

## Supporting Information

### Inverted methoxypyridinium phthalocyanines for PDI of pathogenic bacteria

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## 1 Experimental section

### 1.1 NMR spectra of phthalonitrile and phthalocyanine derivatives

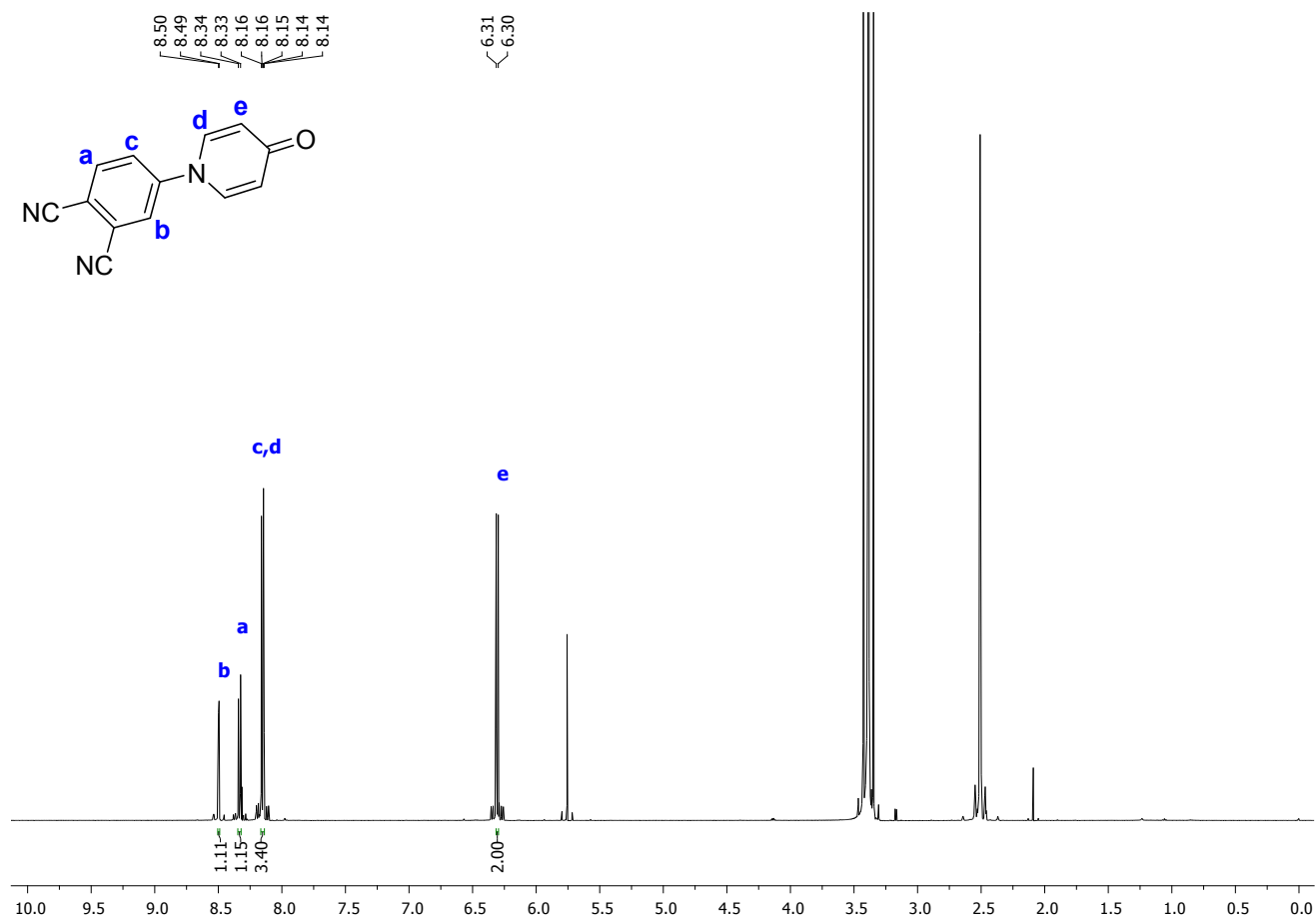
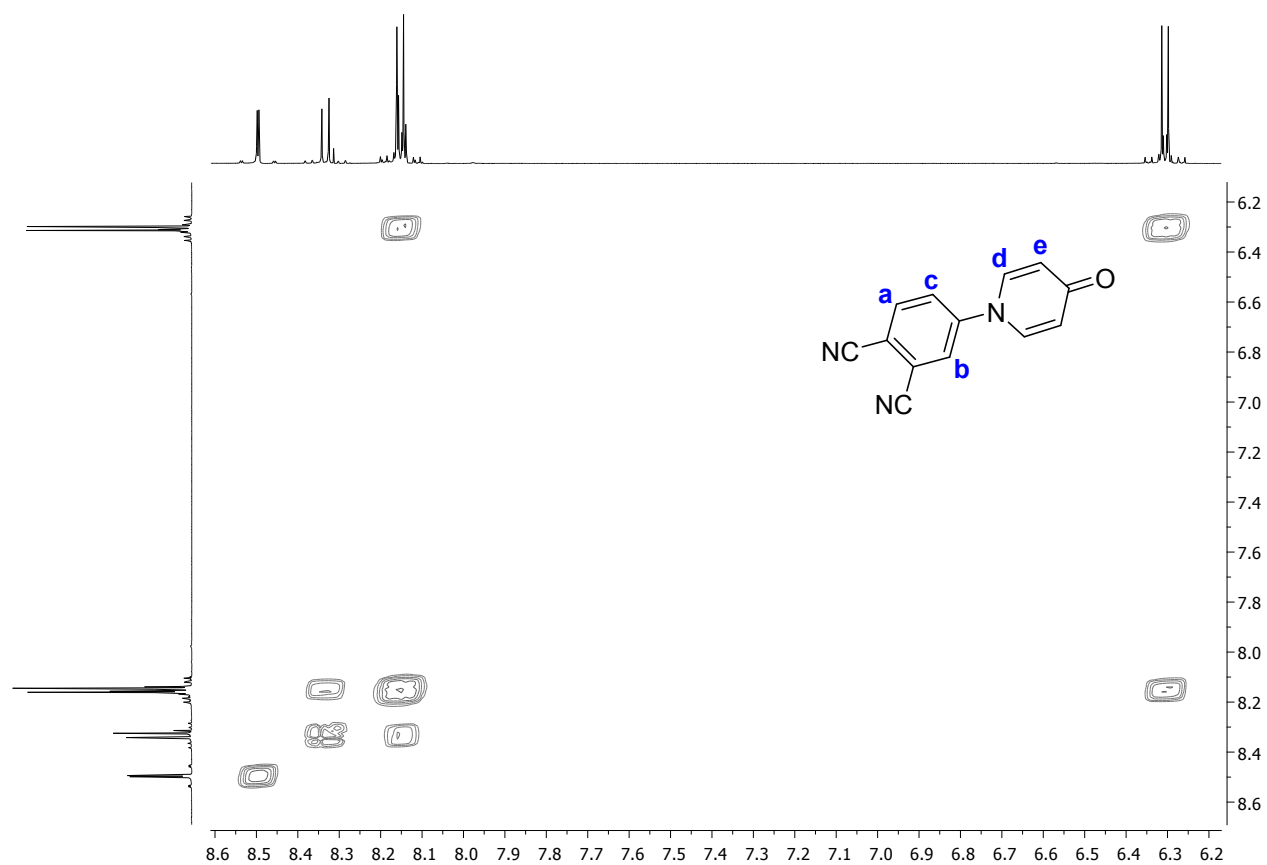
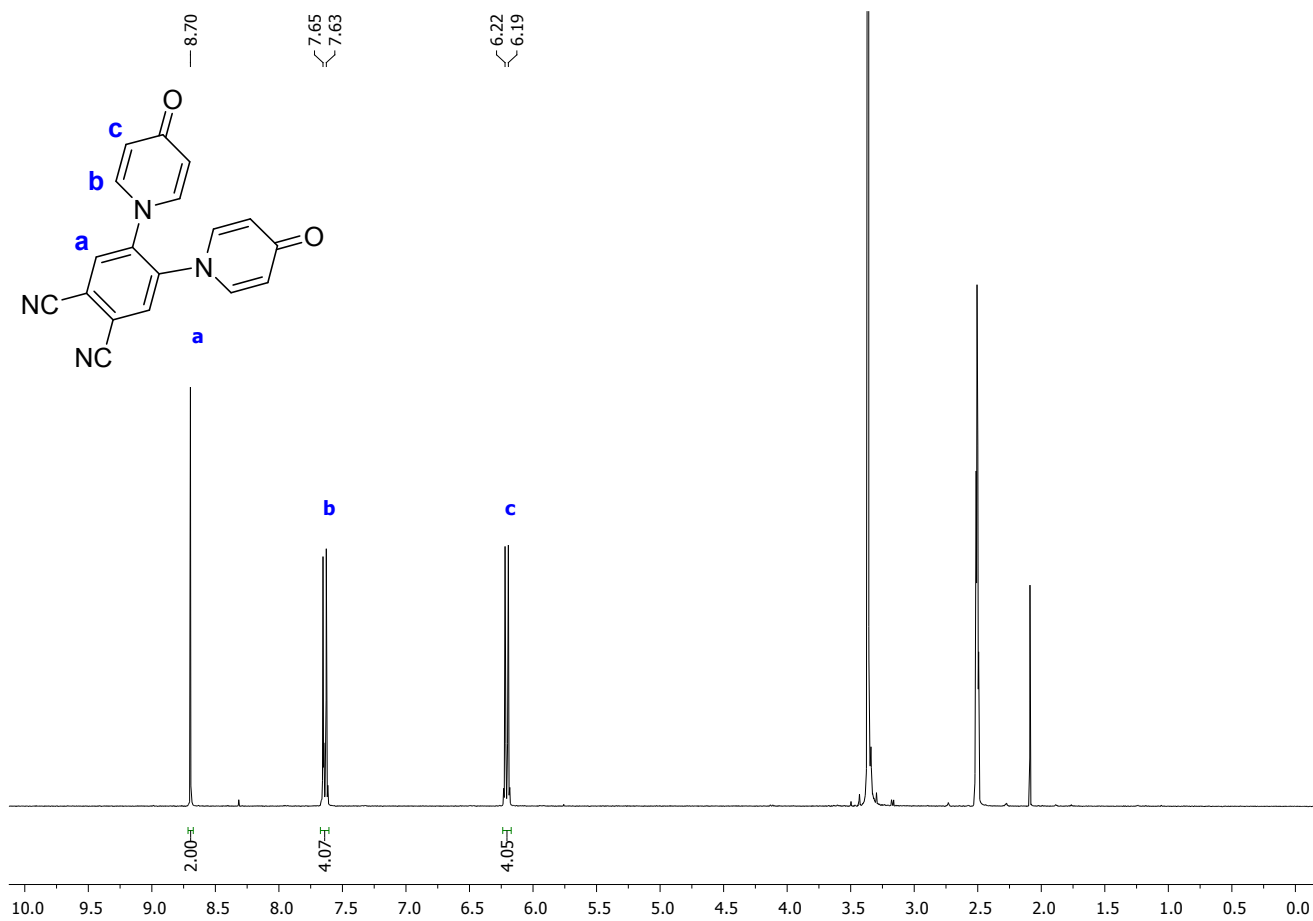


