

## **Design, Synthesis and Biological Evaluation of Fluorescent Ligands for MT<sub>1</sub> and/or MT<sub>2</sub> Melatonin Receptors**

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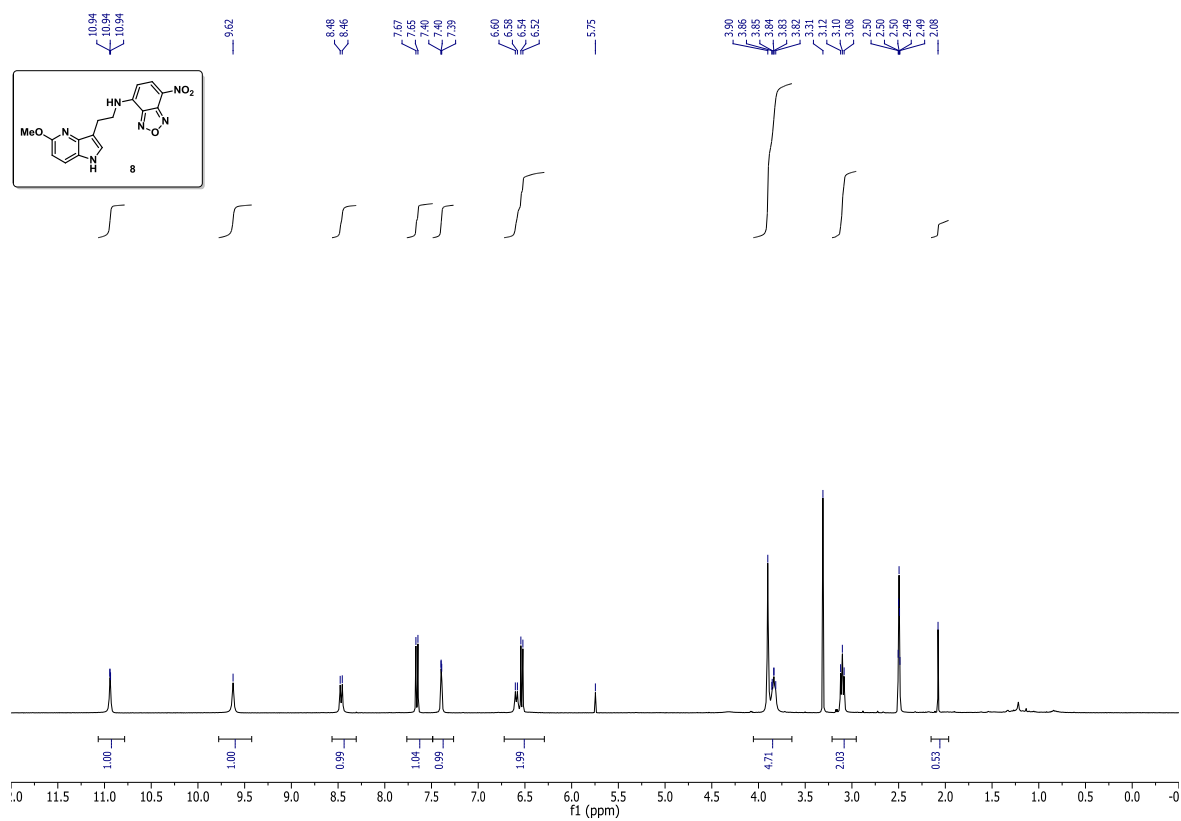
c. Technologie SERVIER, 27 rue Vignat, Orléans 45000, France.

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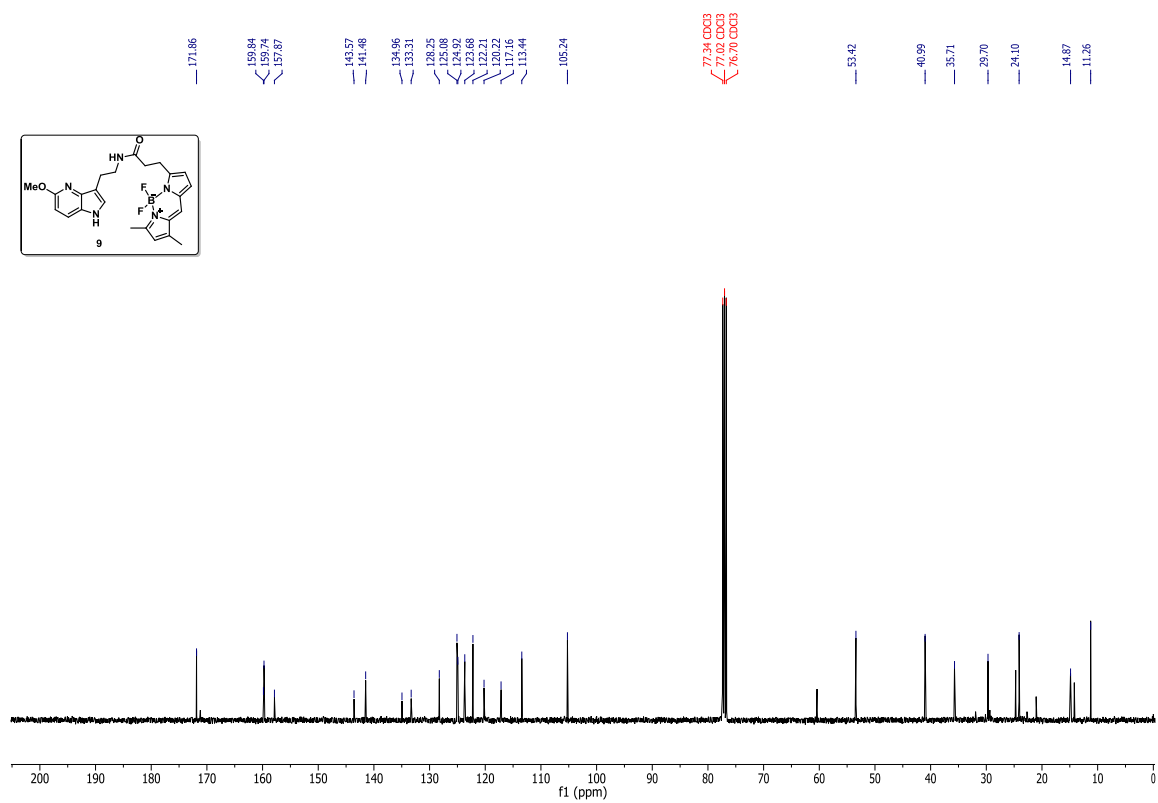
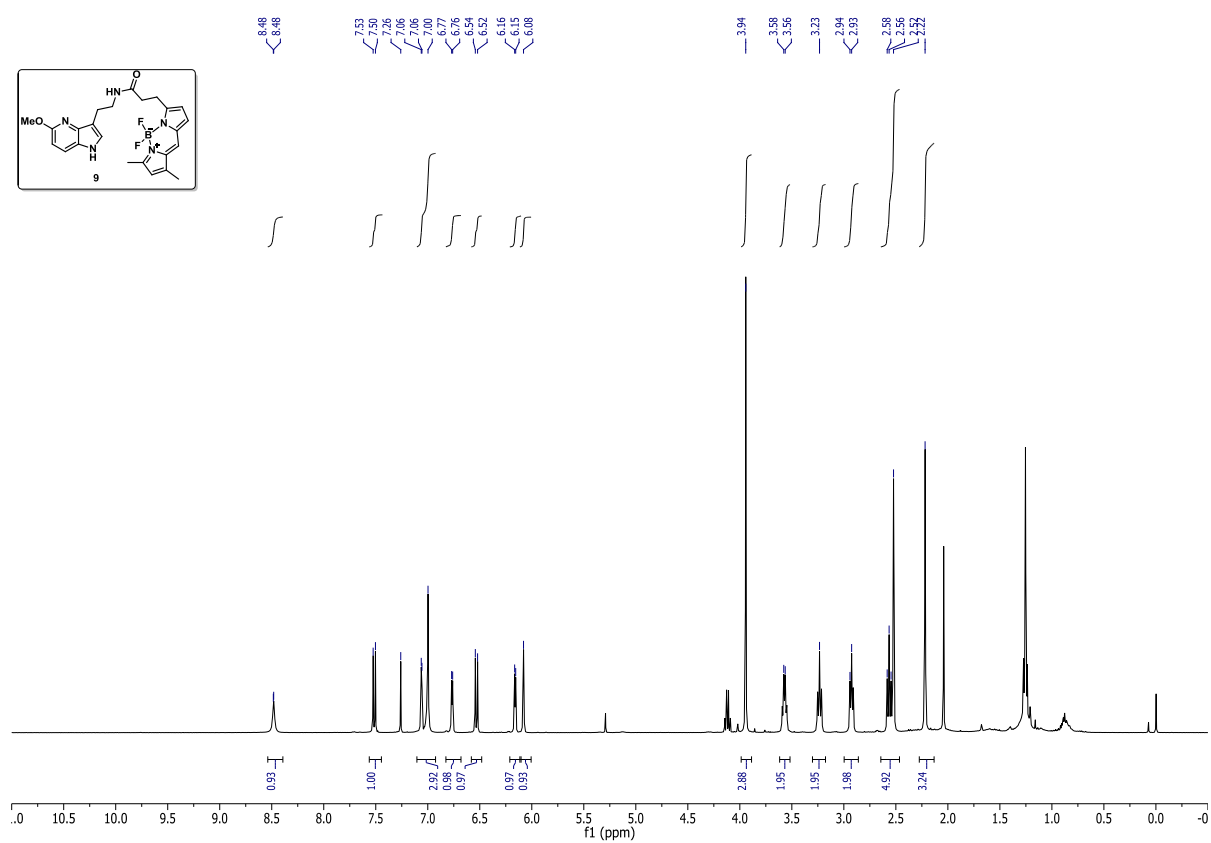
<sup>1</sup>H and <sup>13</sup>C NMR spectra for compounds **8**, **9**, **13-16**, **18**, **20**, **26-30**, **32**, **34-37**.....S2

Absorption and emission spectra for compounds **8**, **9**, **13-16**, **18**, **20**, **26-30**, **32**, **34-37** .....S24

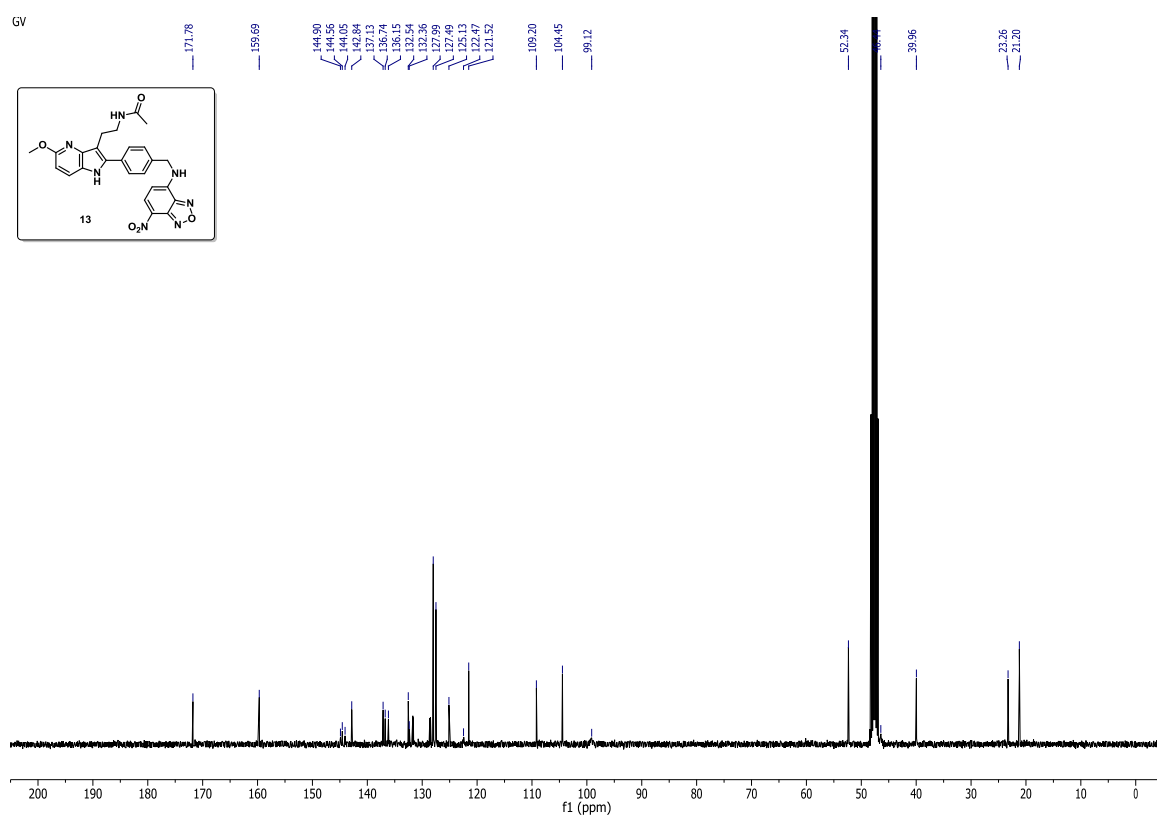
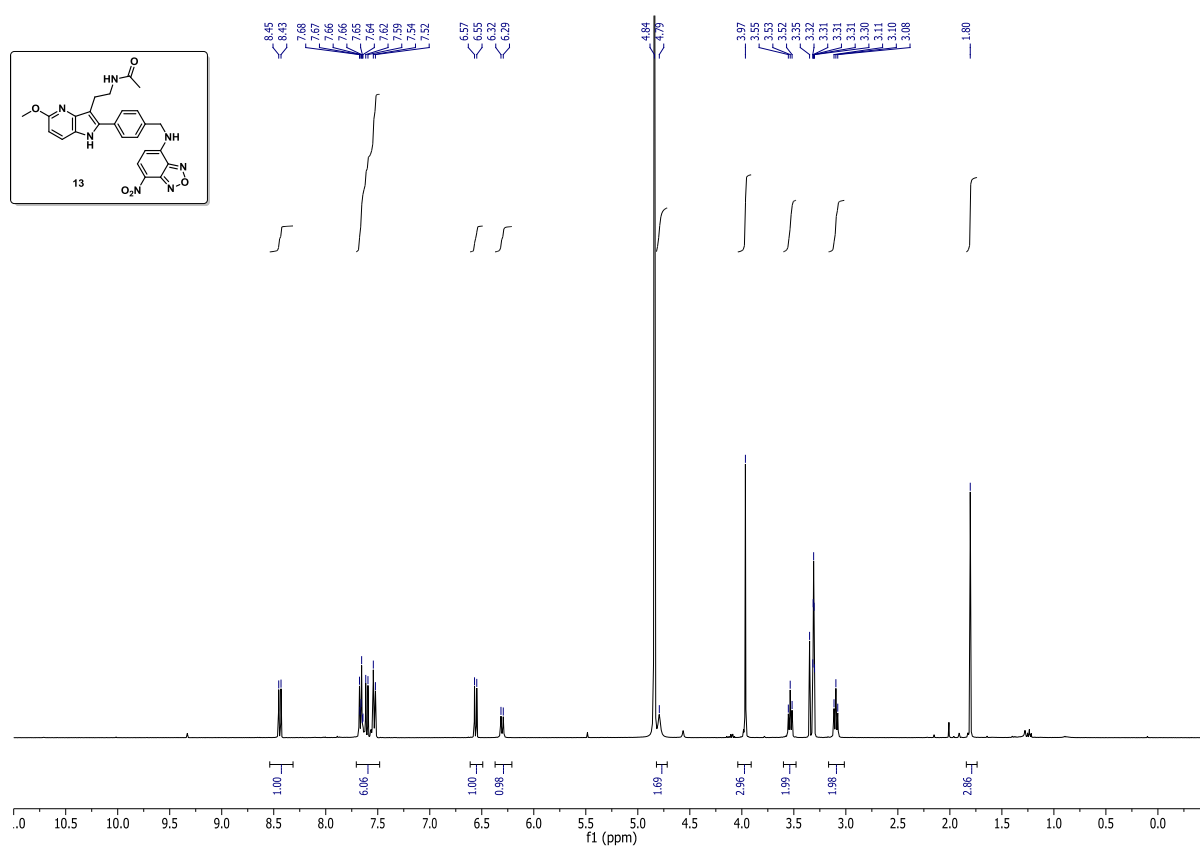
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **8**



