

## Supplementary Data

### Total synthesis of the marine natural products lukianols A and B

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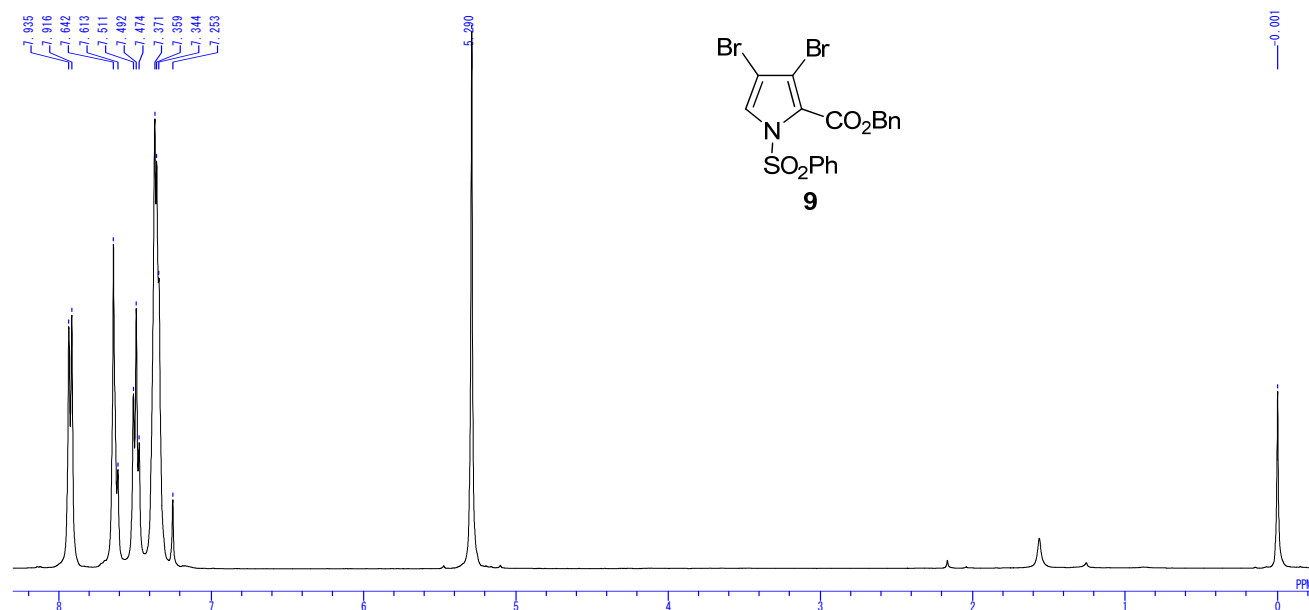
<sup>b</sup>*Institute for Materials Chemistry and Engineering, Kyushu University, 6-1 Kasugakoen, Kasuga 816-8580, Japan*

<sup>c</sup>*Graduate School of Fisheries Science and Environmental Studies, Nagasaki University, 1-14 Bunkyo-machi, Nagasaki 852-8521, Japan*

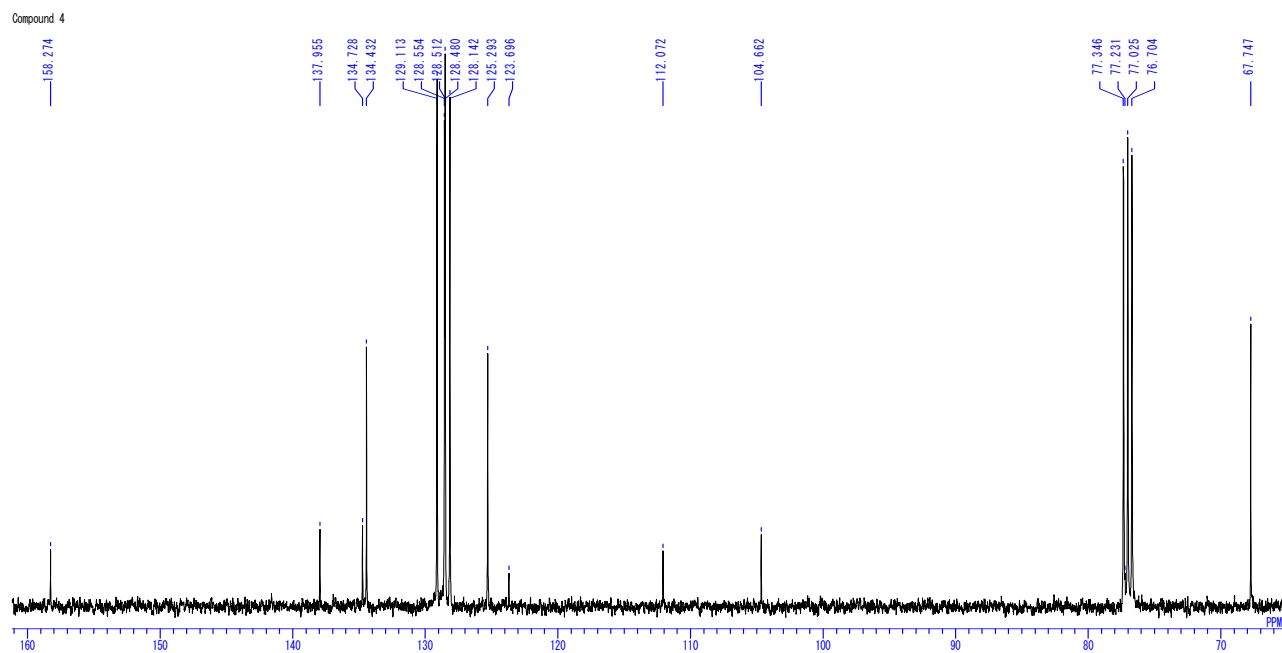
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<sup>1</sup> H and <sup>13</sup> C NMR spectra	S2–S23
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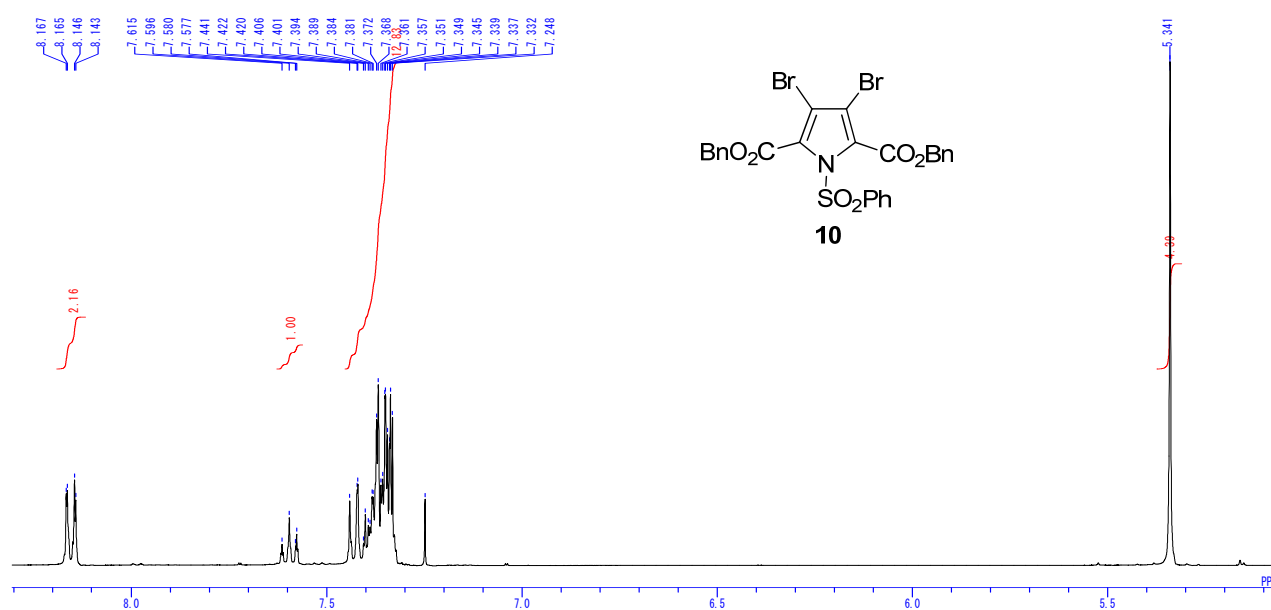
<sup>1</sup>H NMR Spectrum of Compound **9** (CDCl<sub>3</sub>)



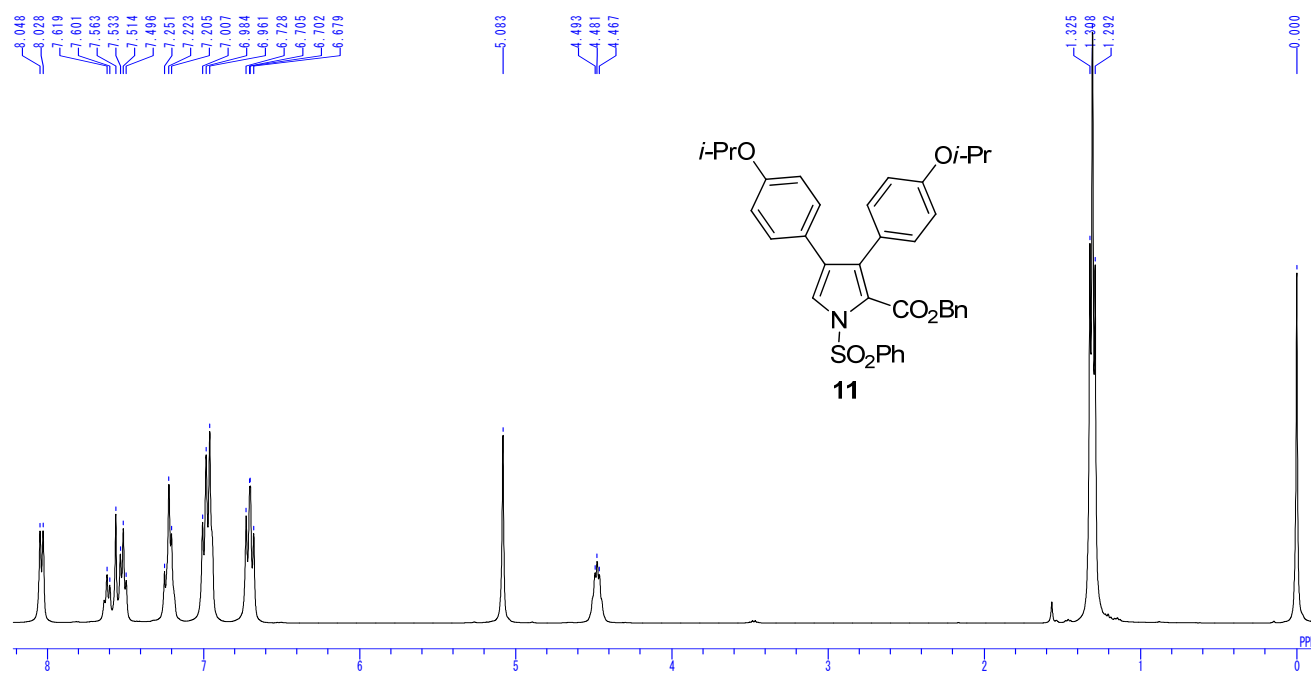
<sup>13</sup>C NMR Spectrum of Compound **9** (CDCl<sub>3</sub>)



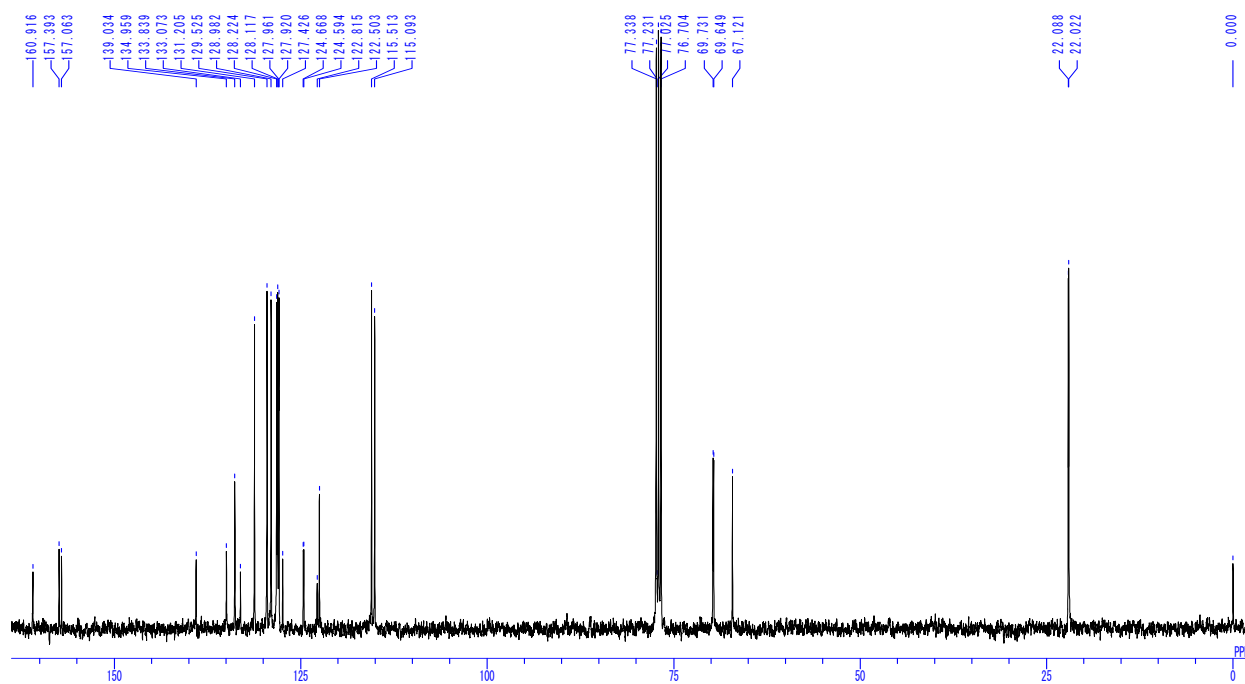
<sup>1</sup>H NMR Spectrum of Compound **10** (CDCl<sub>3</sub>)



