

# Electronic Supplementary Information

## Tin(IV) Chloride Mediated (3+2) Annulation of *trans*-2-Aroyl-3-styrylcyclopropane-1,1-dicarboxylates with Nitriles: Diastereoselective Access to 5-Vinyl-1-pyrroline Derivatives

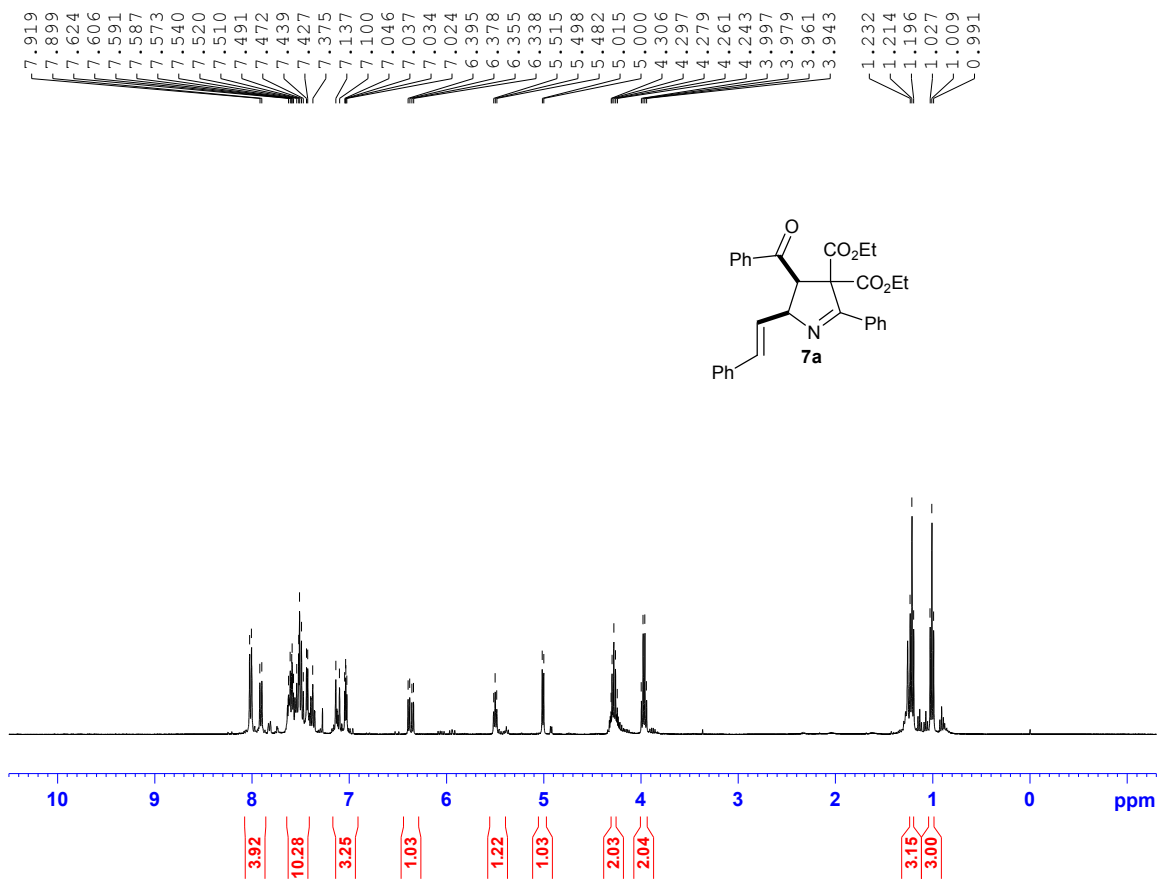