$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **9**

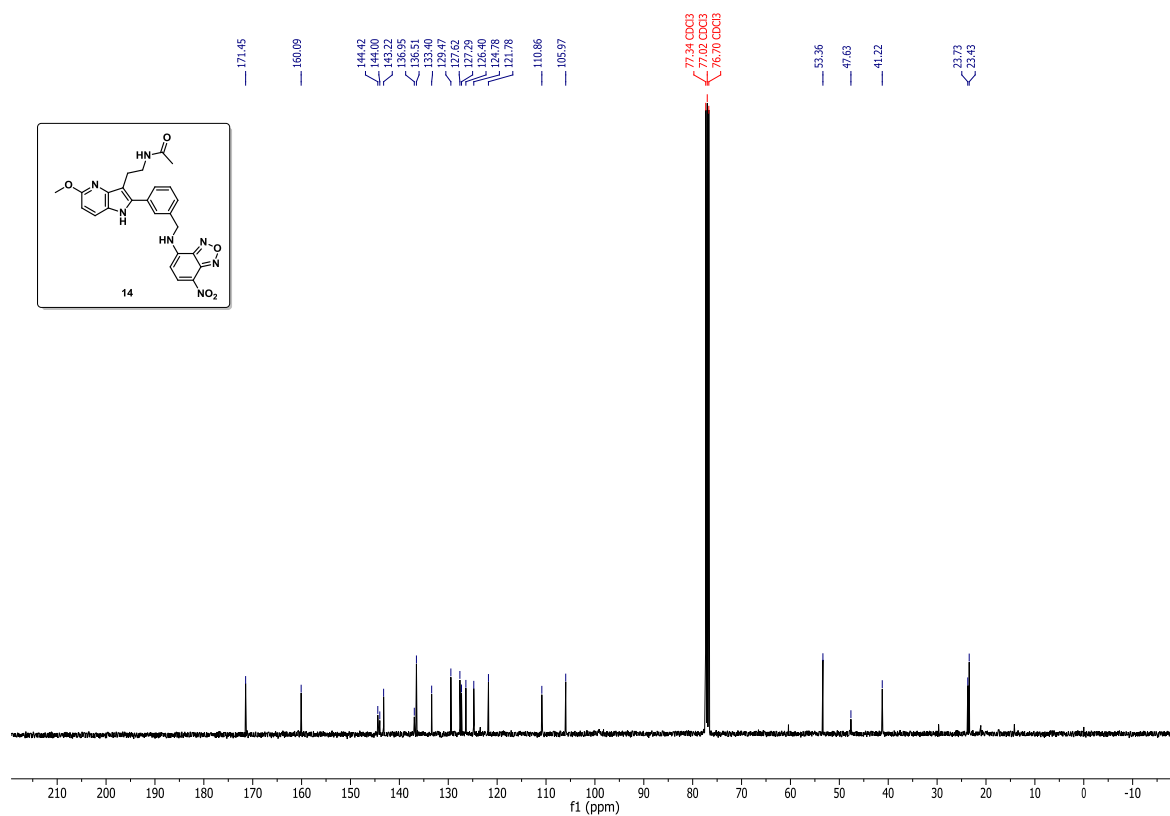


$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **13**

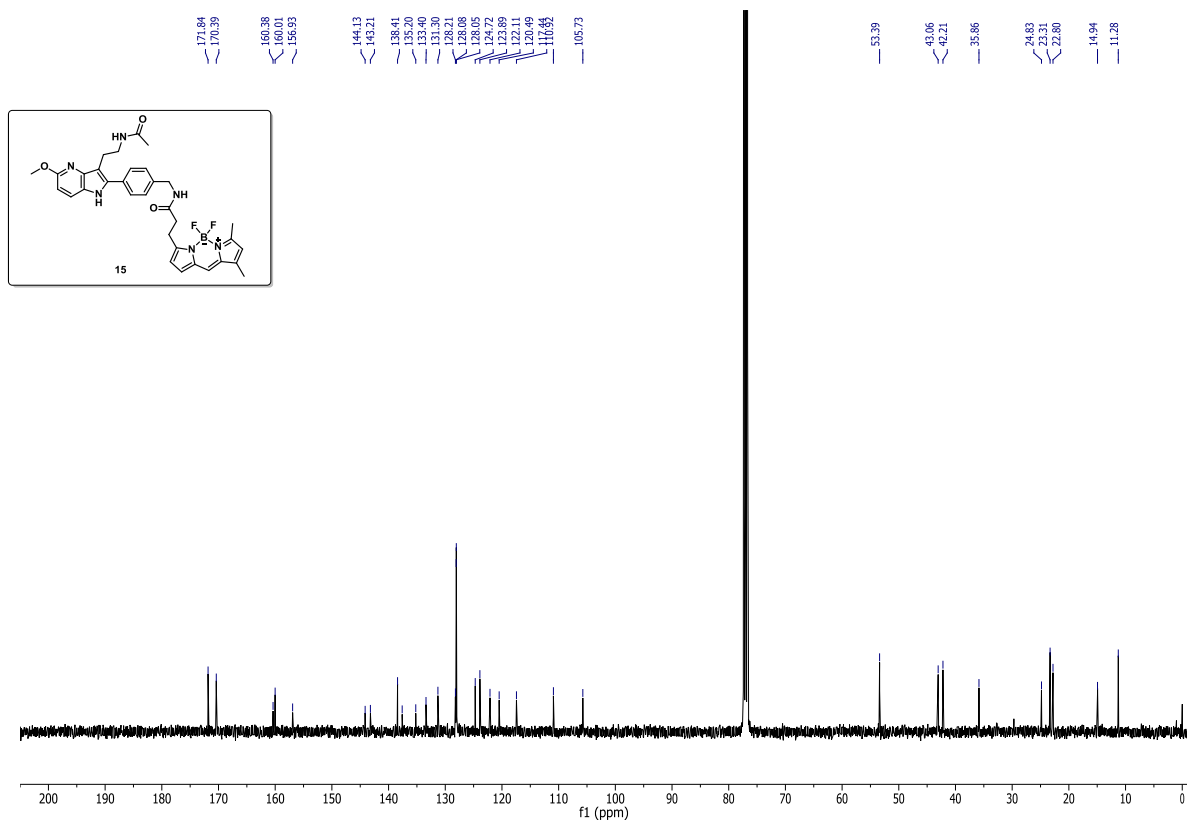
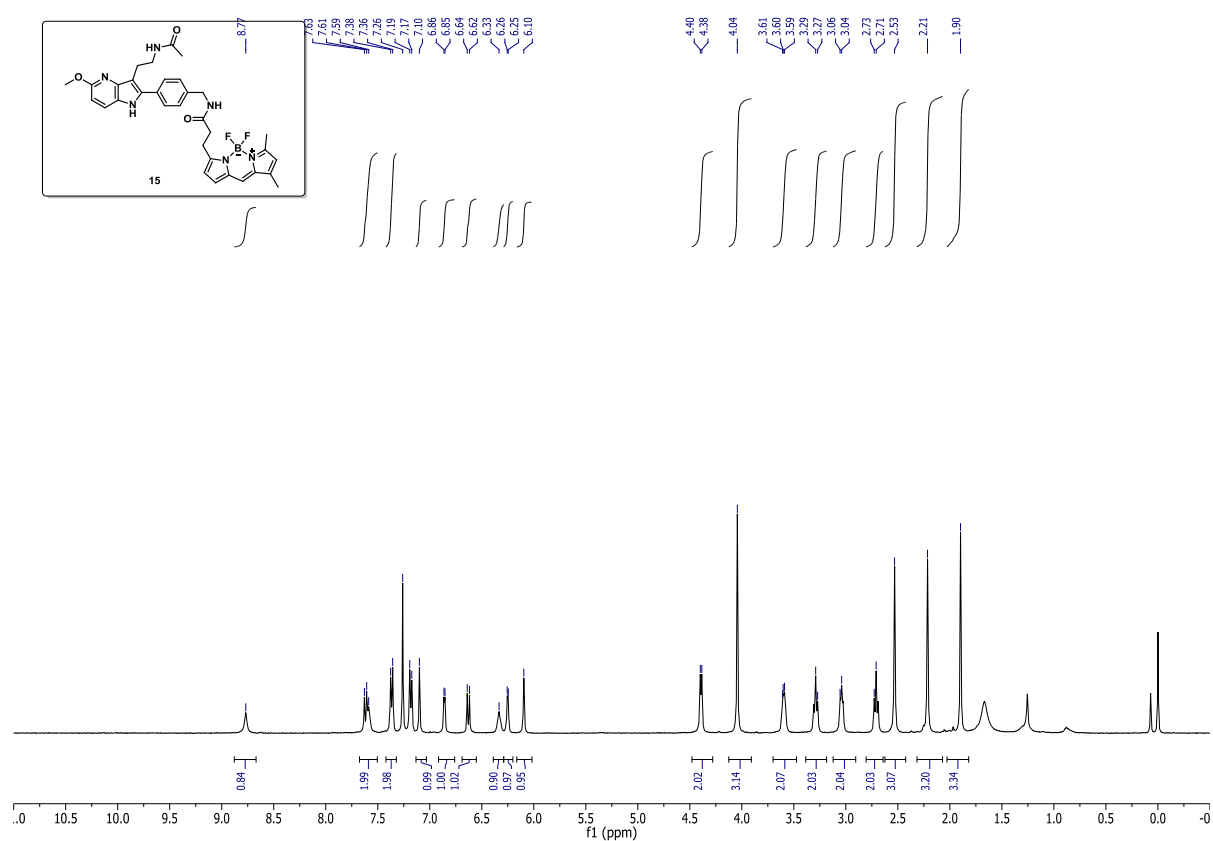


Chemical structure of compound 14 is shown in the inset. The structure is 1-(4-methoxy-1H-indol-3-yl)-2-((4-nitrophenyl)hydrazono)methyl-1H-imidazole-3-carboxamide. The <sup>1</sup>H NMR spectrum (CDCl<sub>3</sub>) shows the following peaks and integrations:

