

## *Supporting information*

### **Synthesis of Near-Infrared Absorbing and Fluorescing Thiophene-Fused BODIPY Dyes with Strong Electron-Donating Groups and Their Application in Dye-Sensitised Solar Cells**

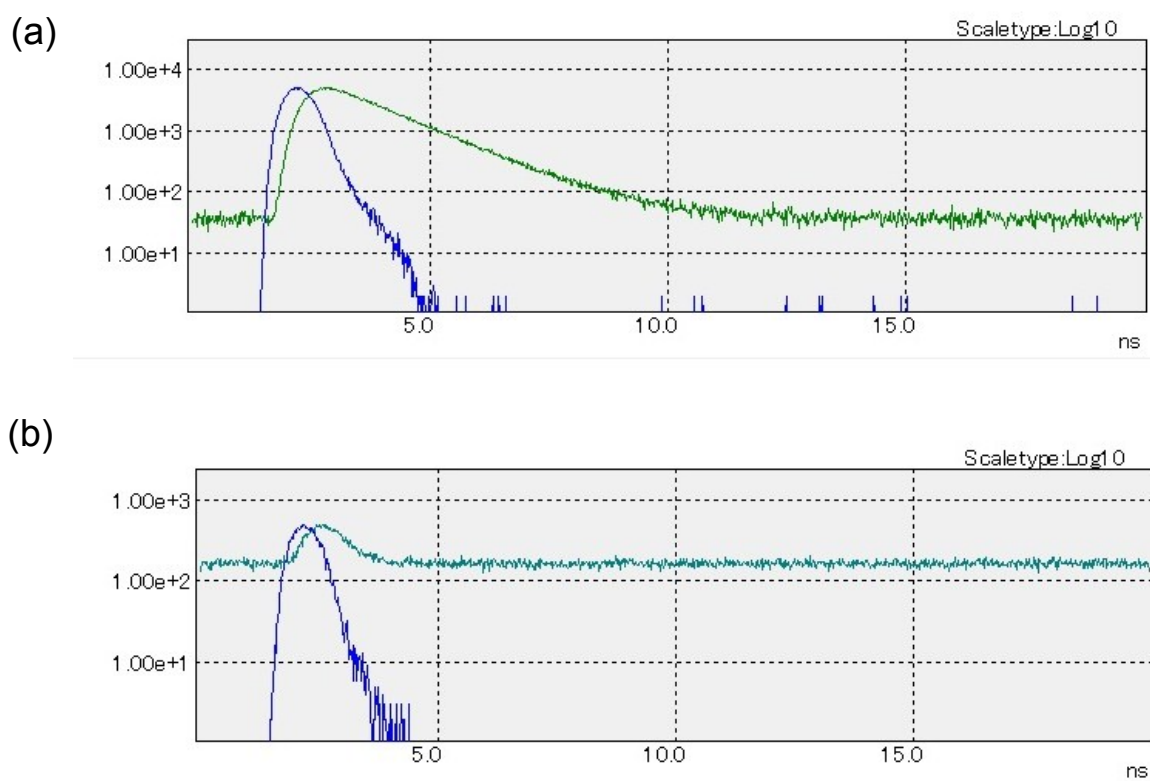
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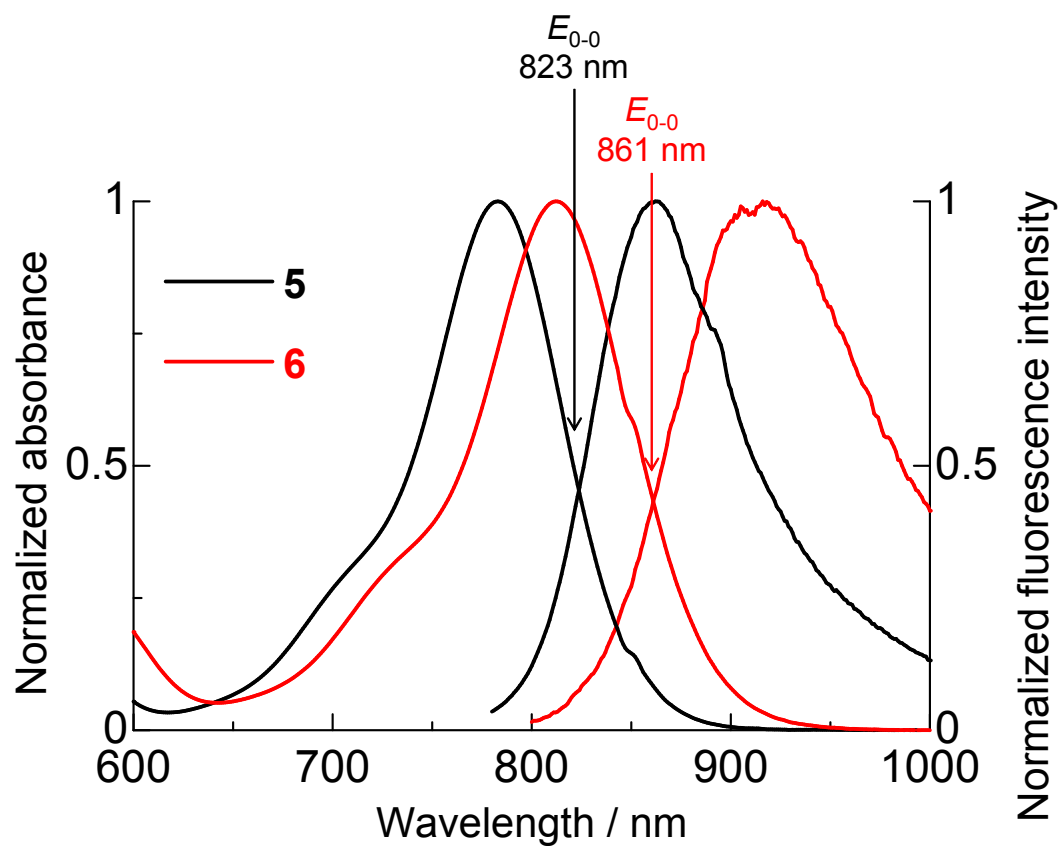
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Nagano, 390-8621, Japan.*