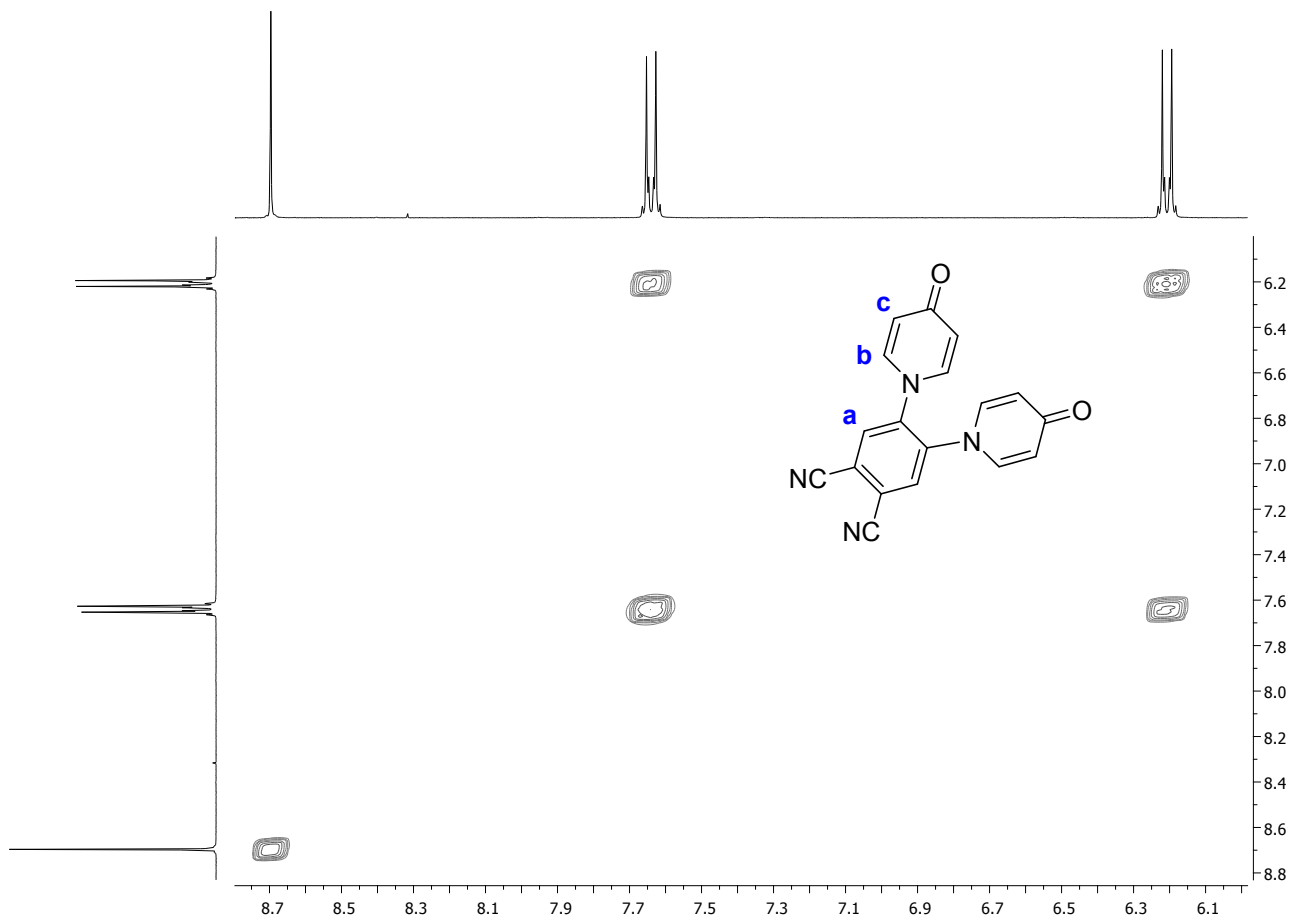
Figure SI 1 –  $^1\text{H}$  NMR spectrum of compound 1 in  $\text{DMSO-}d_6$ .