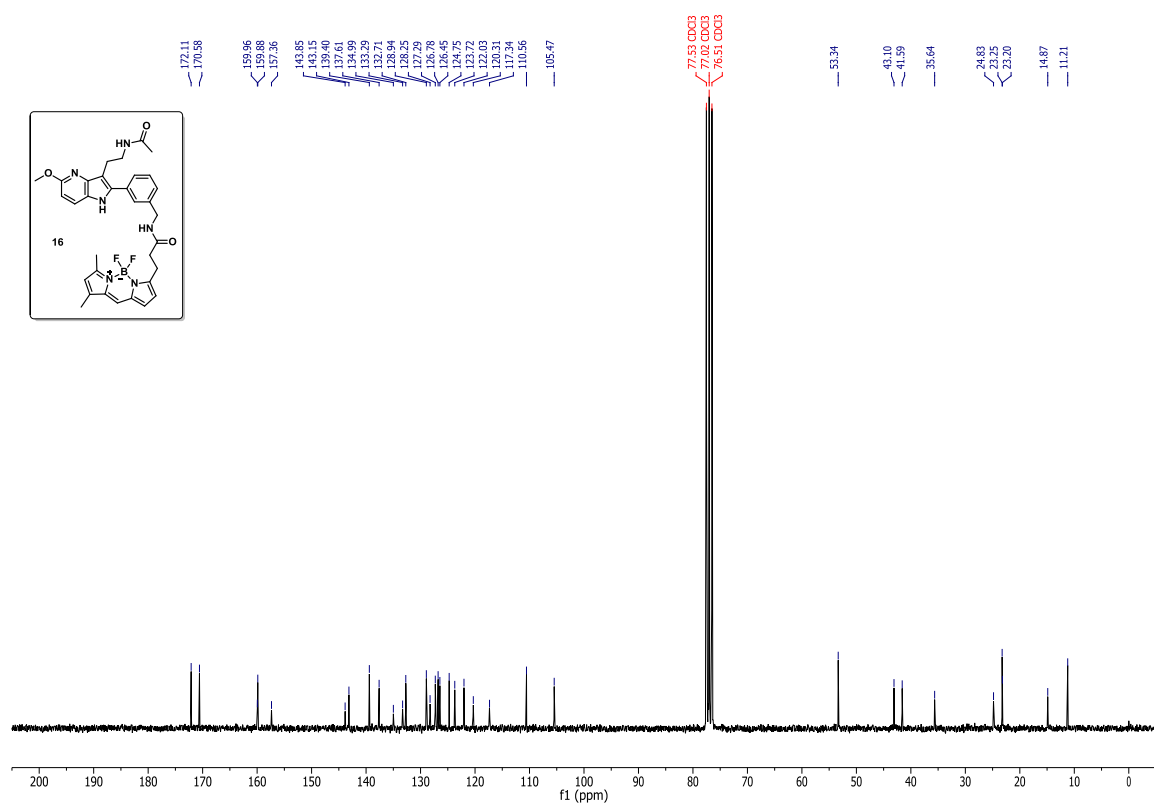
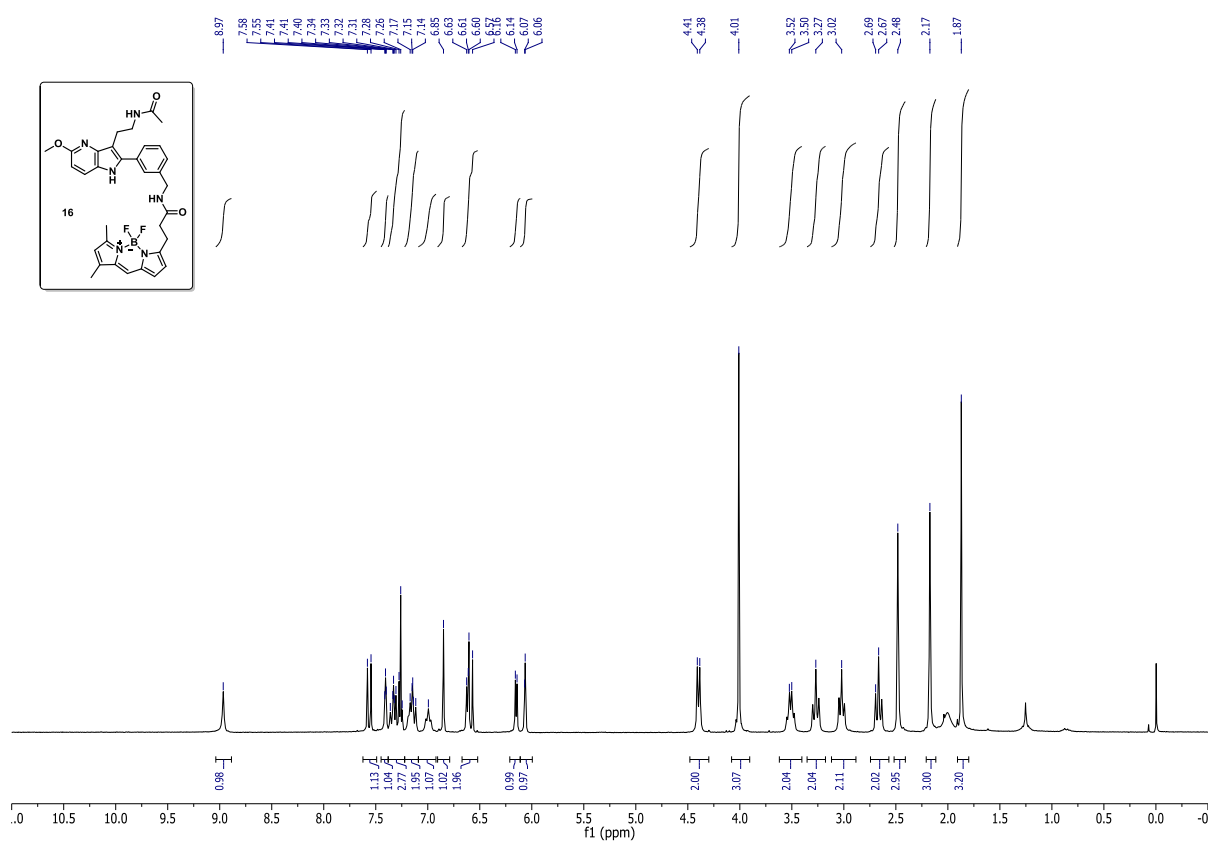
| Chemical Shift (ppm)                                             | Integration |
|------------------------------------------------------------------|-------------|
| 8.54, 8.38, 8.36                                                 | 1.00        |
| 7.96, 7.95                                                       | 1.83        |
| 7.57, 7.55, 7.45, 7.44, 7.43, 7.42, 7.40, 6.60, 6.59, 6.23, 6.20 | 0.96        |
| 4.78, 4.77                                                       | 1.06        |
| 3.99, 3.98, 3.56, 3.56, 3.11, 3.09, 3.07                         | 2.98        |
| 2.05, 2.04                                                       | 0.97        |
| 1.88                                                             | 0.95        |
| 2.90                                                             | 1.88        |
| 1.99                                                             | 2.90        |
| 1.98                                                             | 1.99        |
| 3.39                                                             | 1.98        |
| 3.39                                                             | 3.39        |



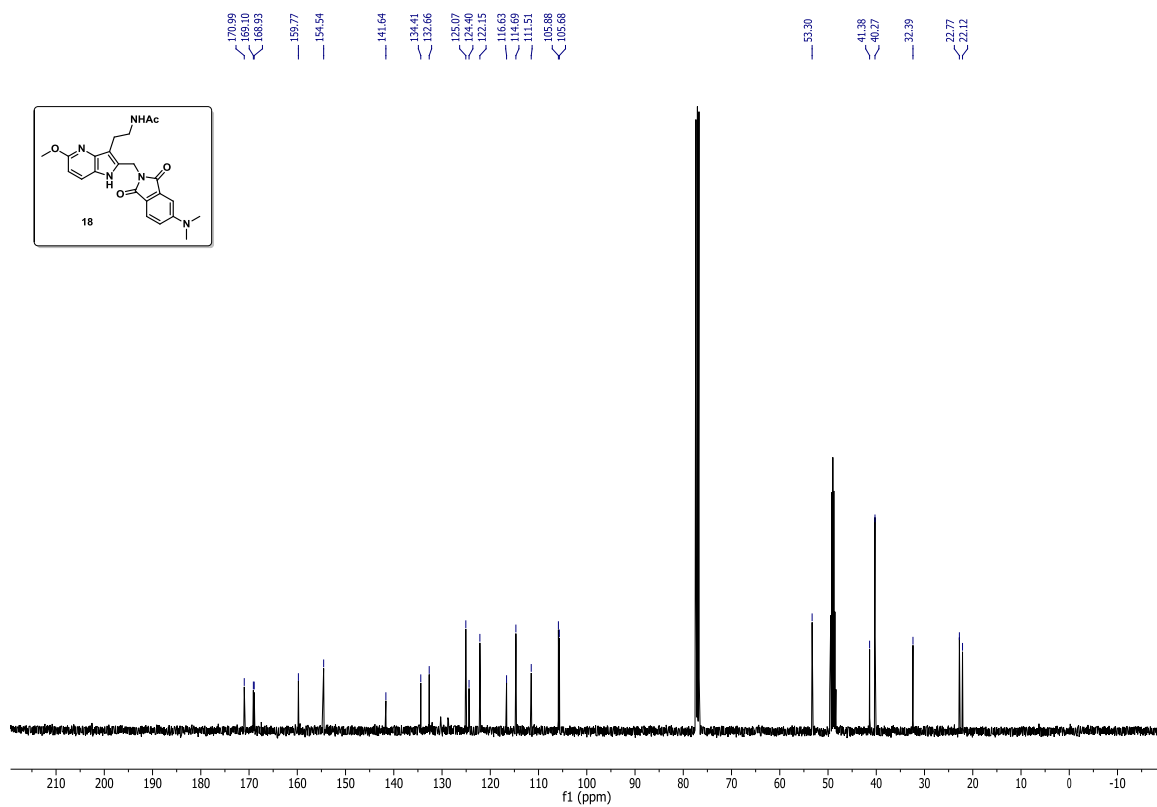
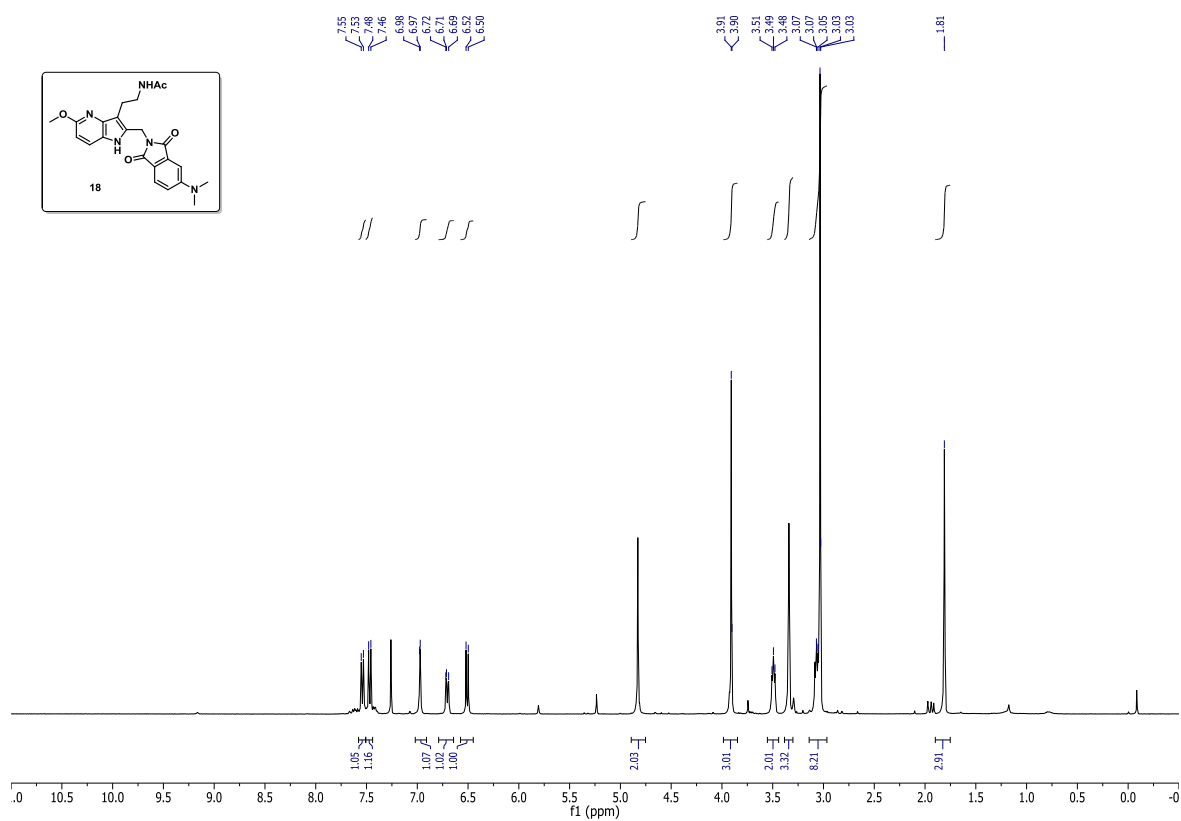
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **15**



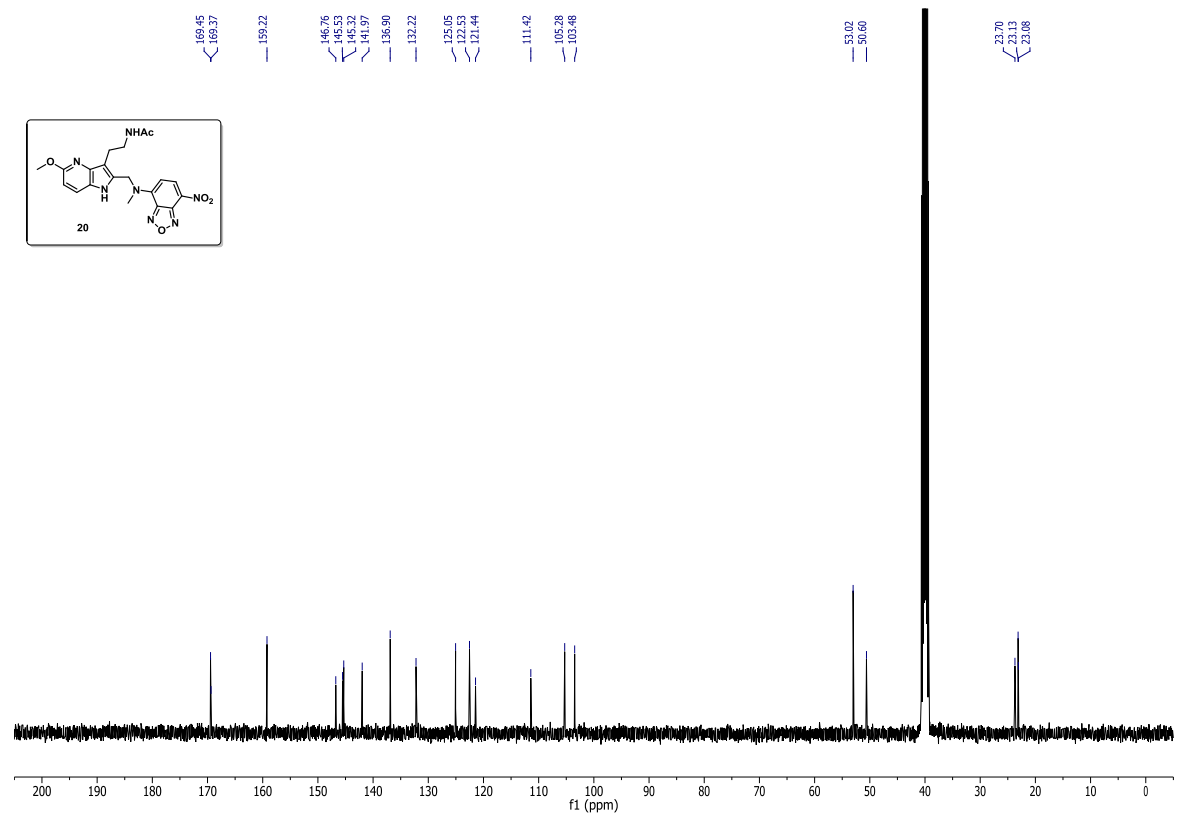
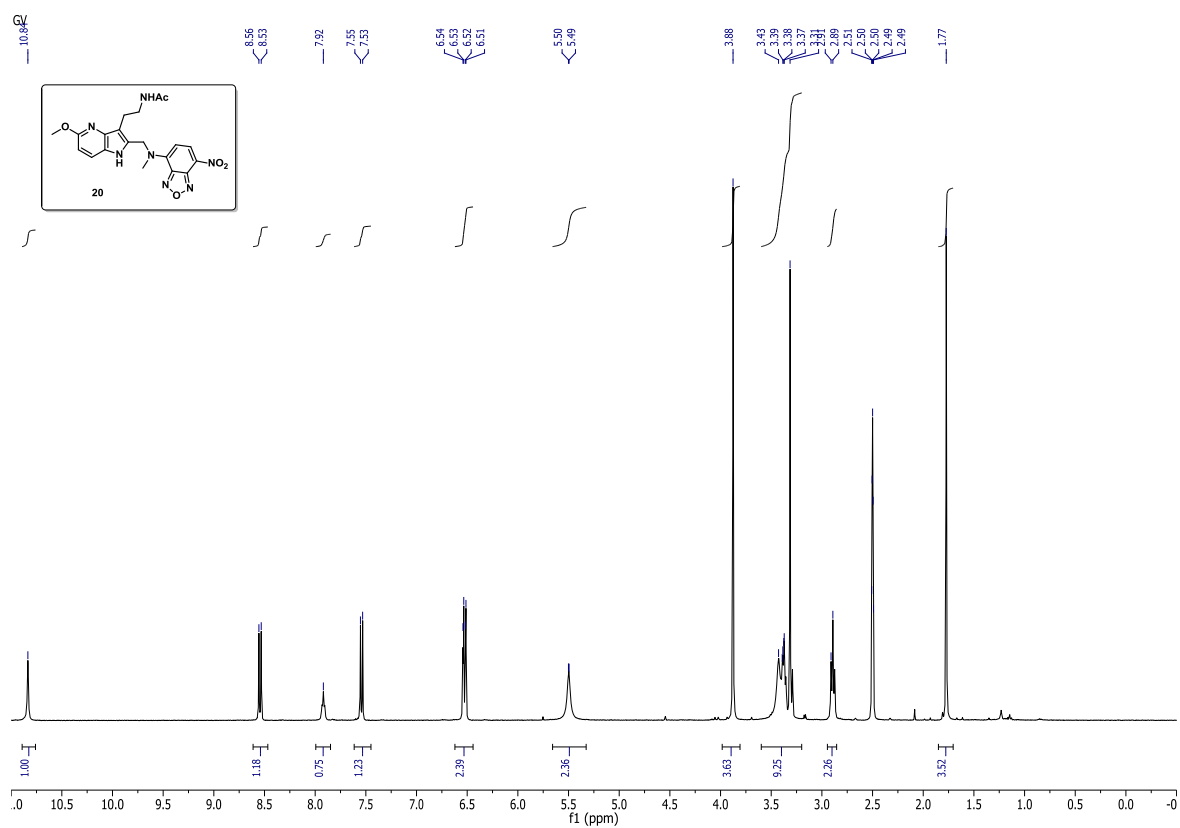
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **16**