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1. The fluorescence decay curves of **5** and **6** in dichloromethane.
2. Normalized absorption and fluorescence spectra of **5** and **6** in dichloromethane.
3. I-V curve and IPCE spectrum of **D149**.
4. Cartesian coordinates of **5** and **6**
5. <sup>1</sup>H and <sup>13</sup>C NMR spectra (Figure S4–Figure S11)



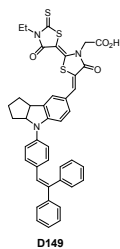
**Figure S1.** The fluorescence decay curves of (a) **5** and (b) **6** in dichloromethane.



**Figure S2.** Normalized absorption and fluorescence spectra in dichloromethane.

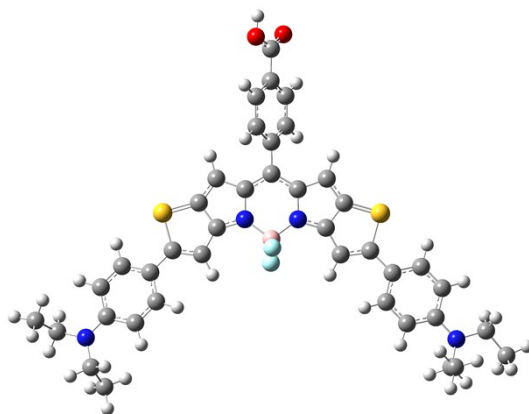
(a)

(b)



**Figure S3.** (a) I-V curve and (b) IPCE spectrum of **D149**.

Cartesian coordinate of **5**.



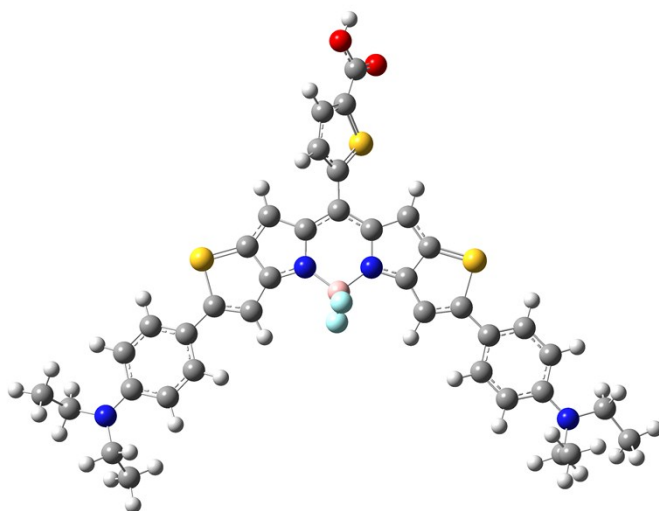
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Cartesian coordinate of **6**.



