

Electronic Supplementary Information

Functional aza-boron dipyrromethenes for subcellular imaging and organelle-specific photodynamic therapy

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

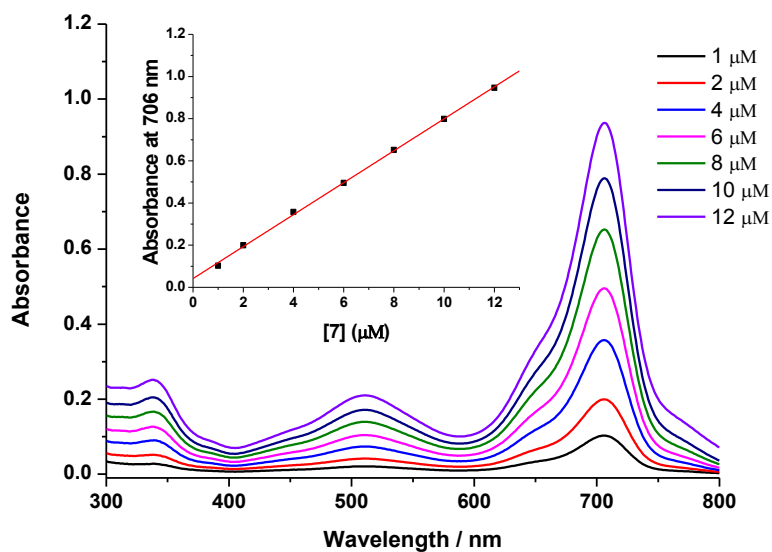


Fig. S1 Electronic absorption spectra of **7** at various concentrations in PBS (pH = 7.4) with 0.1% (v/v) Tween 80. The inset plots the Q-band absorbance versus the concentration of **7**.

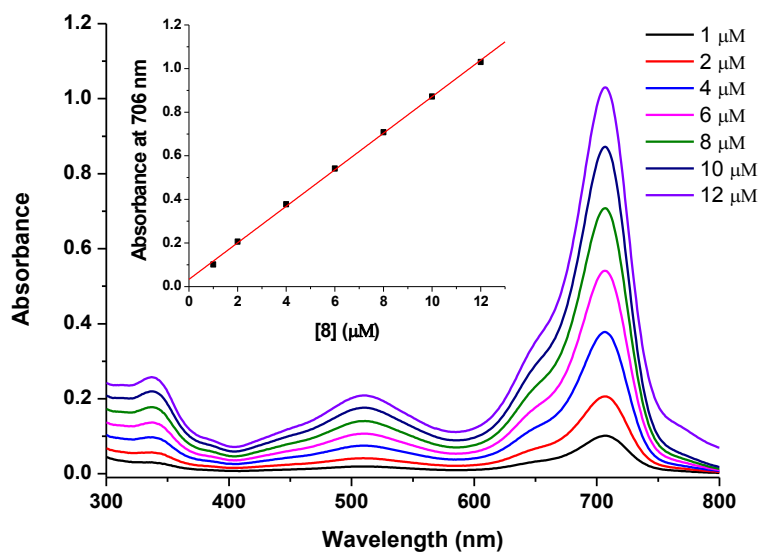


Fig. S2 Electronic absorption spectra of **8** at various concentrations in PBS (pH = 7.4) with 0.1% (v/v) Tween 80. The inset plots the Q-band absorbance versus the concentration of **8**.

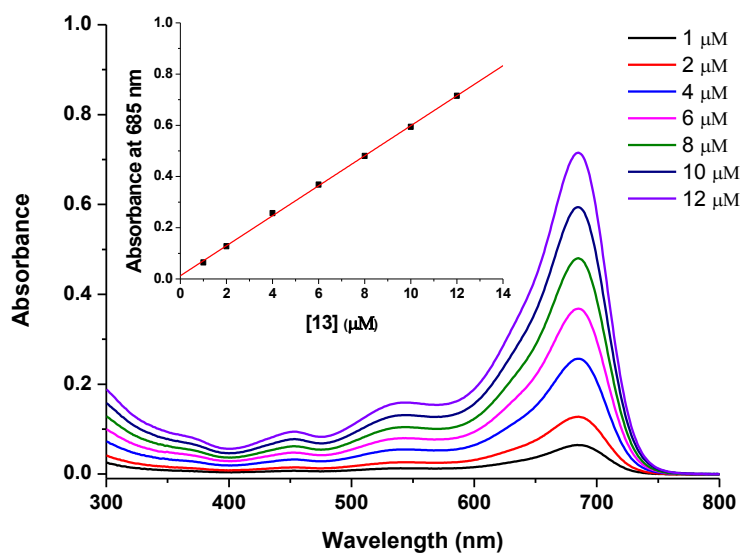


Fig. S3 Electronic absorption spectra of **13** at various concentrations in PBS (pH = 7.4) with 0.1% (v/v) Tween 80. The inset plots the Q-band absorbance versus the concentration of **13**.

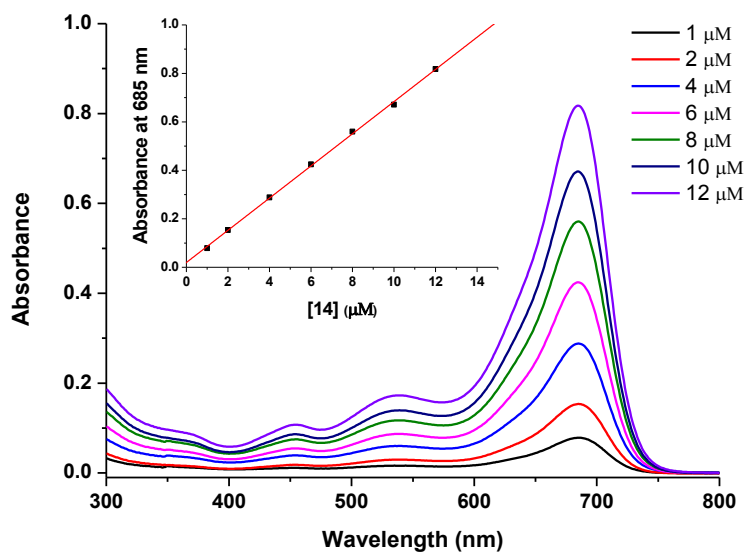


Fig. S4 Electronic absorption spectra of **14** at various concentrations in PBS (pH = 7.4) with 0.1% (v/v) Tween 80. The inset plots the Q-band absorbance versus the concentration of **14**.

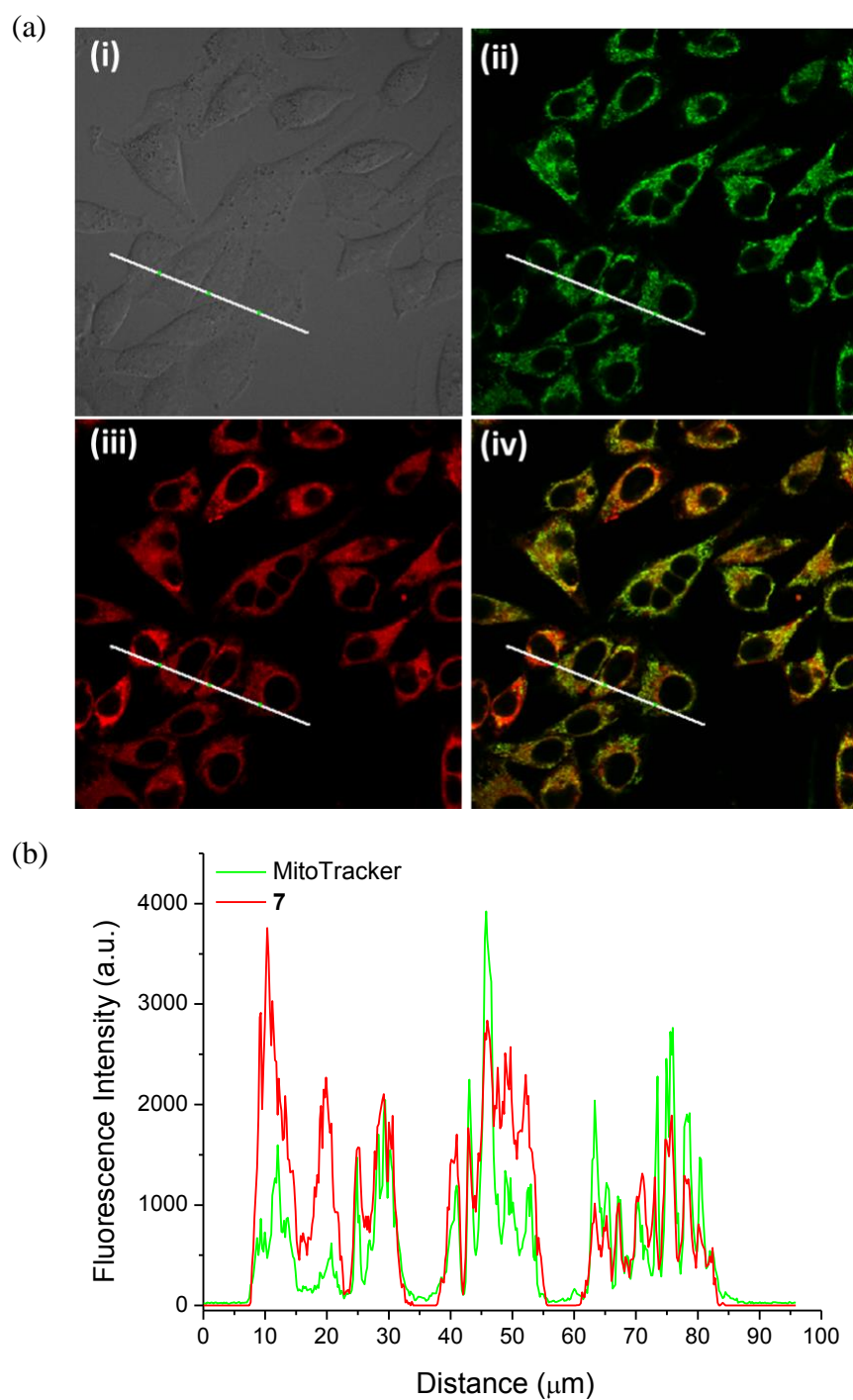


Fig. S5 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HepG2 cells using filter sets specific for (ii) MitoTracker (1 μM , in green) and (iii) **7** (2 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **7** (in red) and MitoTracker (in green) traced along the white lines in Figure (a).

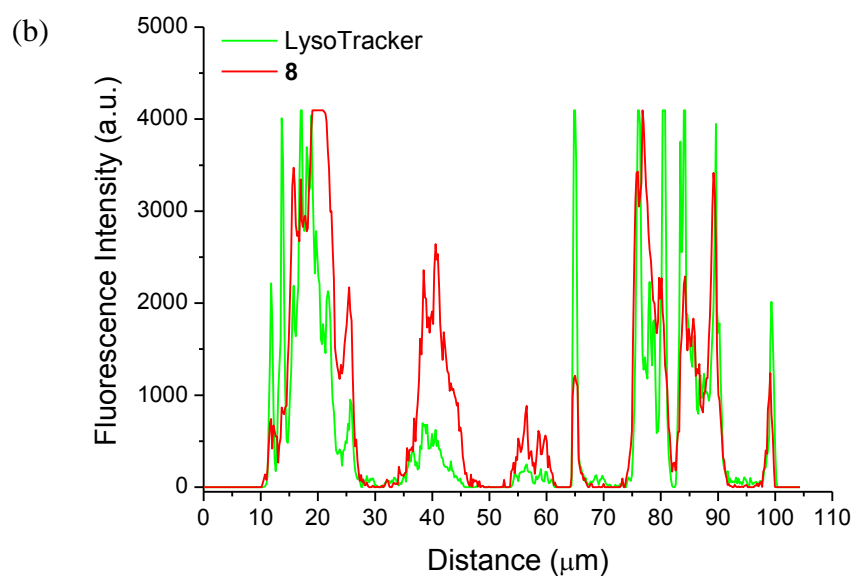
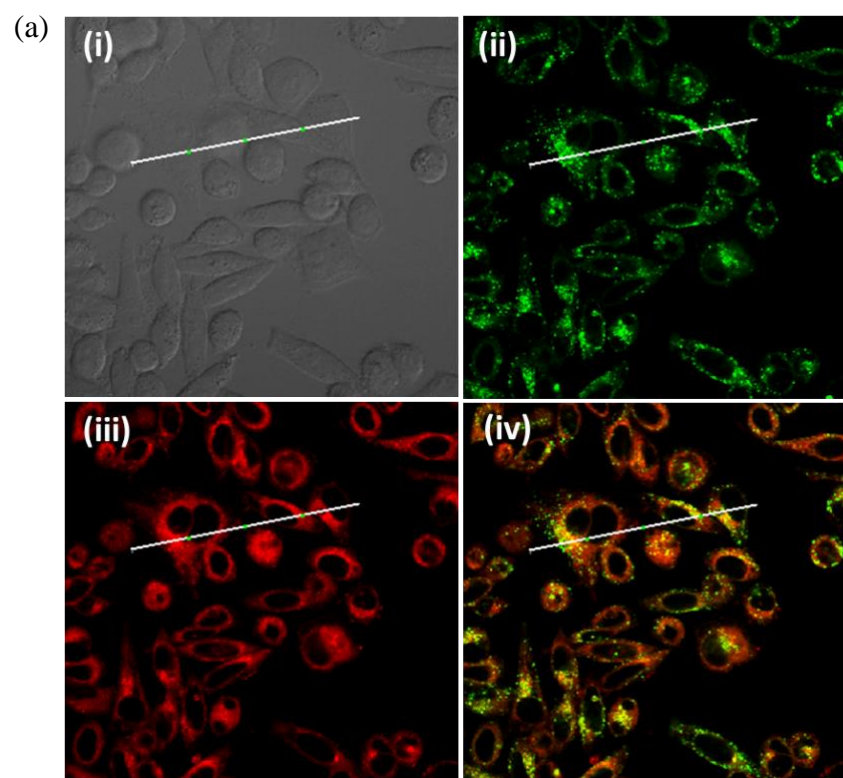