**Figure SI 2** – COSY 2D <sup>1</sup>H-<sup>1</sup>H NMR spectrum of compound **1** in DMSO-*d*<sub>6</sub>.



**Figure SI 3** –  $^1\text{H}$  NMR spectrum of compound **2** in  $\text{DMSO-}d_6$ .



**Figure SI 4** – COSY 2D  $^1\text{H}$ - $^1\text{H}$  NMR spectrum of compound **2** in  $\text{DMSO-}d_6$ .

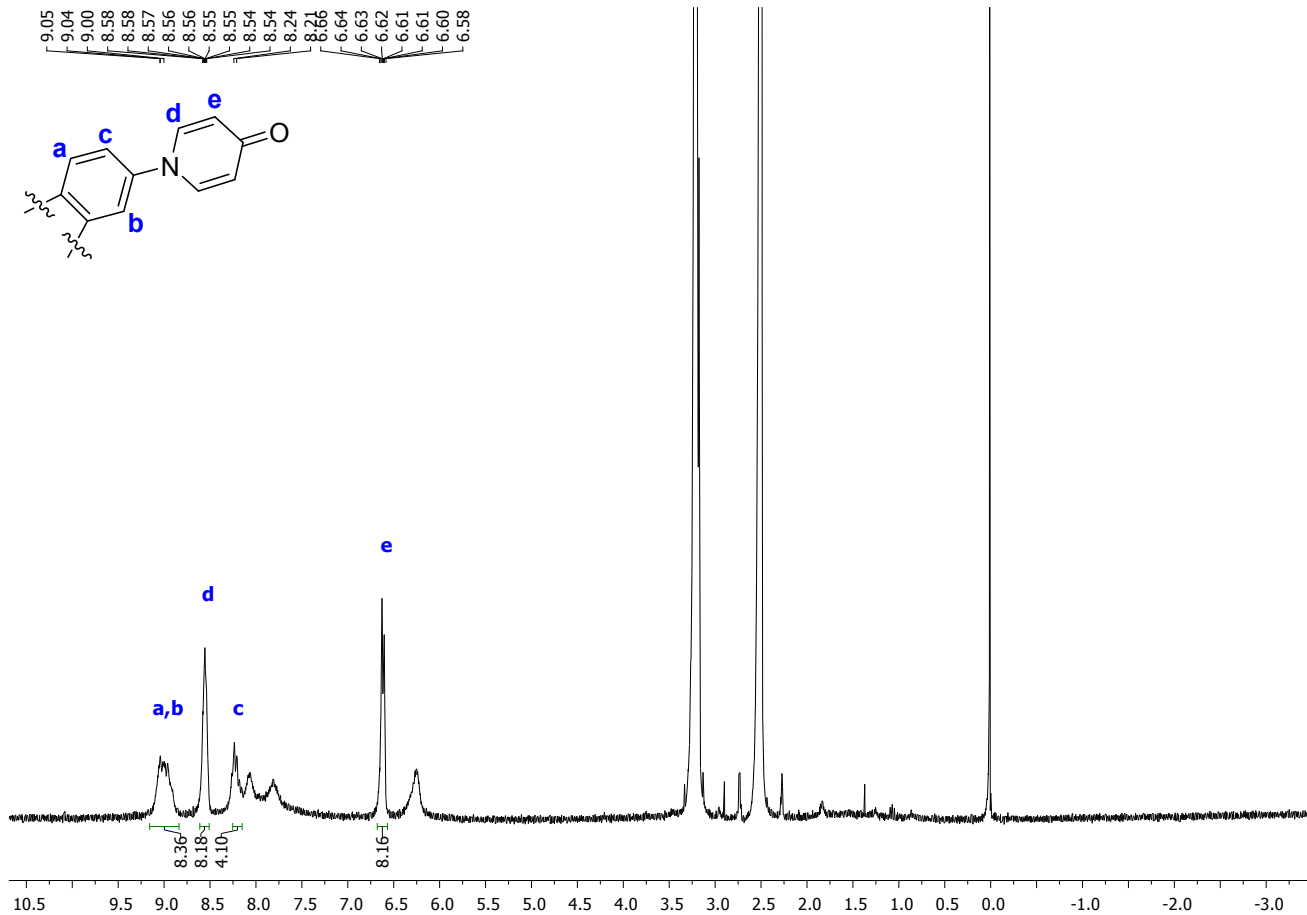
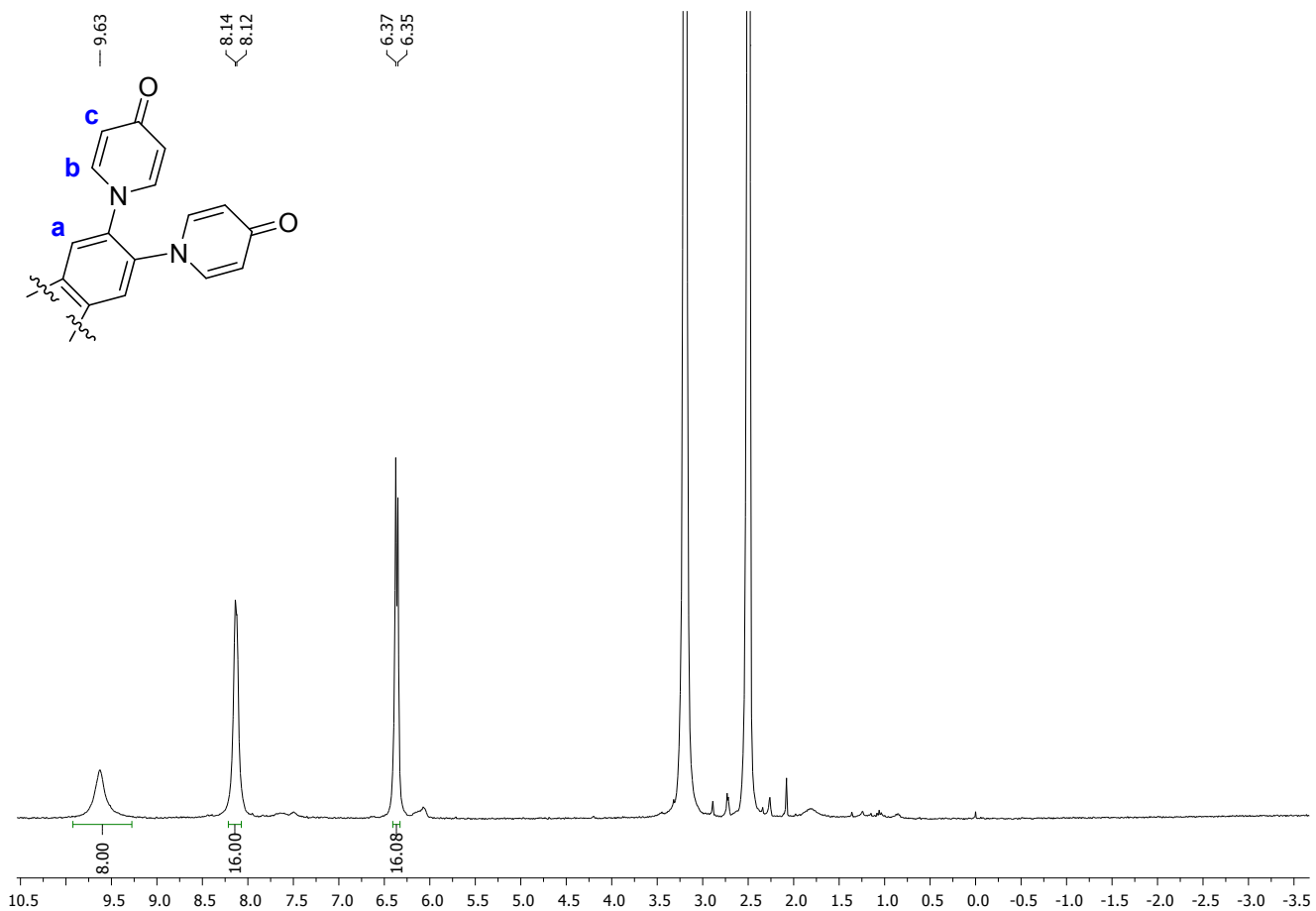


Figure SI 5 –  $^1\text{H}$  NMR spectrum of compound 3 in  $\text{DMSO-}d_6$ .