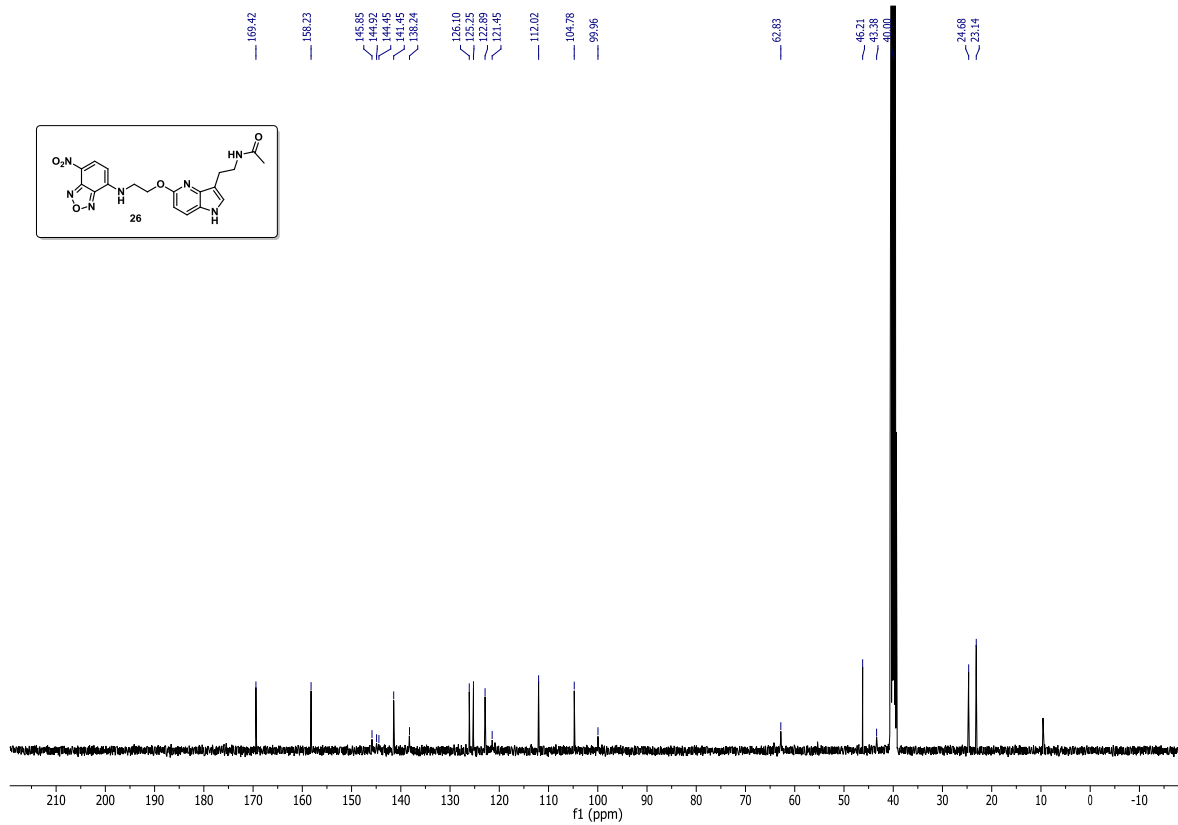
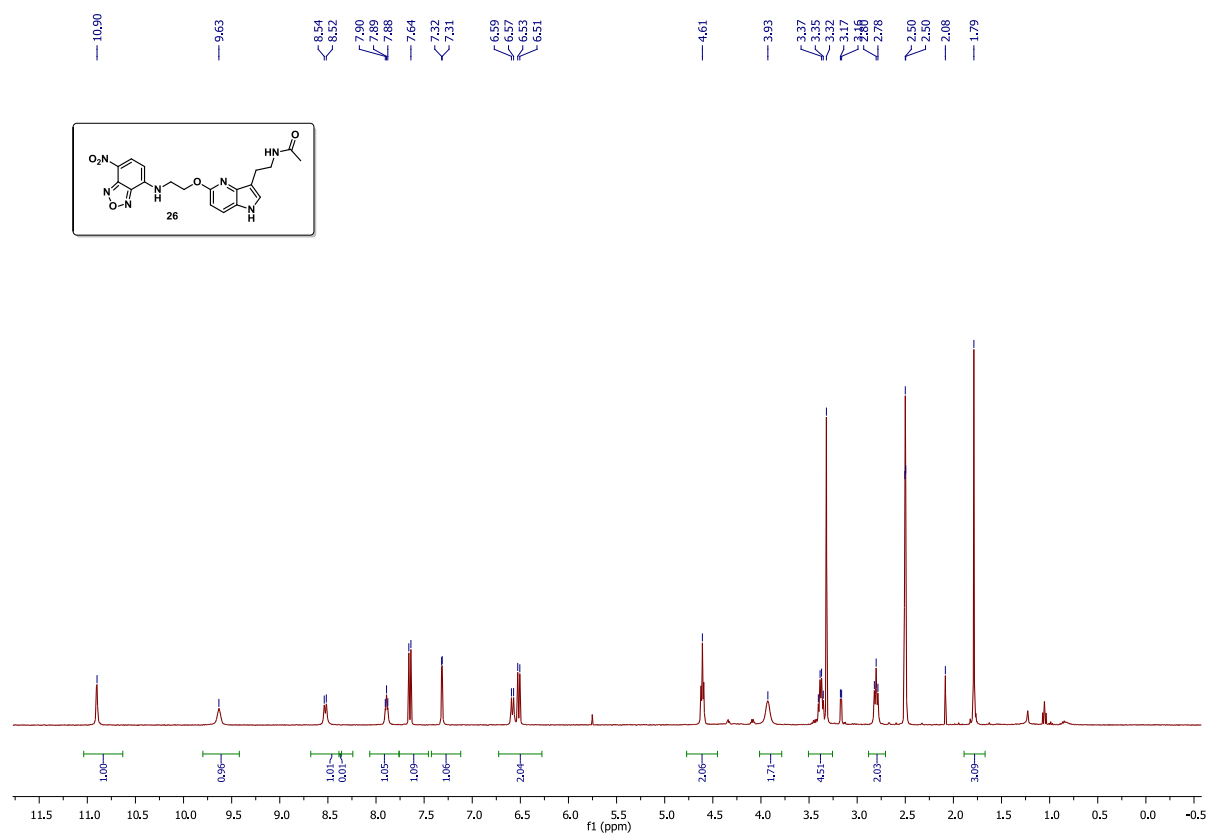
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **18**



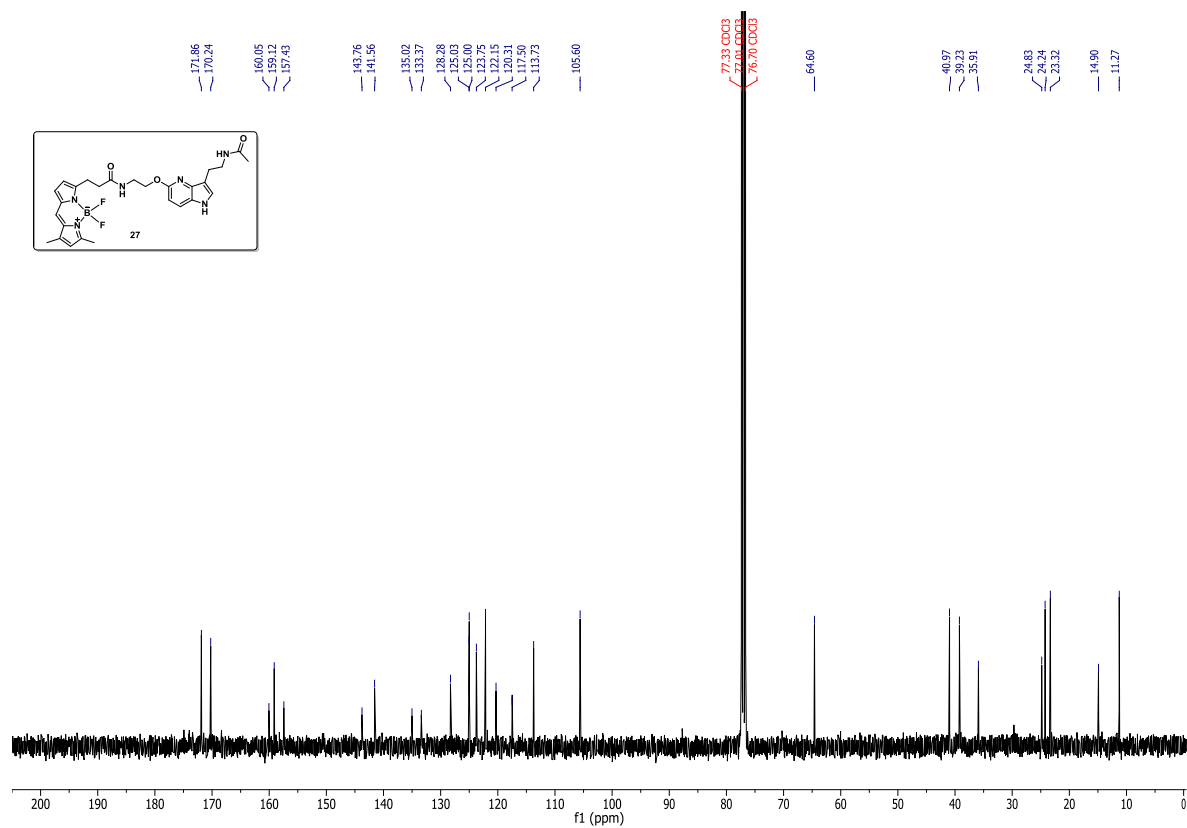
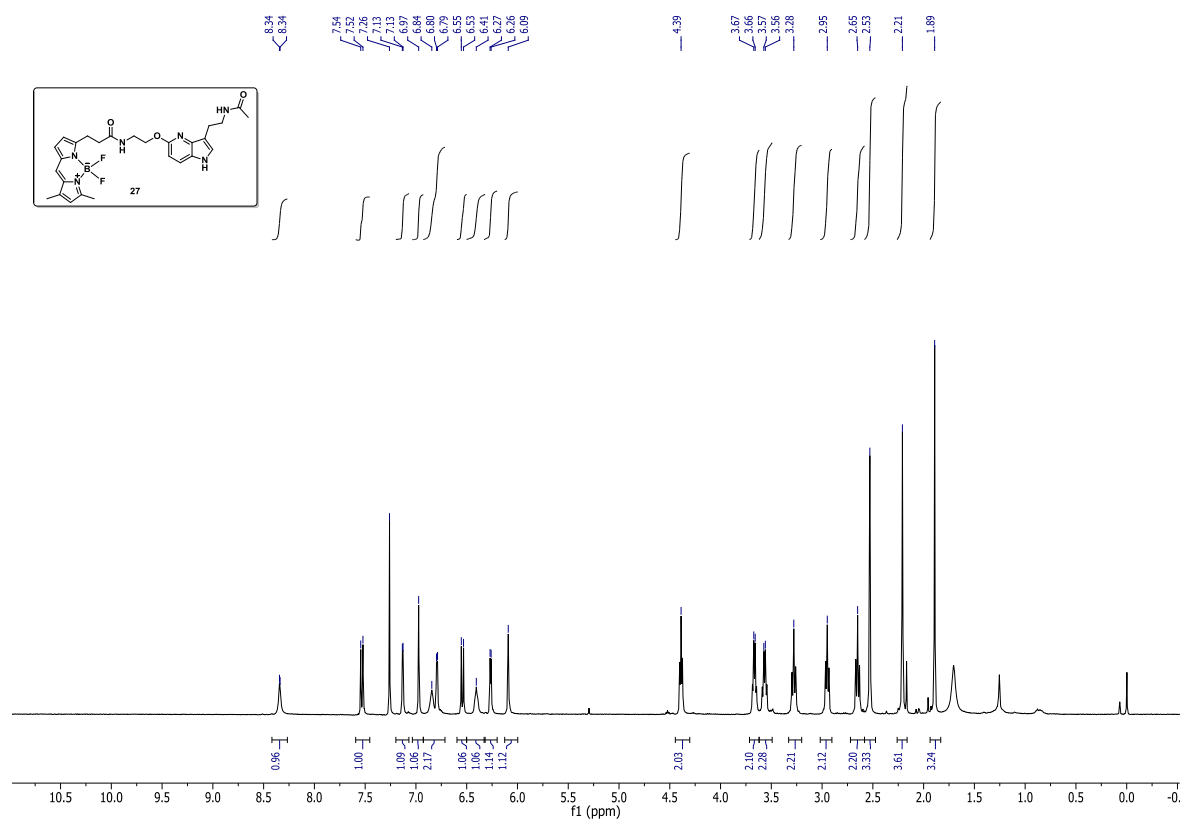
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **20**