Fig. S6 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HepG2 cells using filter sets specific for (ii) LysoTracker (2 μM , in green) and (iii) **8** (2 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **8** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

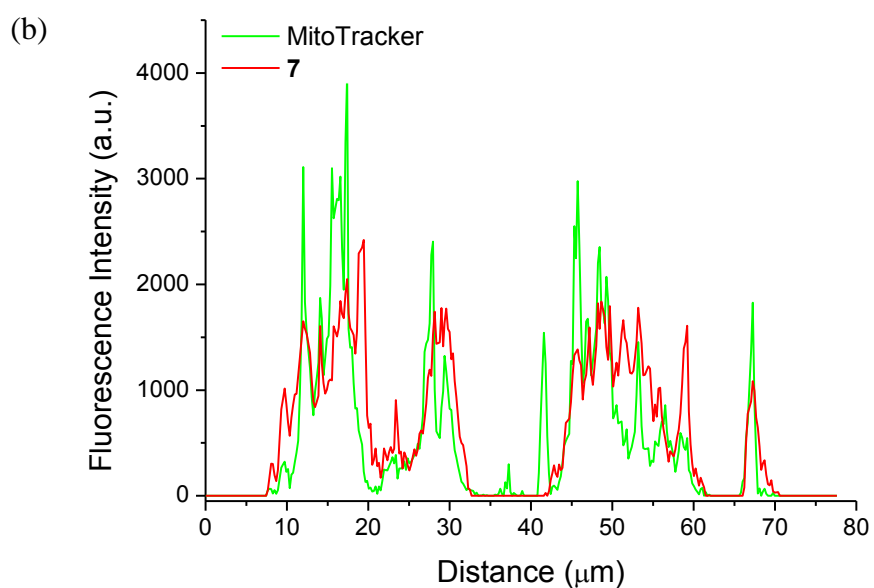
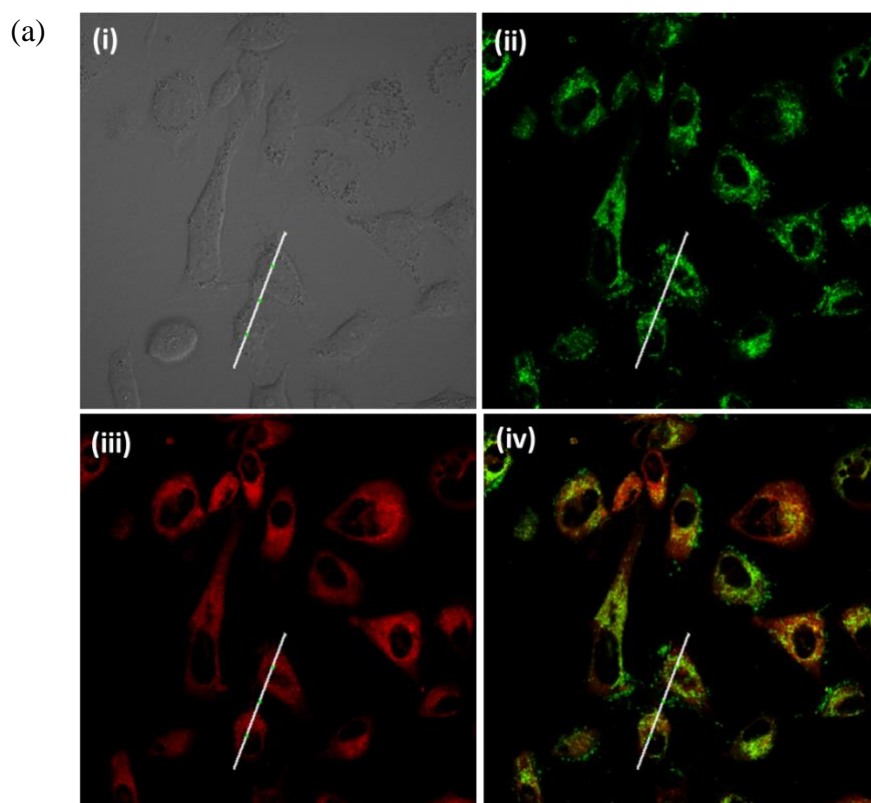


Fig. S7 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of MCF-7 cells using filter sets specific for (ii) MitoTracker (1 μM , in green) and (iii) **7** (2 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **7** (in red) and MitoTracker (in green) traced along the white lines in Figure (a).

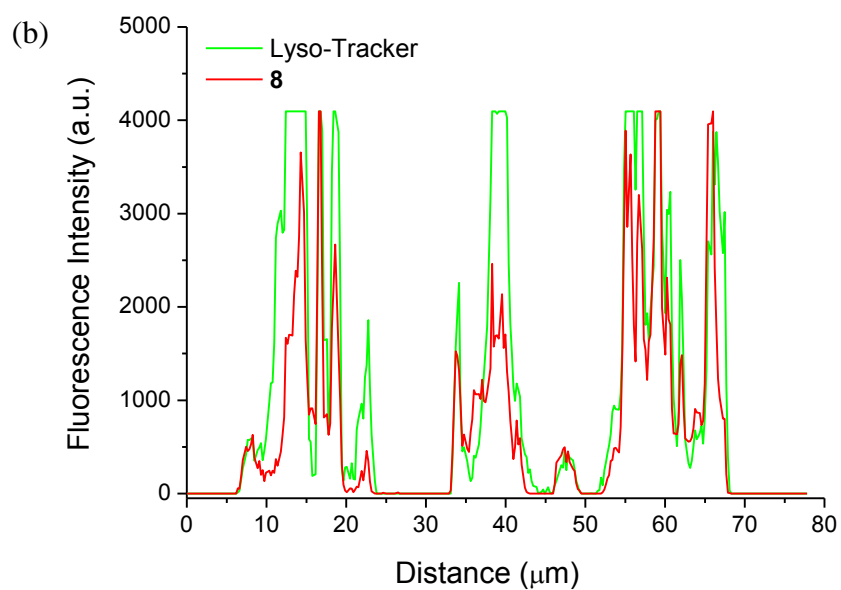
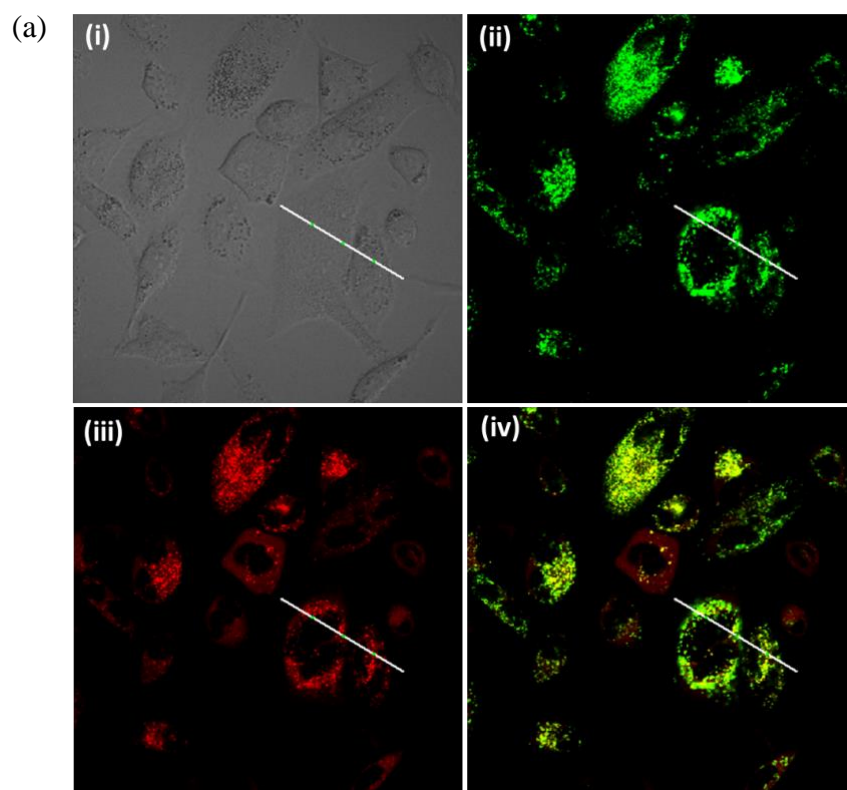


Fig. S8 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of MCF-7 cells using filter sets specific for (ii) LysoTracker (2 μM , in green) and (iii) **8** (2 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **8** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

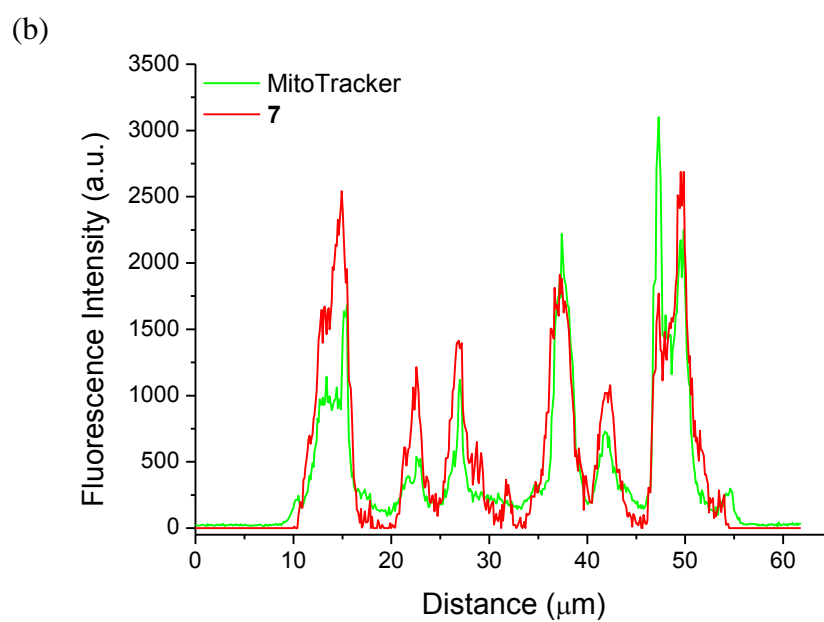
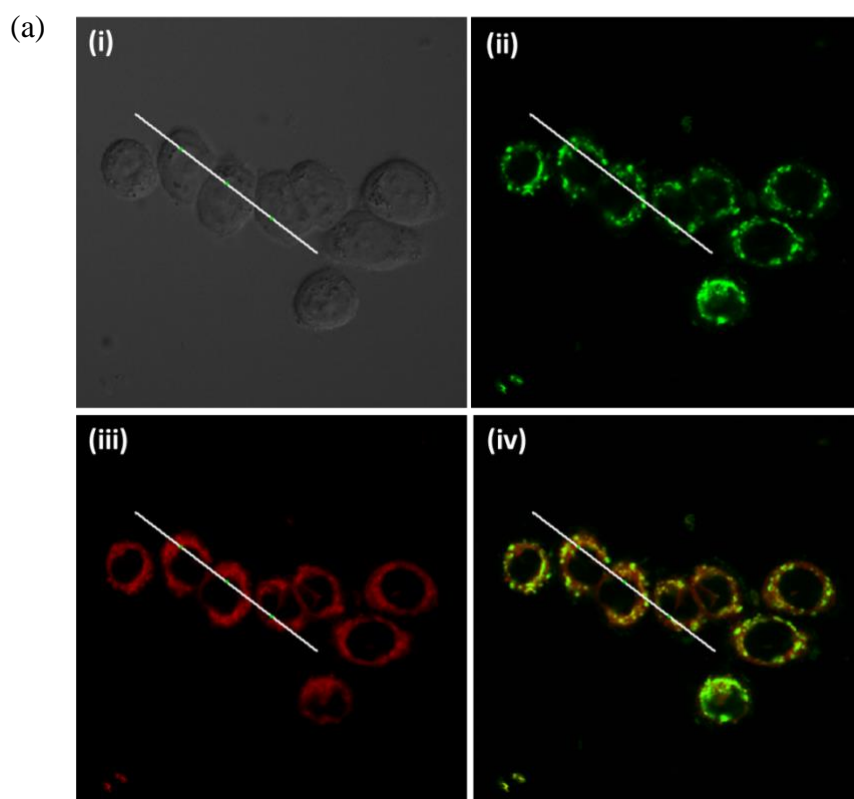


Fig. S9 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HT29 cells using filter sets specific for (ii) MitoTracker (1 μM , in green) and (iii) **7** (1 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **7** (in red) and MitoTracker (in green) traced along the white lines in Figure (a).