**Figure SI 6** –  $^1\text{H}$  NMR spectrum of compound 4 in  $\text{DMSO-}d_6$ .

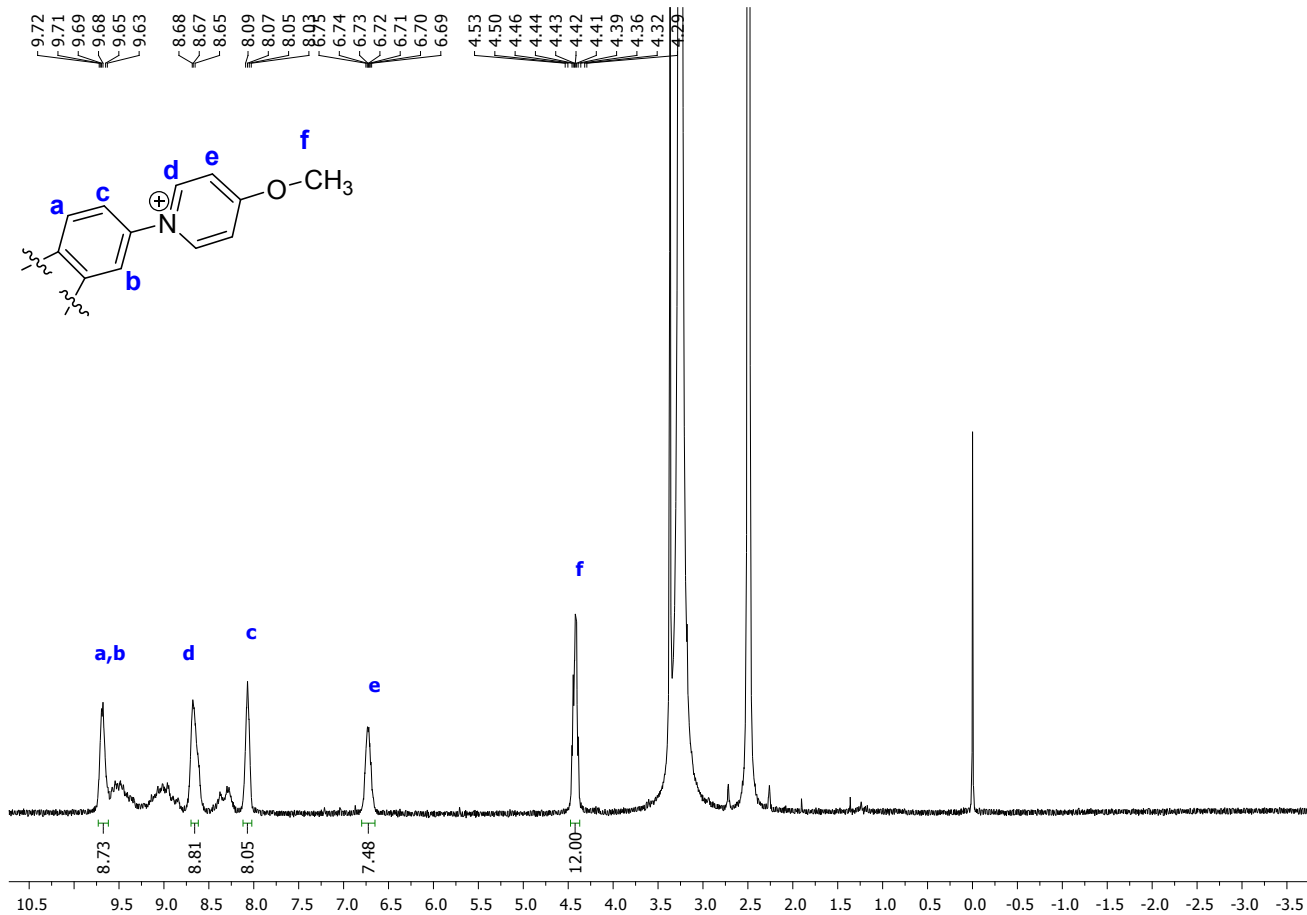
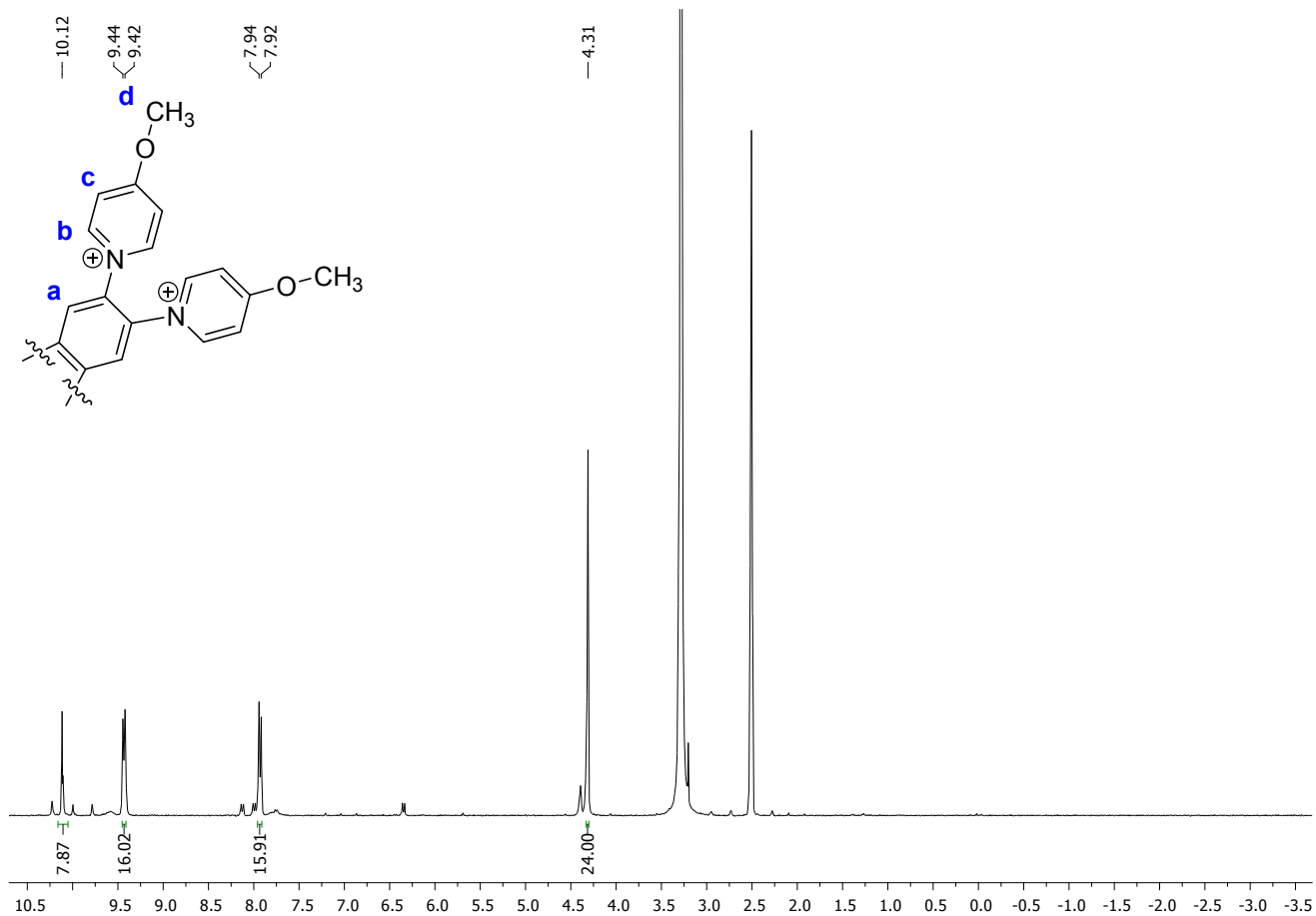
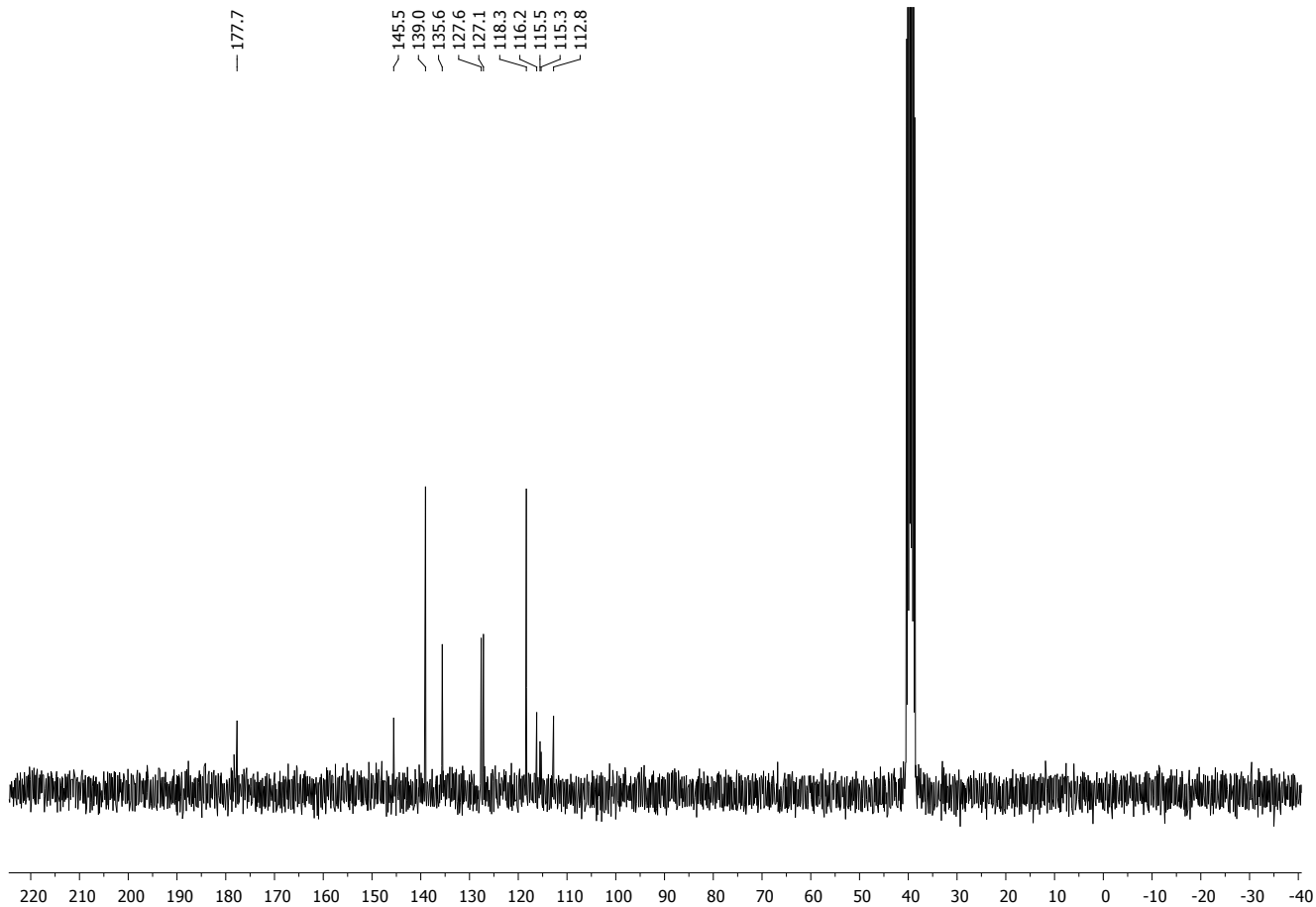


Figure SI 7 – <sup>1</sup>H NMR spectrum of compound 5 in DMSO-*d*<sub>6</sub>.