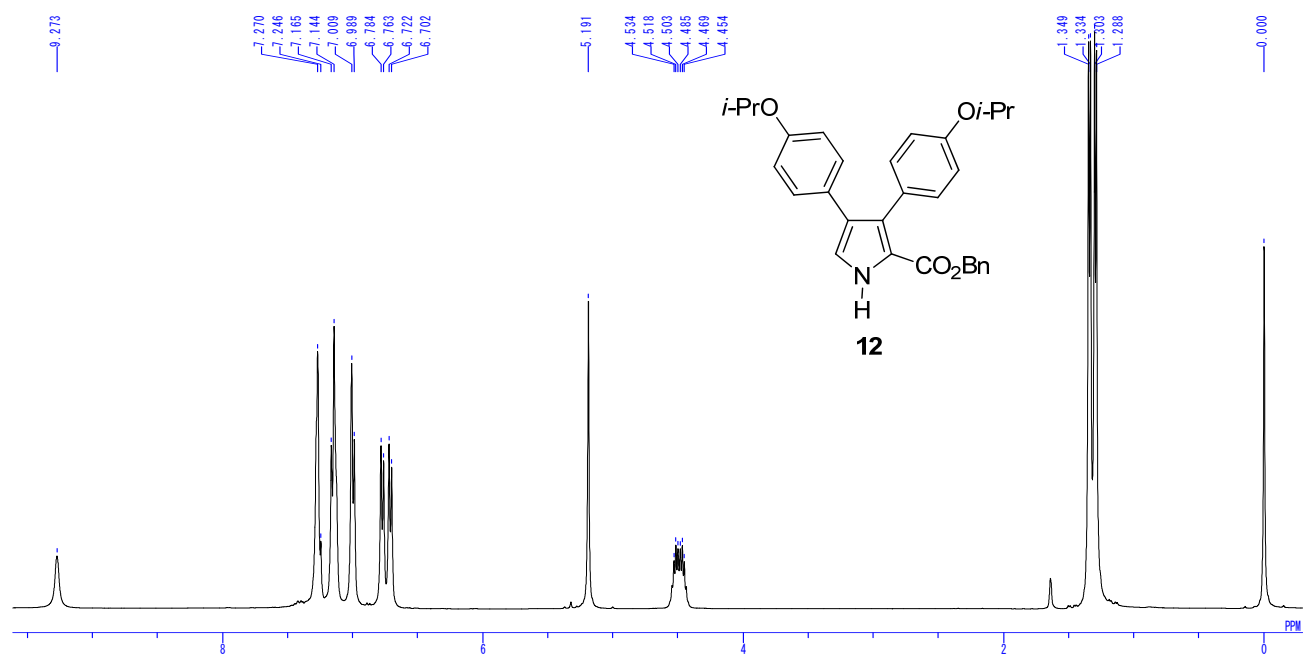
<sup>1</sup>H NMR Spectrum of Compound **11** (CDCl<sub>3</sub>)



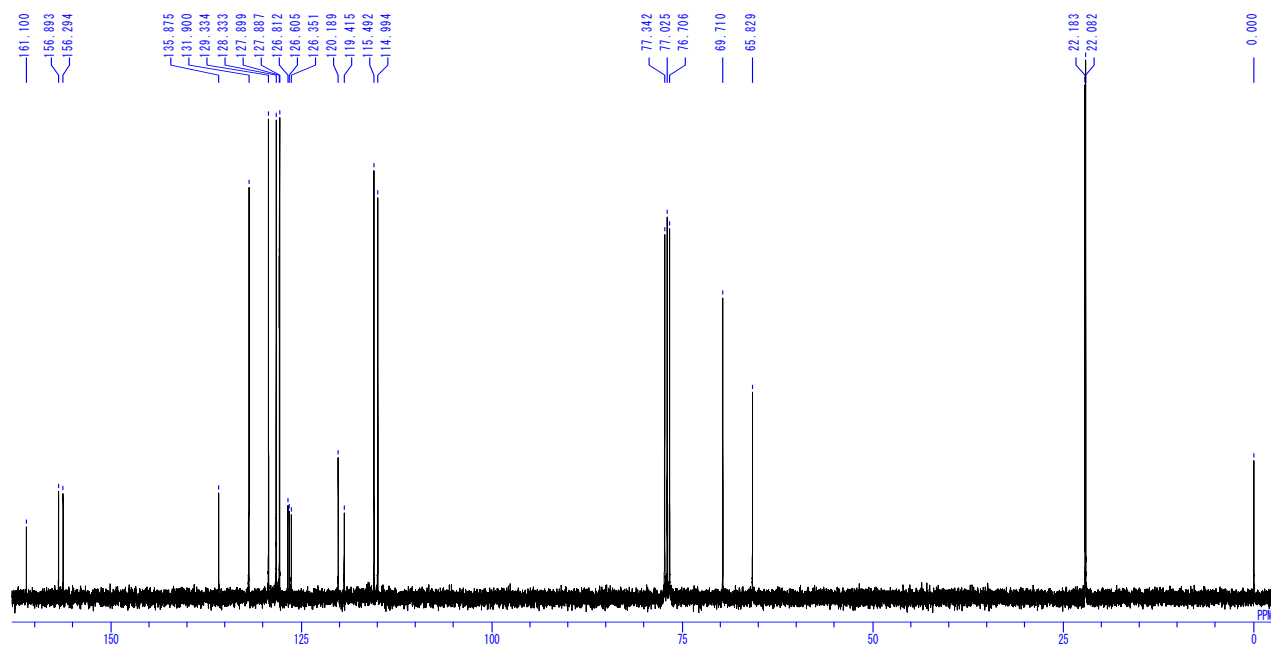
<sup>13</sup>C NMR Spectrum of Compound **11** (CDCl<sub>3</sub>)



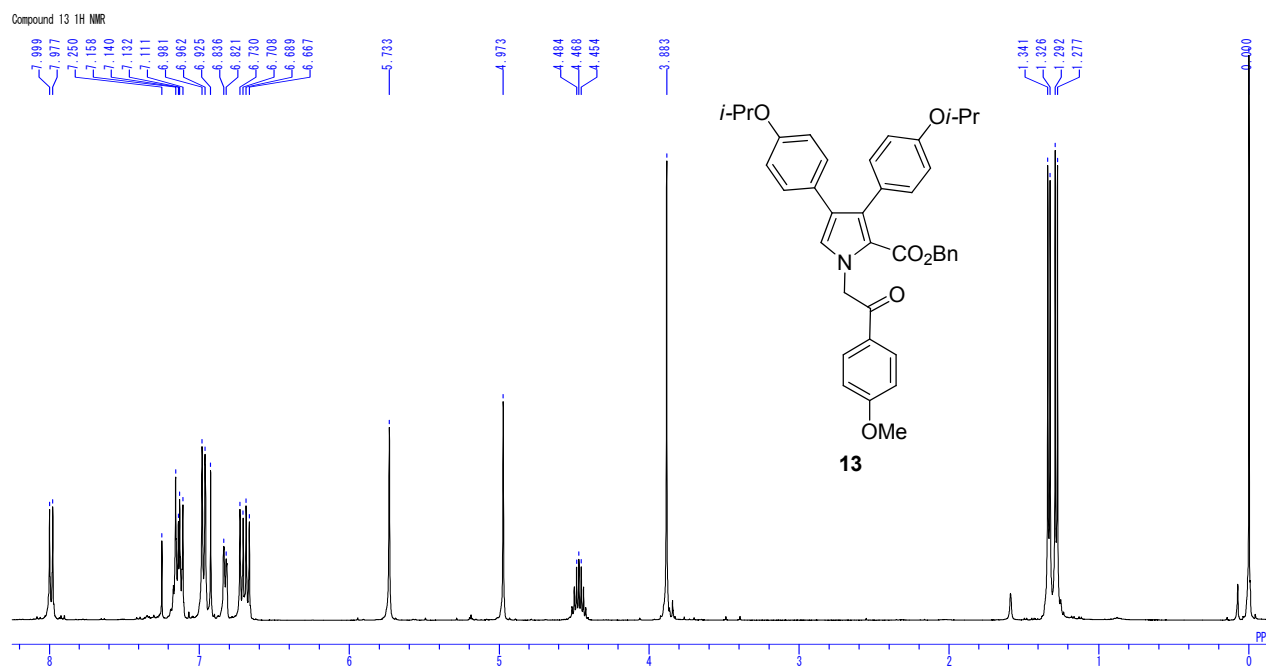
<sup>1</sup>H NMR Spectrum of Compound **12** (CDCl<sub>3</sub>)



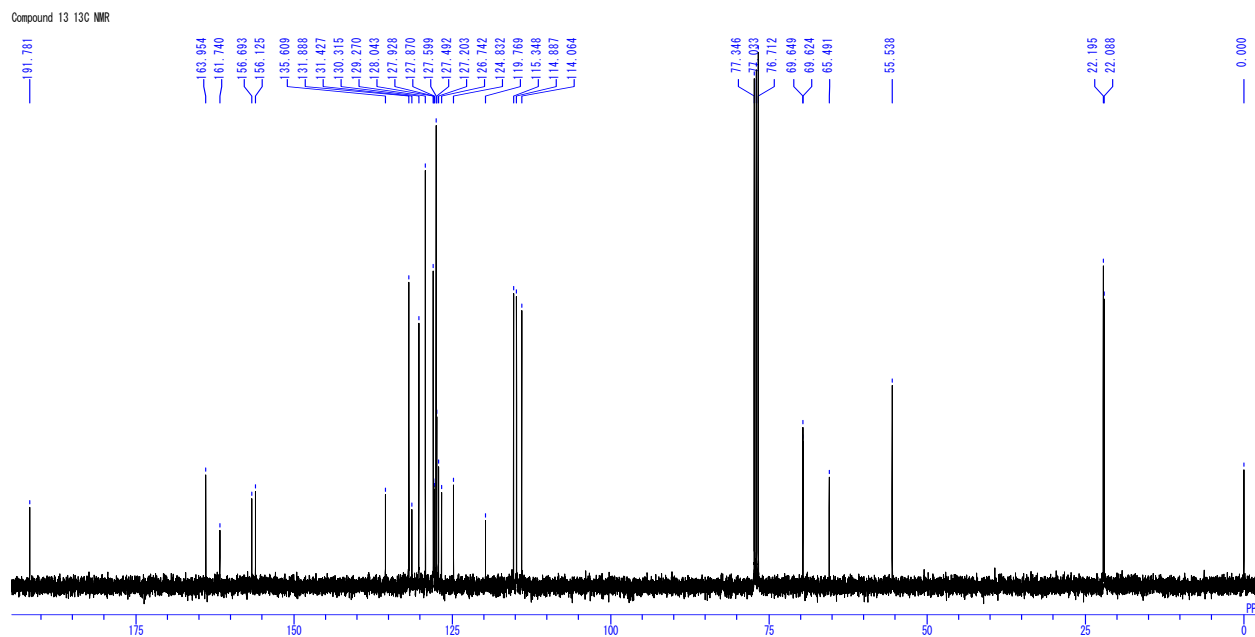
<sup>13</sup>C NMR Spectrum of Compound **12** (CDCl<sub>3</sub>)



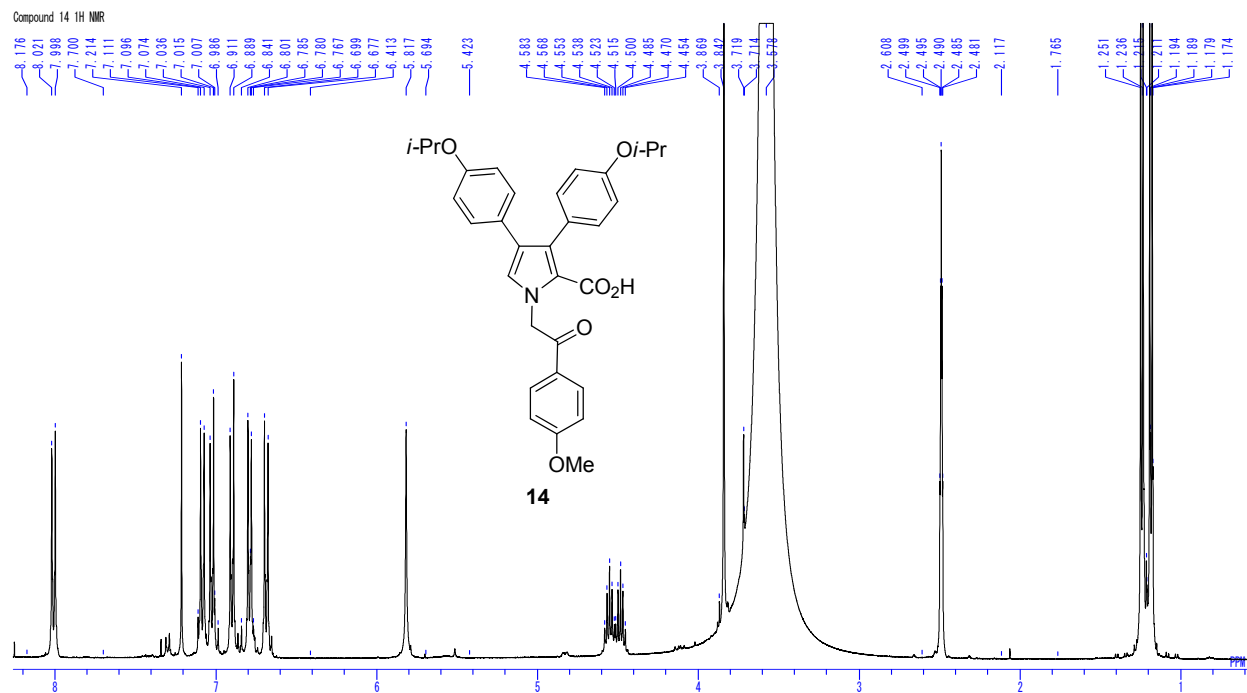
<sup>1</sup>H NMR Spectrum of Compound **13** (CDCl<sub>3</sub>)