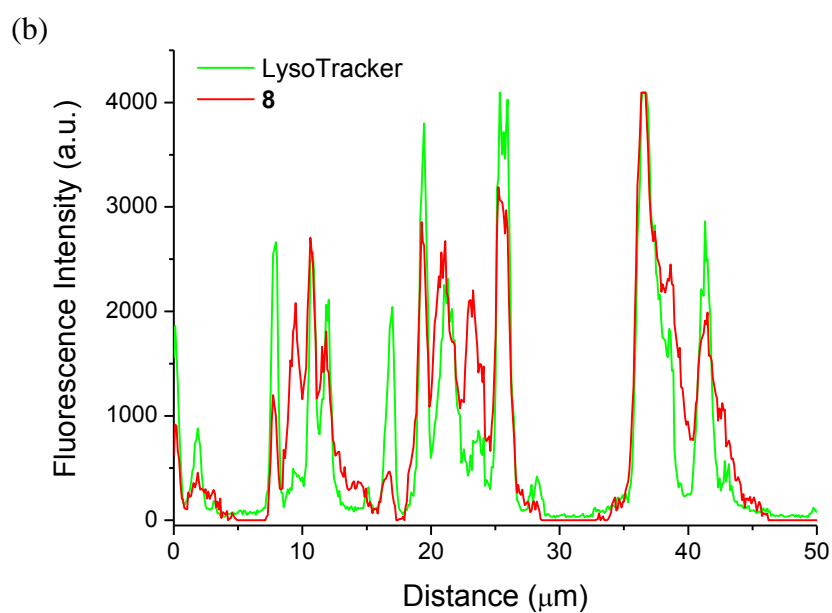
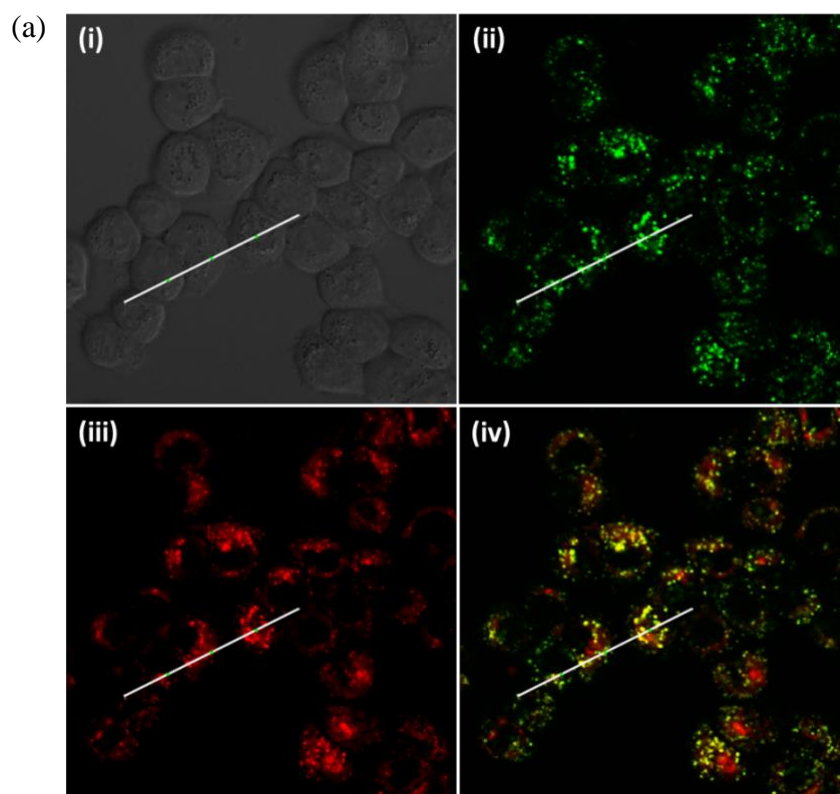


Fig. S10 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HT29 cells using filter sets specific for (ii) LysoTracker (2 μM , in green) and (iii) **8** (1 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **8** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

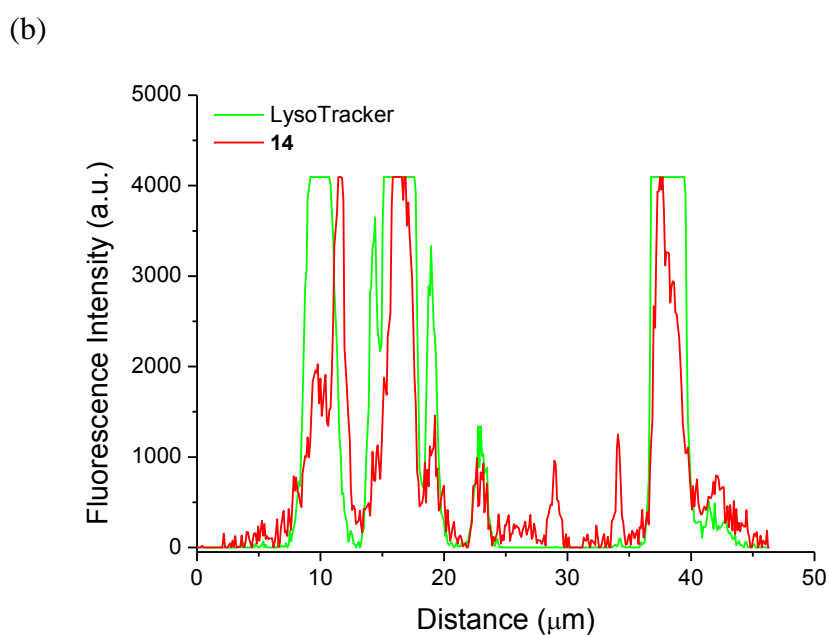
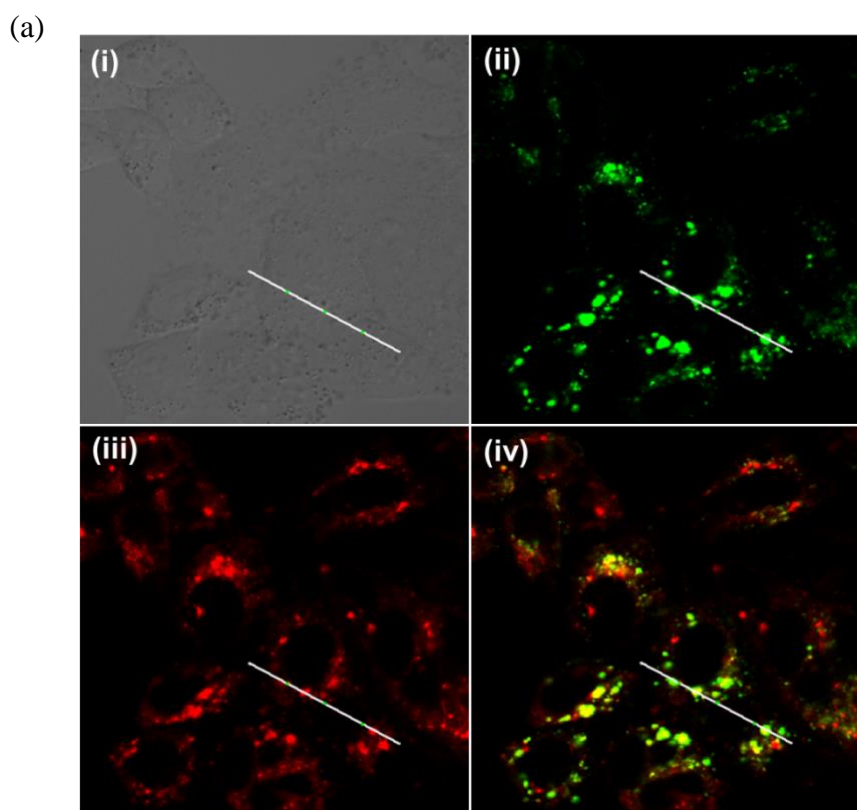


Fig. S11 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HepG2 cells using filter sets specific for (ii) LysoTracker (2 μM , in green) and (iii) **14** (4 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **14** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

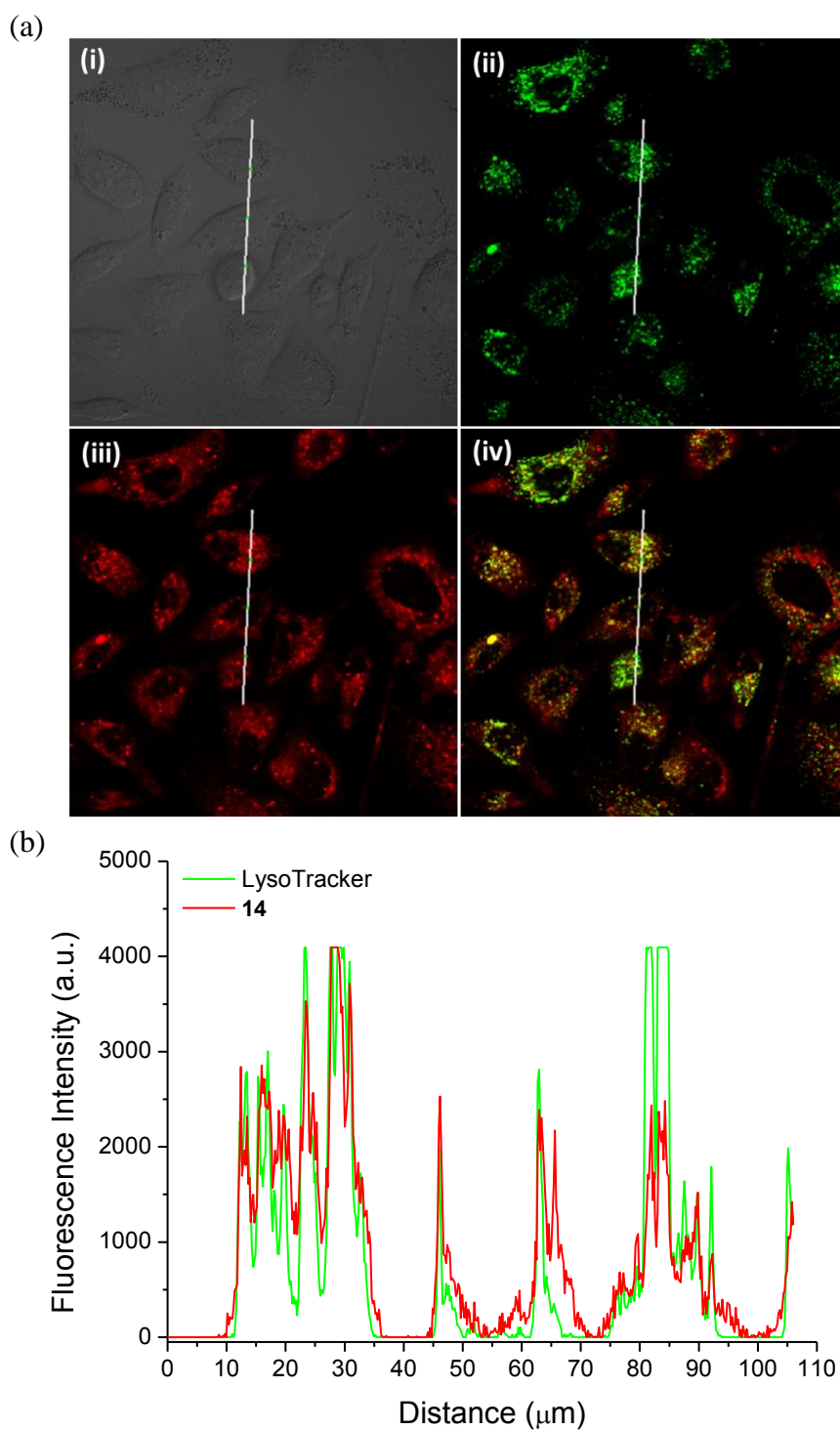


Fig. S12 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of MCF-7 cells using filter sets specific for (ii) LysoTracker ($2 \mu\text{M}$, in green) and (iii) **14** ($4 \mu\text{M}$, in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **14** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