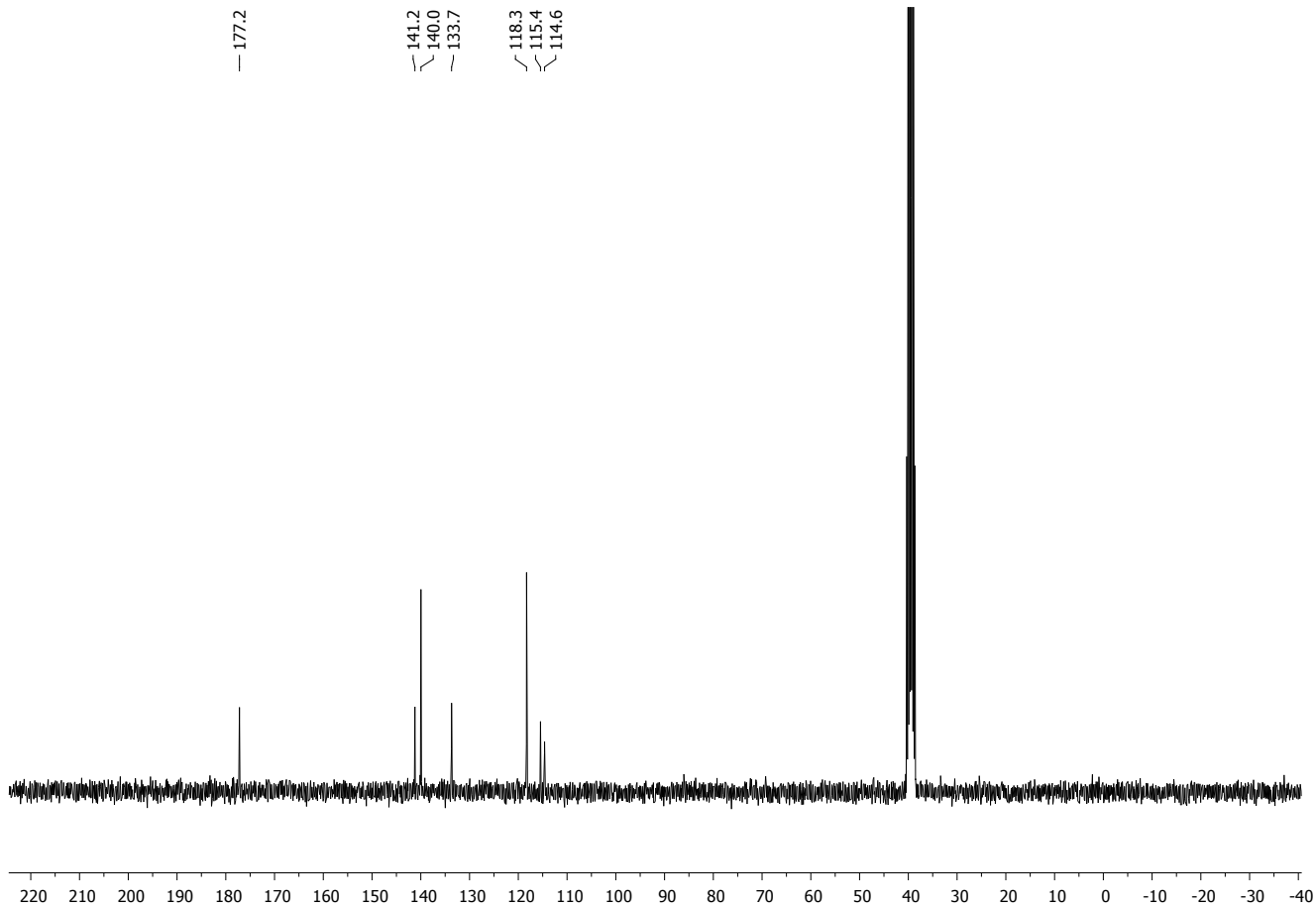




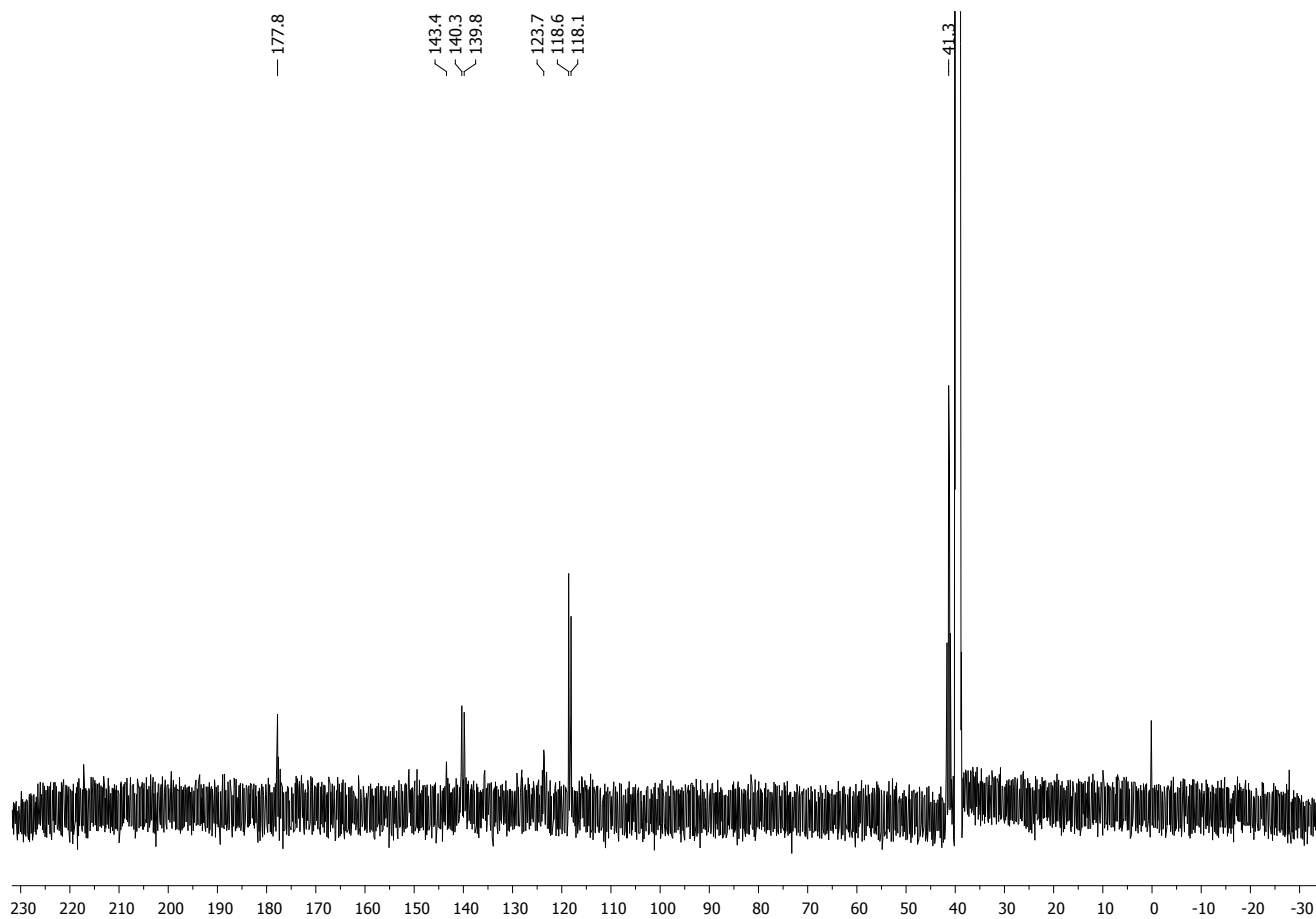
**Figure SI 8** –  $^1\text{H}$  NMR spectrum of compound **6** in  $\text{DMSO-}d_6$ .



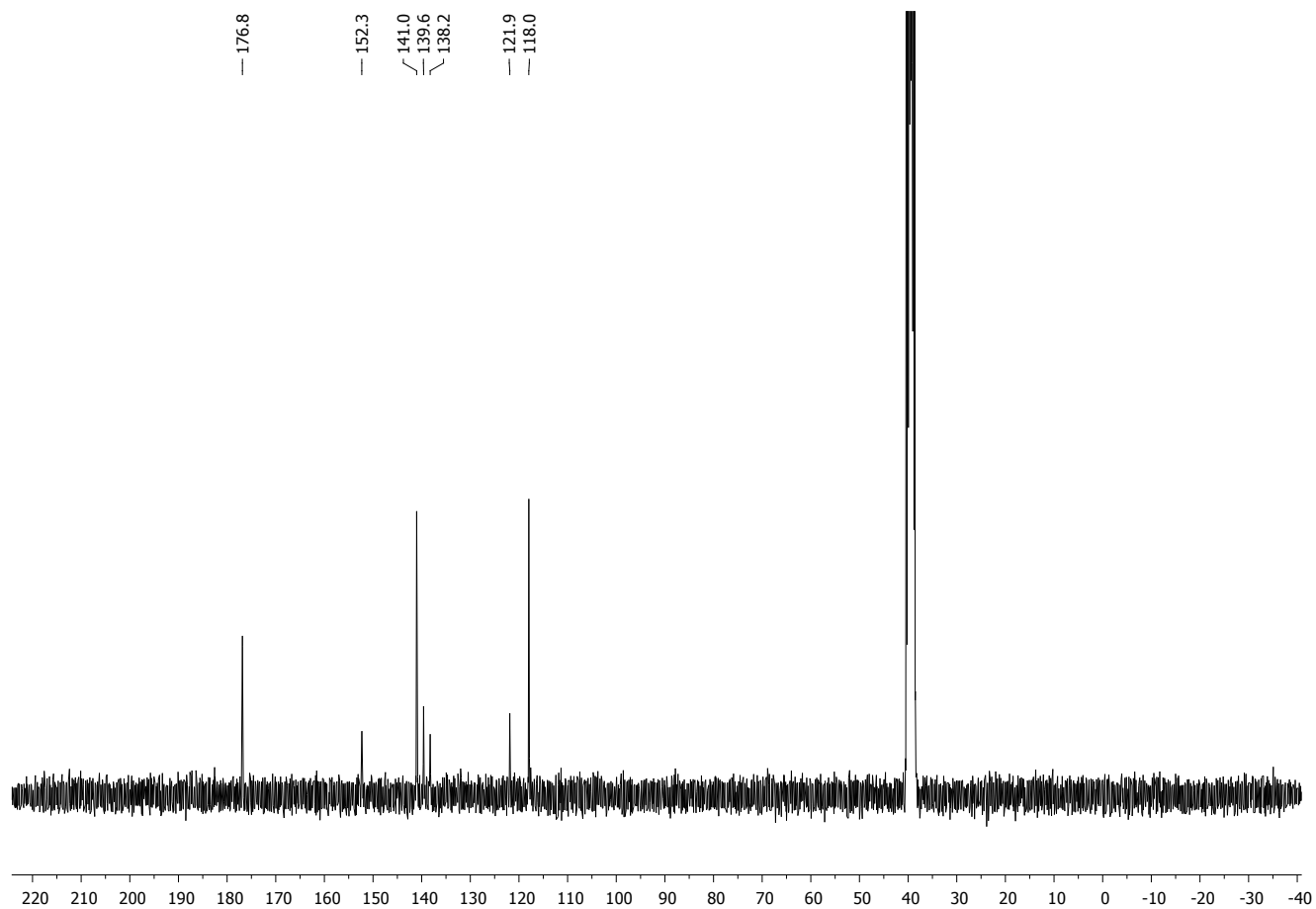
**Figure SI 9** –  $^{13}\text{C}$  NMR spectrum of compound **1** in  $\text{DMSO-}d_6$ .