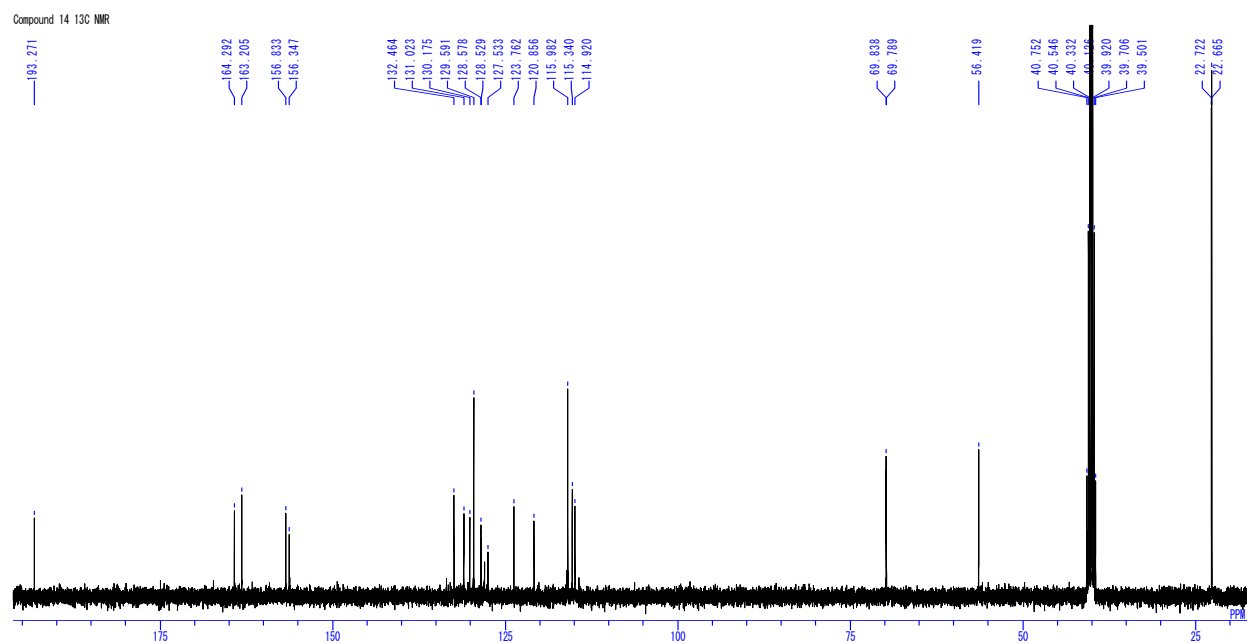
<sup>13</sup>C NMR Spectrum of Compound **13** (CDCl<sub>3</sub>)



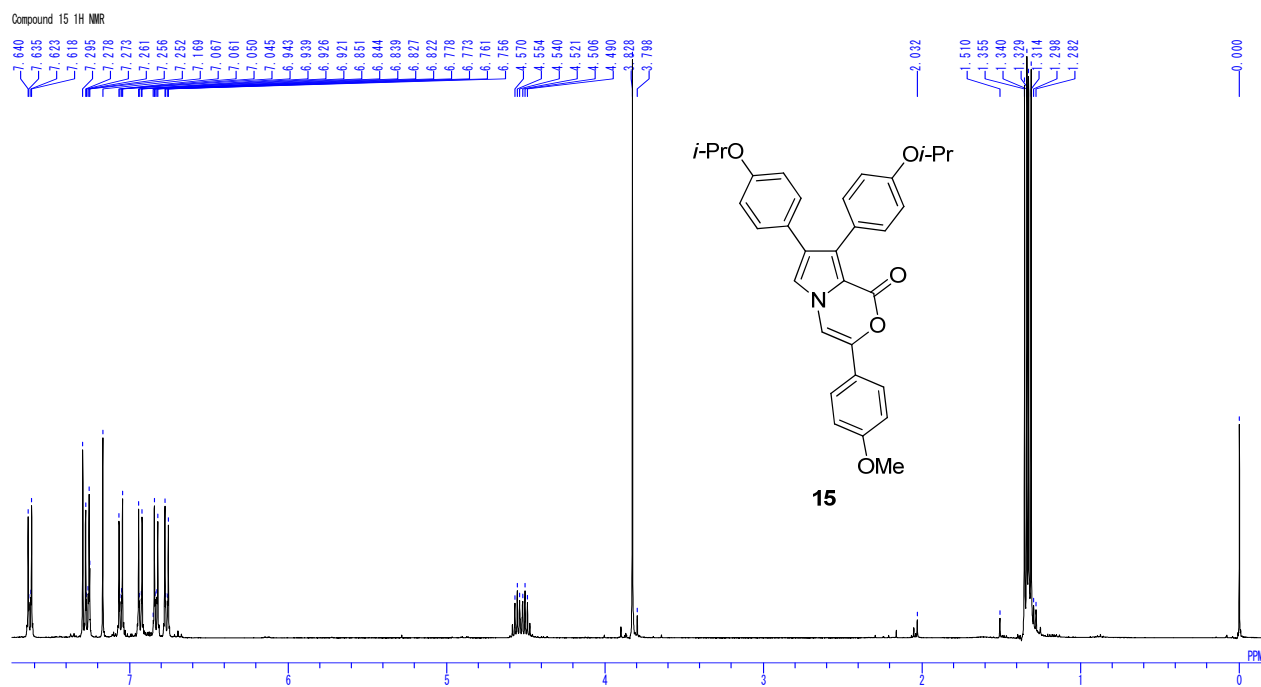
<sup>1</sup>H NMR Spectrum of Compound **14** (DMSO-*d*<sub>6</sub>)



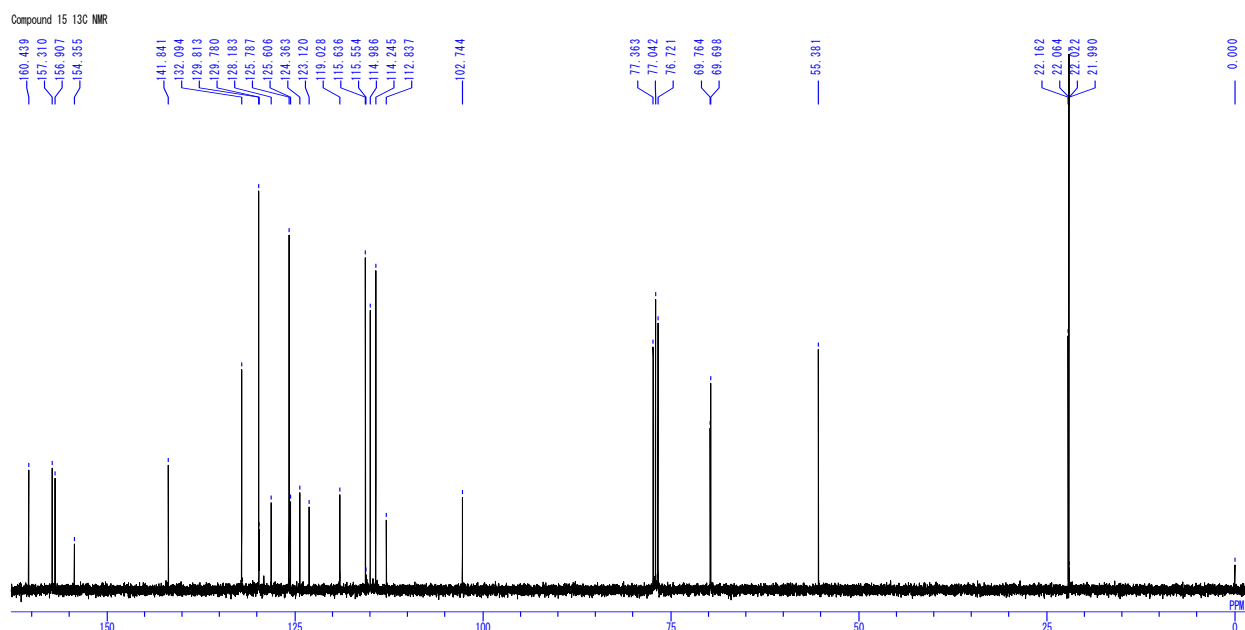
<sup>13</sup>C NMR Spectrum of Compound **14** (DMSO-*d*<sub>6</sub>)



<sup>1</sup>H NMR Spectrum of Compound **15** (CDCl<sub>3</sub>)

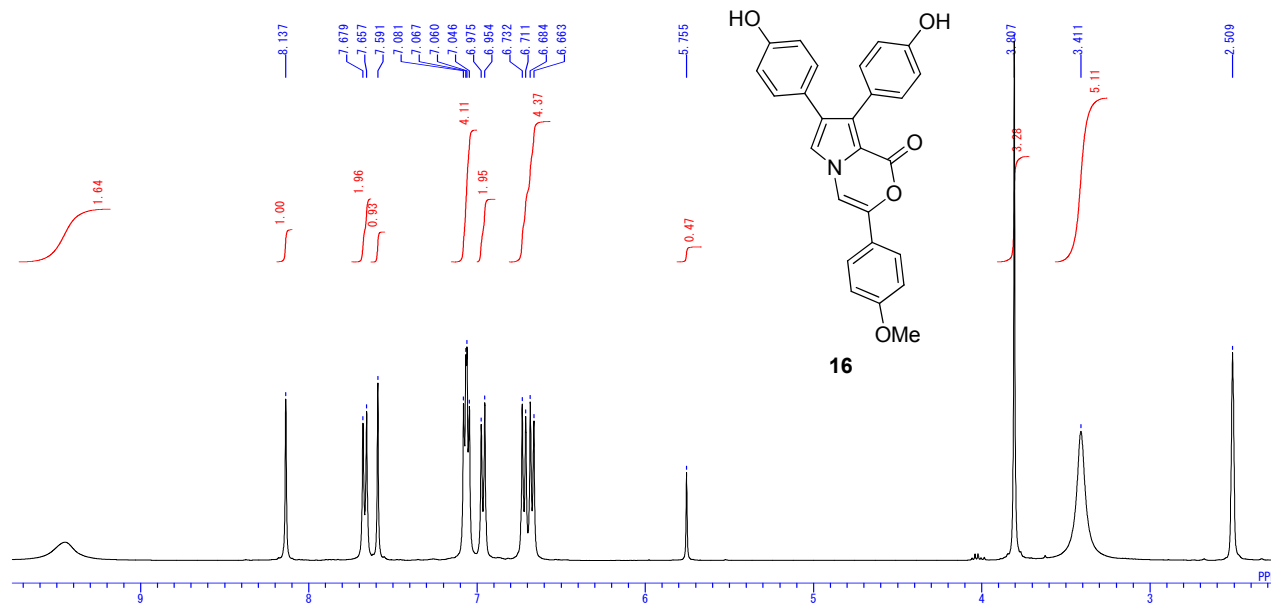


<sup>13</sup>C NMR Spectrum of Compound **15** (CDCl<sub>3</sub>)

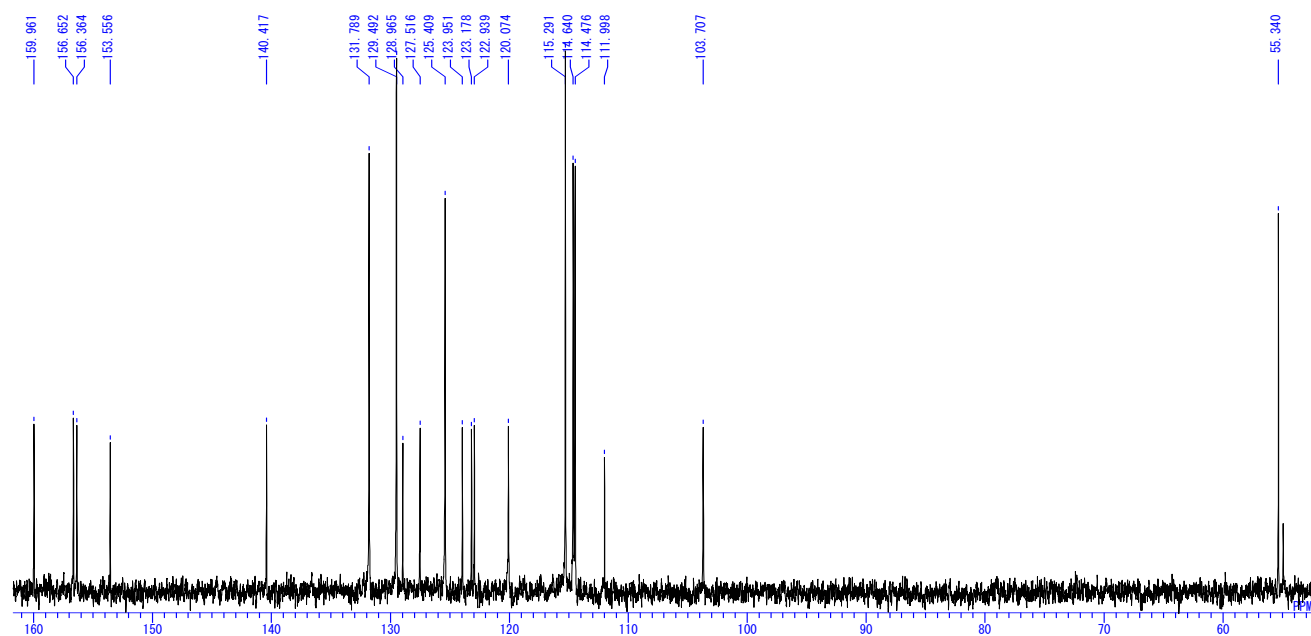




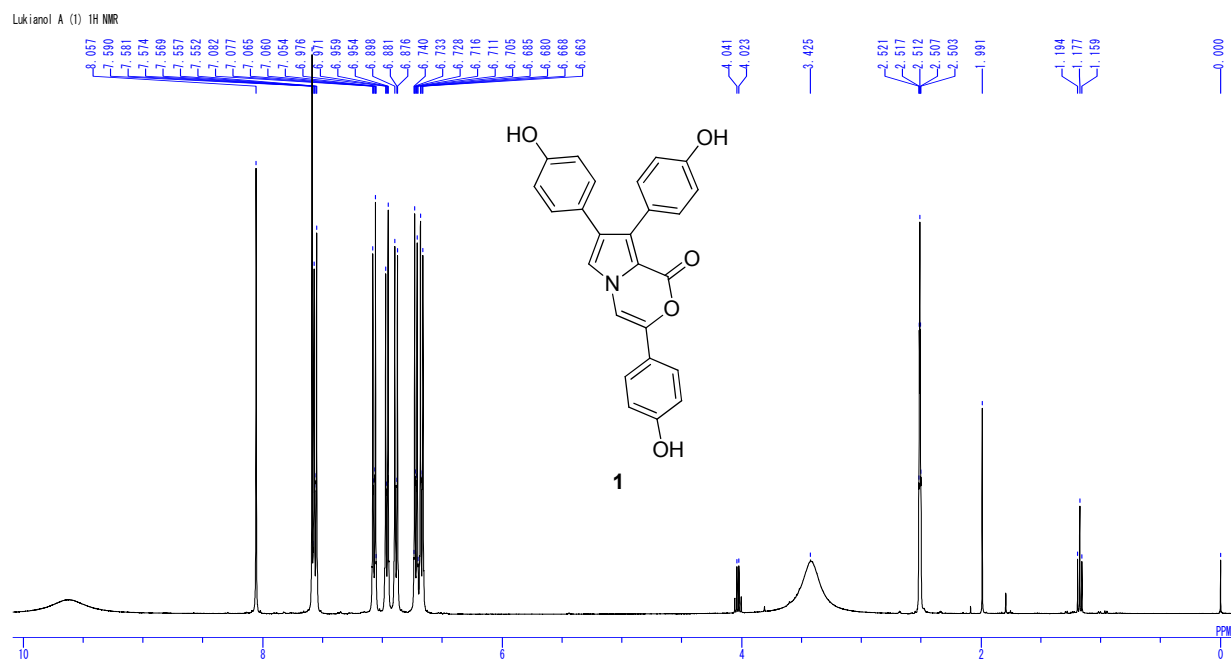
$^1\text{H}$  NMR Spectrum of Compound **16** ( $\text{DMSO}-d_6$ )