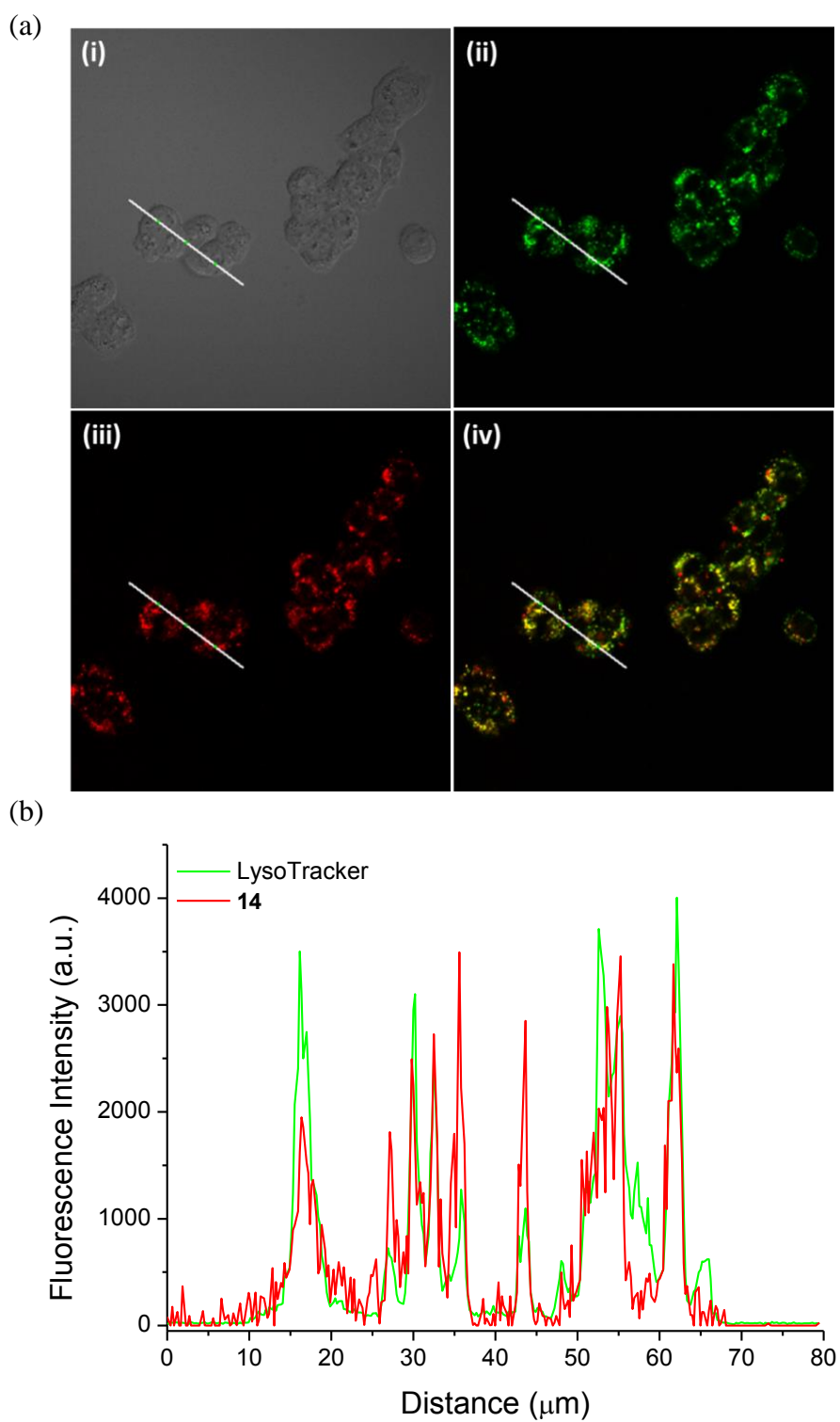
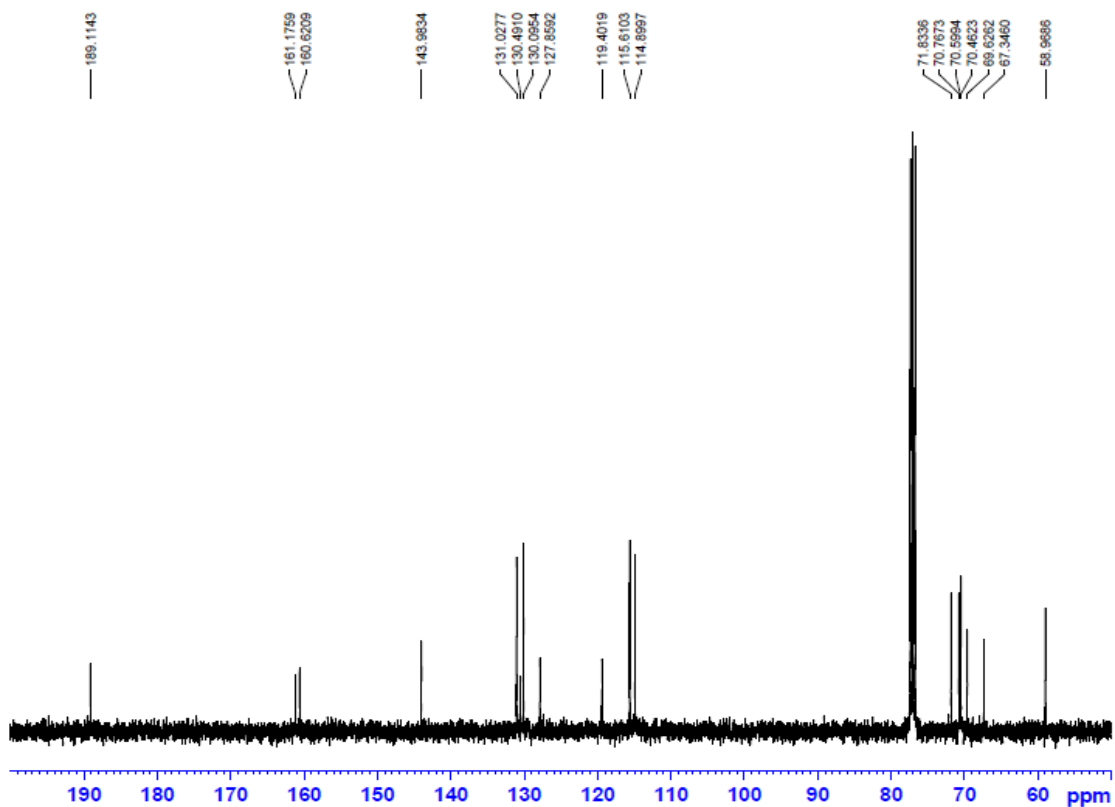
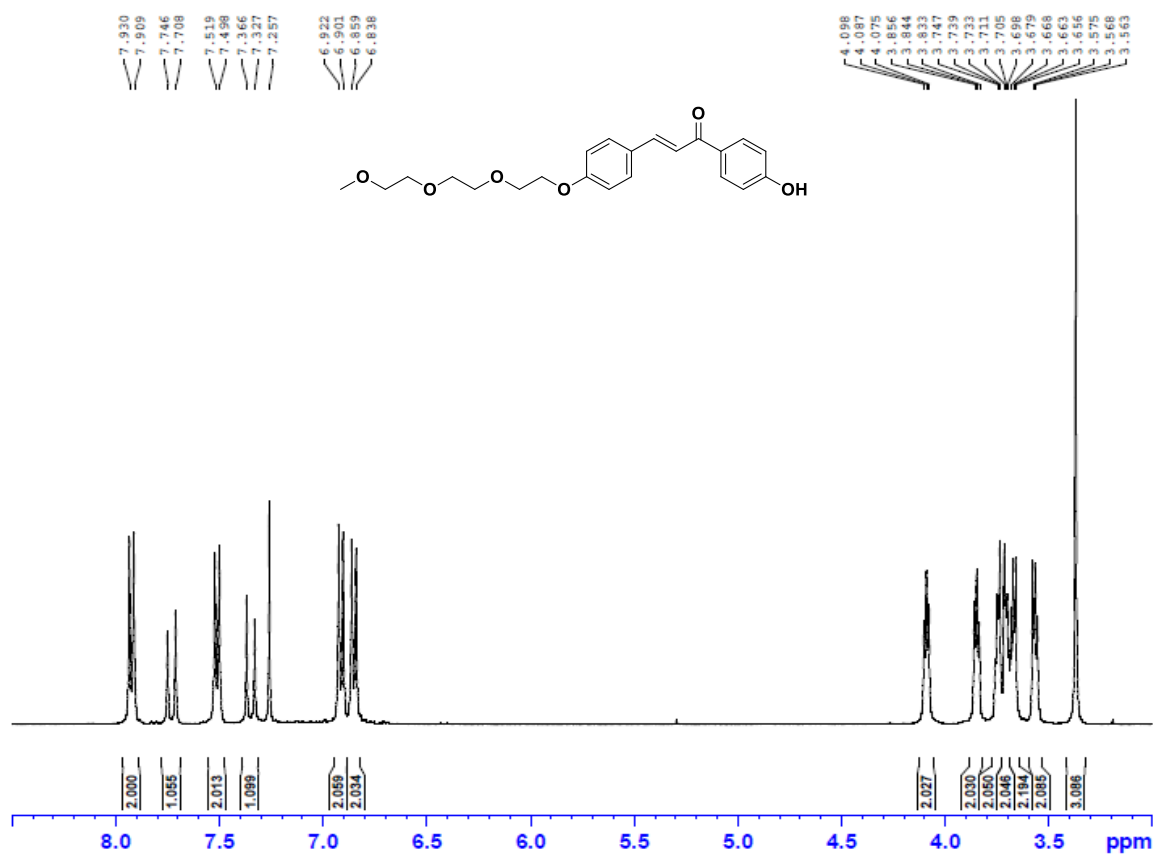
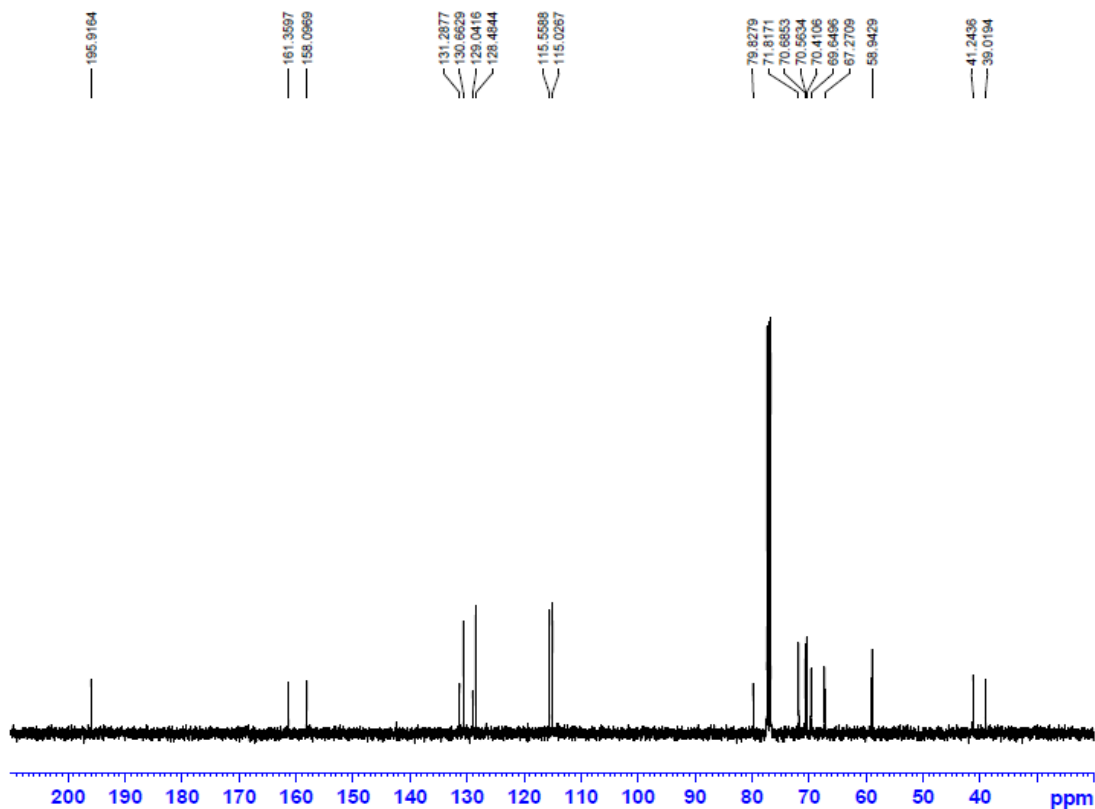
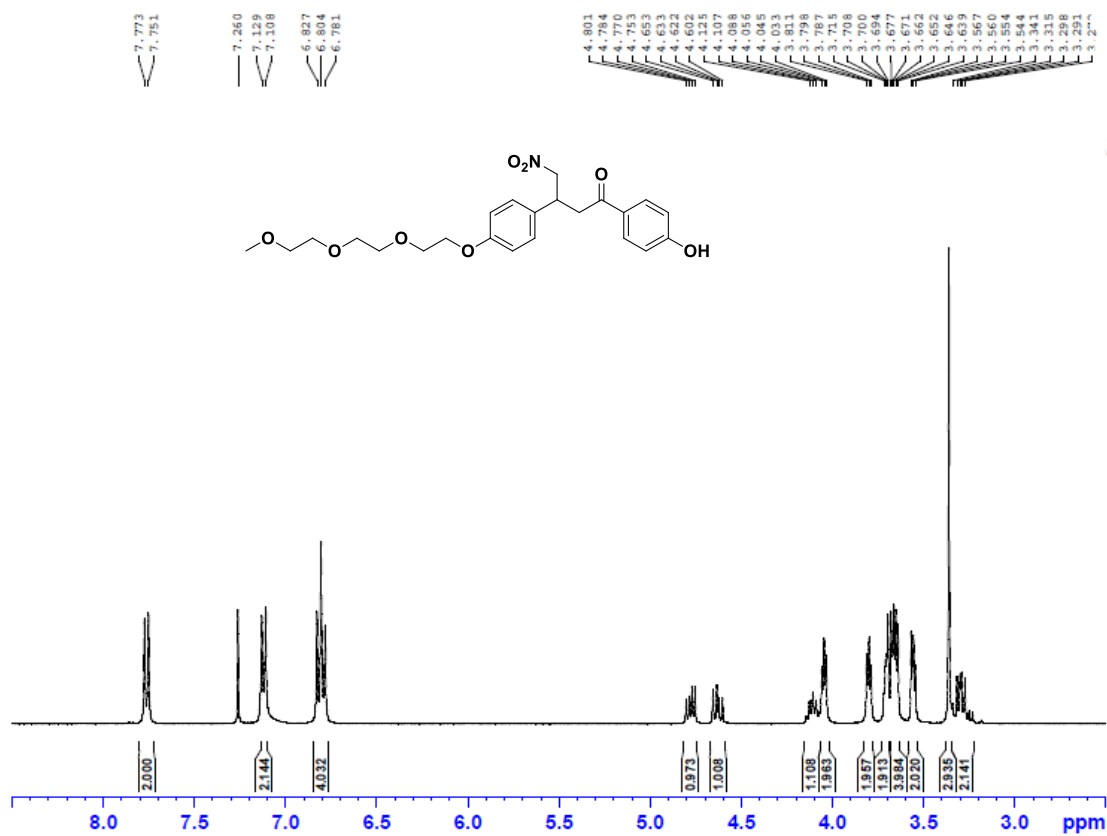