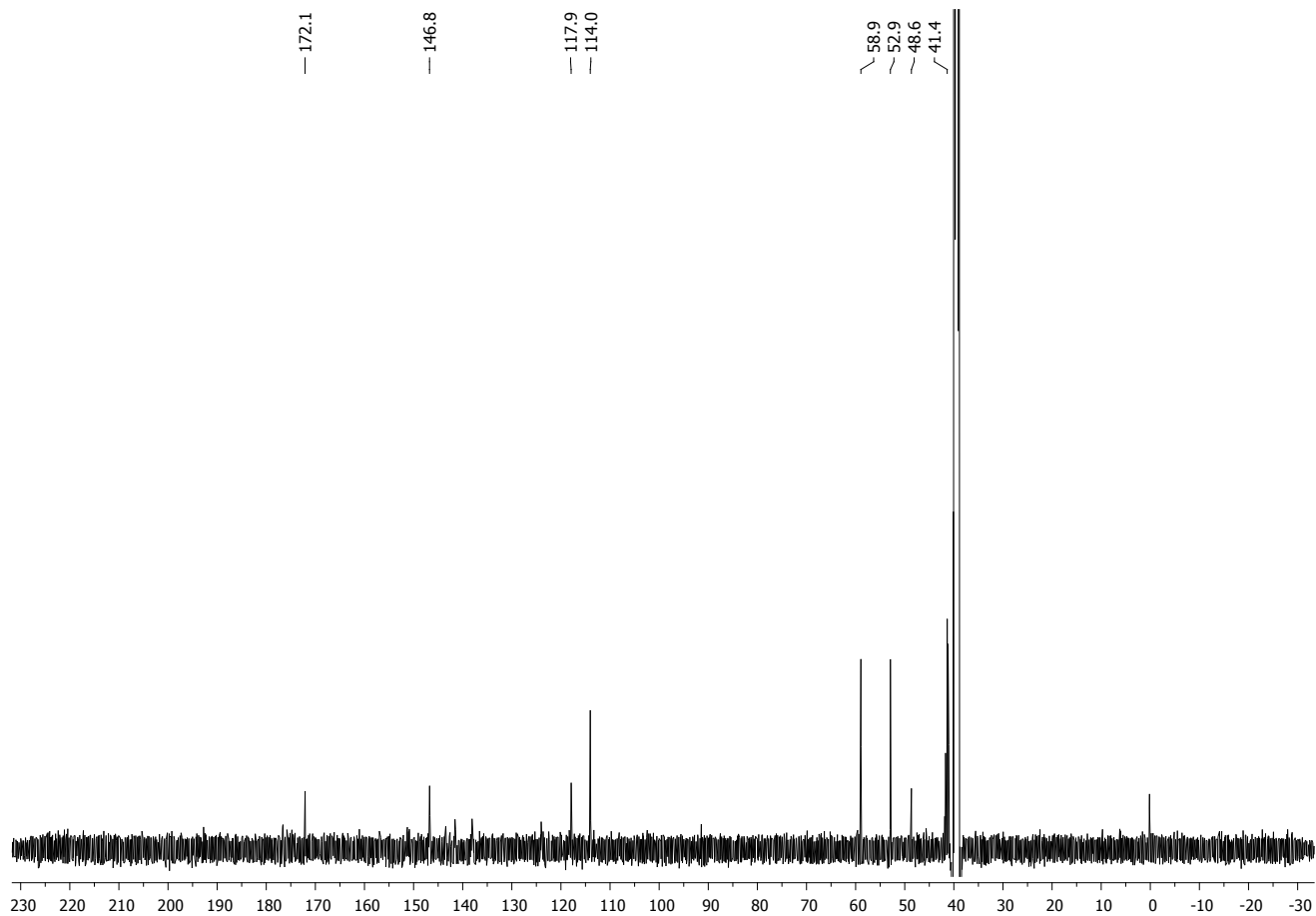
**Figure SI 10** –  $^{13}\text{C}$  NMR spectrum of compound **2** in  $\text{DMSO-}d_6$ .



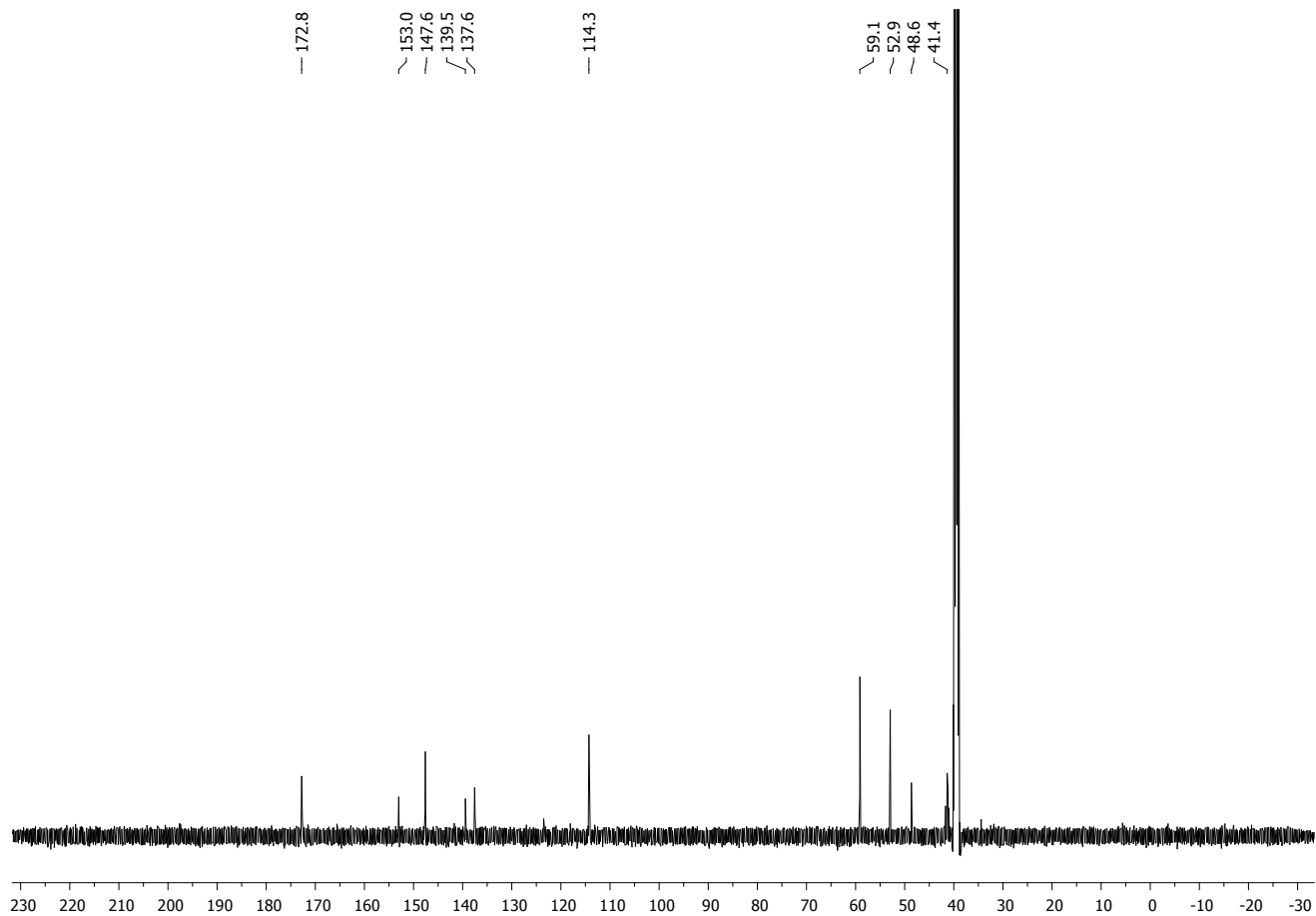
**Figure SI 11** –  $^{13}\text{C}$  NMR spectrum of compound **3** in  $\text{DMSO-}d_6$ .



**Figure SI 12** –  $^{13}\text{C}$  NMR spectrum of compound **4** in  $\text{DMSO-}d_6$ .



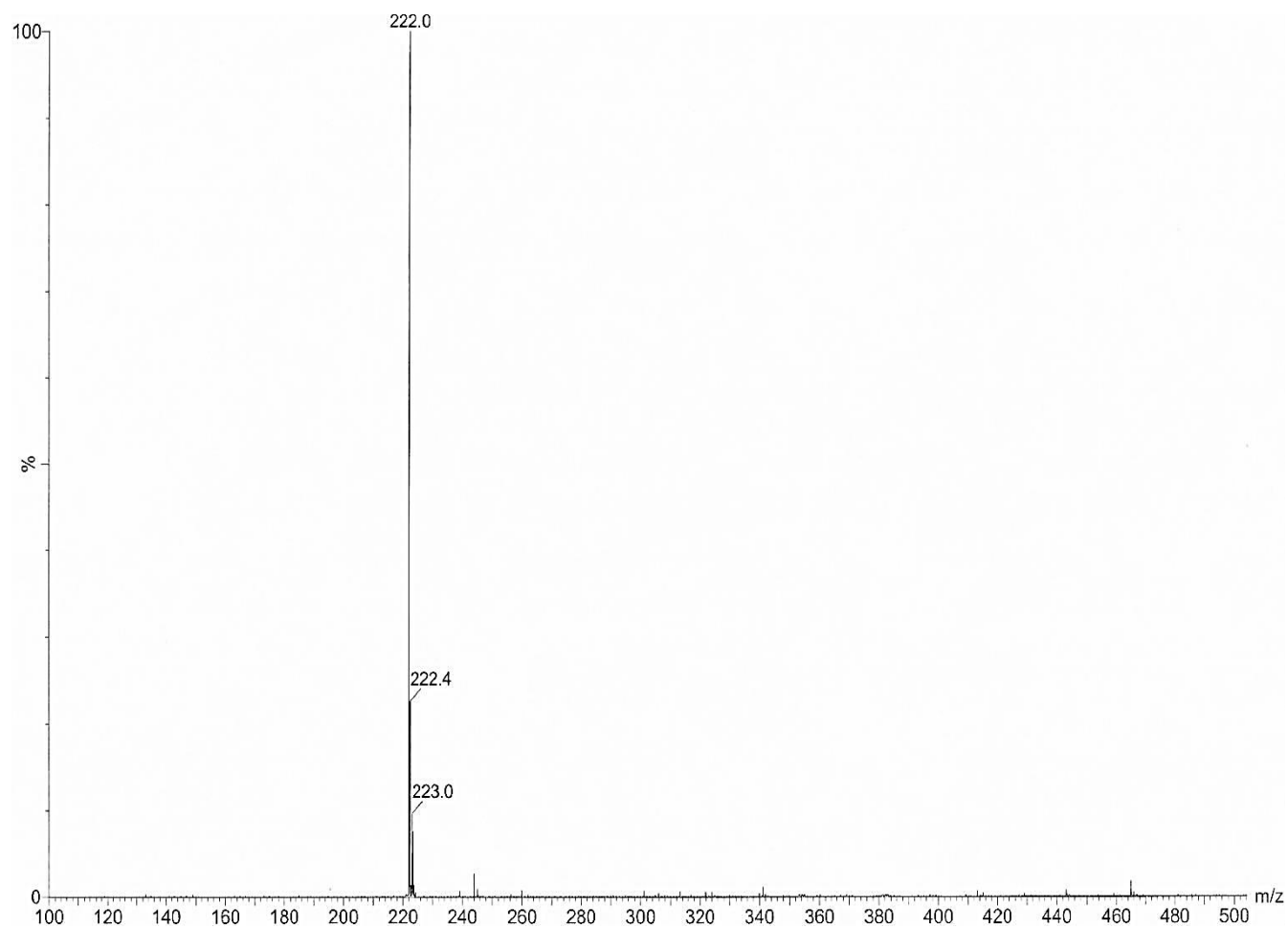
**Figure SI 13** –  $^{13}\text{C}$  NMR spectrum of compound **5** in  $\text{DMSO-}d_6$ .