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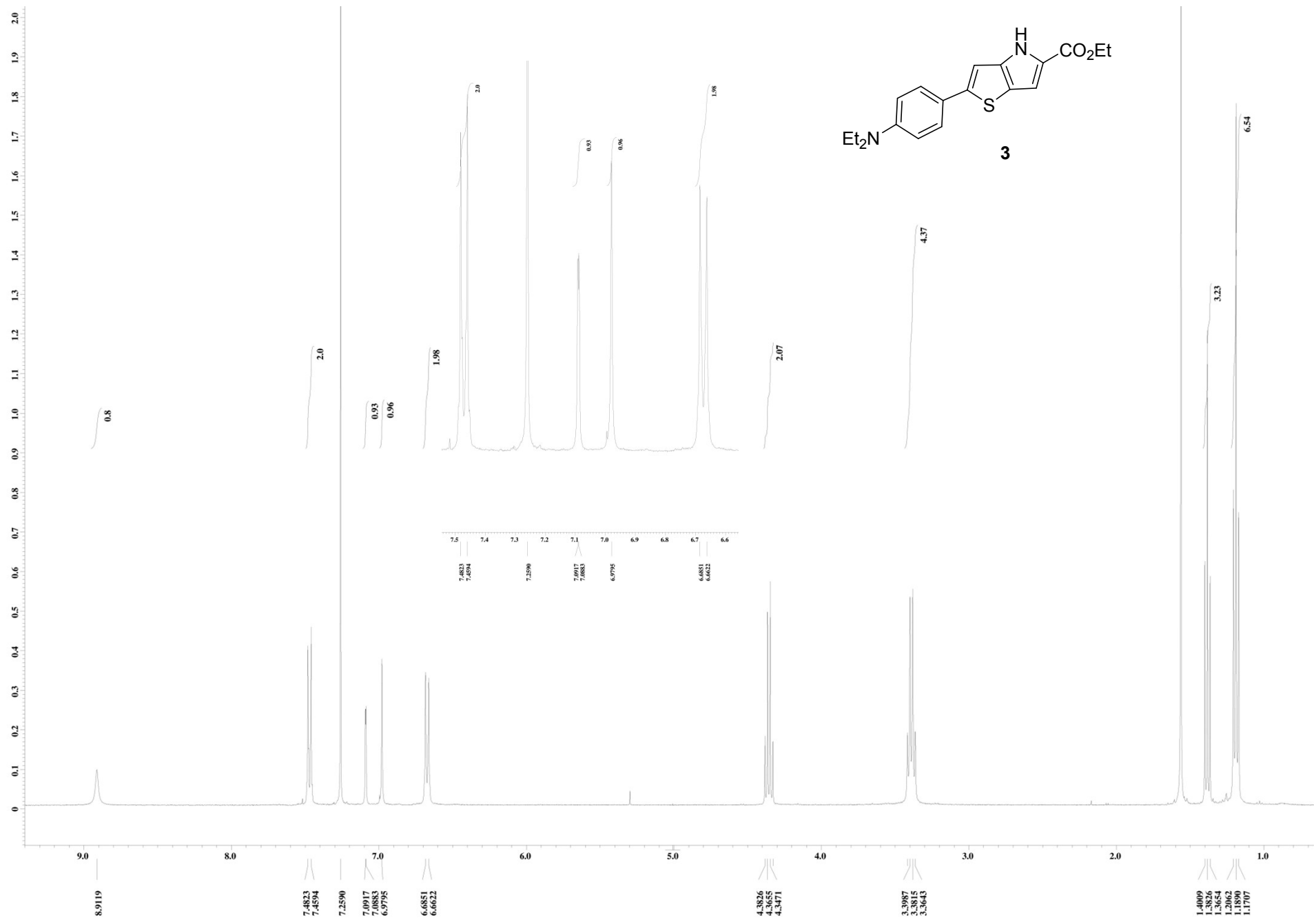
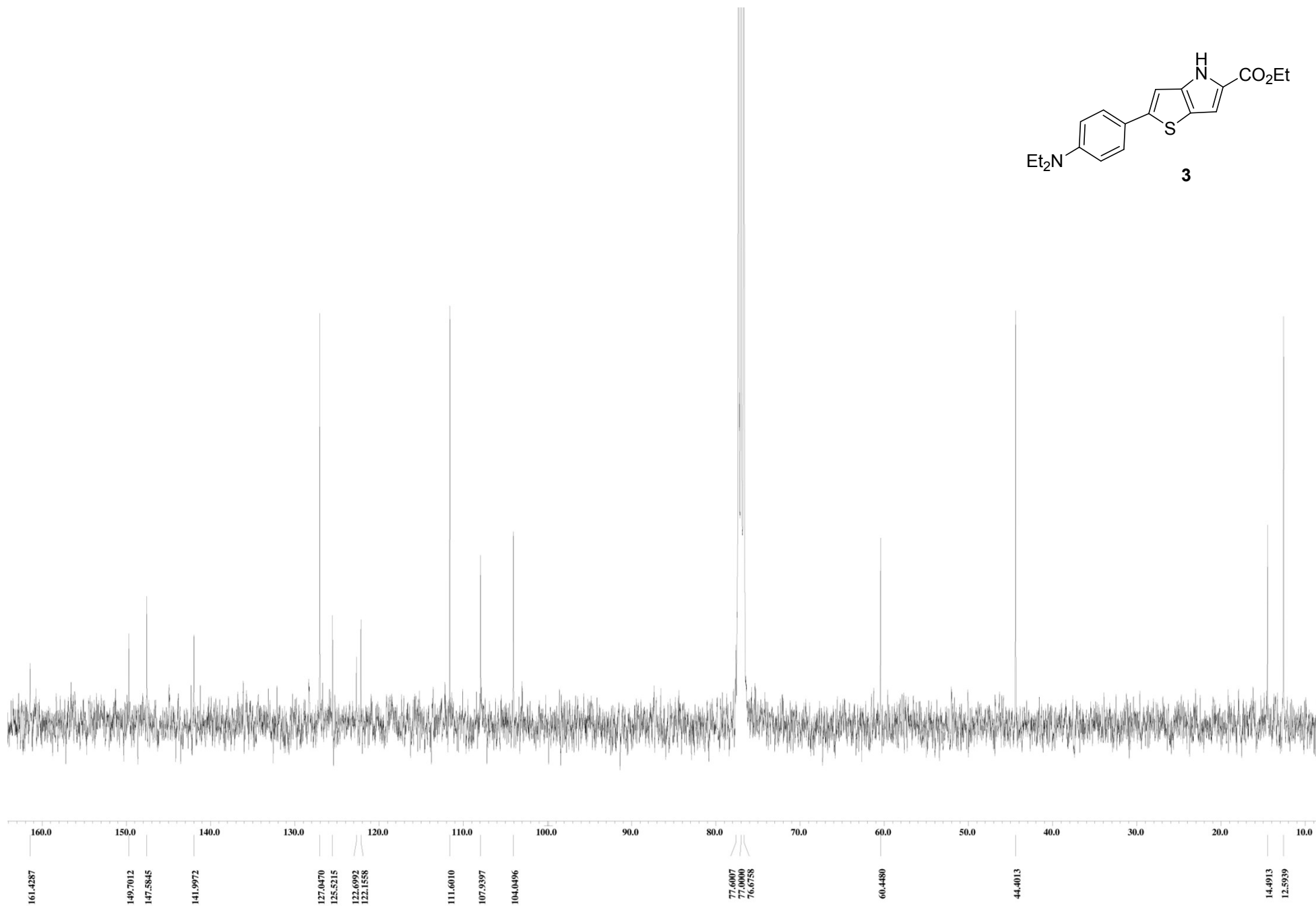
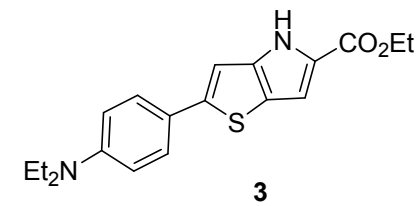