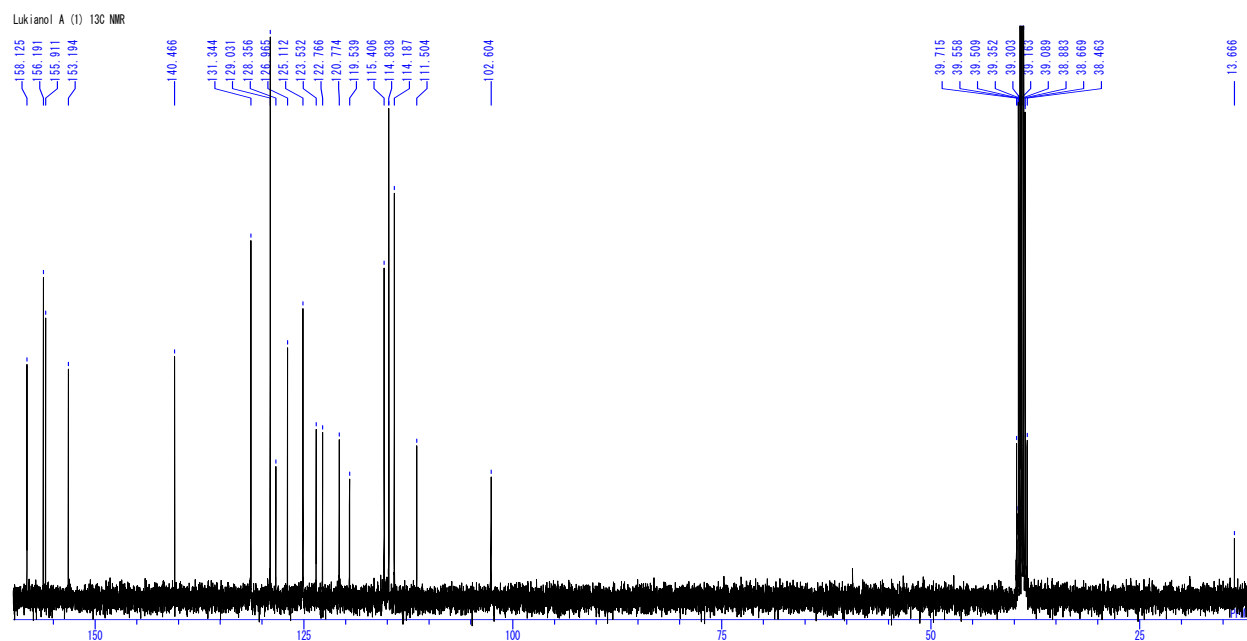
$^{13}\text{C}$  NMR Spectrum of Compound **16** ( $\text{DMSO}-d_6$ )



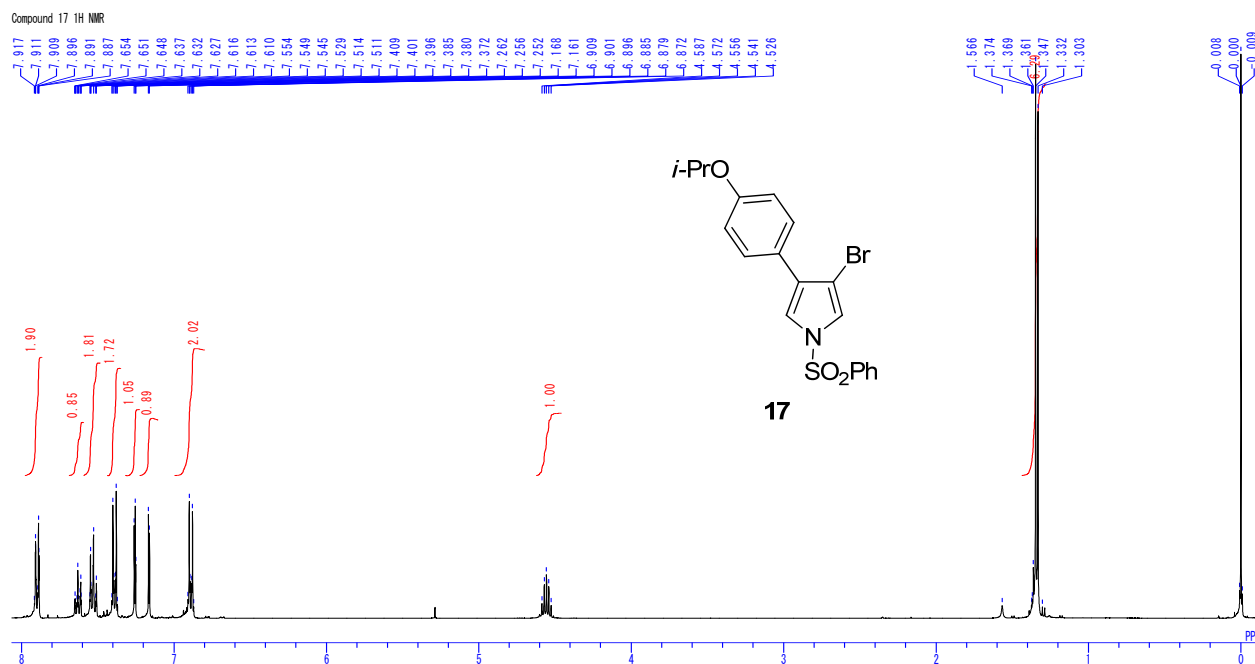
<sup>1</sup>H NMR Spectrum of Compound **1** (DMSO-*d*<sub>6</sub>)



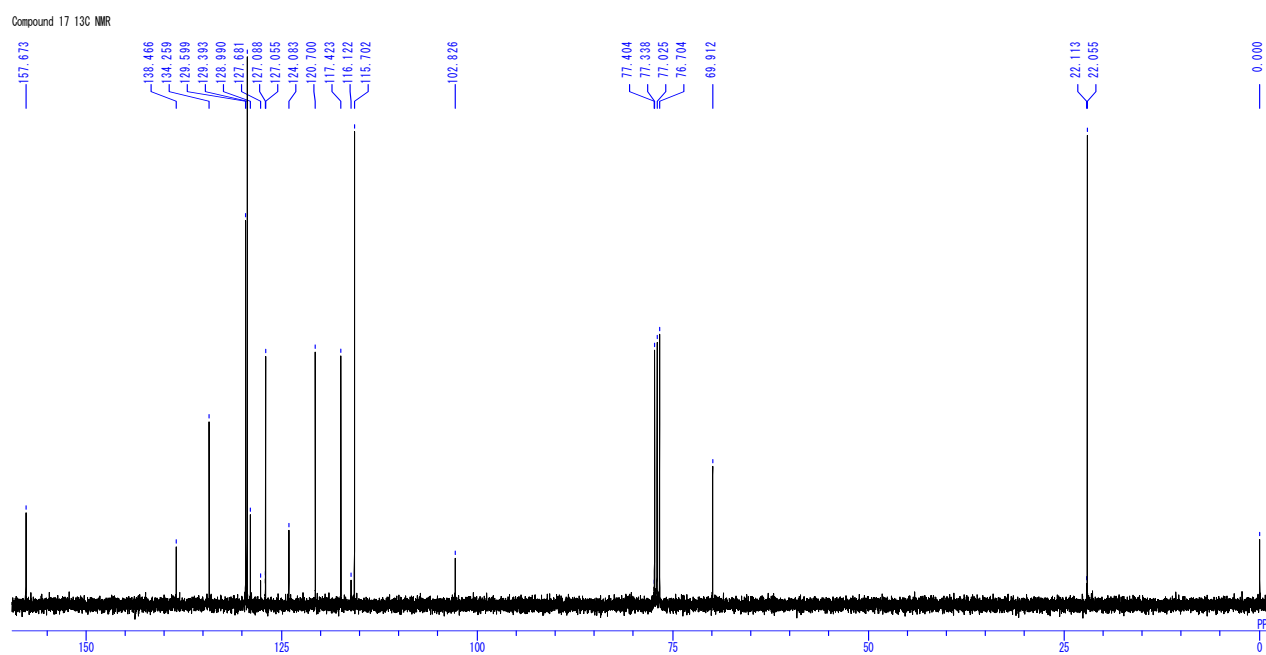
<sup>13</sup>C NMR Spectrum of Compound **1** (DMSO-*d*<sub>6</sub>)



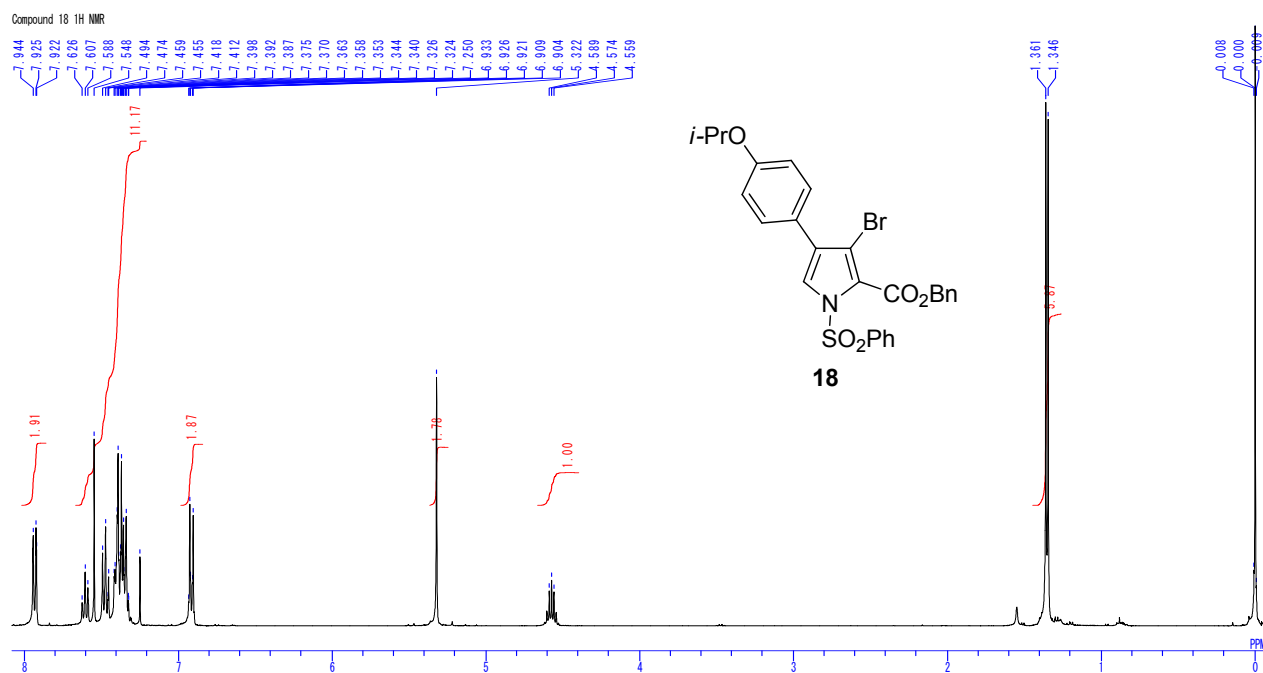
<sup>1</sup>H NMR Spectrum of Compound **17** (CDCl<sub>3</sub>)



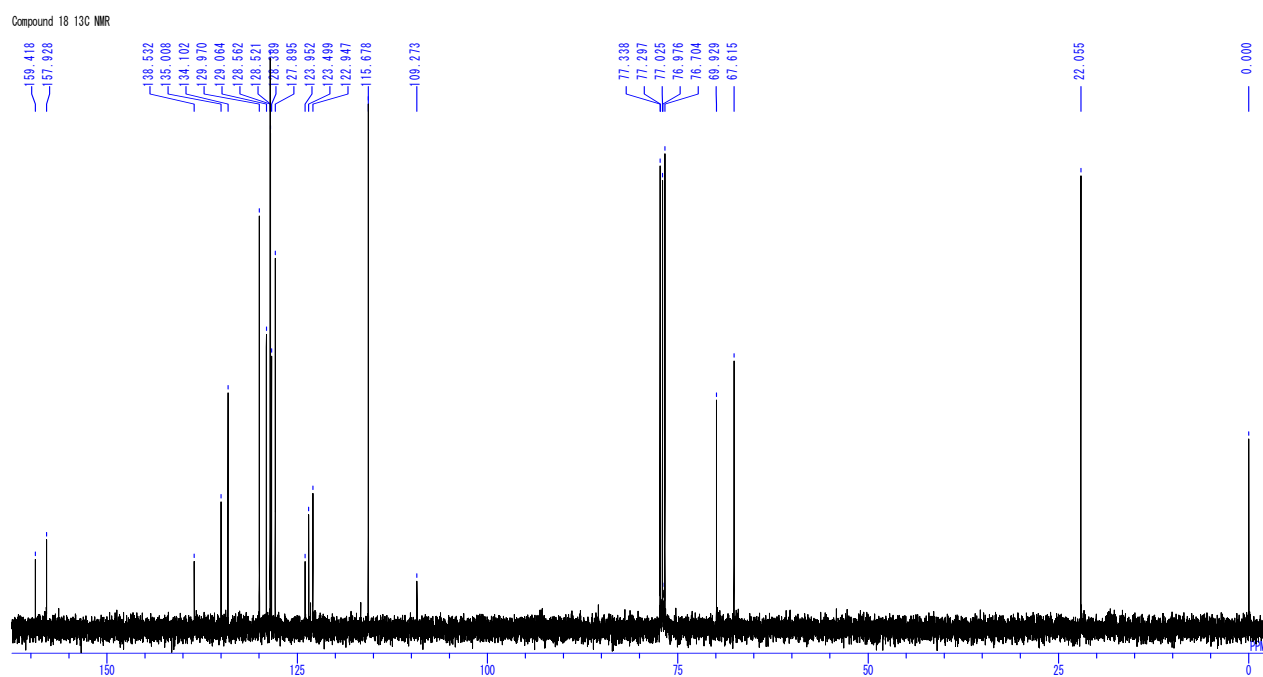
<sup>13</sup>C NMR Spectrum of Compound **17** (CDCl<sub>3</sub>)