**Figure SI 14** –  $^{13}\text{C}$  NMR spectrum of compound **6** in  $\text{DMSO-}d_6$ .

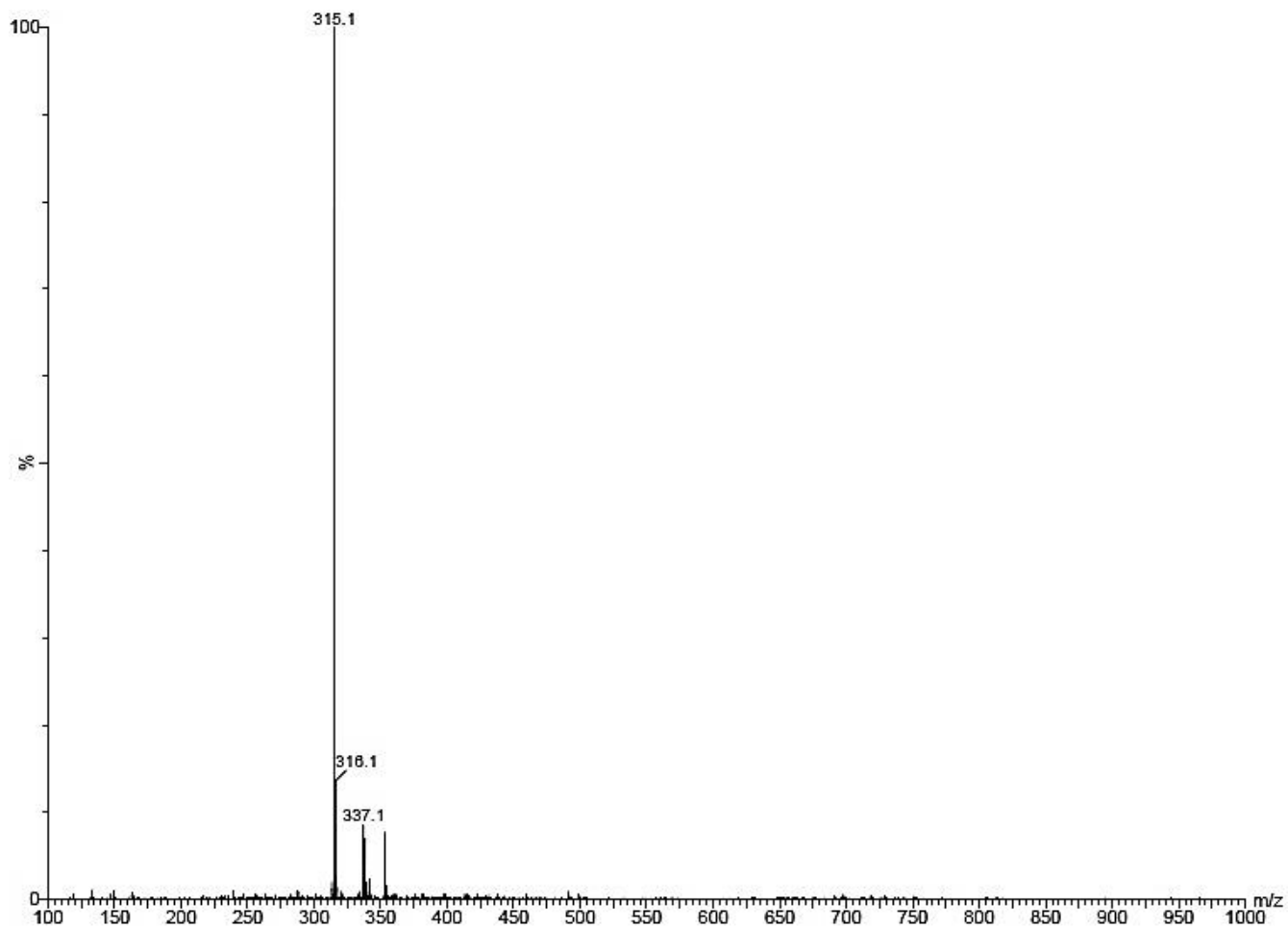
## 1.2 Mass spectra of phthalonitrile and phthalocyanine derivatives

### 1.2.1 ESI-MS spectra



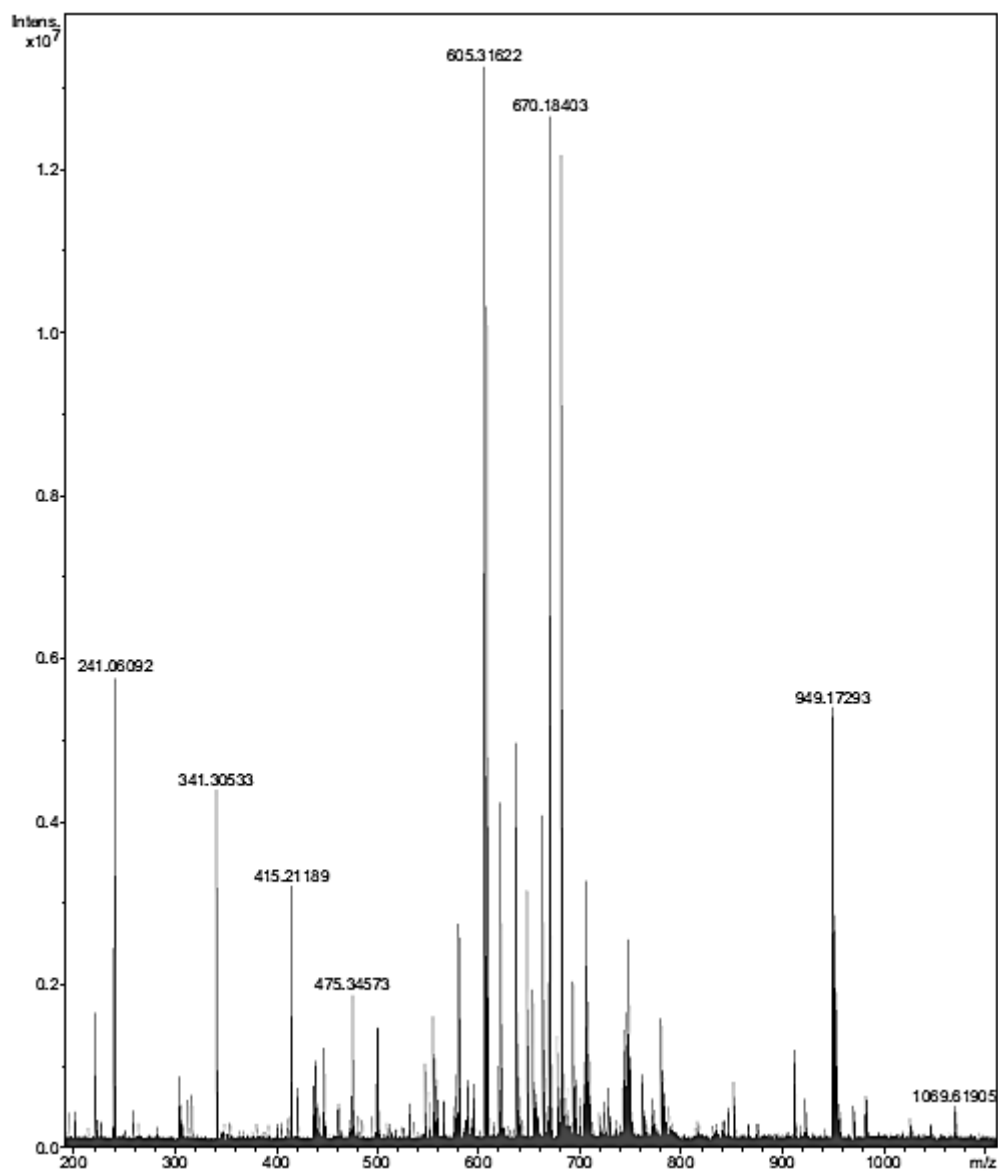
**Figure SI 15** – ESI-MS spectrum of compound **1**.