Figure S4. <sup>1</sup>H NMR spectrum of **3** (400 MHz, CDCl<sub>3</sub>).



**Figure S5.**  $^{13}\text{C}$  NMR spectrum of **3** (100 MHz,  $\text{CDCl}_3$ ).

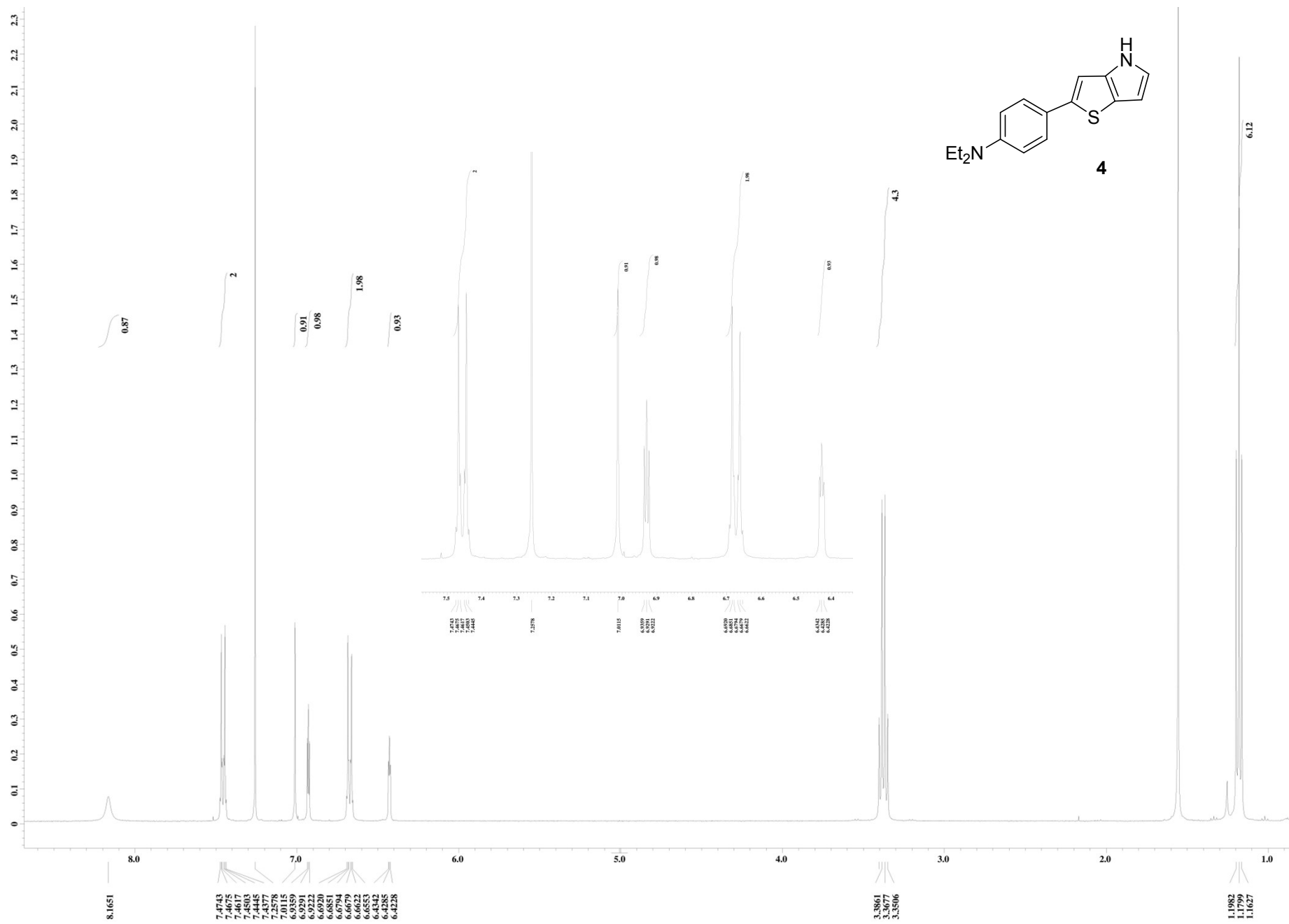
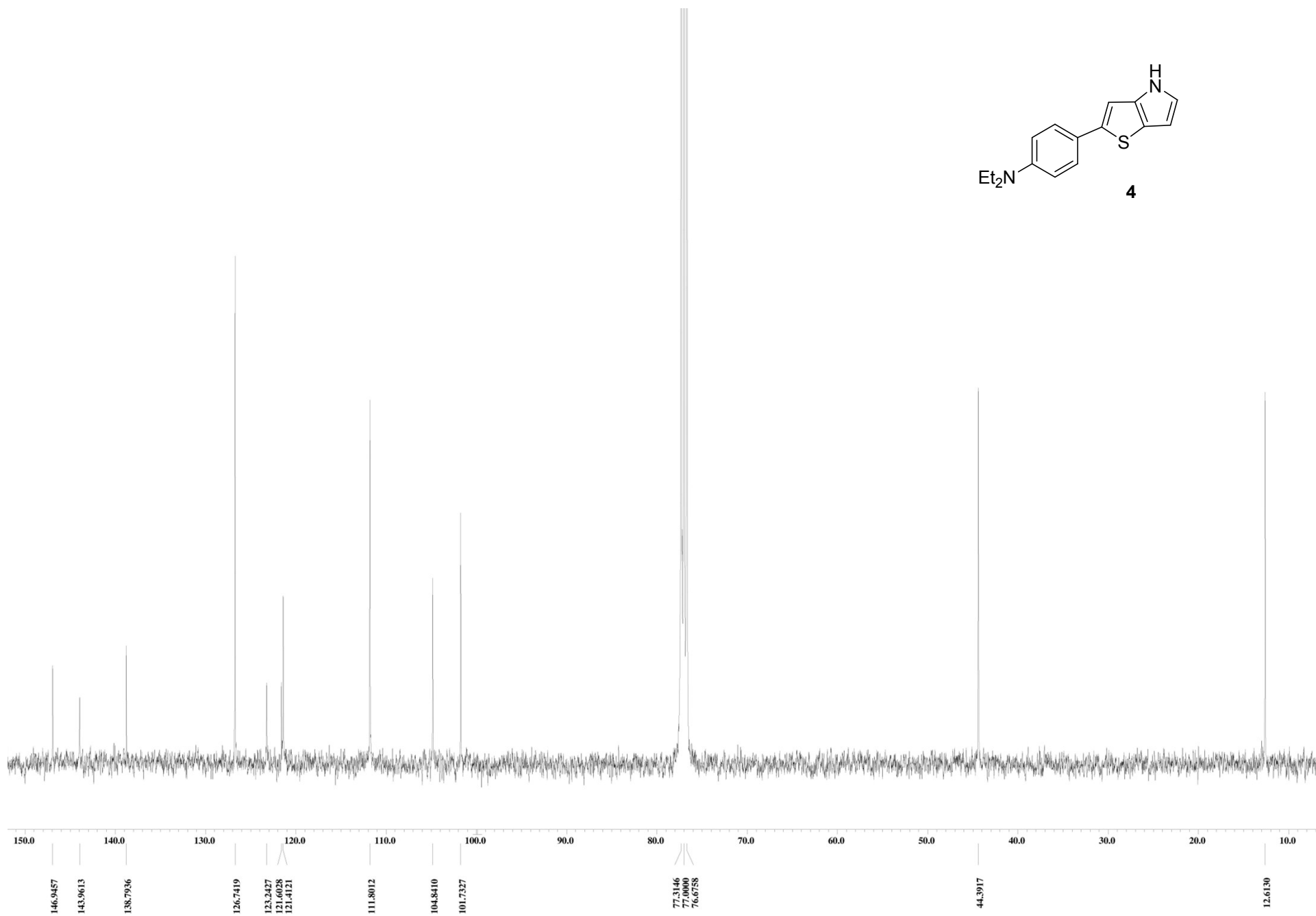
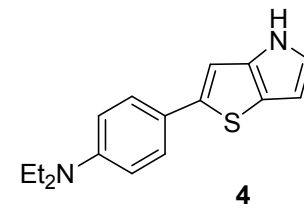
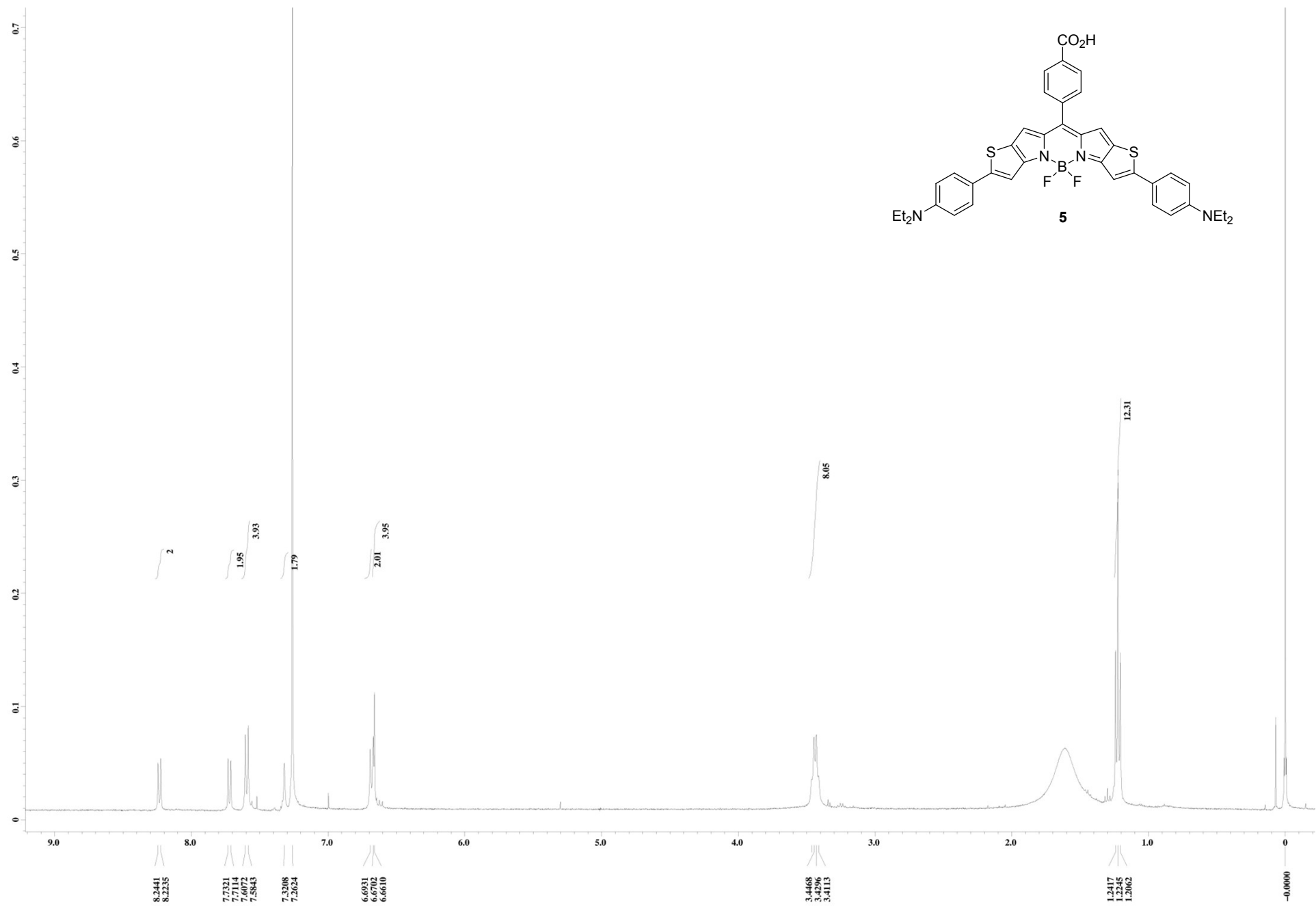


