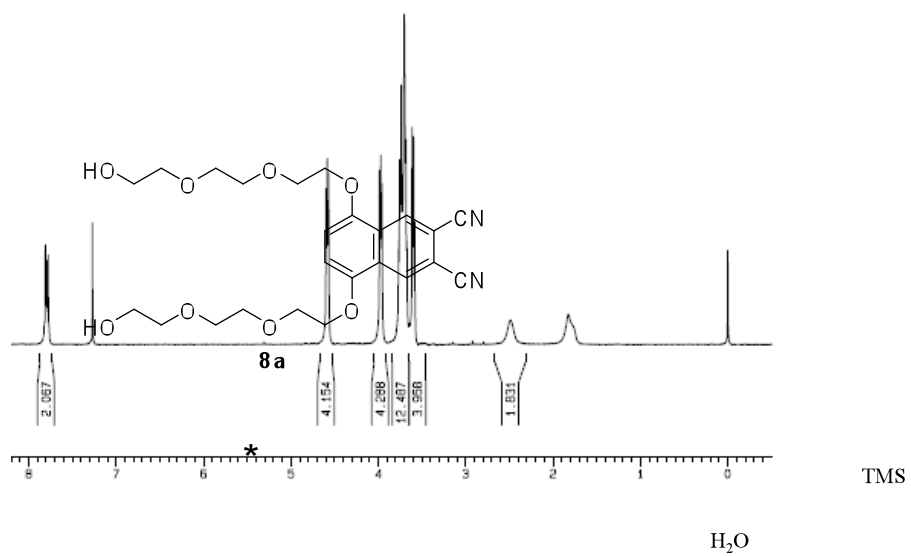
¹³C{¹H} NMR spectrum of 6c in CDCl₃ with a trace amount of pyridine-d₅.



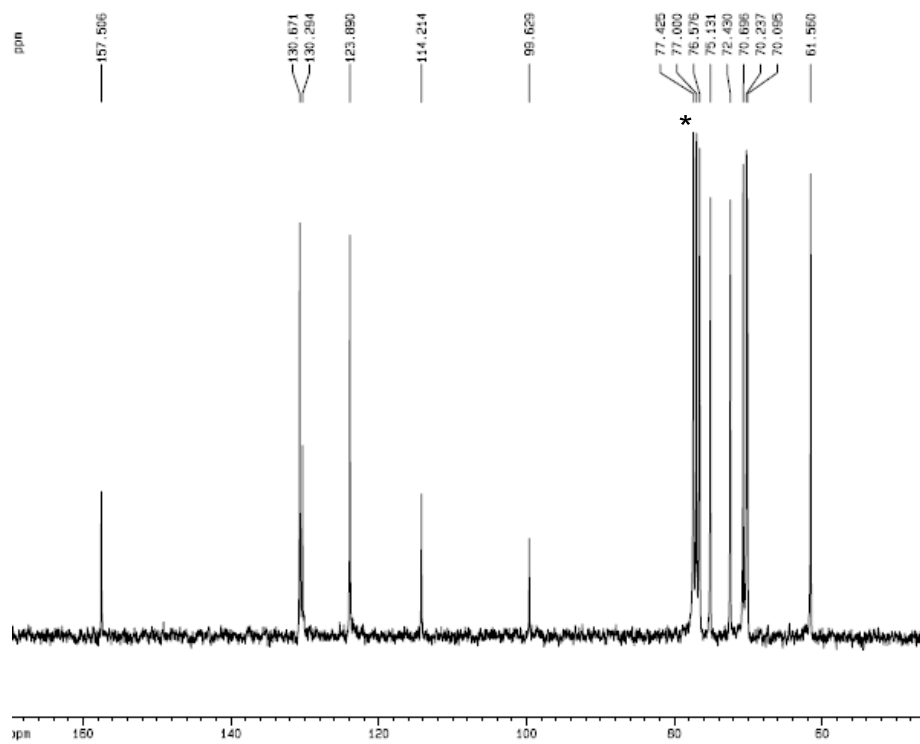
¹H NMR spectrum of **6d** in DMSO-d₆.