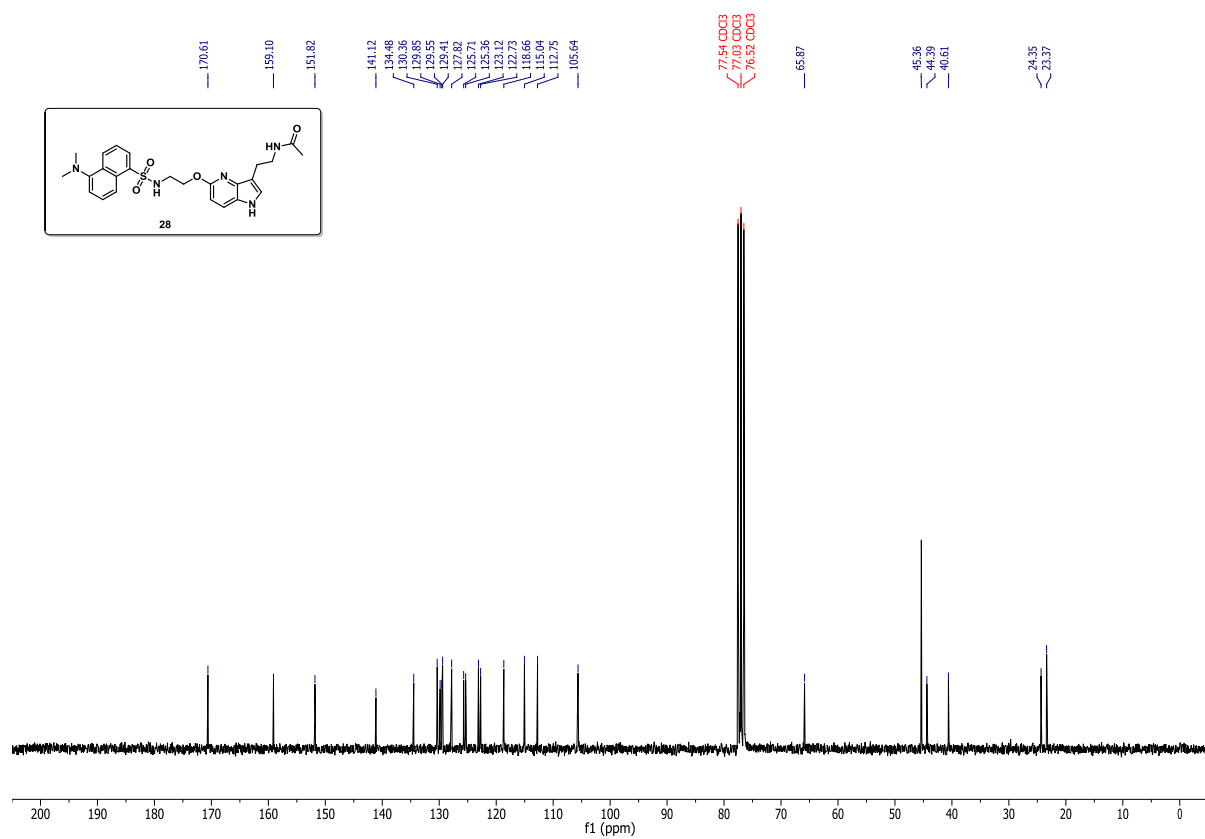
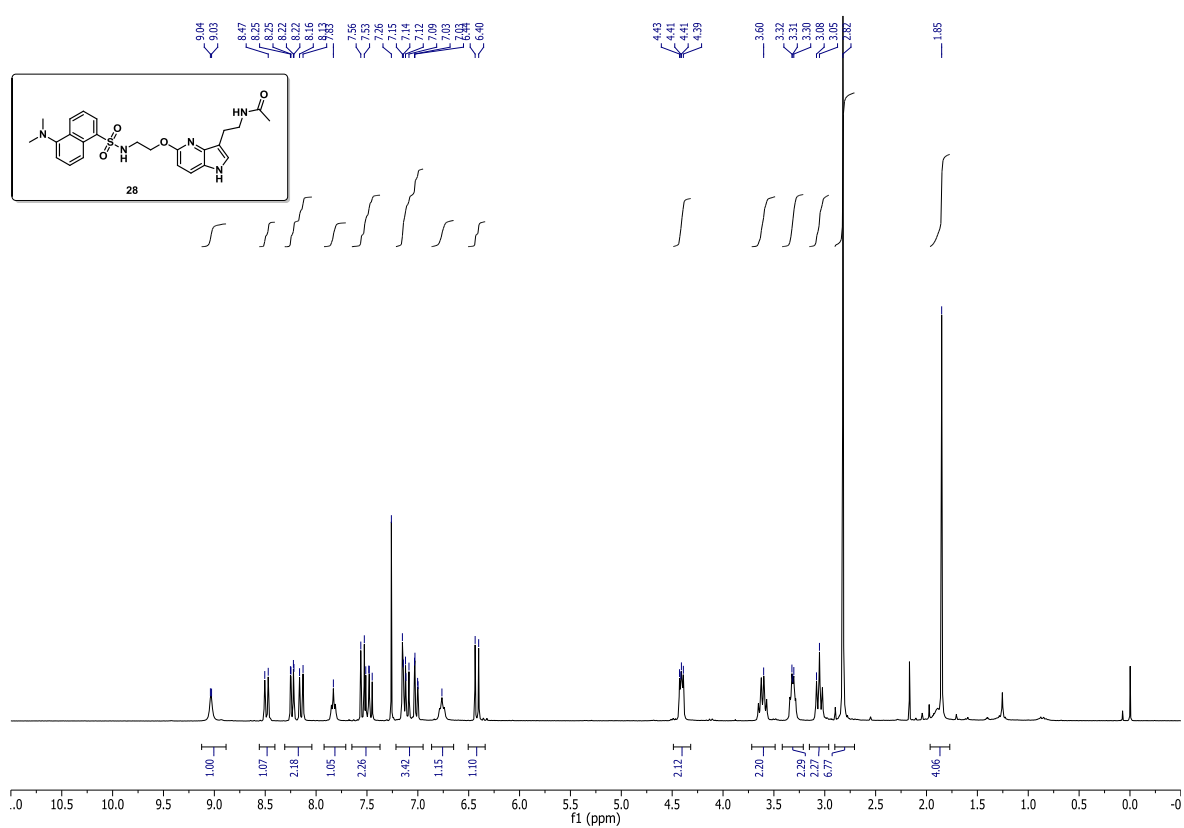
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **26**

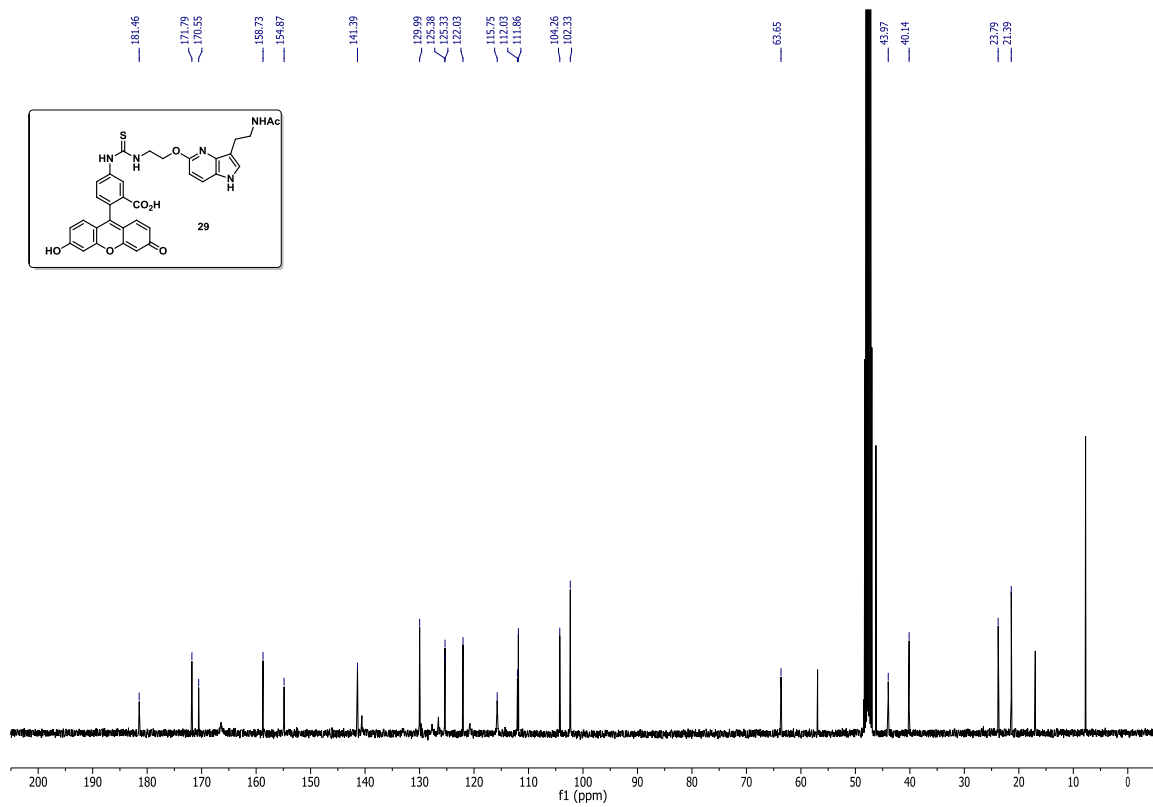
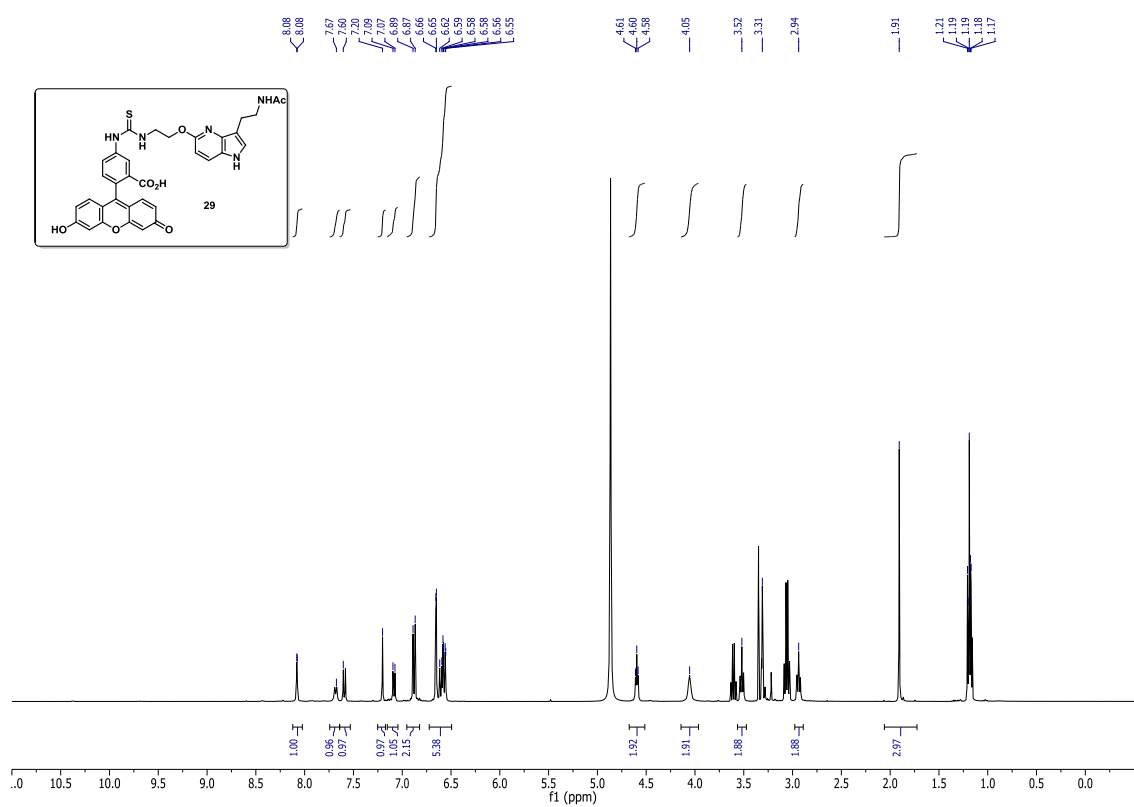