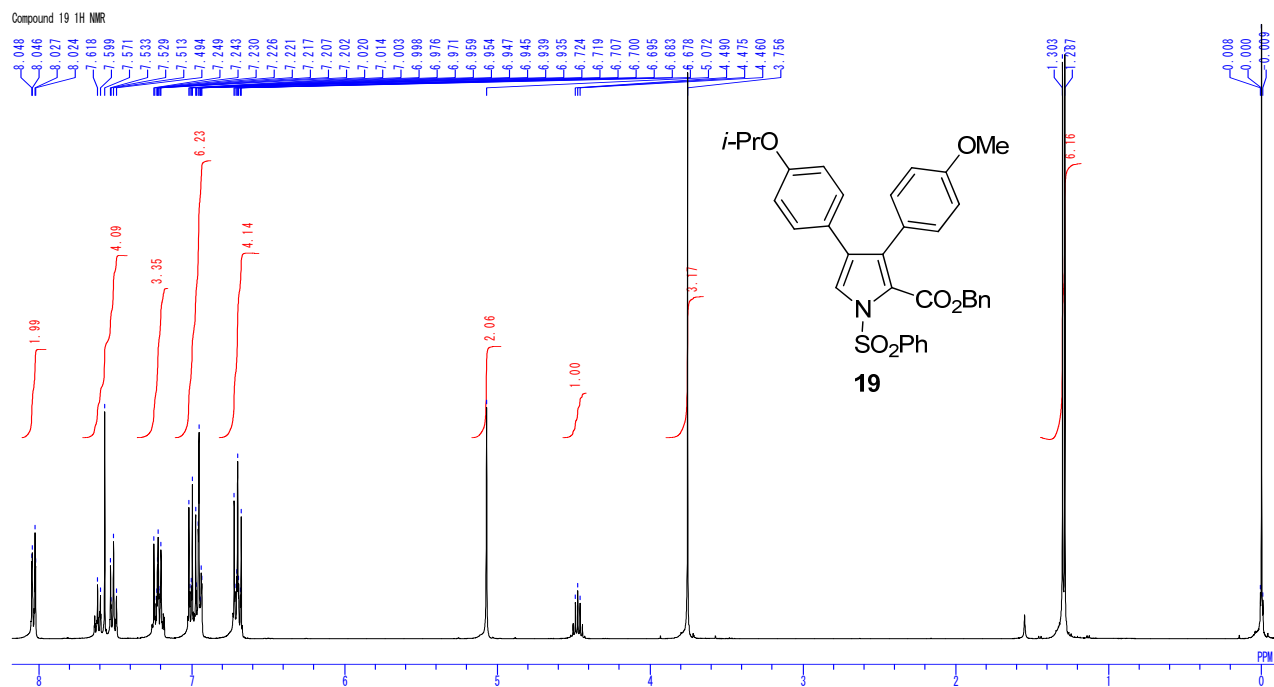
<sup>1</sup>H NMR Spectrum of Compound **18** (CDCl<sub>3</sub>)



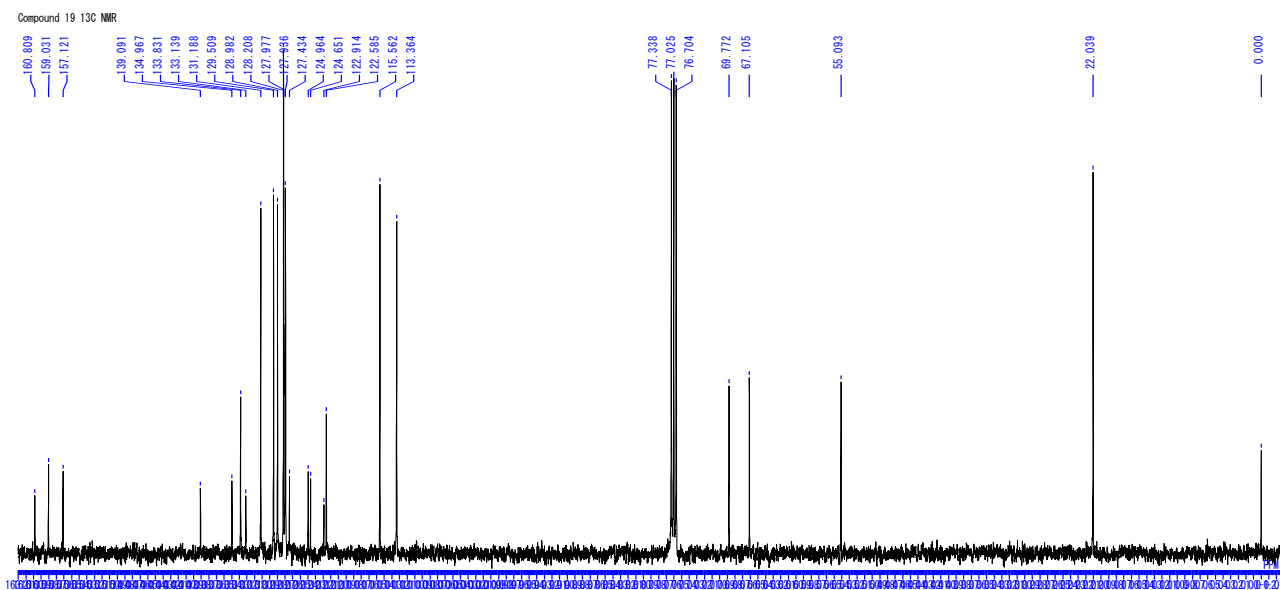
<sup>13</sup>C NMR Spectrum of Compound **18** (CDCl<sub>3</sub>)



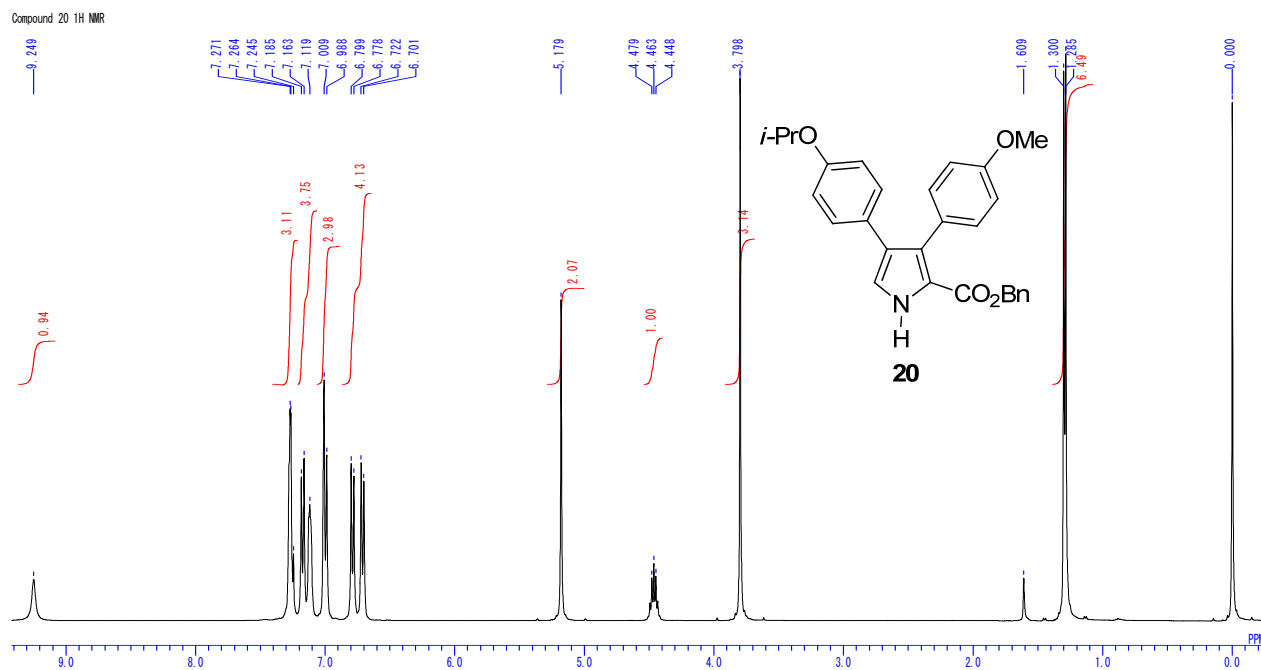
<sup>1</sup>H NMR Spectrum of Compound **19** (CDCl<sub>3</sub>)



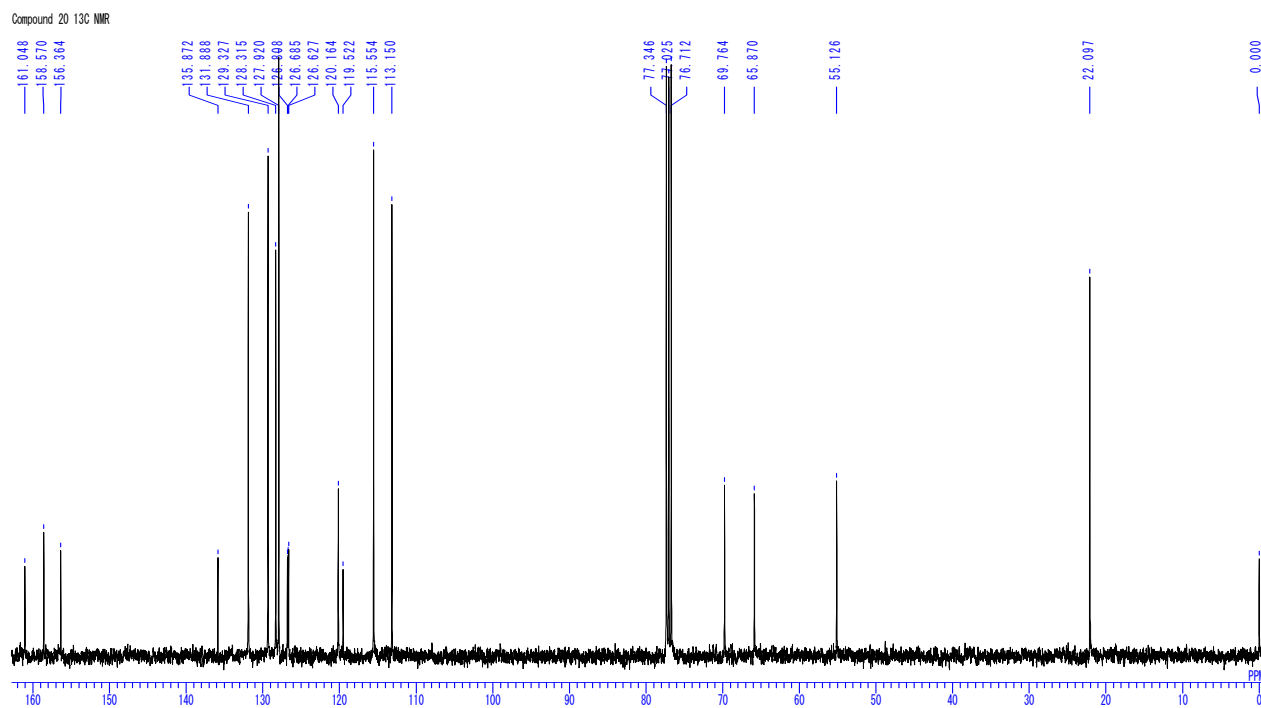
<sup>13</sup>C NMR Spectrum of Compound **19** (CDCl<sub>3</sub>)



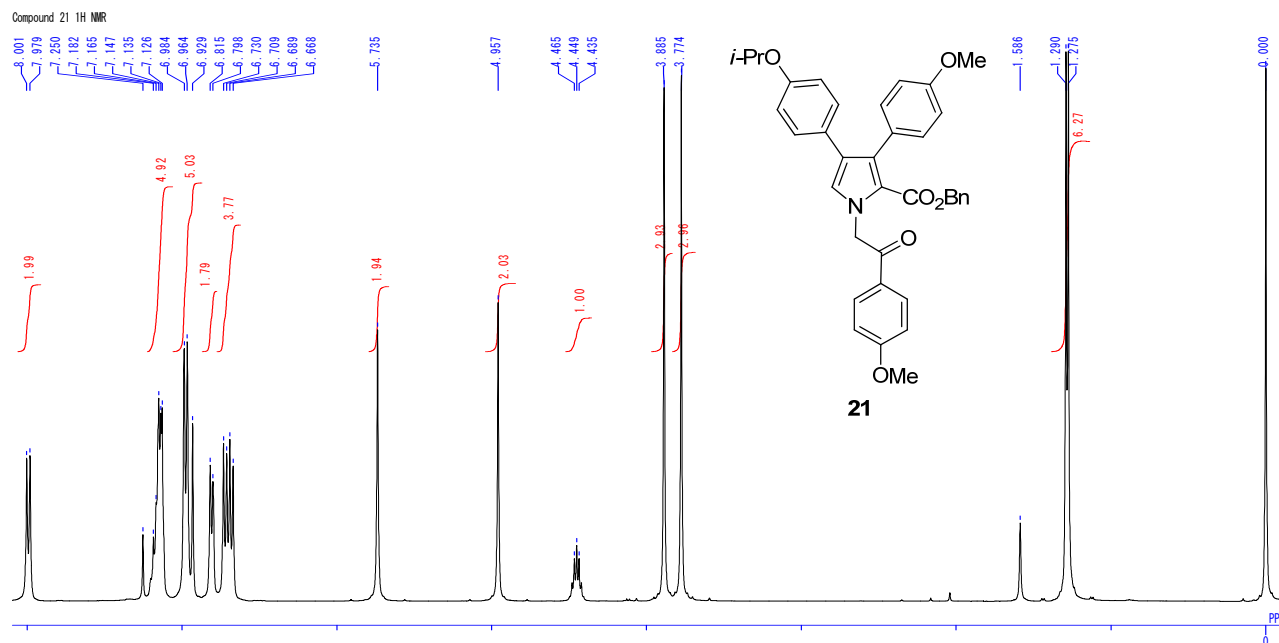
<sup>1</sup>H NMR Spectrum of Compound **20** (CDCl<sub>3</sub>)