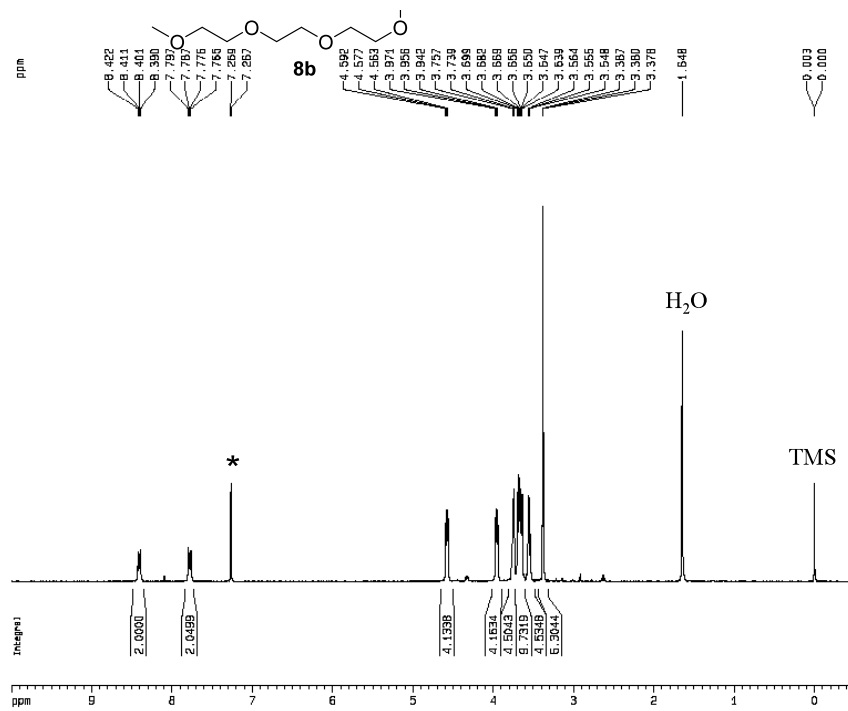
¹³C{¹H} NMR spectrum of **6d** in DMSO-d₆.



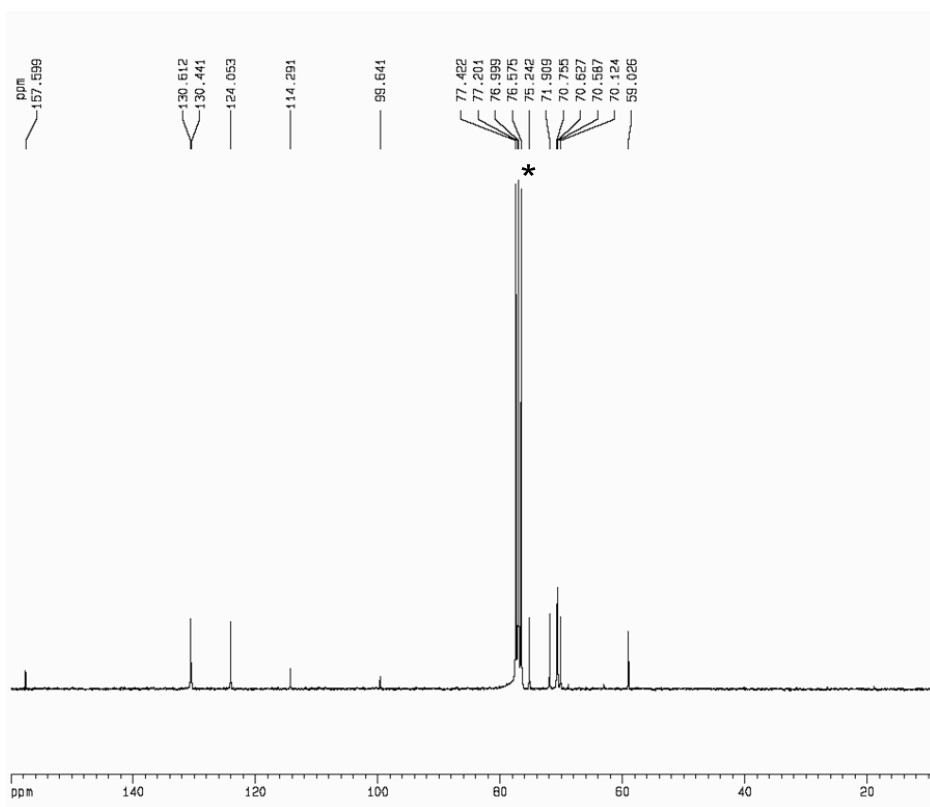
¹H NMR spectrum of **8a** in CDCl₃.