$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **27**

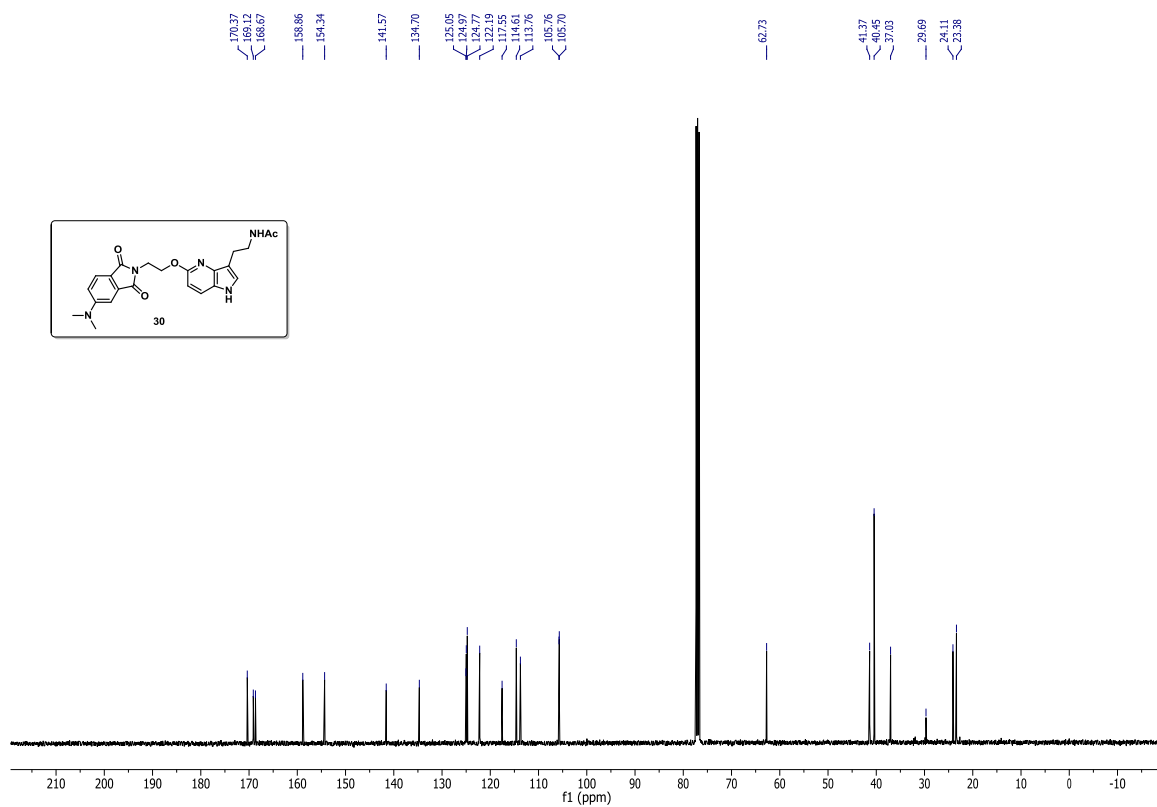
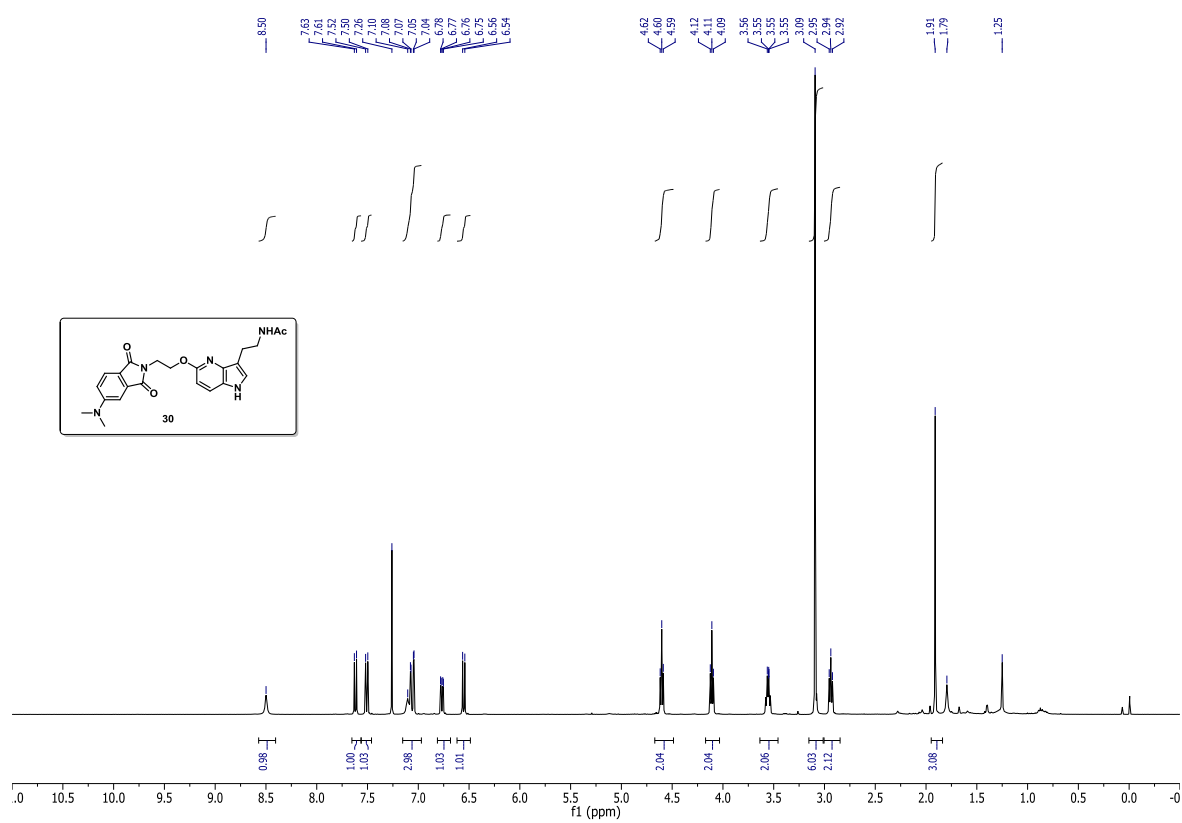


$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **28**

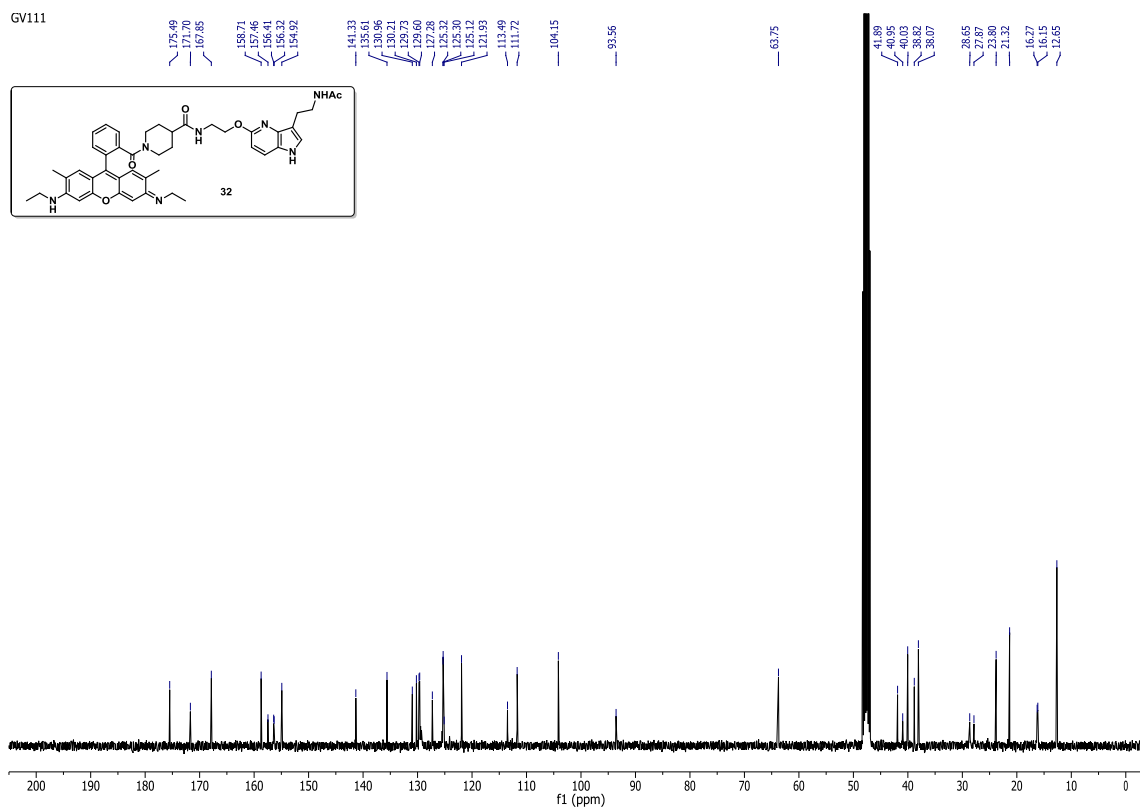
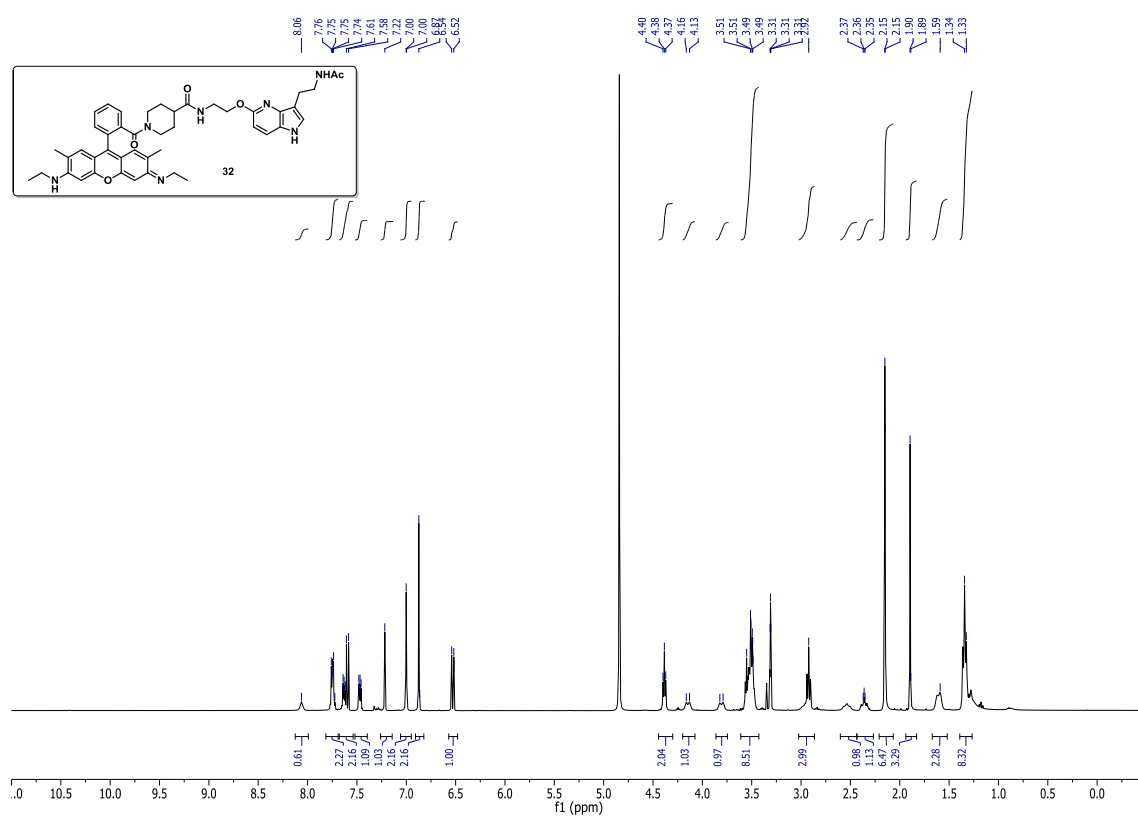


<sup>1</sup>H and <sup>13</sup>C NMR spectra for compound **29**

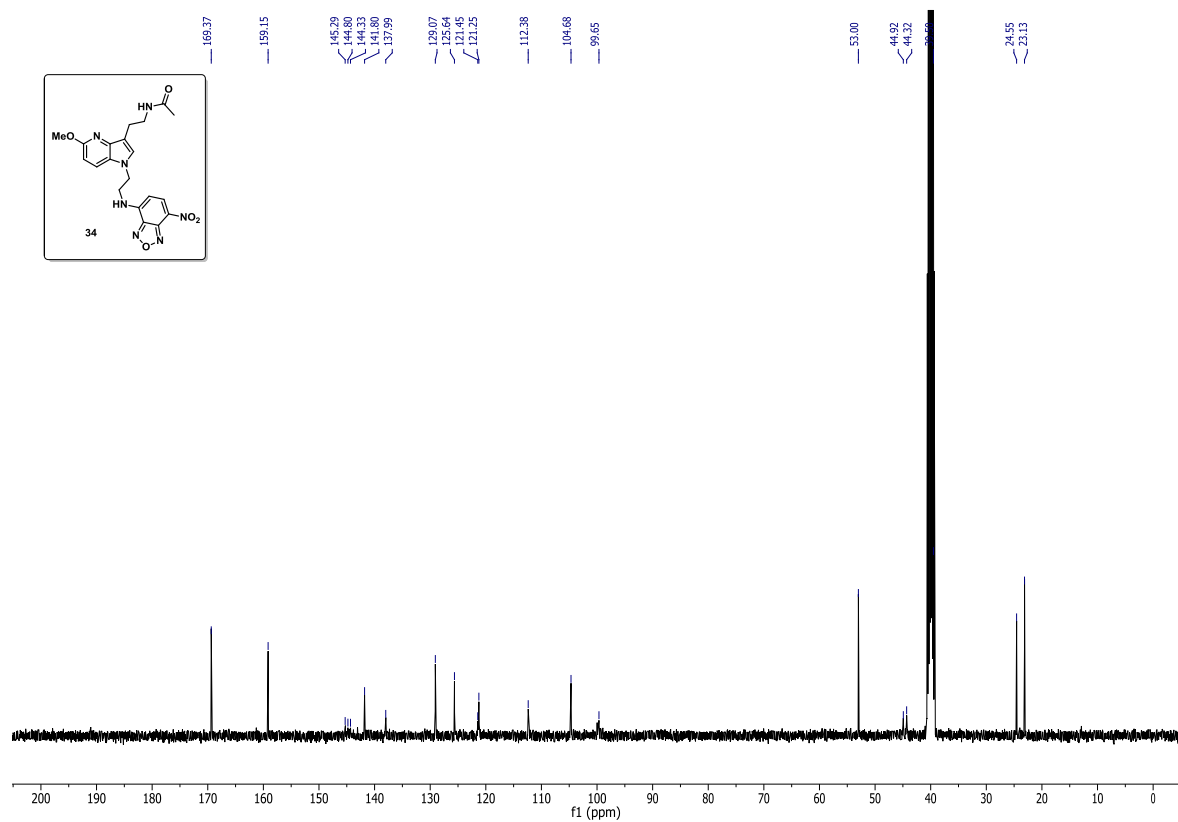
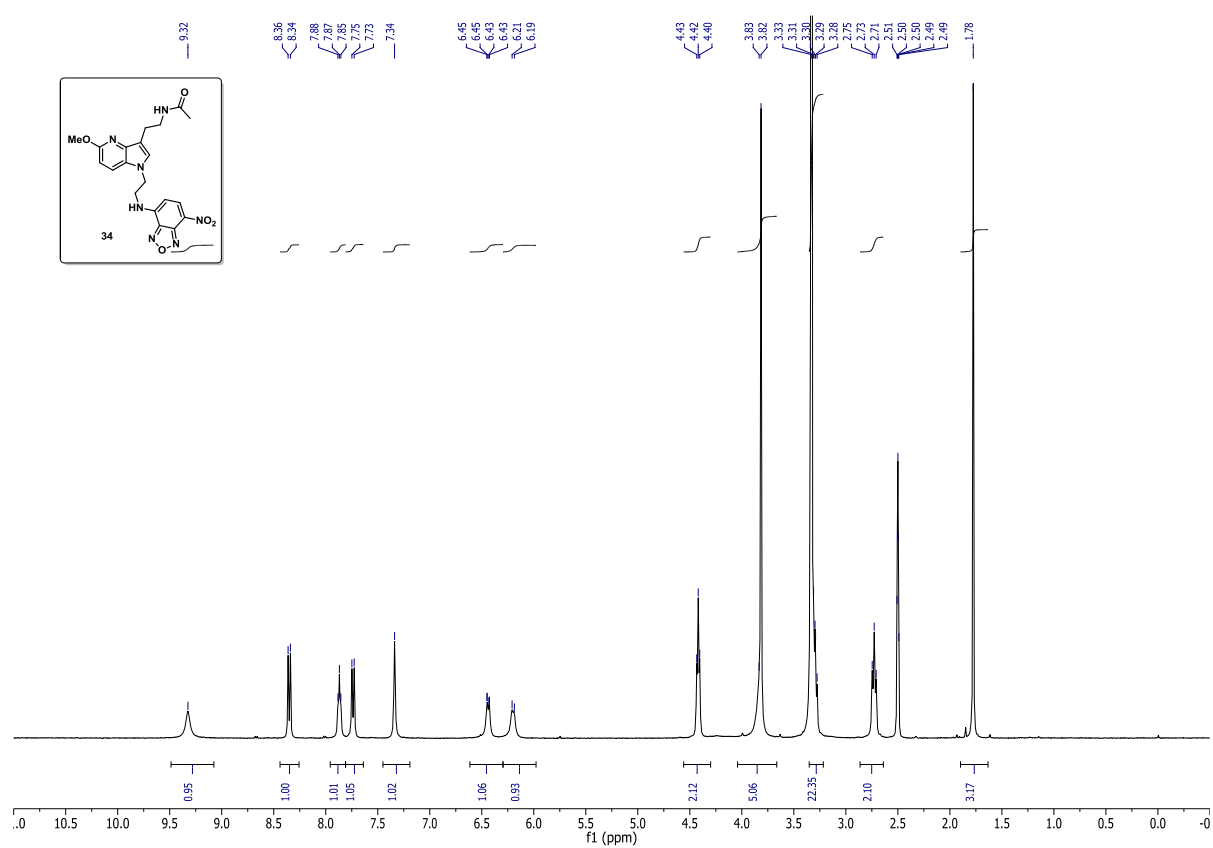
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **30**