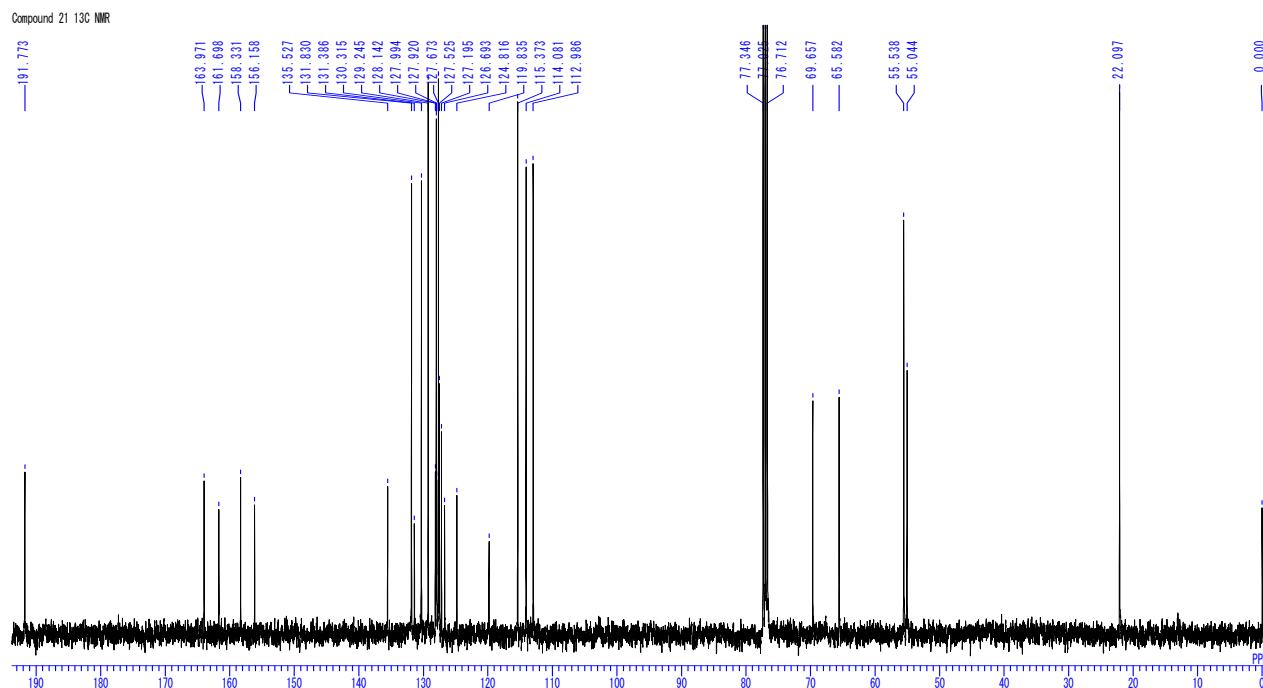
<sup>13</sup>C NMR Spectrum of Compound **20** (CDCl<sub>3</sub>)



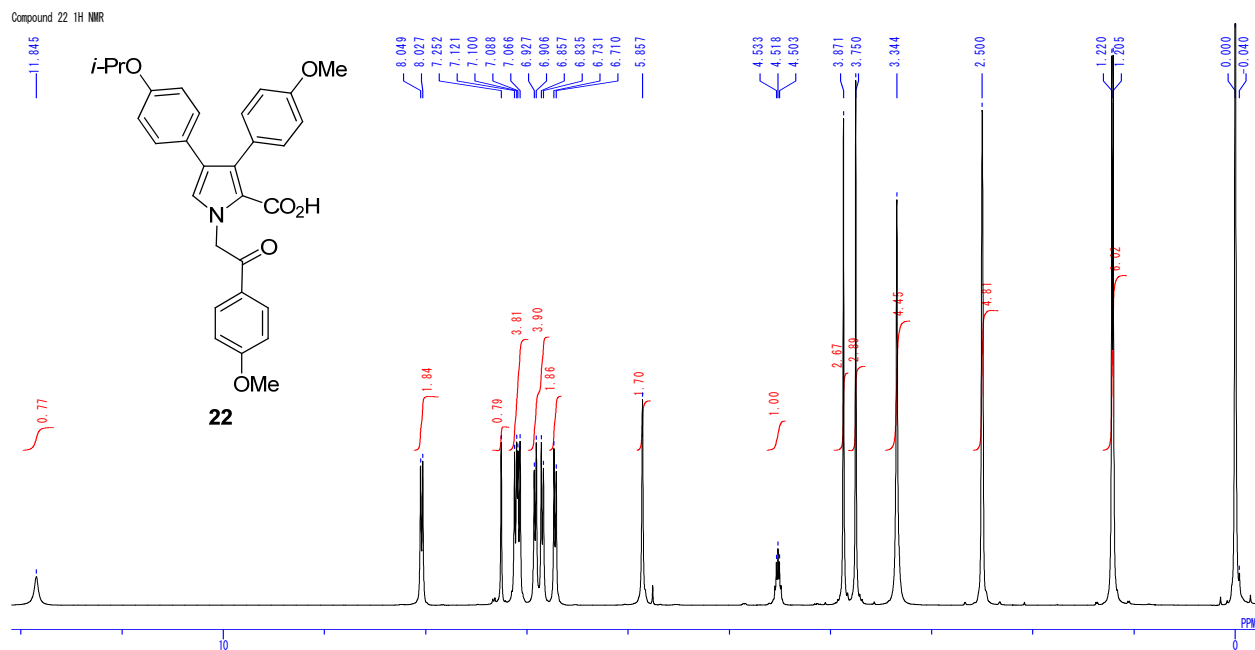
<sup>1</sup>H NMR Spectrum of Compound **21** (CDCl<sub>3</sub>)



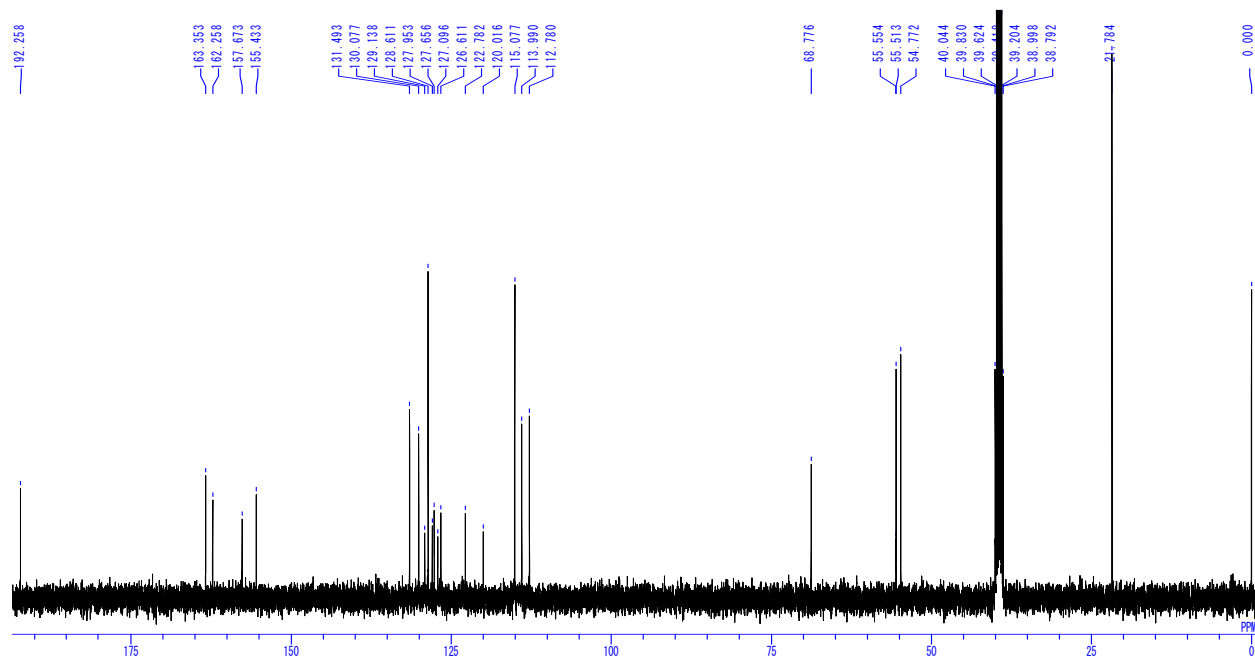
<sup>13</sup>C NMR Spectrum of Compound **21** (CDCl<sub>3</sub>)



<sup>1</sup>H NMR Spectrum of Compound **22** (DMSO-*d*<sub>6</sub>)

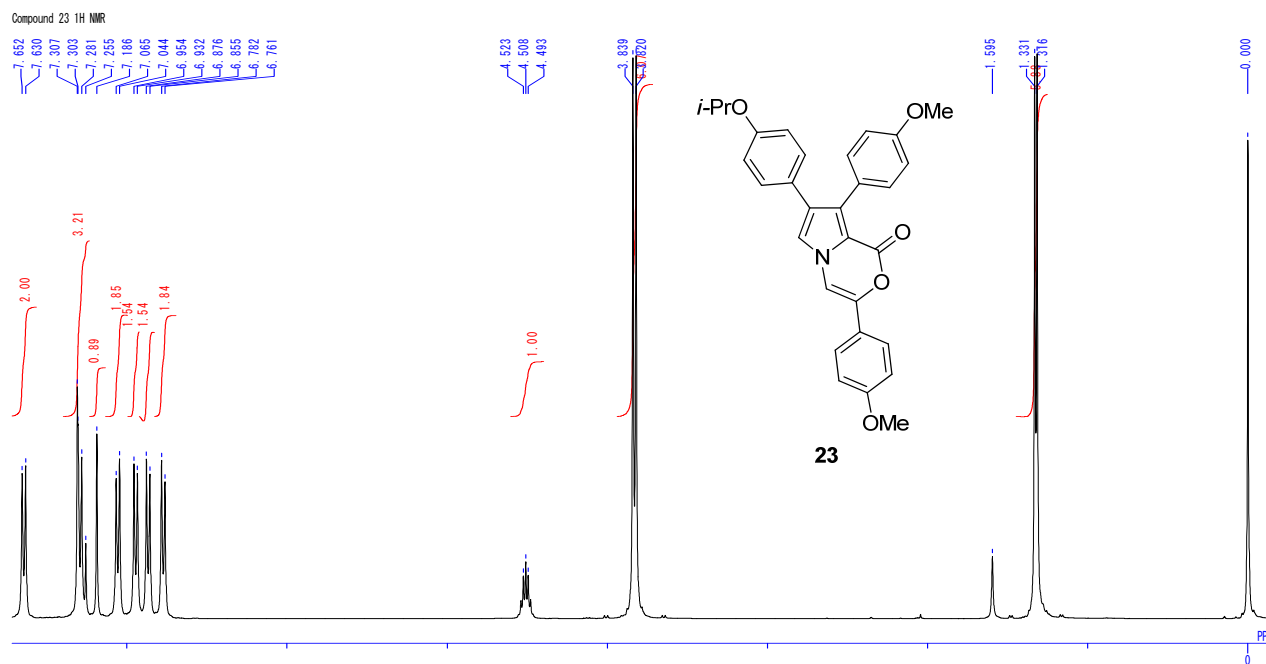


<sup>13</sup>C NMR Spectrum of Compound **22** (DMSO-*d*<sub>6</sub>)