Fig. S13 (a) Visualisation of the (i) bright-field image and intracellular fluorescence of HT29 cells using filter sets specific for (ii) LysoTracker (0.2 μM , in green) and (iii) **14** (4 μM , in red), and (iv) the corresponding superimposed image. Figure (b) shows the fluorescence intensity line profiles of **14** (in red) and LysoTracker (in green) traced along the white lines in Figure (a).

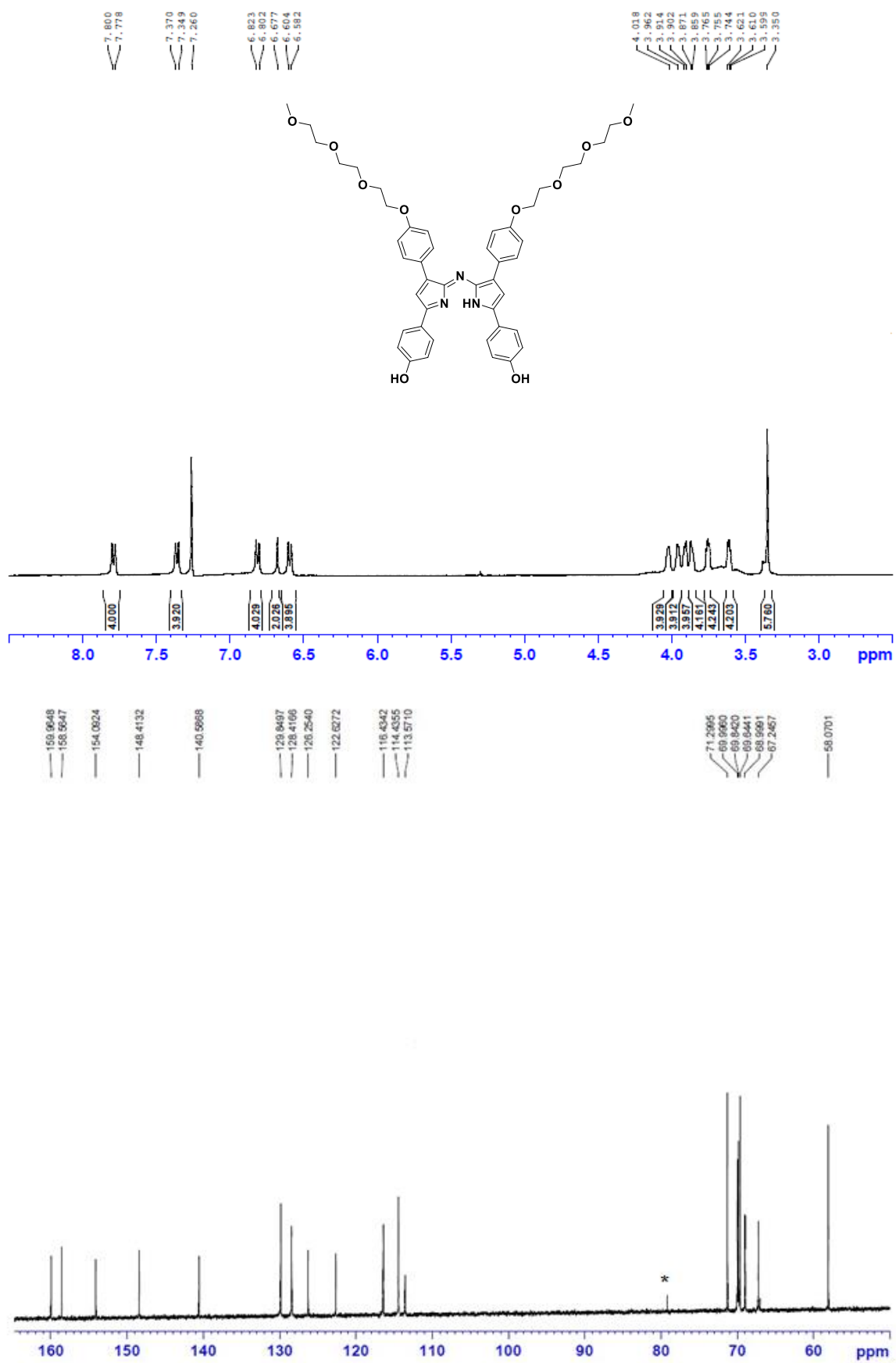
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **2** in CDCl_3



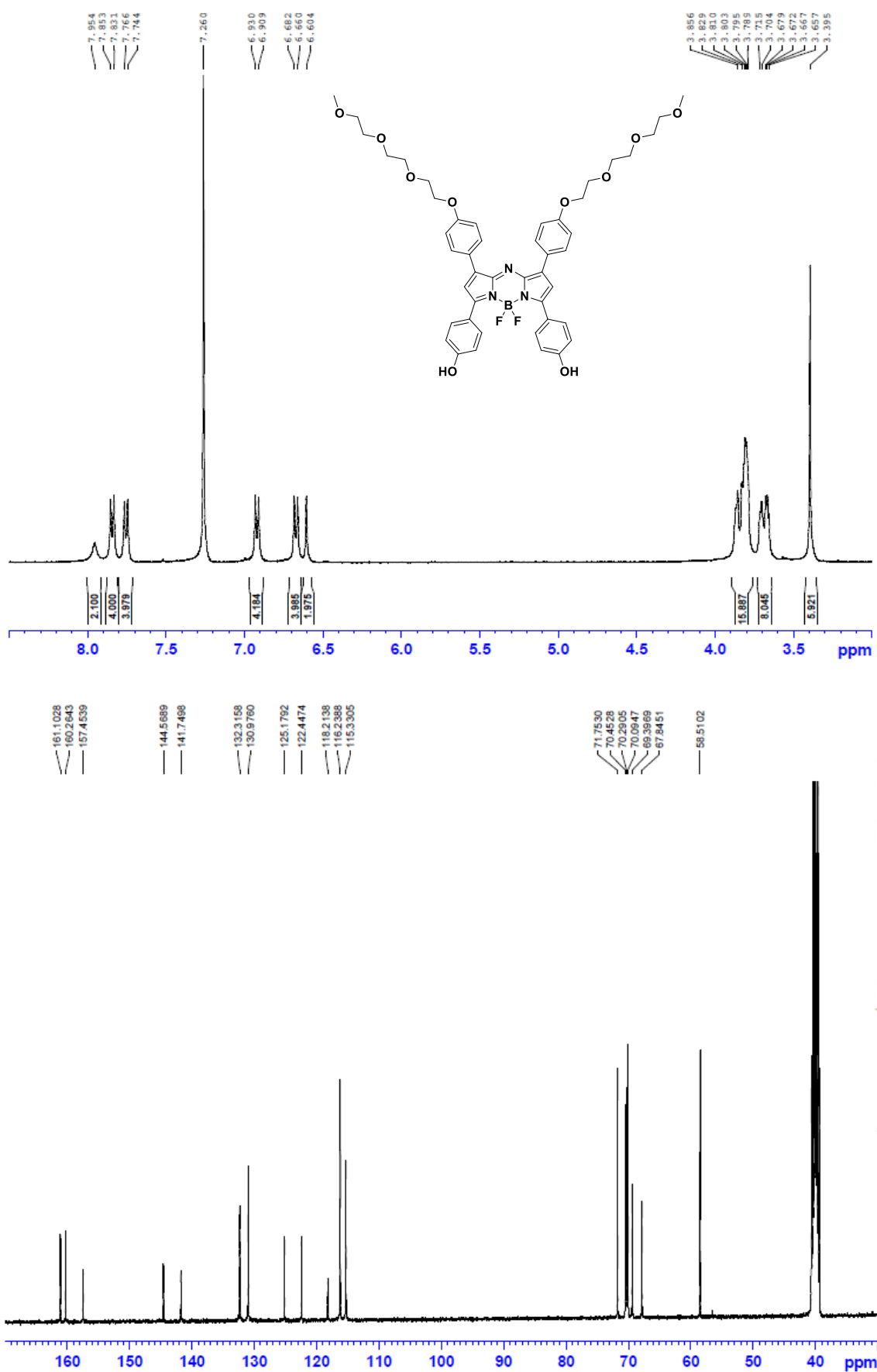
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **3** in CDCl_3