Figure S6 <sup>1</sup>H NMR spectrum of 4 (400 MHz, CDCl<sub>3</sub>).



**Figure S7.** <sup>13</sup>C NMR spectrum of **4** (100 MHz, CDCl<sub>3</sub>).



**Figure S8.** <sup>1</sup>H NMR spectrum of **5** (400 MHz, CDCl<sub>3</sub>).

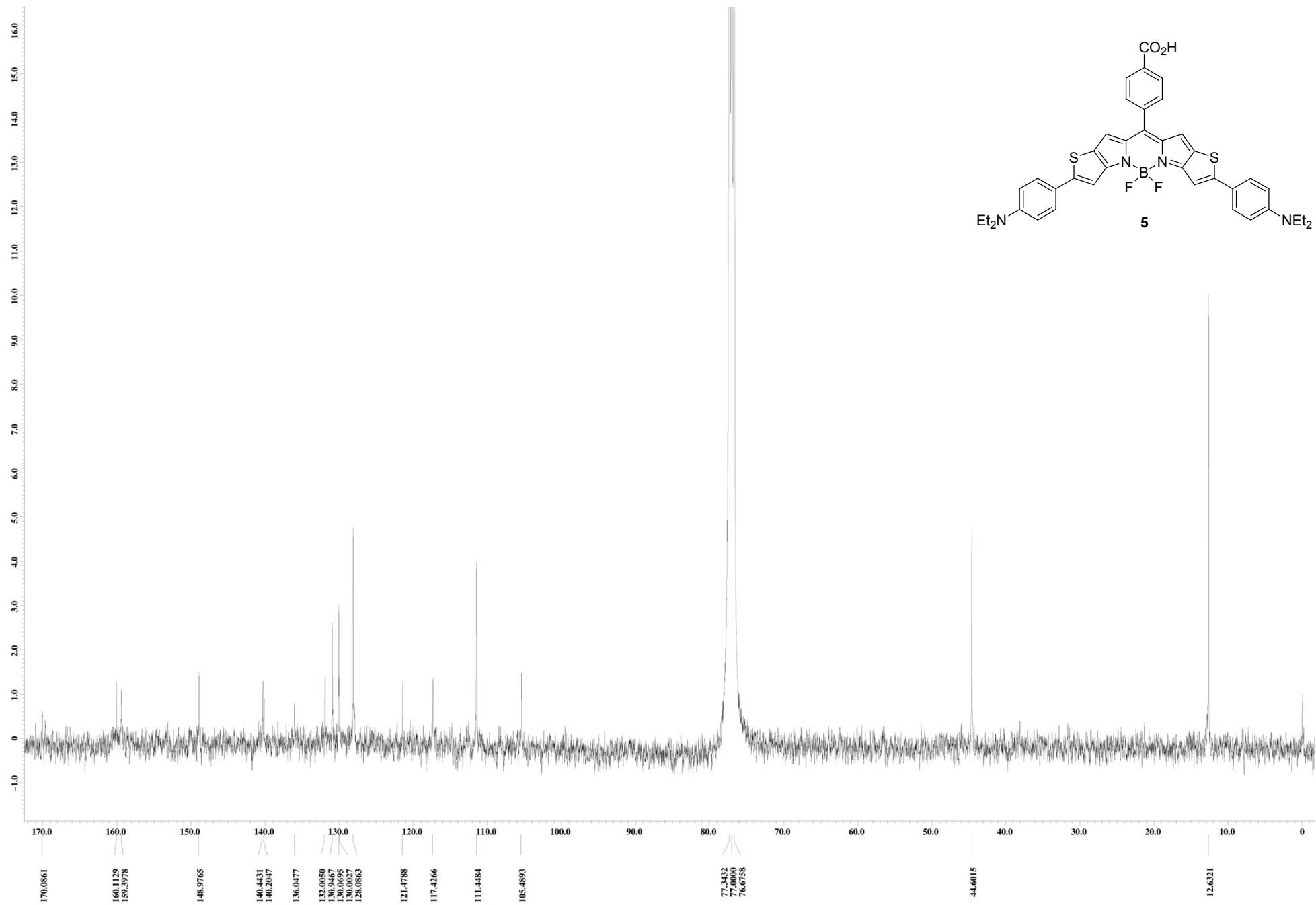
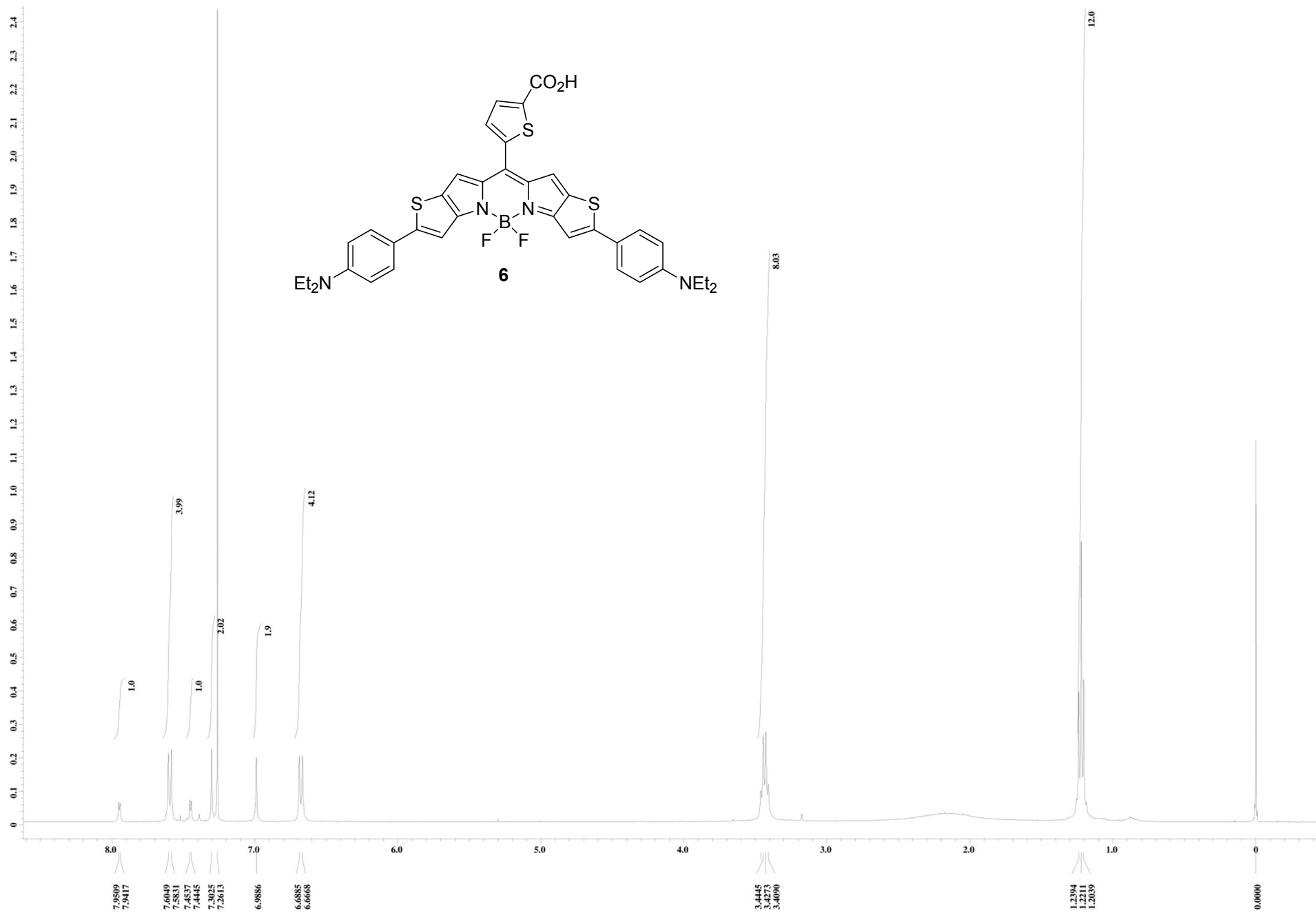