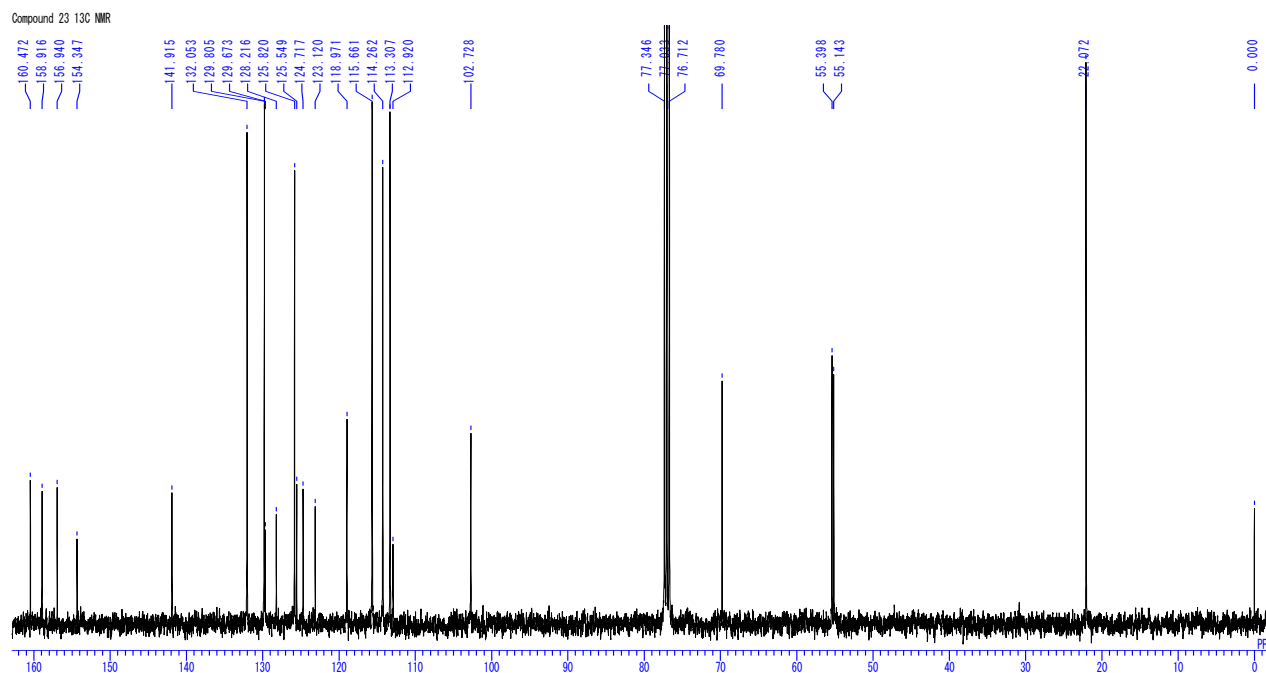




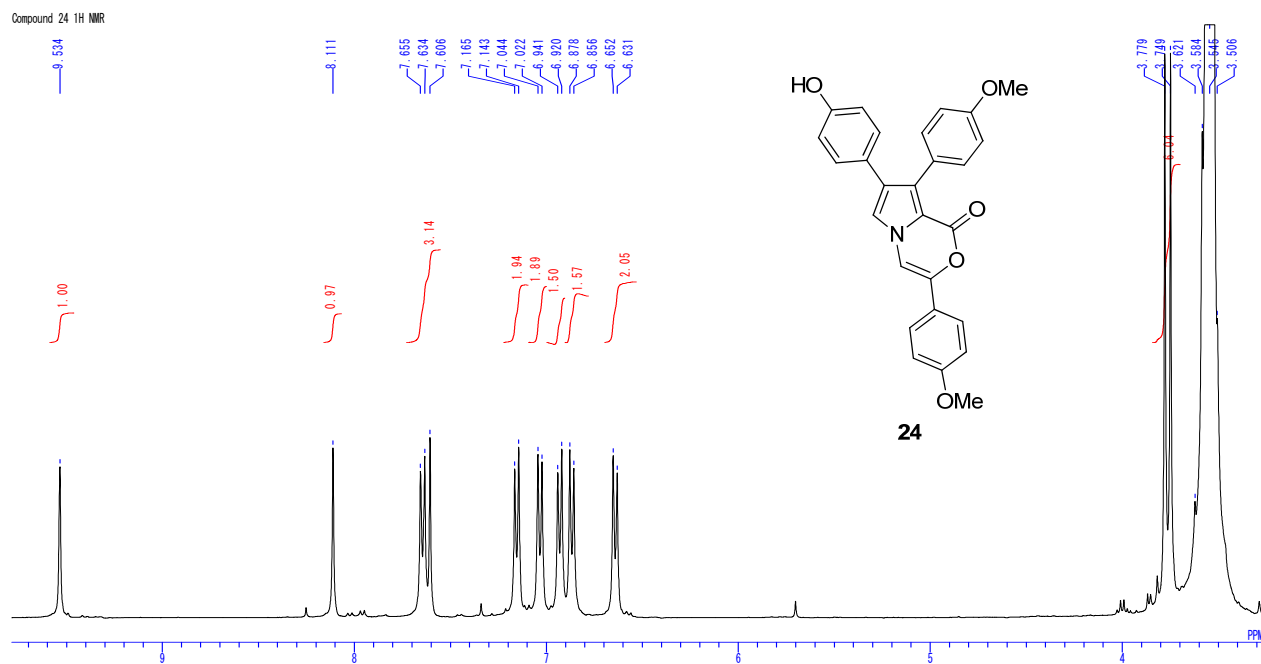
$^1\text{H}$  NMR Spectrum of Compound **23** ( $\text{CDCl}_3$ )



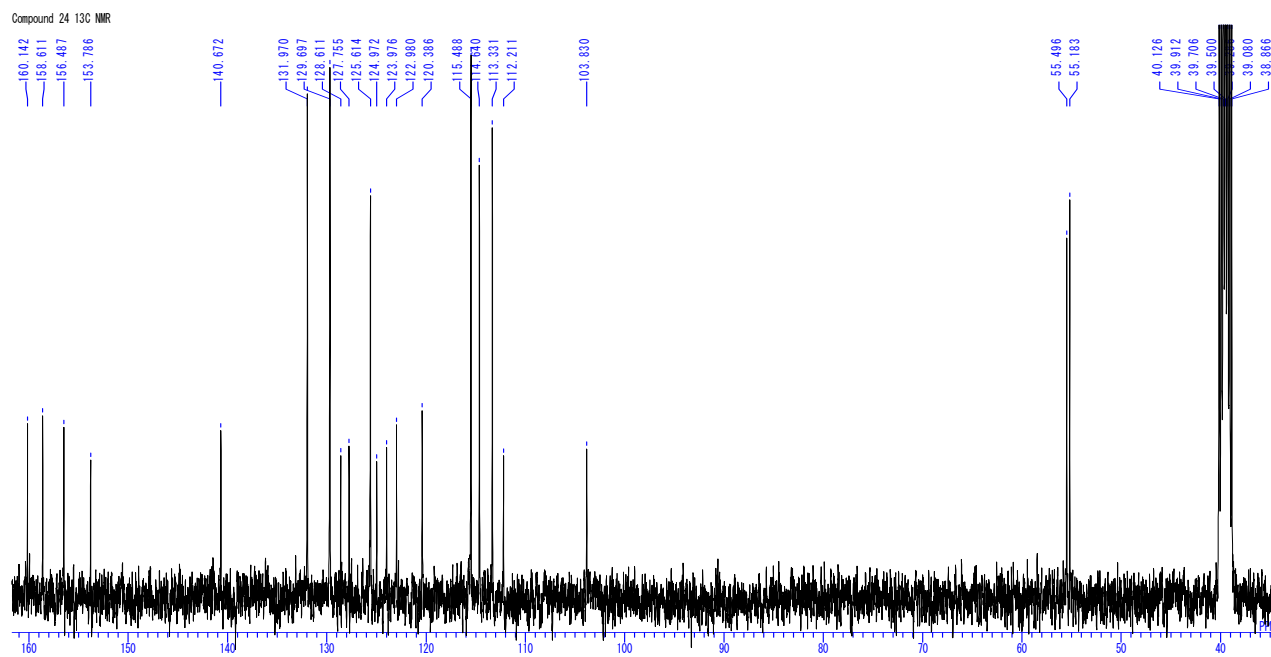
$^{13}\text{C}$  NMR Spectrum of Compound **23** ( $\text{CDCl}_3$ )



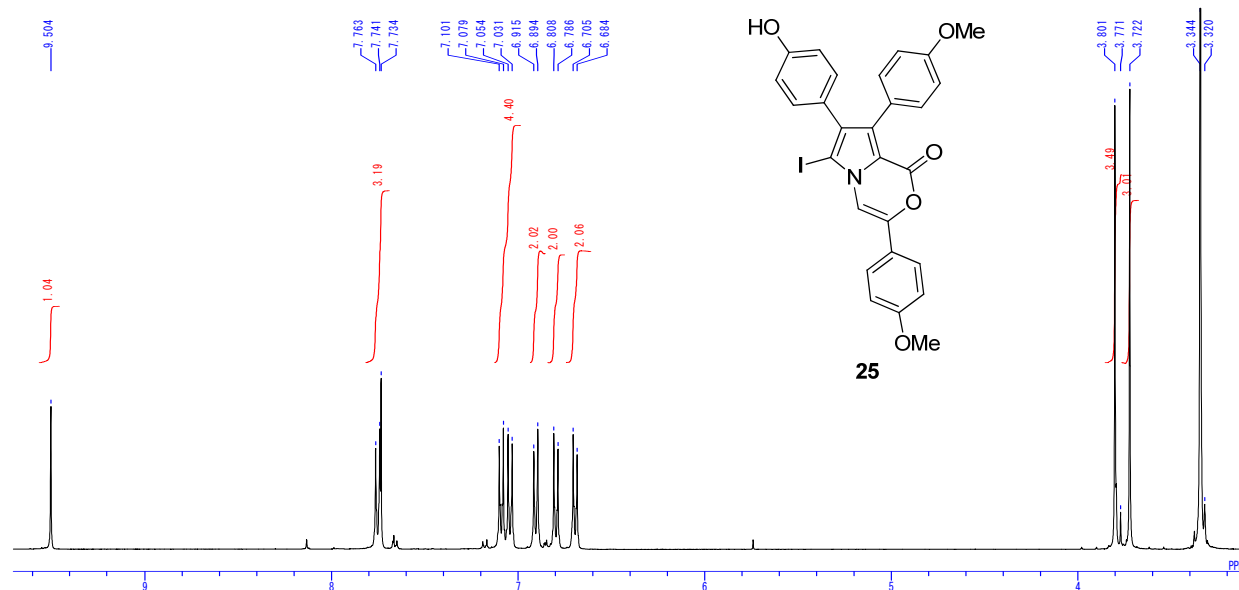
<sup>1</sup>H NMR Spectrum of Compound **24** (DMSO-*d*<sub>6</sub>)



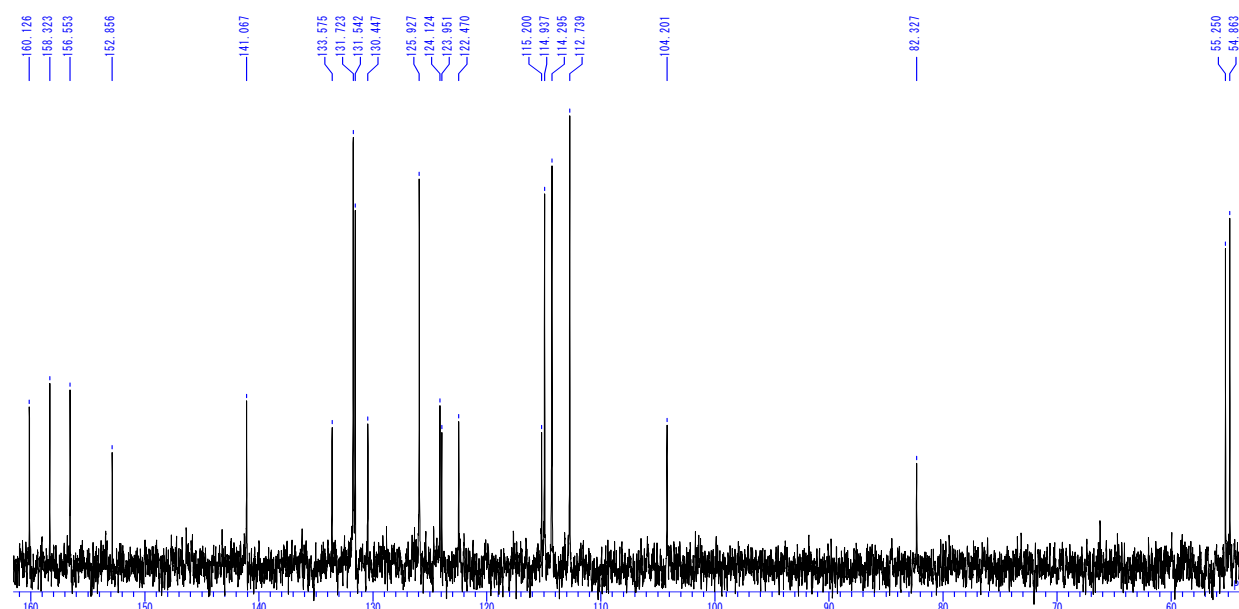
<sup>13</sup>C NMR Spectrum of Compound **24** (DMSO-*d*<sub>6</sub>)



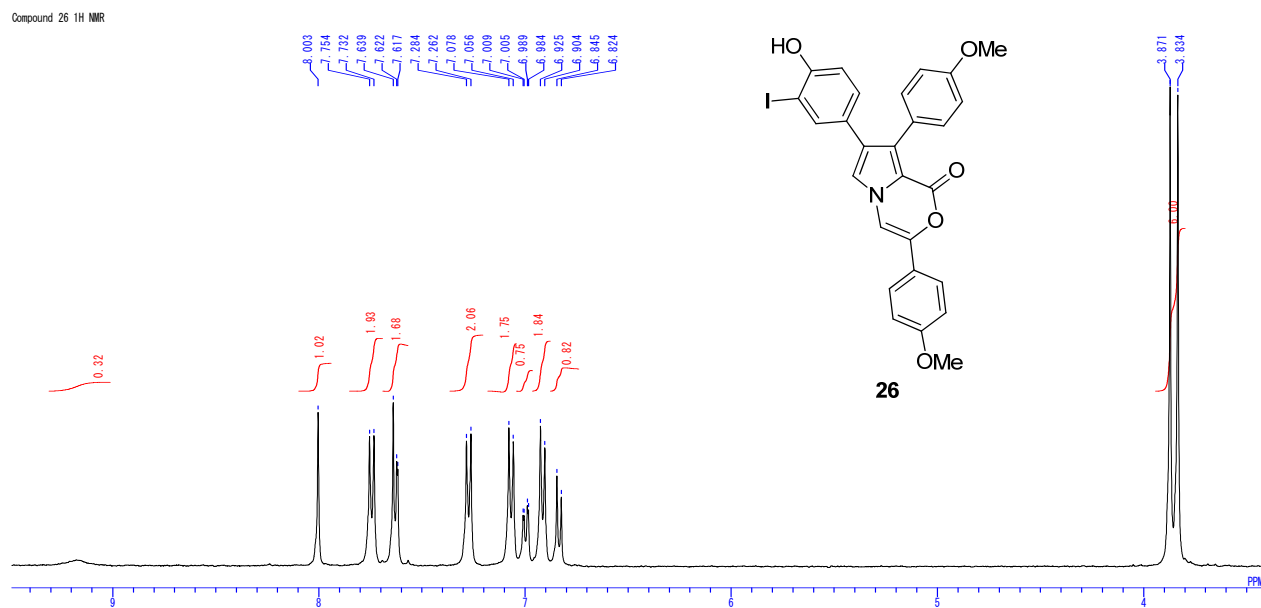
$^1\text{H}$  NMR Spectrum of Compound **25** (DMSO- $d_6$ )



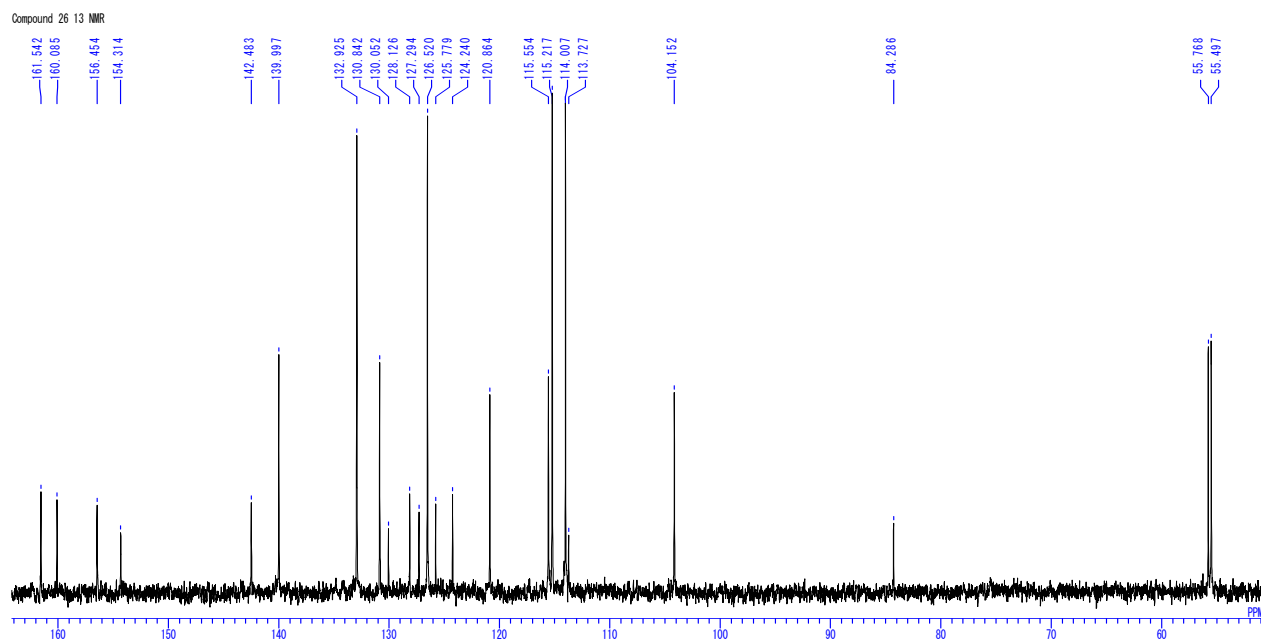
$^{13}\text{C}$  NMR Spectrum of Compound **25** (DMSO- $d_6$ )