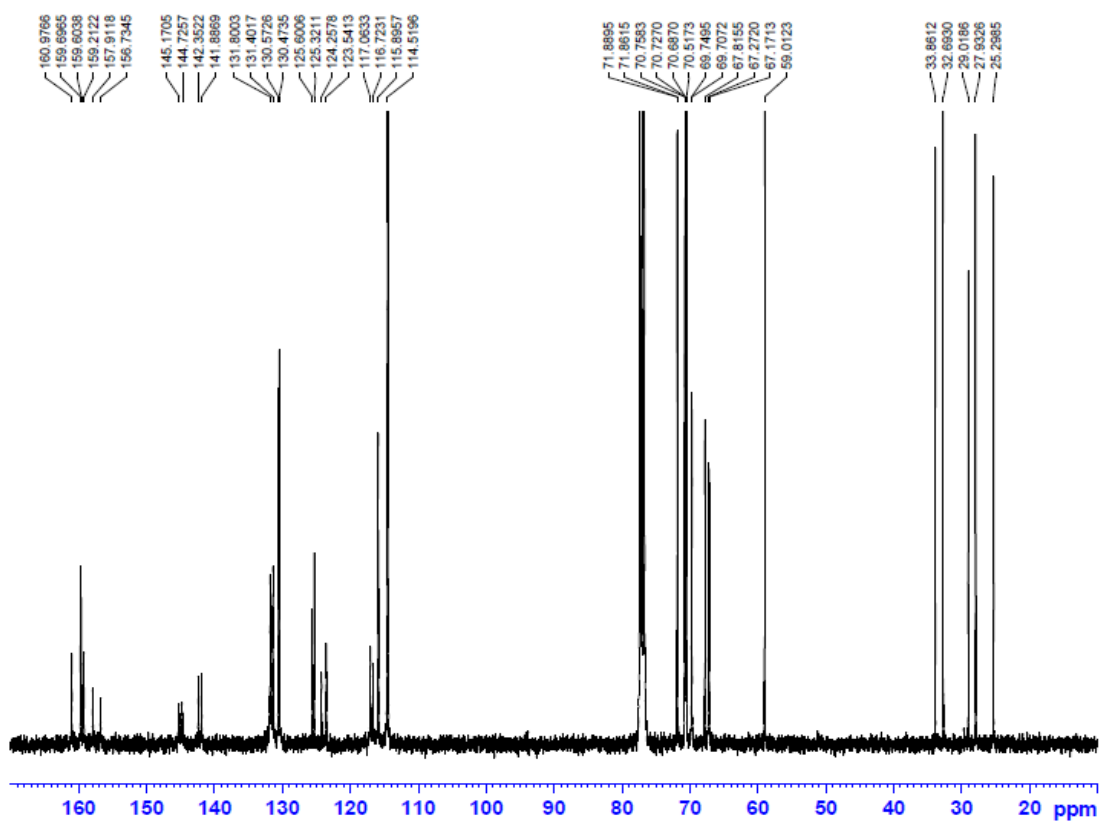
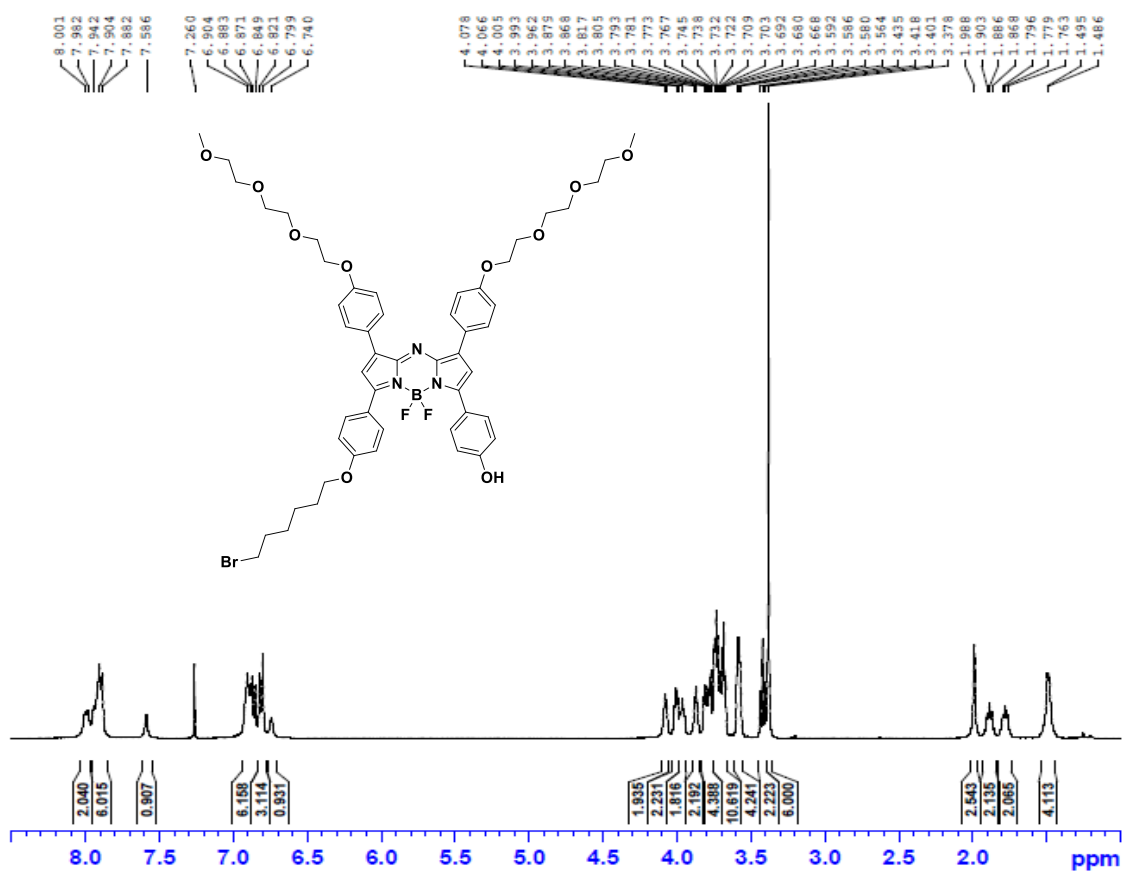
^1H (in CDCl_3) and $^{13}\text{C}\{^1\text{H}\}$ (in DMSO-d_6) NMR spectra of **4**



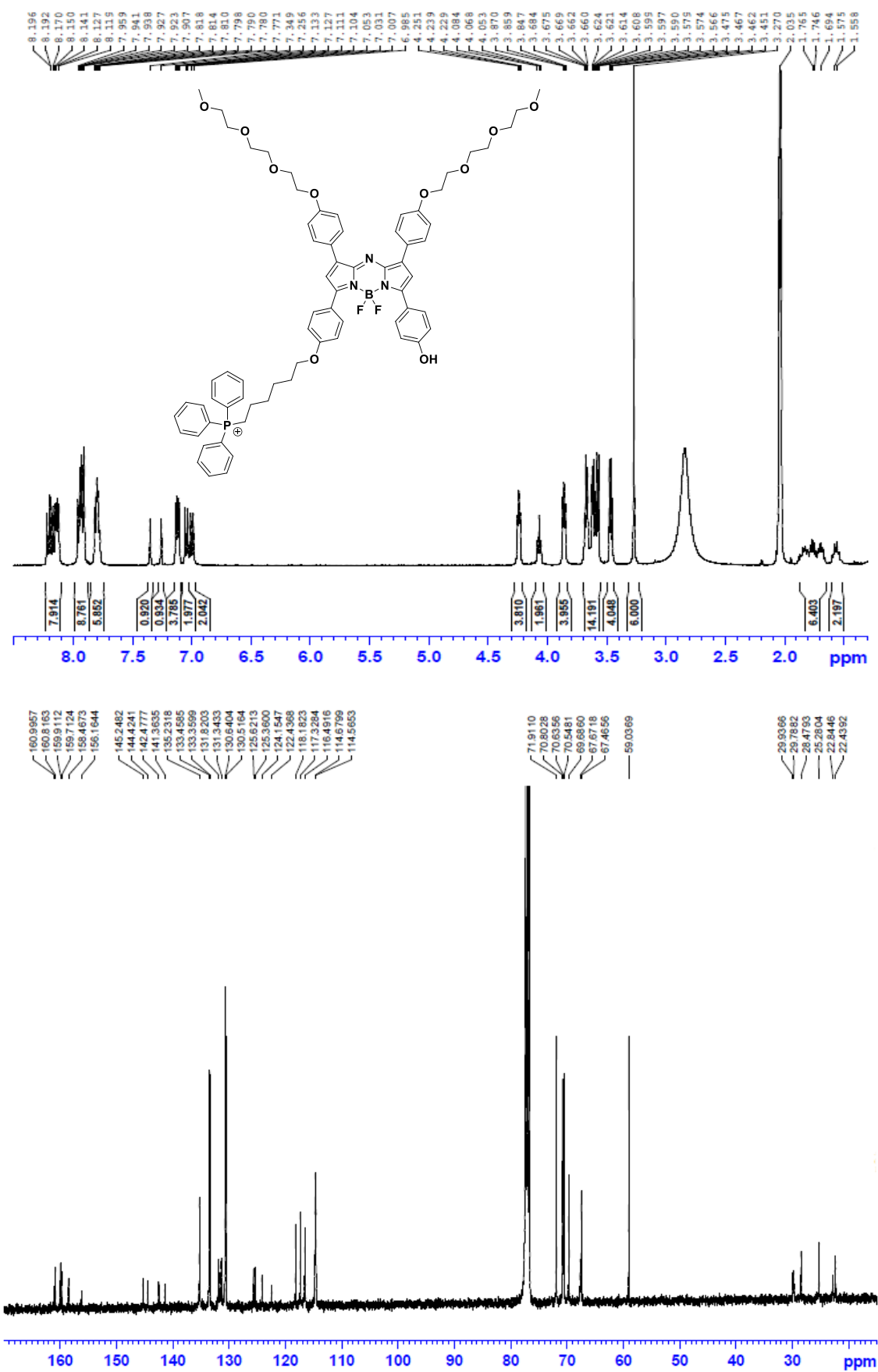
^1H (in CDCl_3) and $^{13}\text{C}\{^1\text{H}\}$ (in DMSO-d_6) NMR spectra of **5**



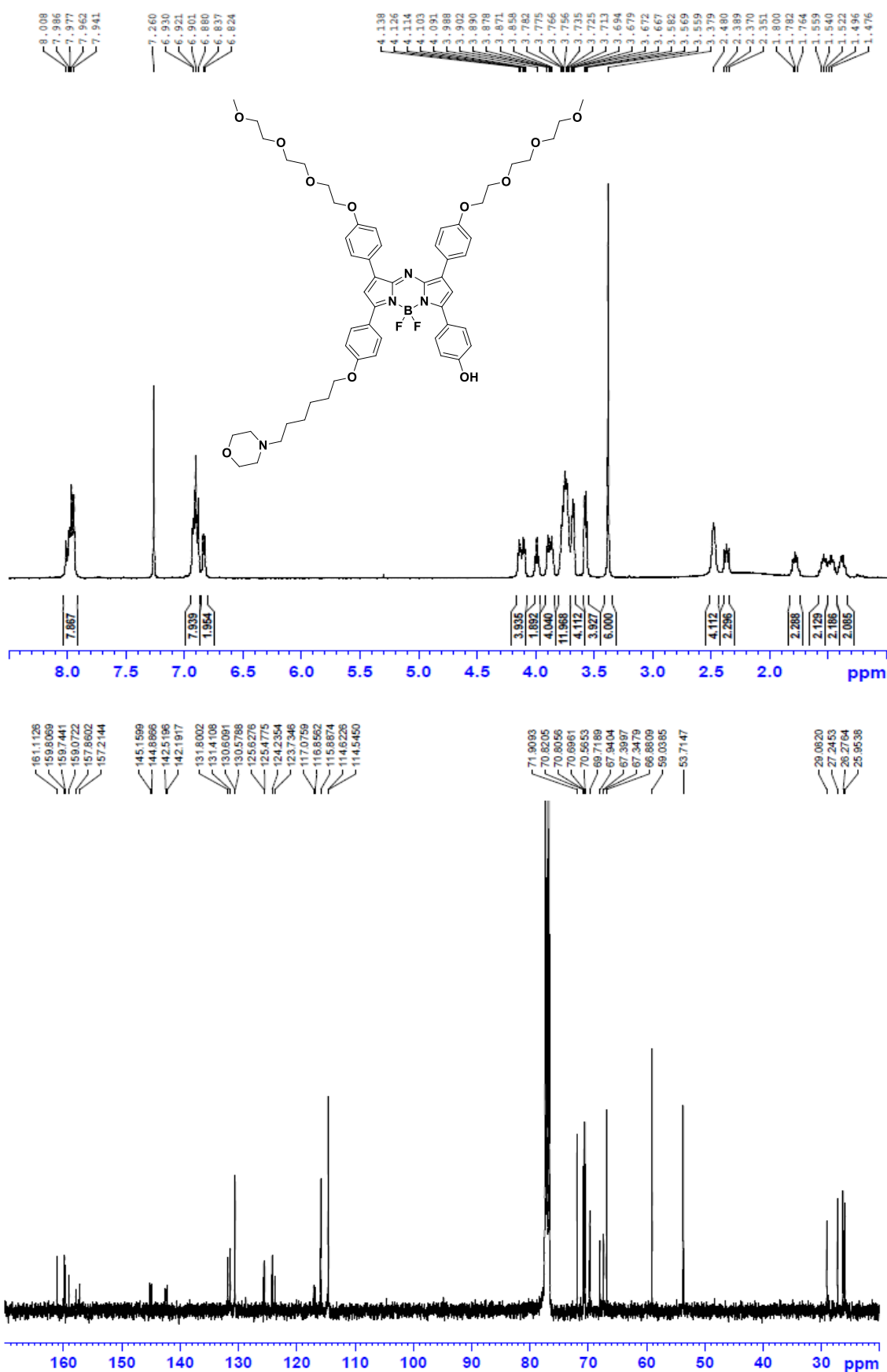
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **6** in CDCl_3