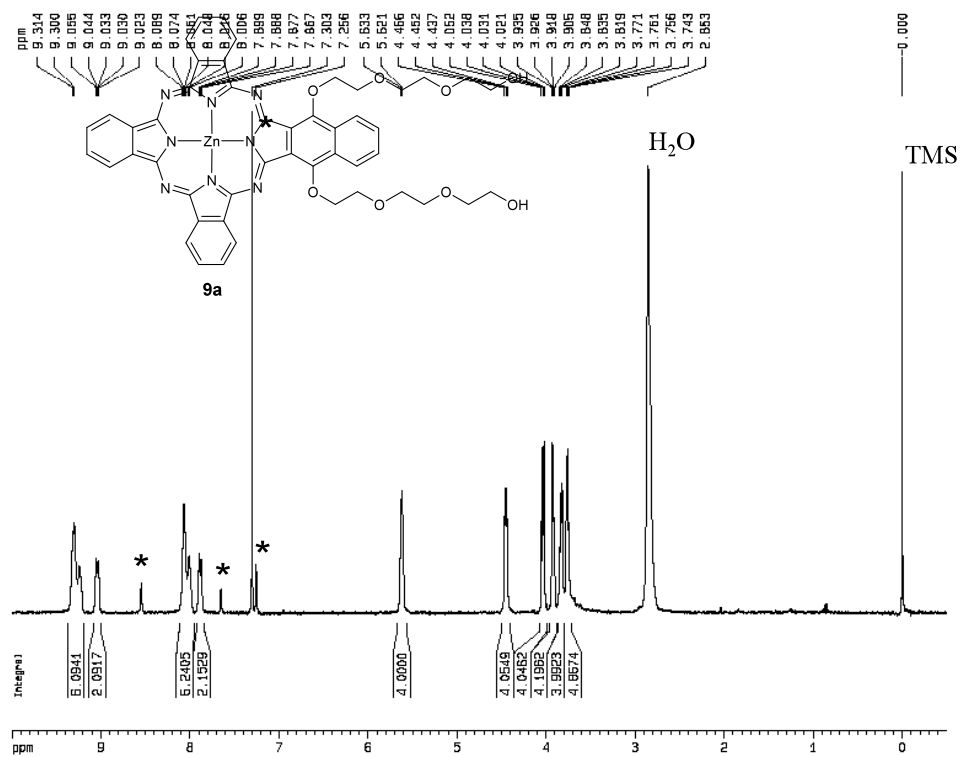
¹³C{¹H} NMR spectrum of **8a** in CDCl₃.



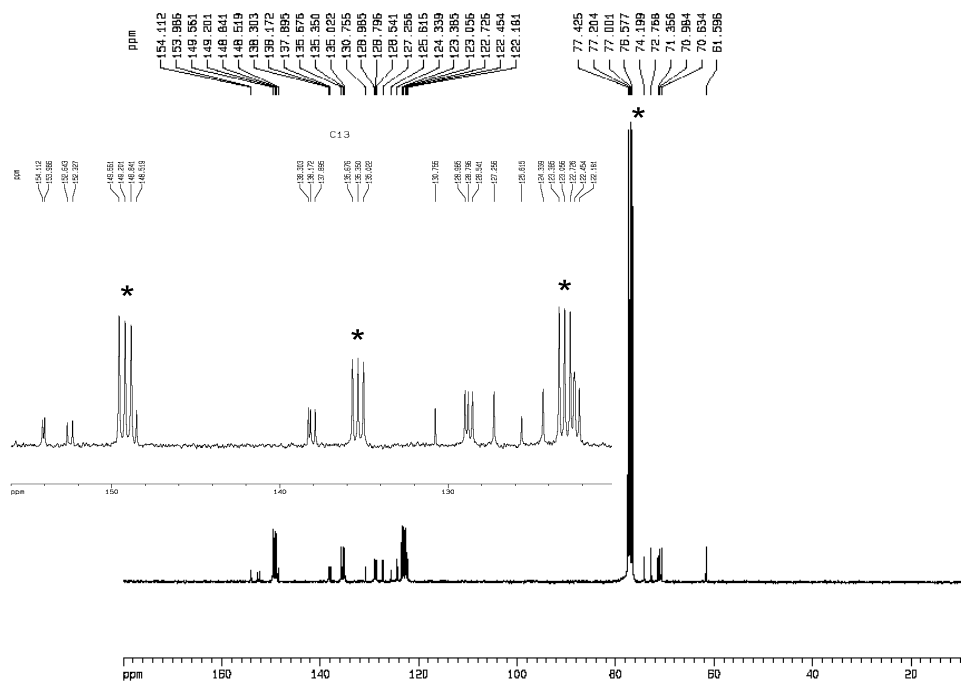
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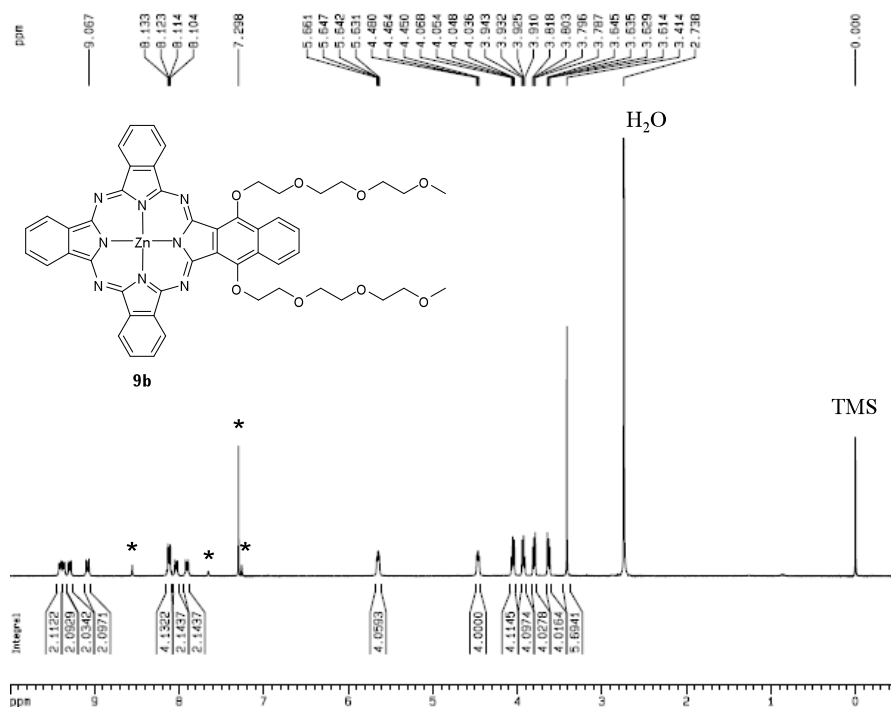
¹³C{¹H} NMR spectrum of **8b** in CDCl₃.