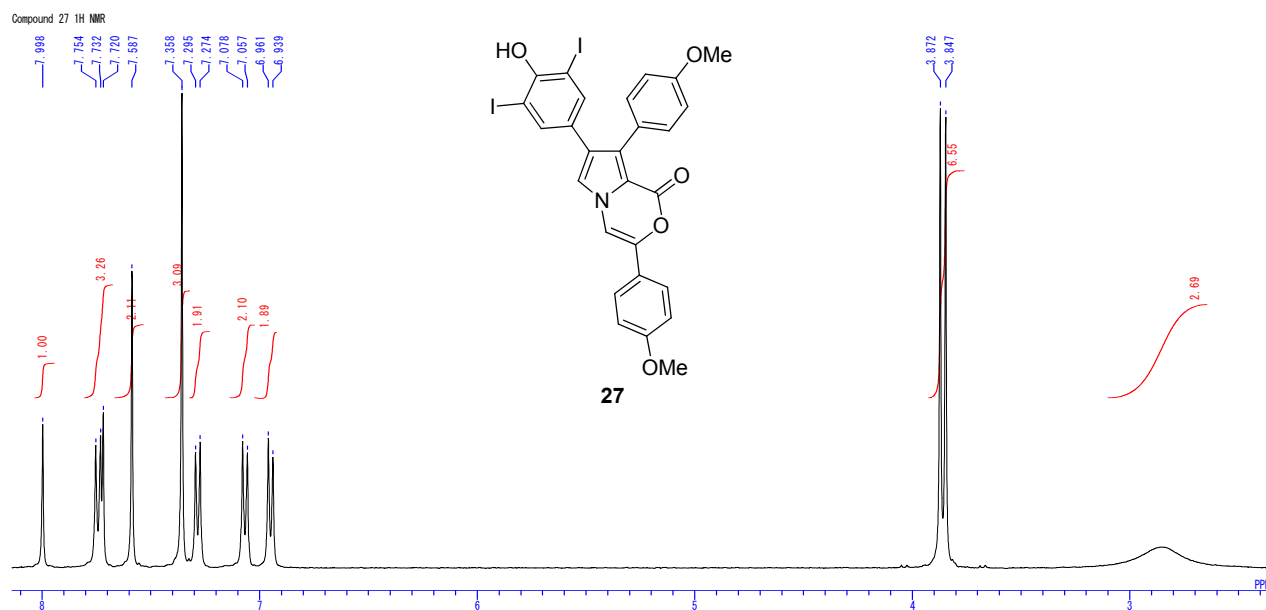
<sup>1</sup>H NMR Spectrum of Compound **26** (acetone-*d*<sub>6</sub>)



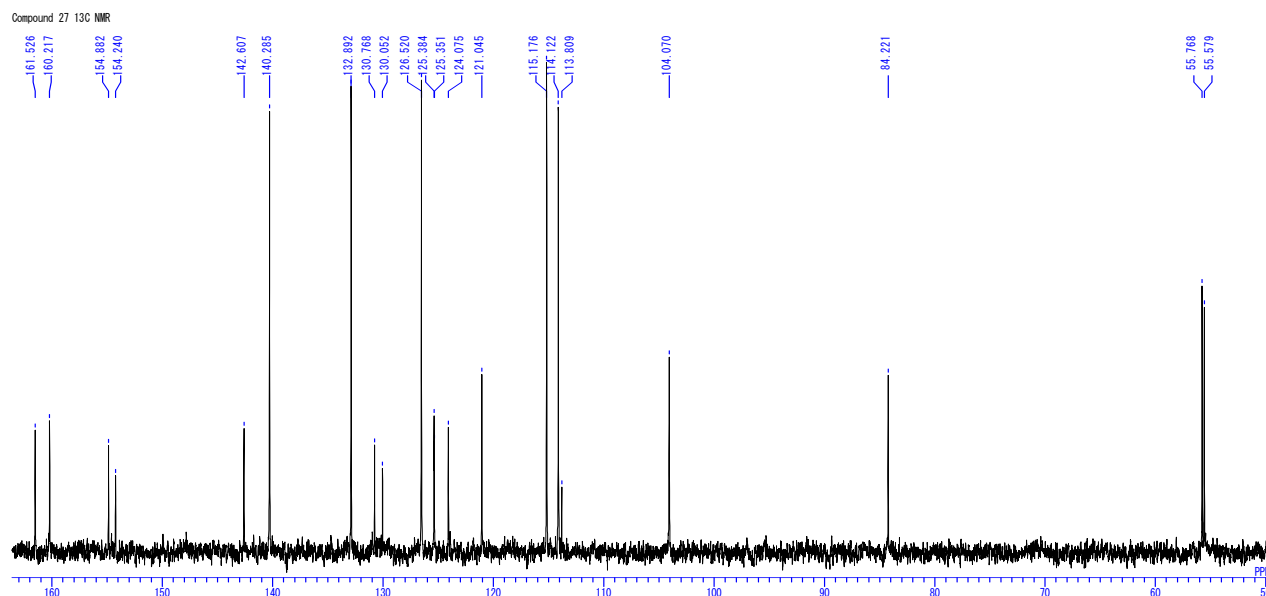
<sup>13</sup>C NMR Spectrum of Compound **26** (acetone-*d*<sub>6</sub>)



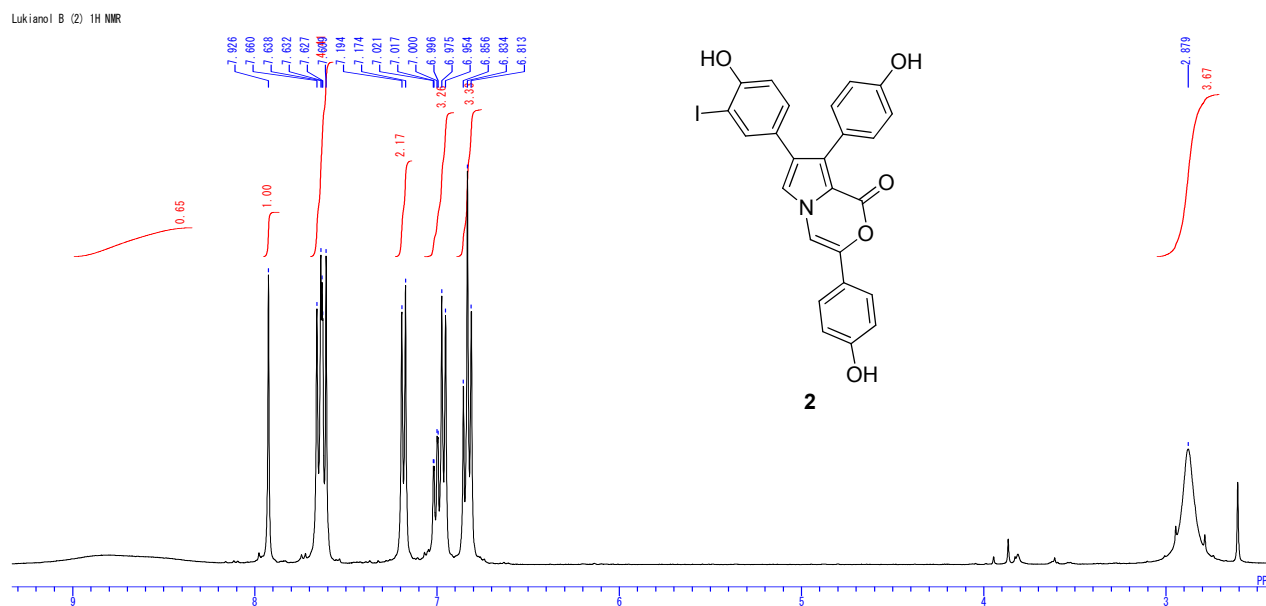
<sup>1</sup>H NMR Spectrum of Compound **27** (acetone-*d*<sub>6</sub>)



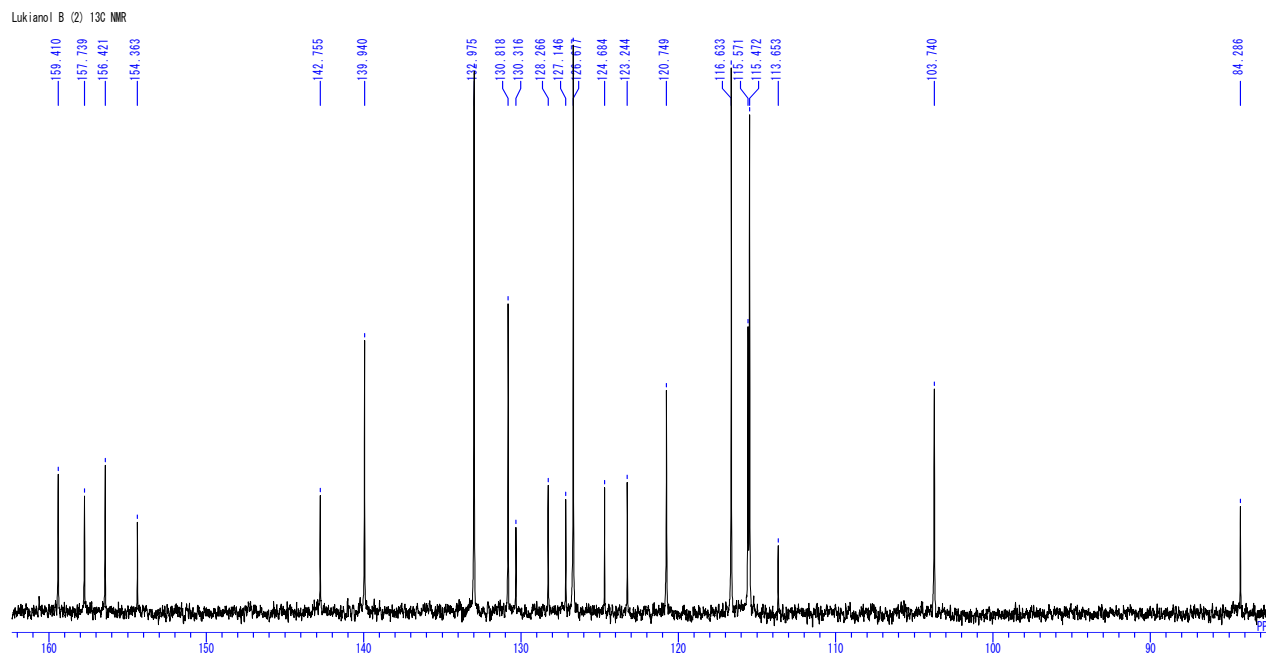
<sup>13</sup>C NMR Spectrum of Compound **27** (acetone-*d*<sub>6</sub>)



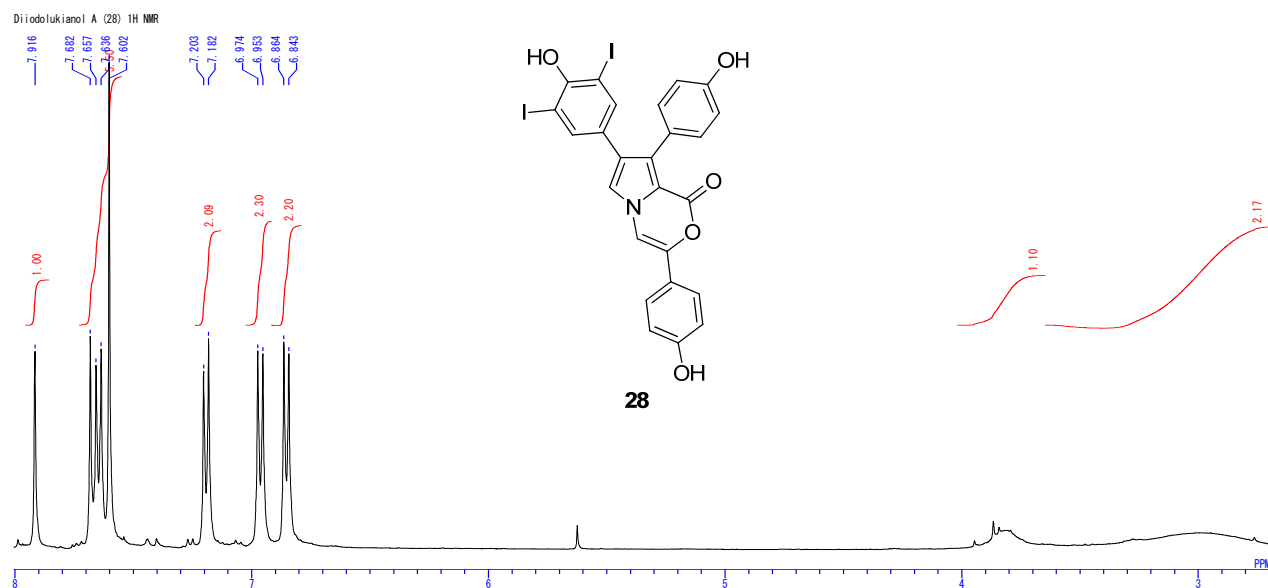
<sup>1</sup>H NMR Spectrum of Compound **2** (acetone-*d*<sub>6</sub>)



<sup>13</sup>C NMR Spectrum of Compound **2** (acetone-*d*<sub>6</sub>)



<sup>1</sup>H NMR Spectrum of Compound **28** (acetone-*d*<sub>6</sub>)



<sup>13</sup>C NMR Spectrum of Compound **28** (acetone-*d*<sub>6</sub>)