Figure S9. <sup>13</sup>C NMR spectrum of **5** (100 MHz, CDCl<sub>3</sub>).





**Figure S10.** <sup>1</sup>H NMR spectrum of **6** (400 MHz, CDCl<sub>3</sub>).

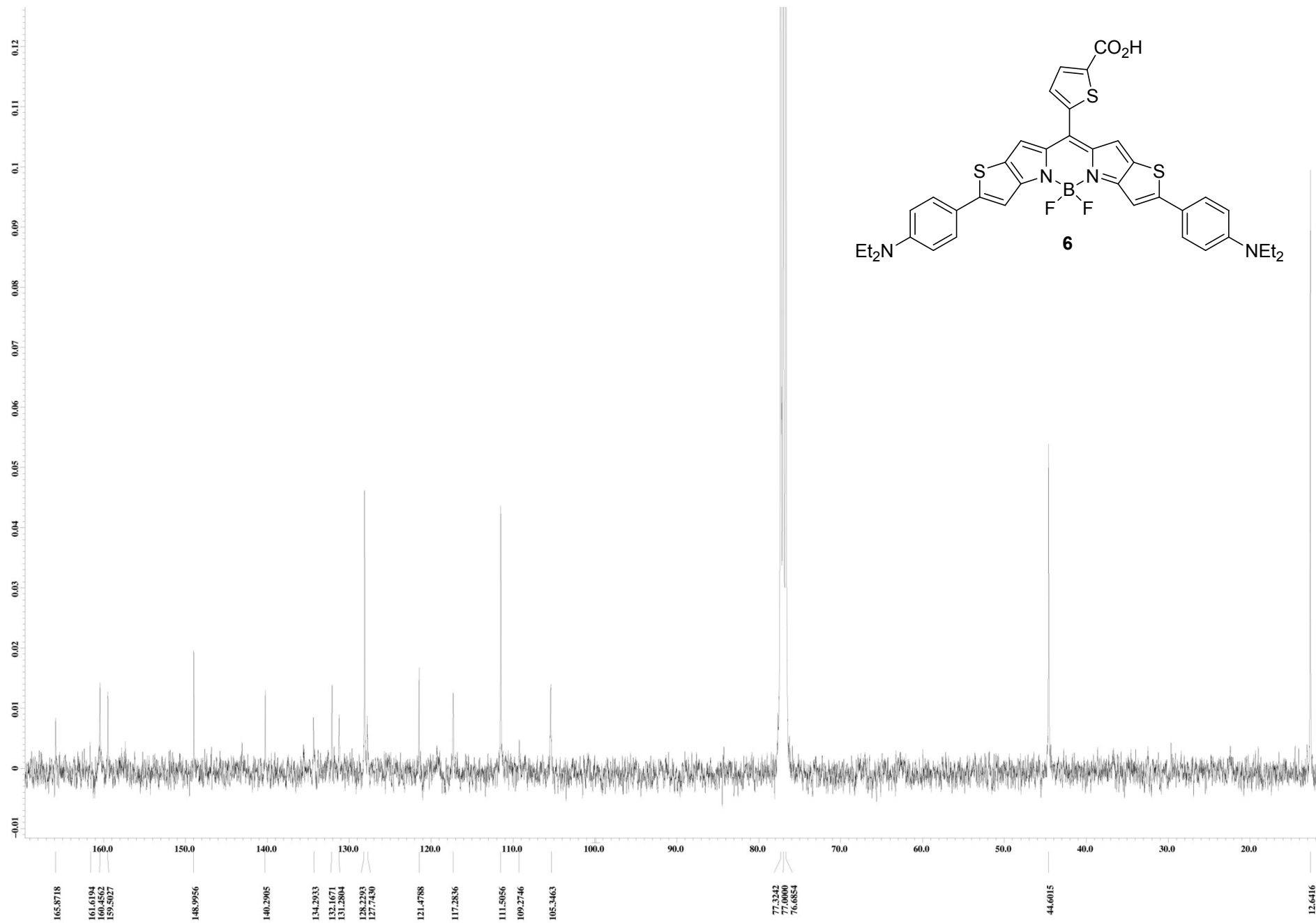


Figure S11.  $^{13}\text{C}$  NMR spectrum of **6** (100 MHz,  $\text{CDCl}_3$ ).