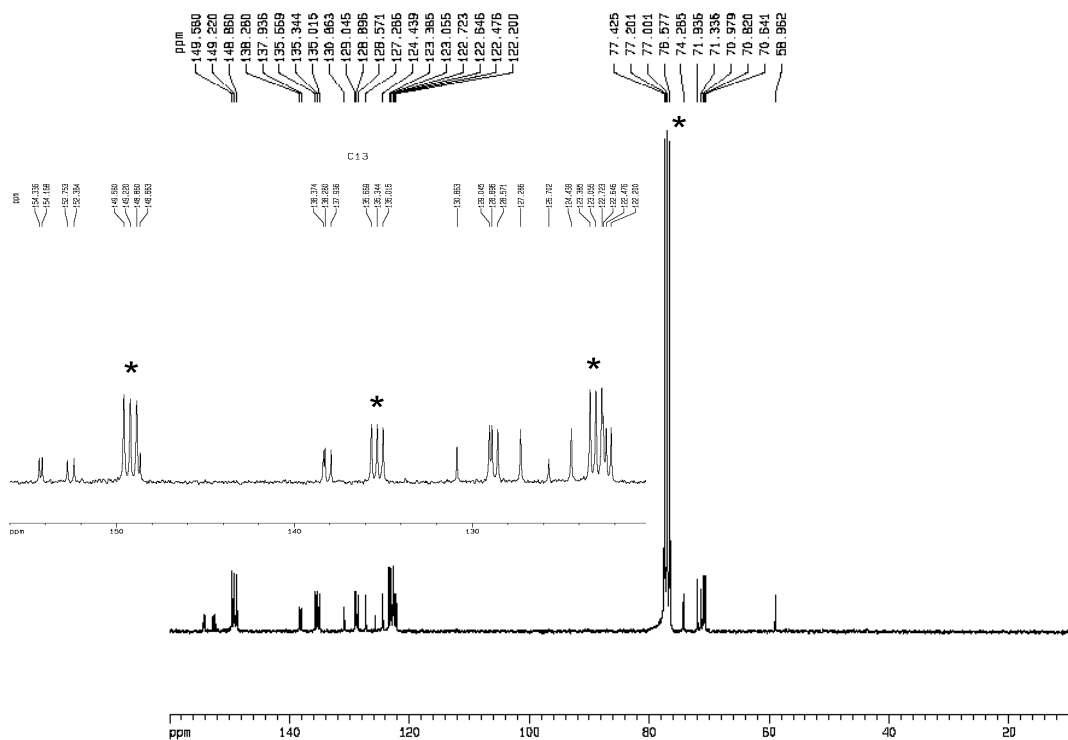
¹H NMR spectrum of 9a in CDCl₃ with a trace amount of pyridine-d₅.



¹³C{¹H} NMR spectrum of 9a in CDCl₃ with a trace amount of pyridine-d₅.



¹H NMR spectrum of **9b** in CDCl₃ with a trace amount of pyridine-d₅.



¹³C{¹H} NMR spectrum of **9b** in CDCl₃ with a trace amount of pyridine-d₅.