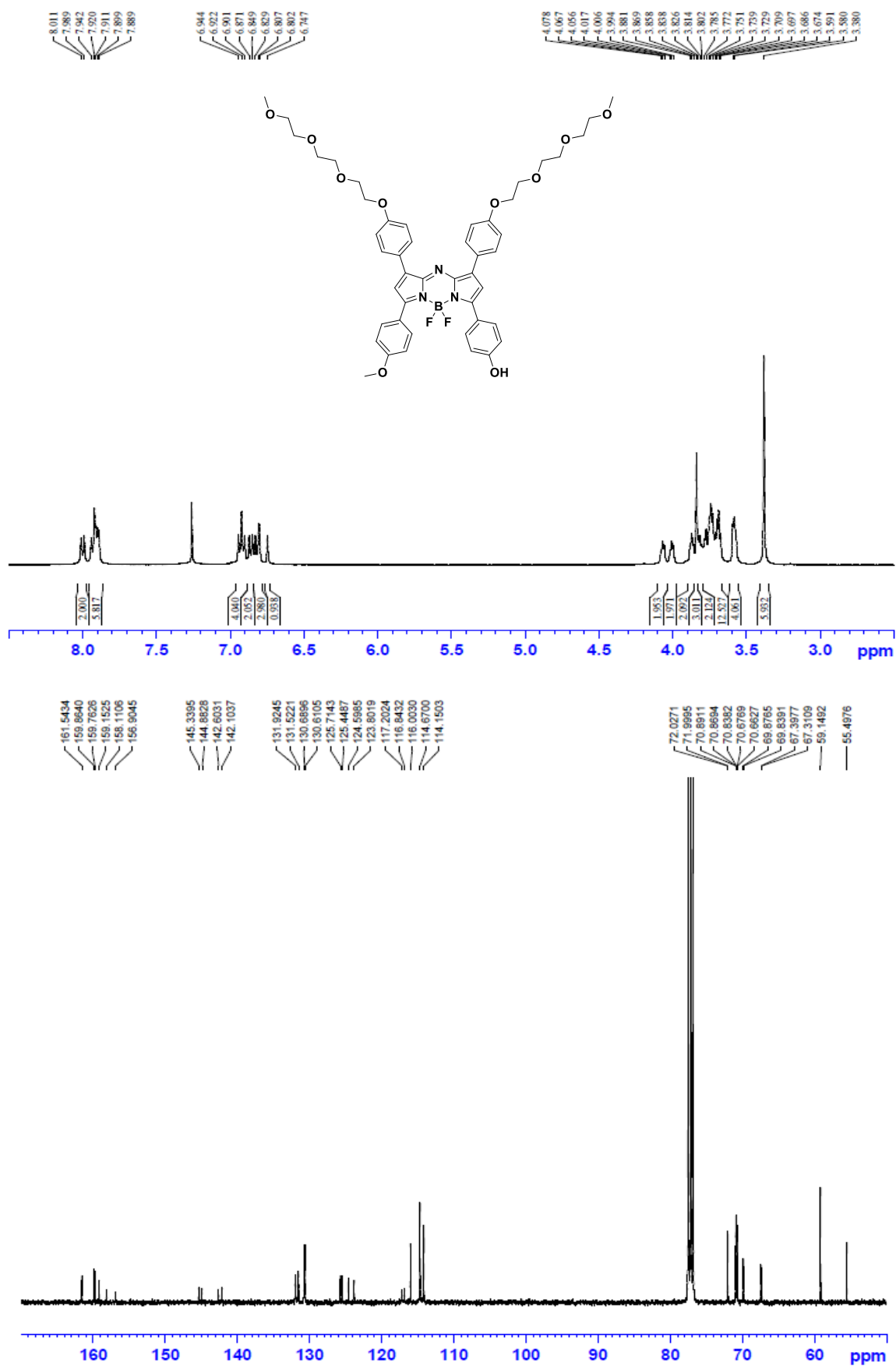
^1H (in CD_3COCD_3) and $^{13}\text{C}\{^1\text{H}\}$ (in CDCl_3) NMR spectra of **7**



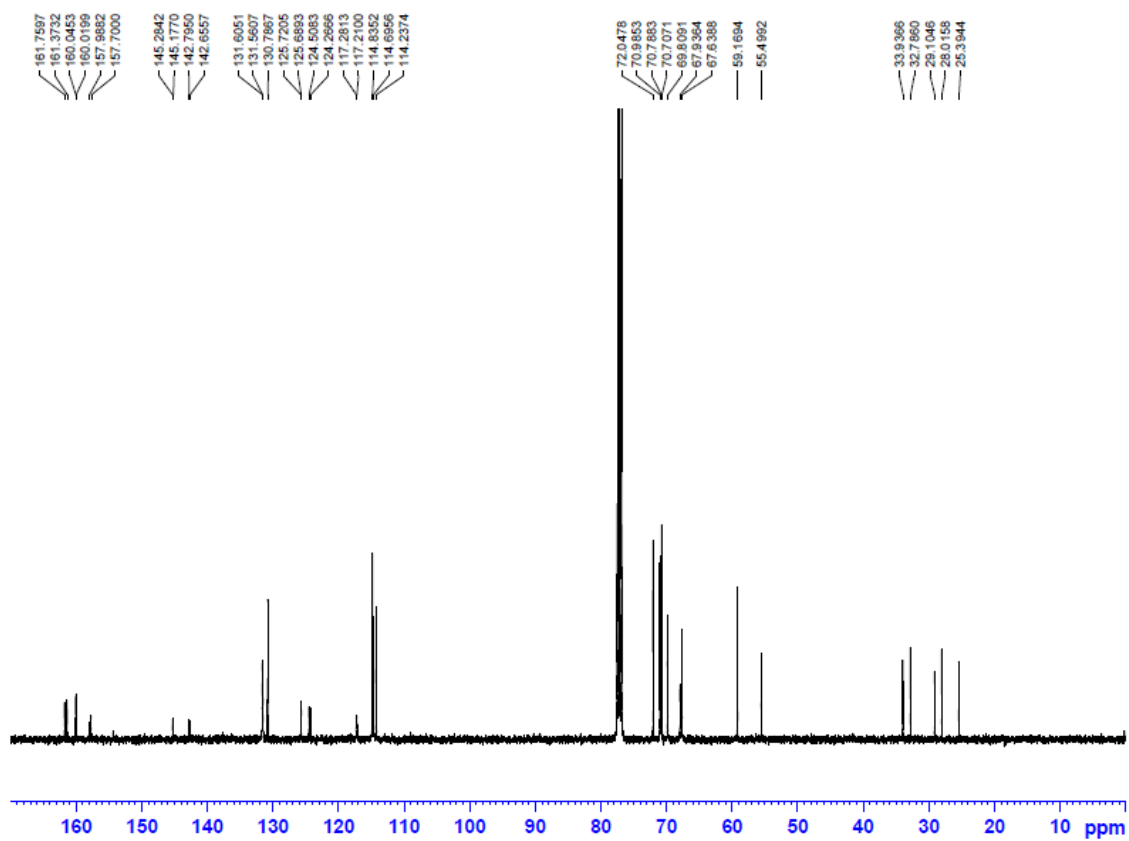
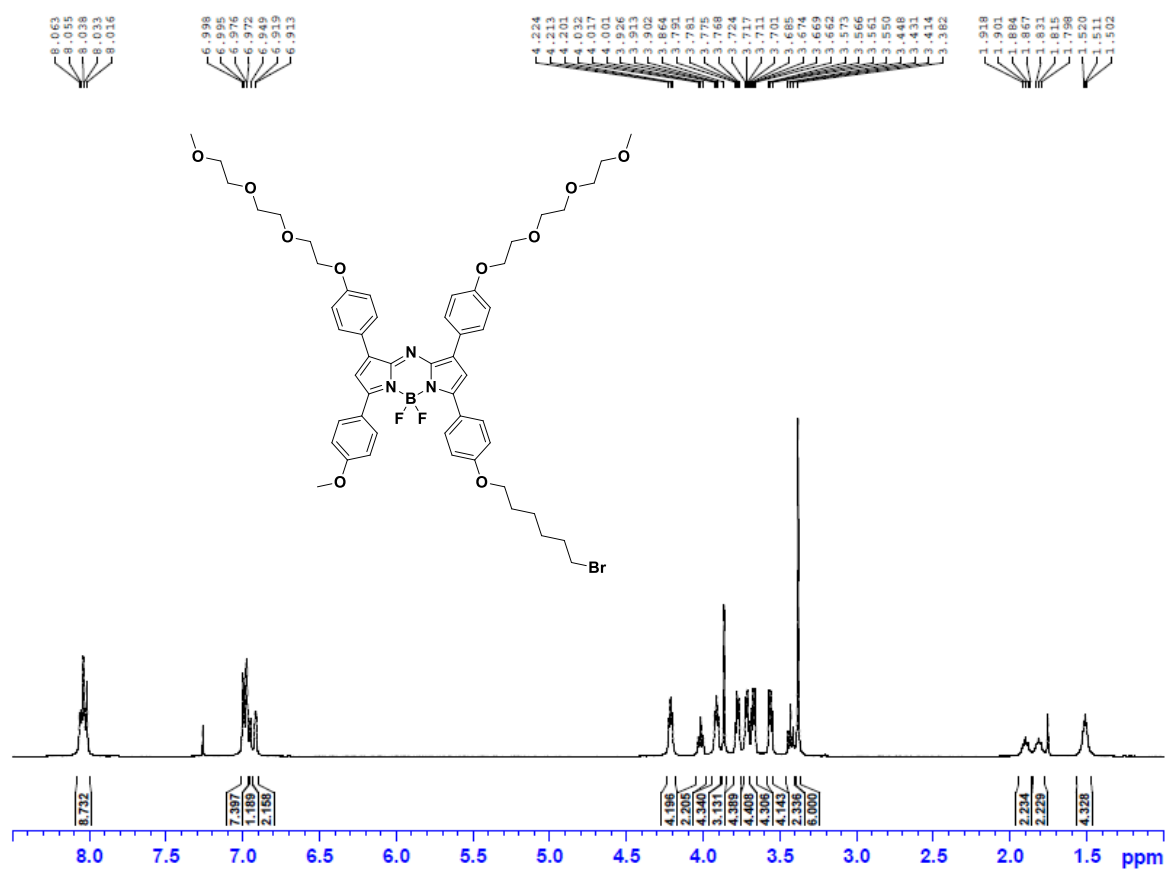
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **8** in CDCl_3



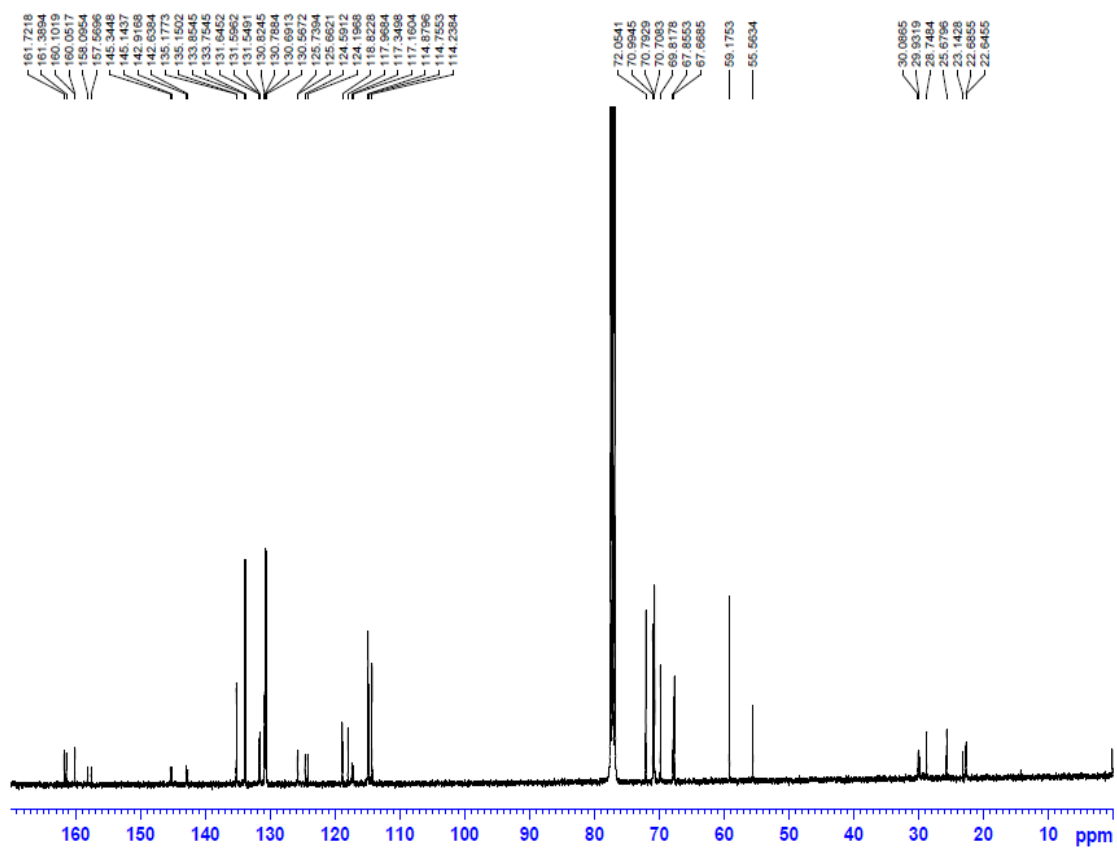
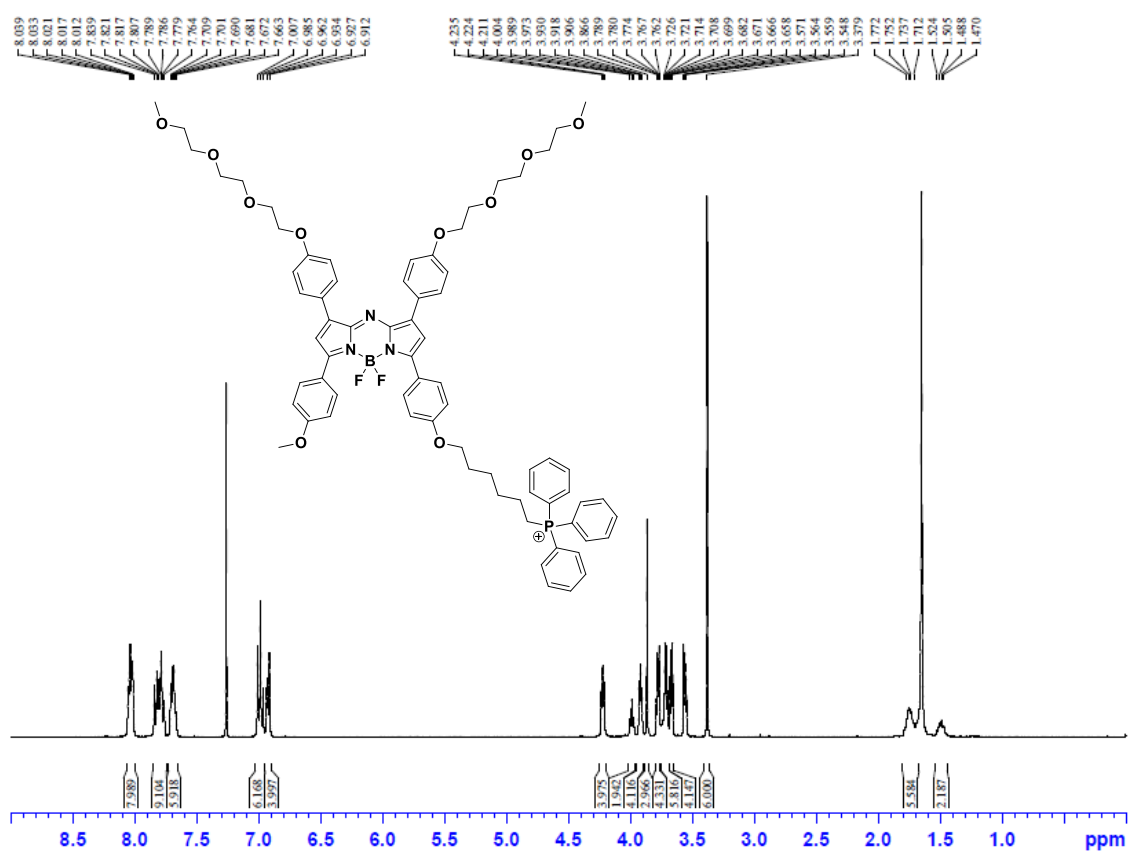
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **9** in CDCl_3