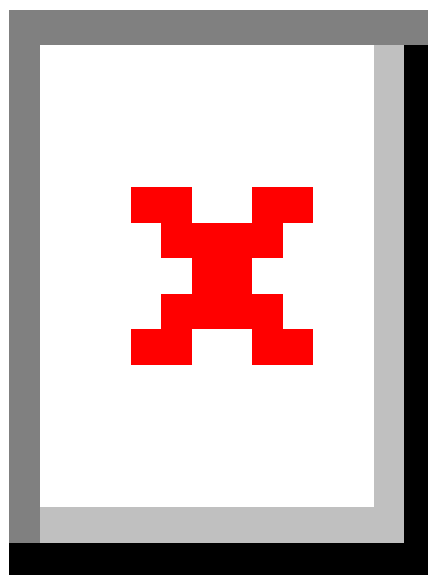


**Figure SI 16** – ESI-MS spectrum of compound **2**.

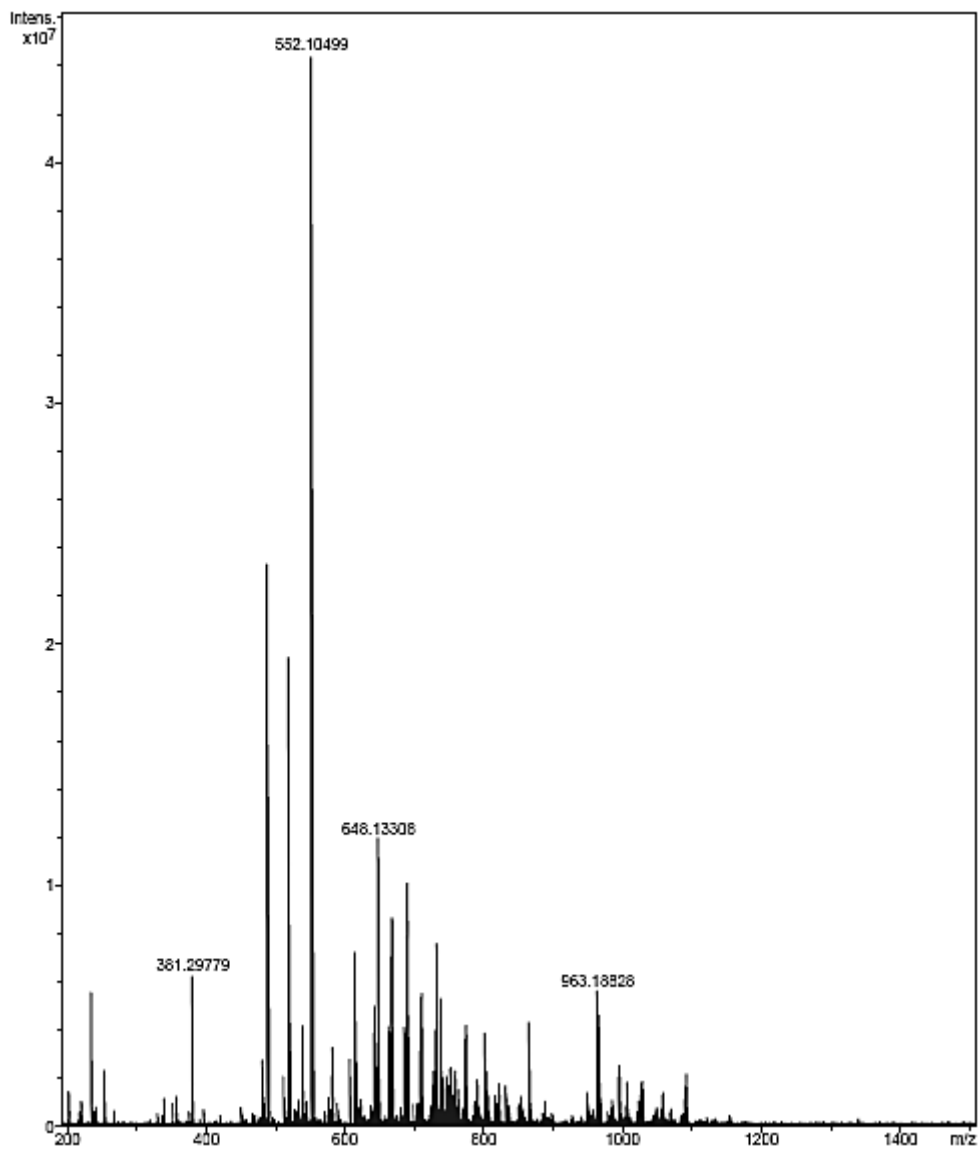
## 1.2.2 ESI-HRMS spectra



**Figure SI 17** – ESI-HRMS spectrum of compound **3**.



**Figure SI 18** – ESI-HRMS spectrum of compound 4.



**Figure SI 19** – ESI-HRMS spectrum of compound **5**.

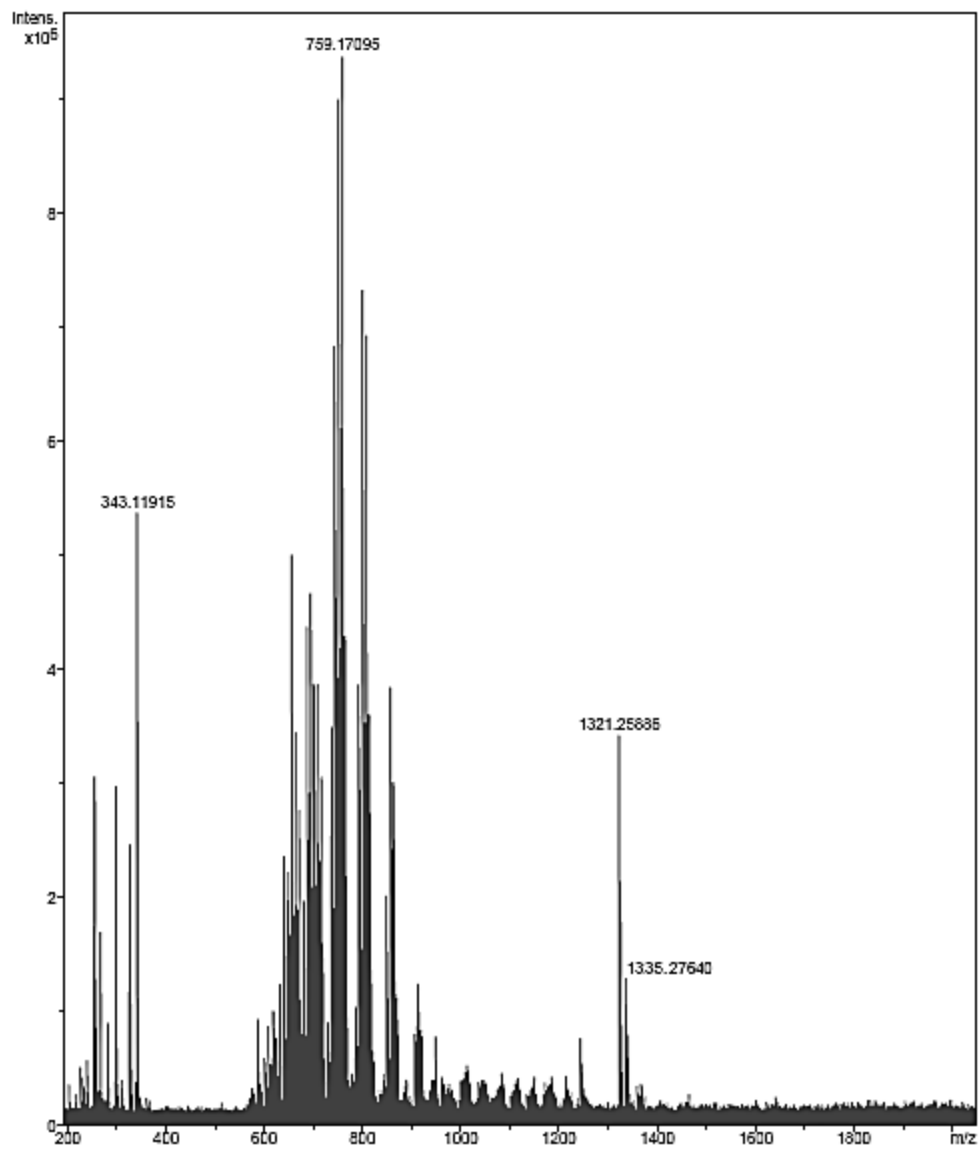
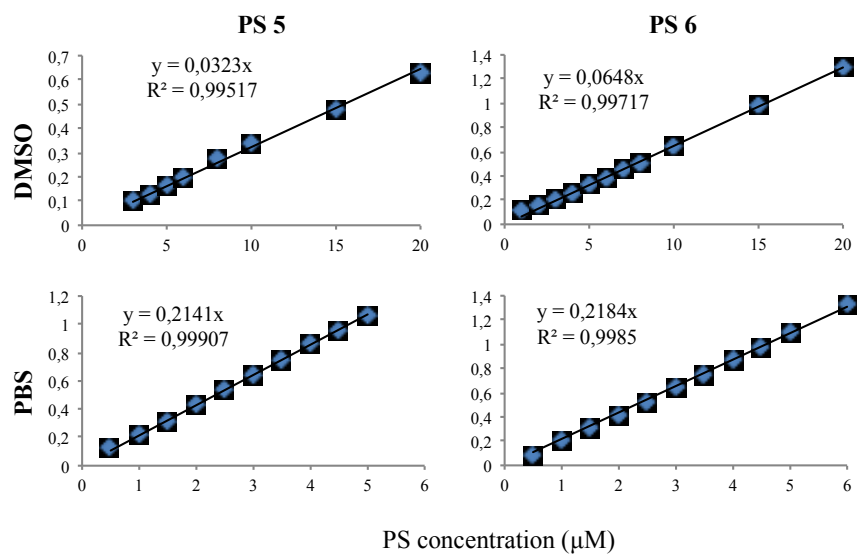
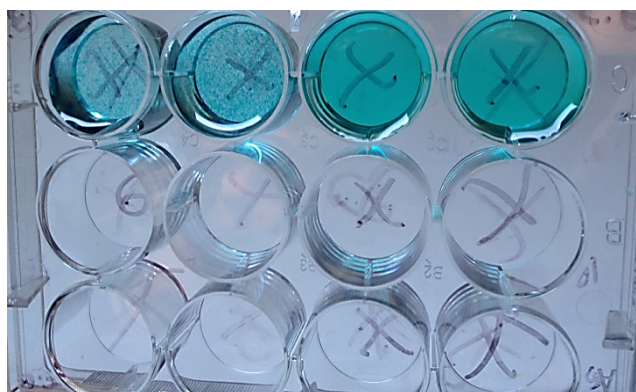


Figure SI 20 – ESI-HRMS spectrum of compound 6.



**Figure SI 21** – Linear regression graphics of Pcs **5** and **6** plotted the Q-band absorbance *versus* the concentrations in PBS and DMSO.



**Figure SI 22** – 12-well plate prepared for PDI studies with 20  $\mu\text{M}$  of **5**, two left wells, and **6**, two right wells, after 15 min of pre-incubation in the dark, under gentle shaking conditions.