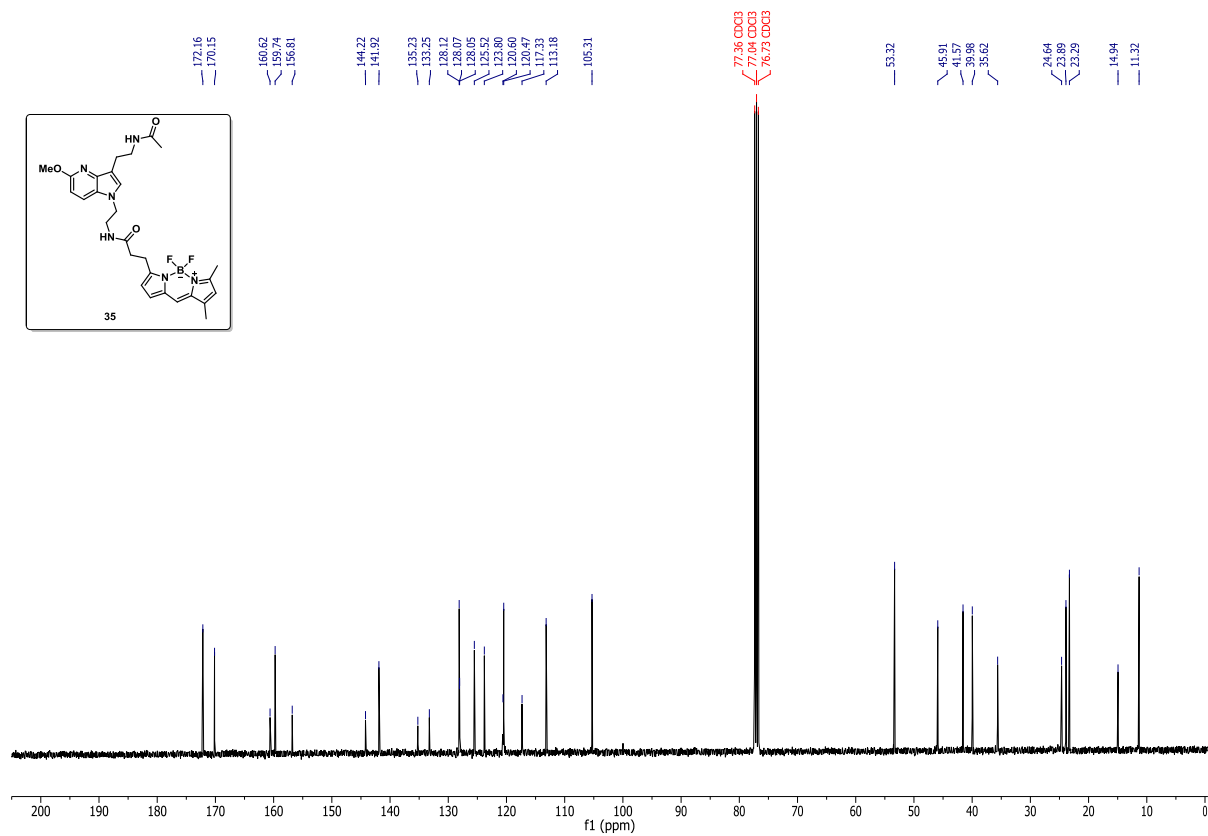
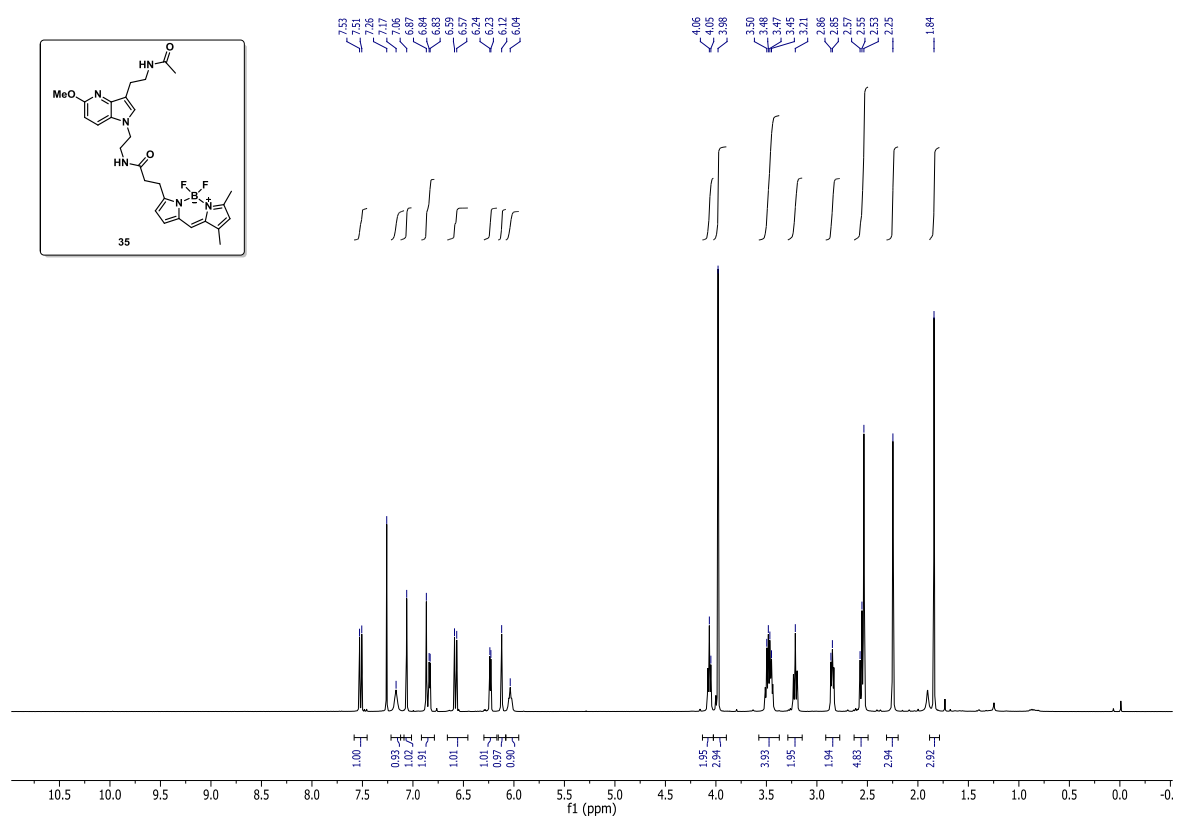
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **32**



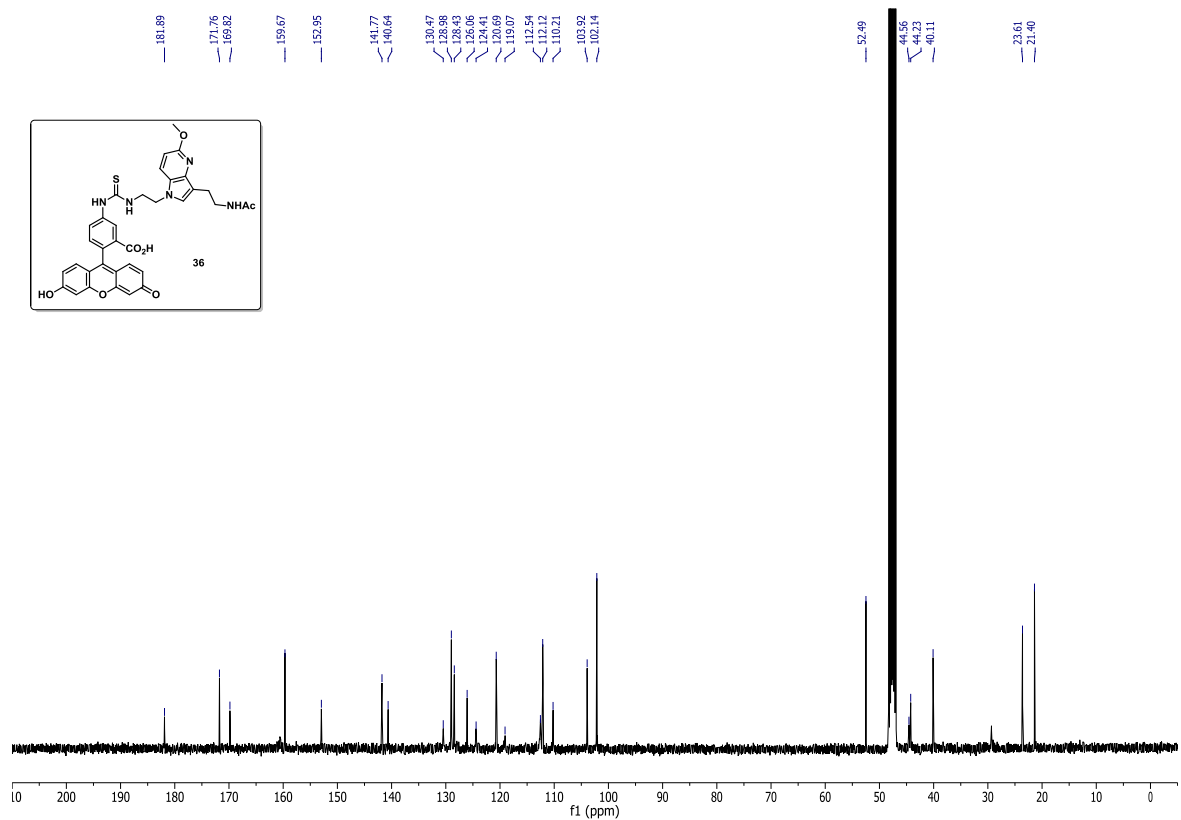
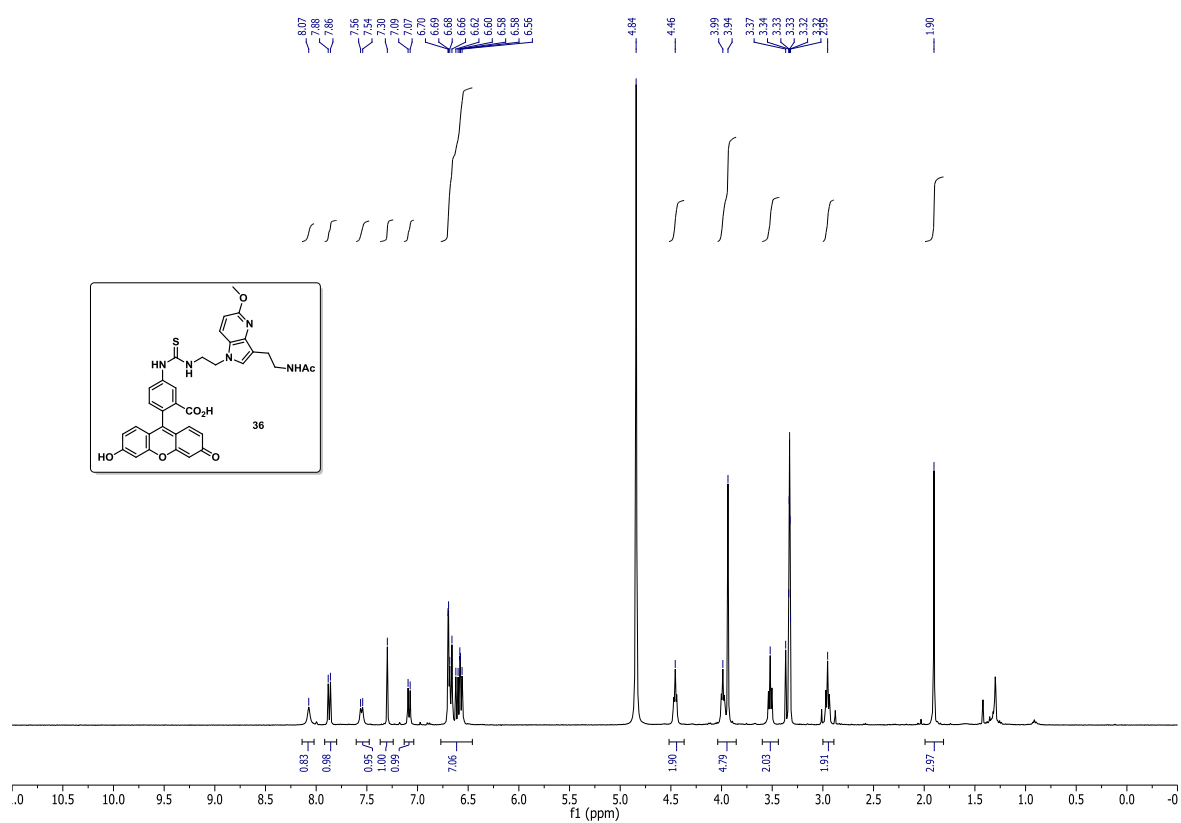
$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **34**