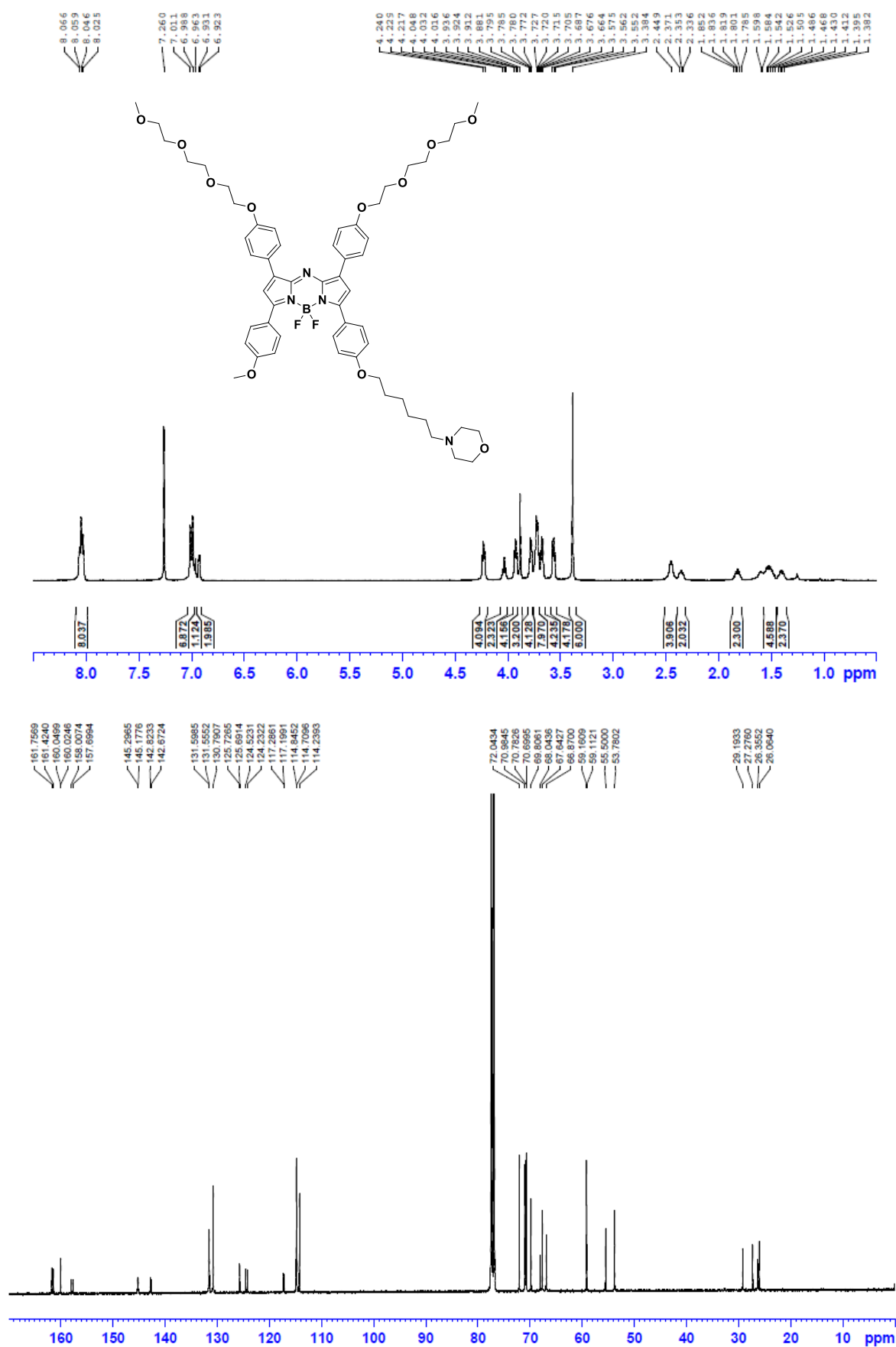
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **10** in CDCl_3



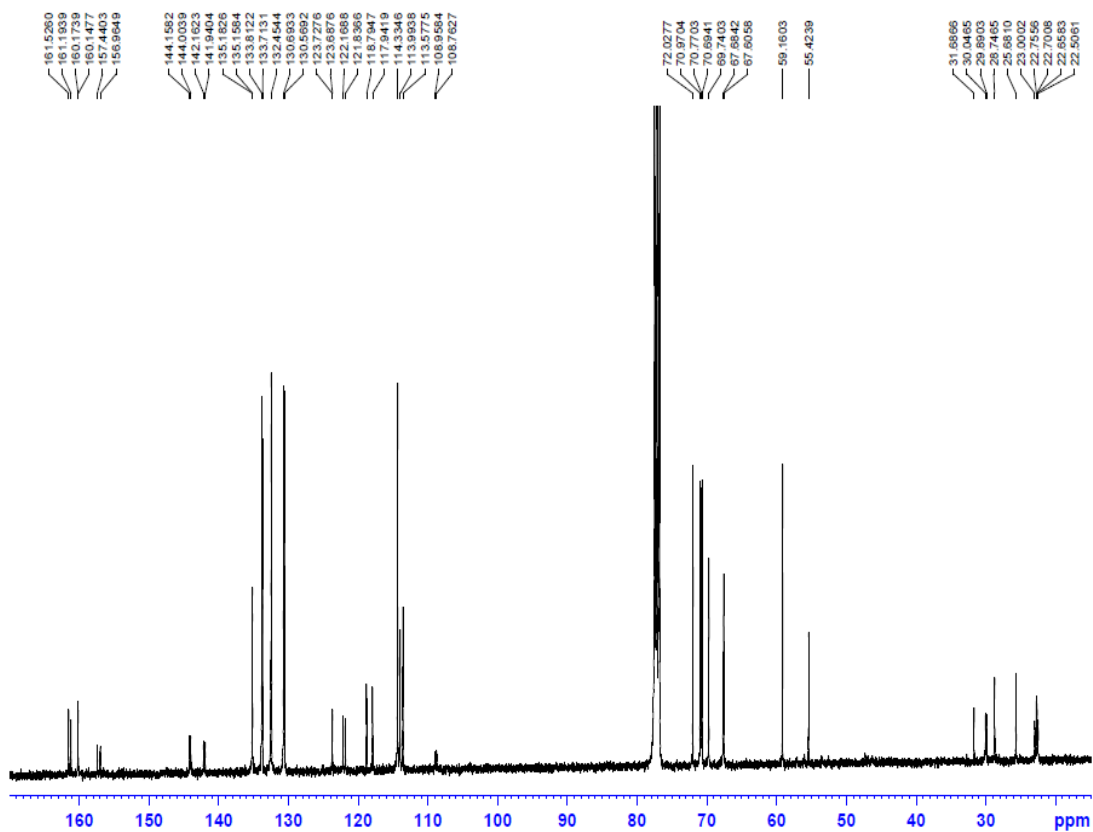
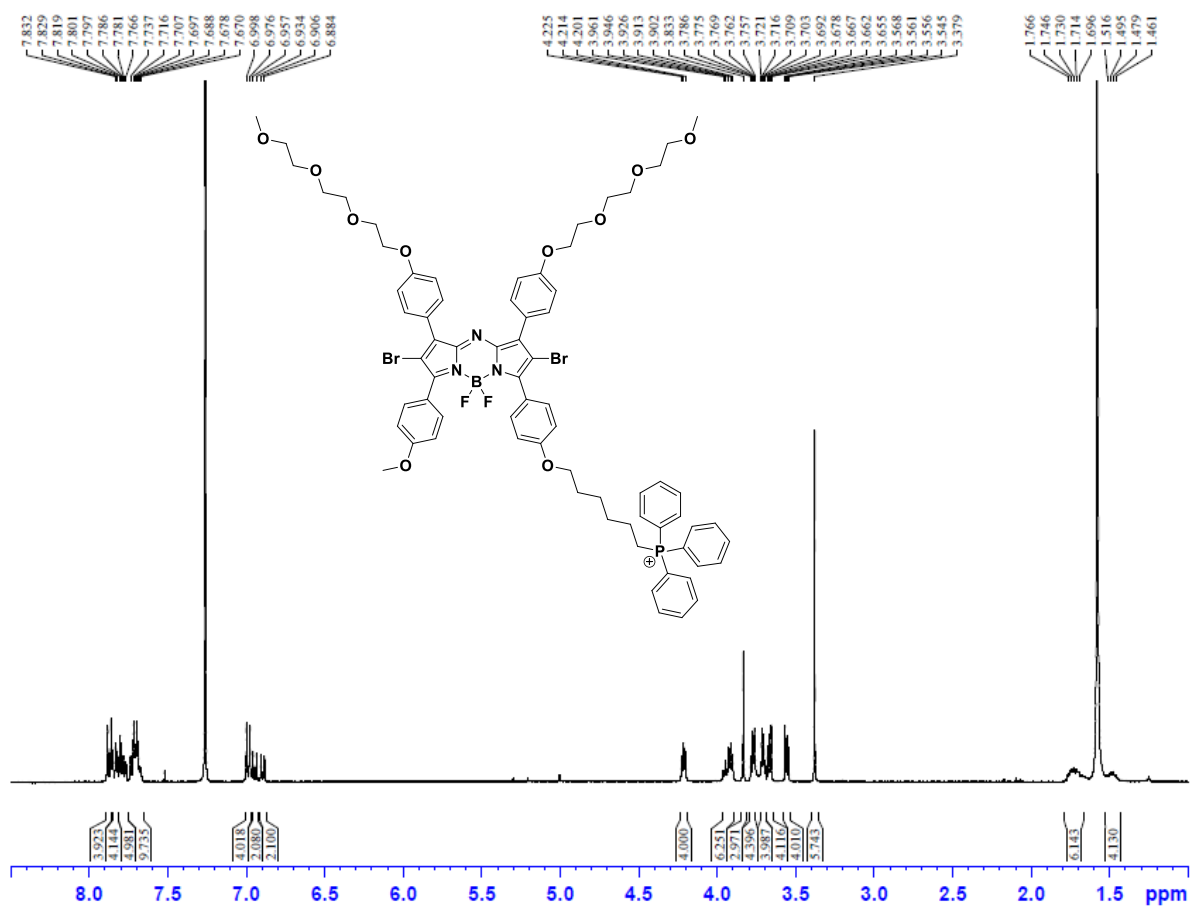
^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **11** in CDCl_3



^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **12** in CDCl_3



^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **13** in CDCl_3



^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR spectra of **14** in CDCl_3