$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **35**



$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **36**



$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compound **37**

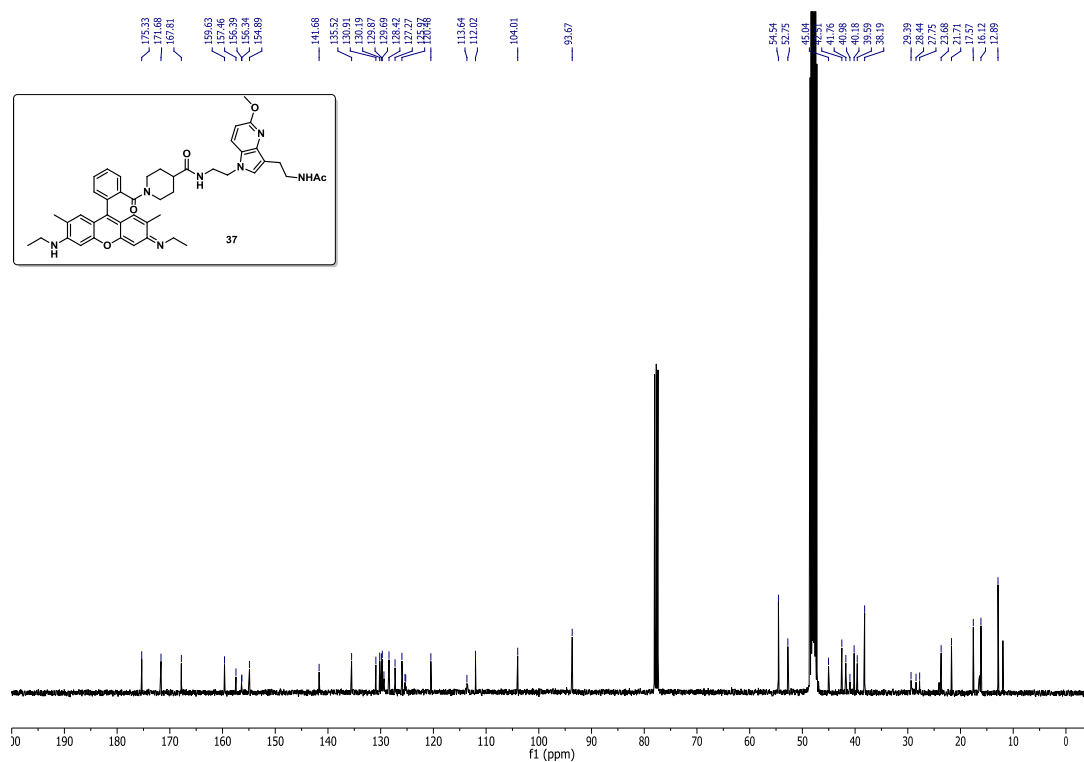
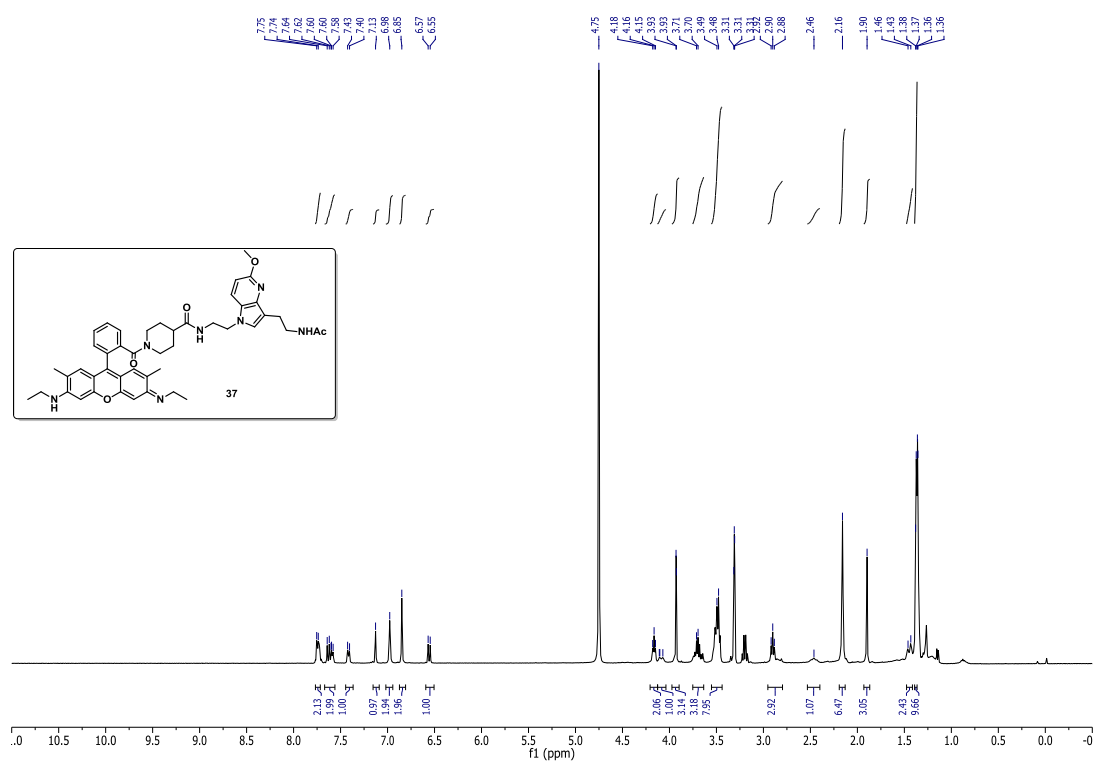


Fig. 1 Absorption and emission spectra of compounds **8** and **9** recorded in DMSO at 25 °C

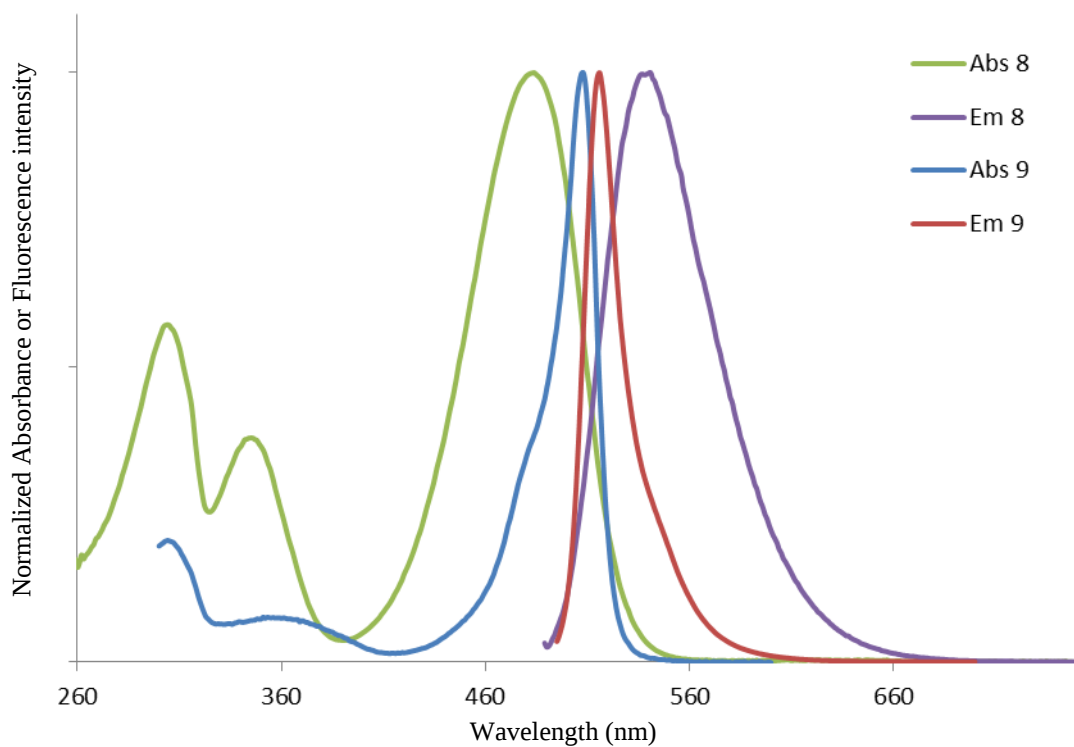


Fig. 2 Absorption and emission spectra of compounds **13**, **14**, **15**, **16**, **18** and **20** recorded in DMSO at 25 °C

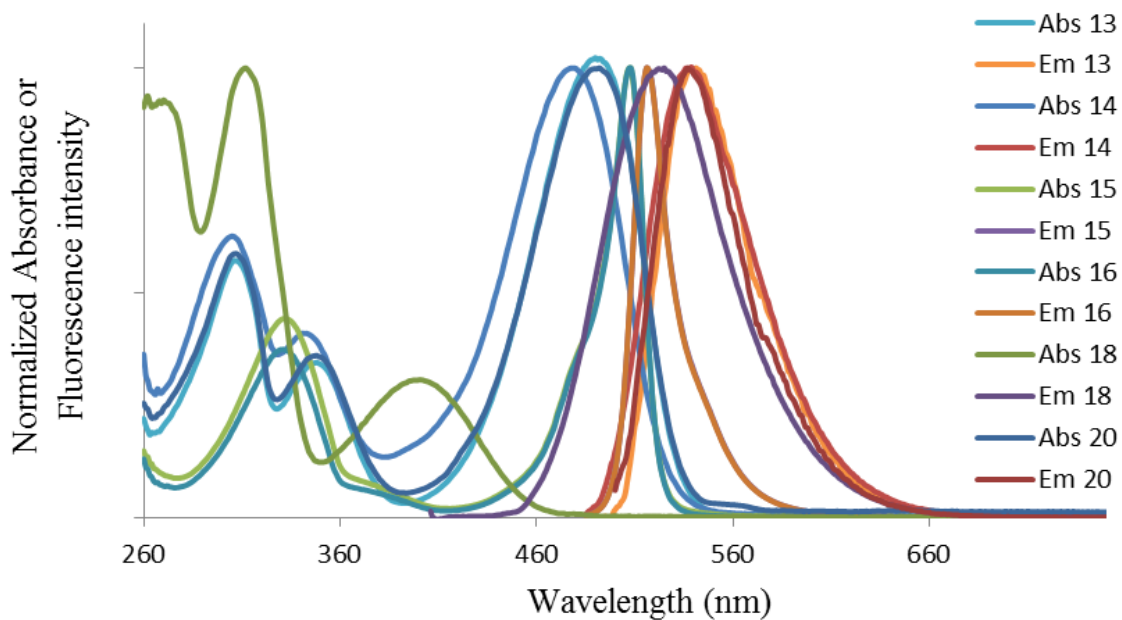


Fig. 3 Absorption and emission spectra of compounds **26**, **27**, **28**, **29**, **30** and **32** recorded in DMSO at 25 °C

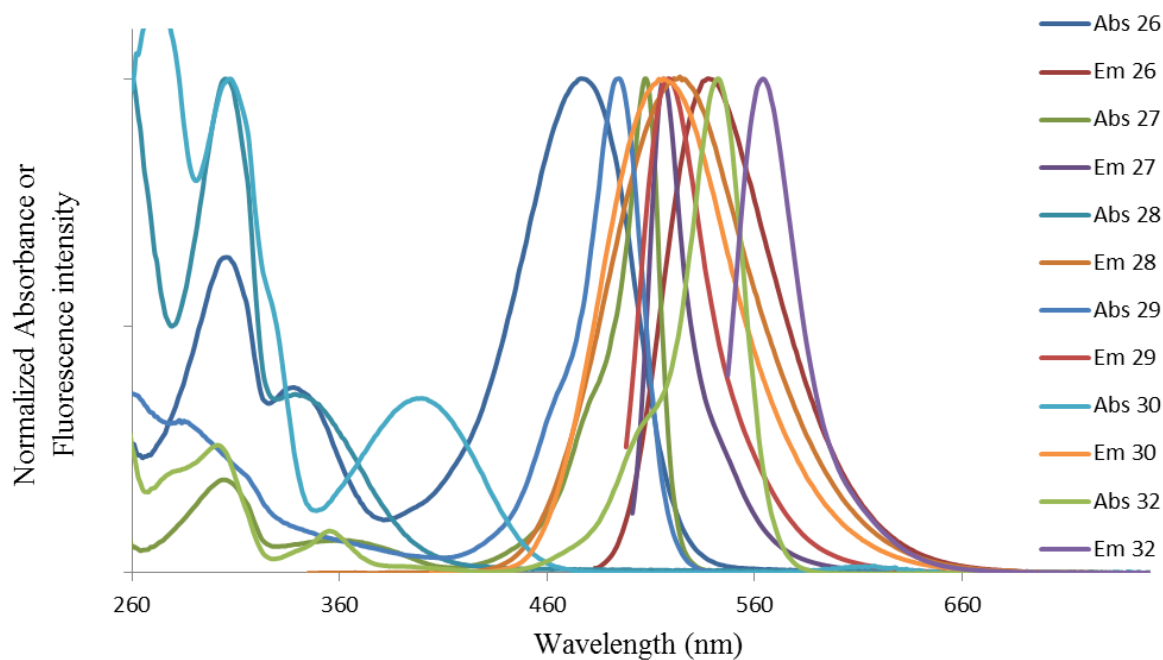


Fig. 4 Absorption and emission spectra of compounds **34**, **35**, **37** recorded in DMSO and **36** recorded in NaOH 0.1 M at 25 °C