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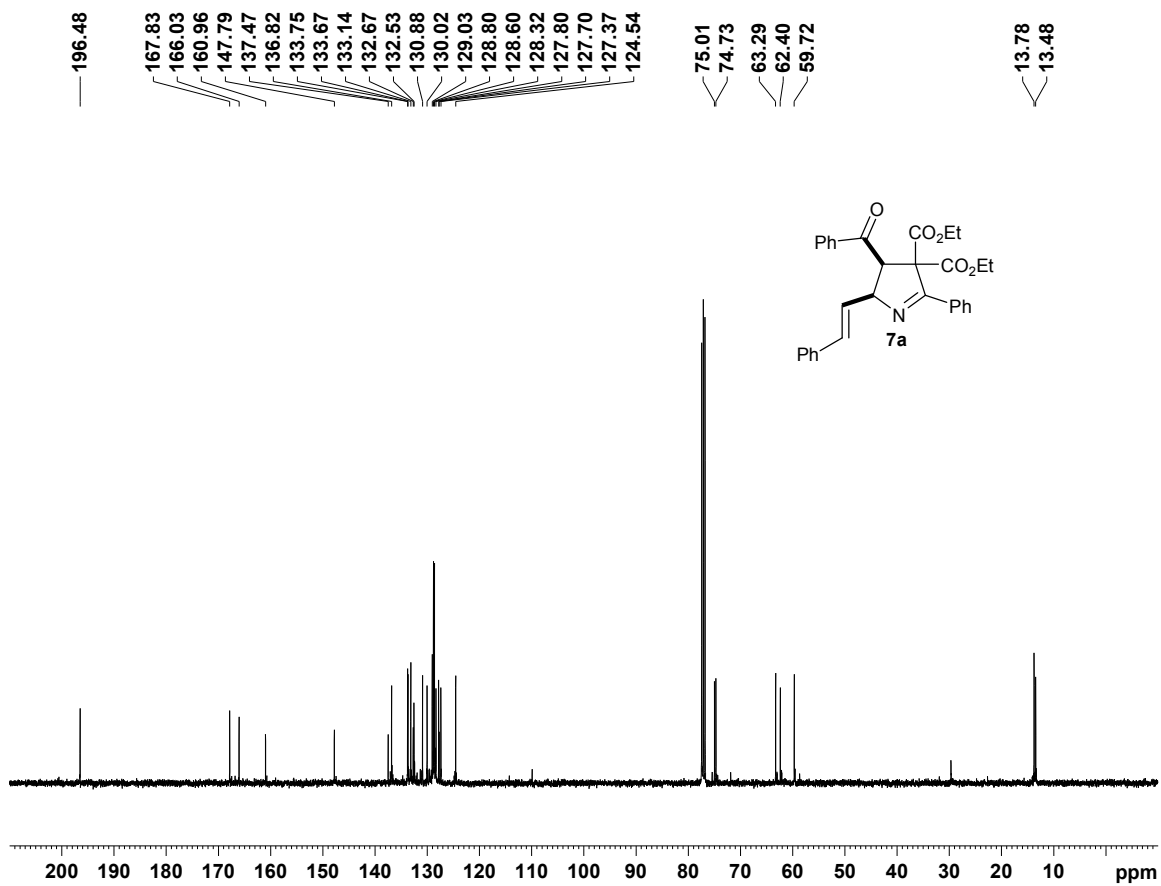
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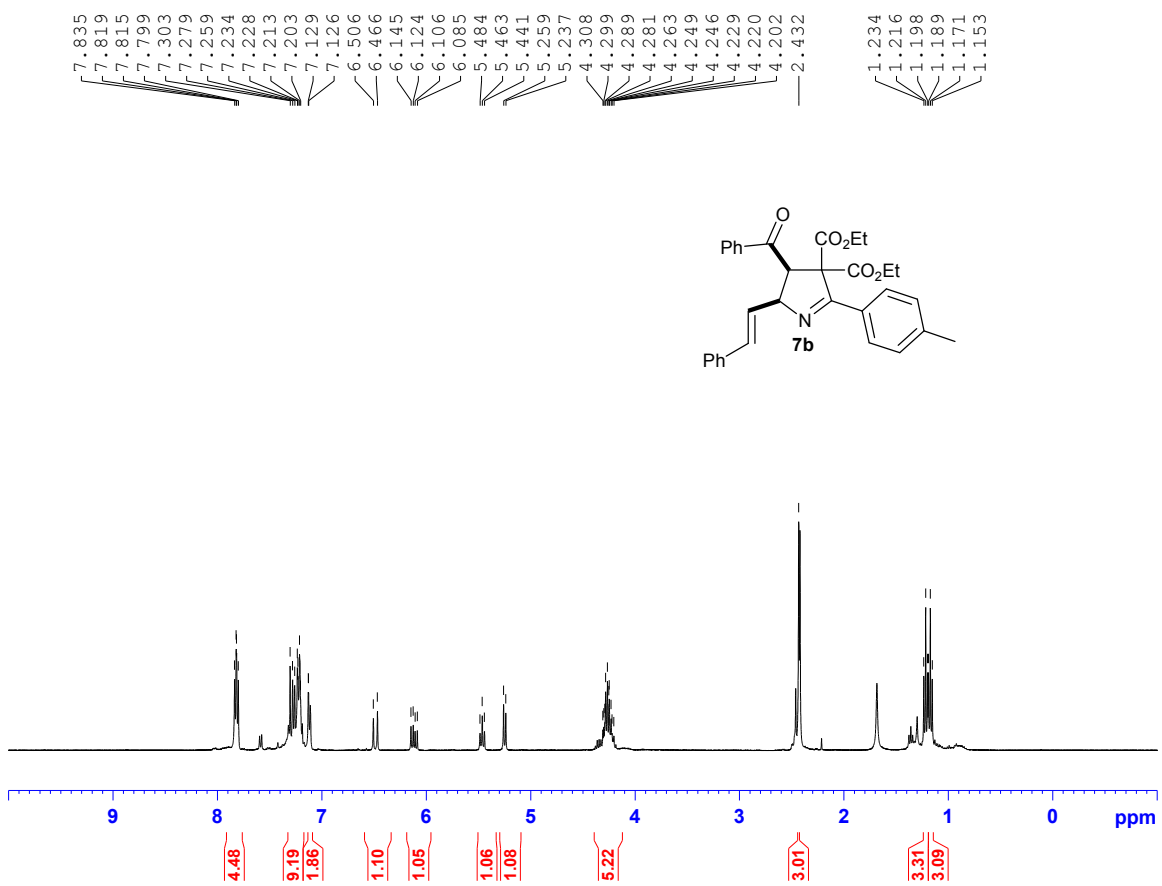
Copies of <sup>1</sup>H NMR and <sup>13</sup>C NMR for all products.....S2-S37



**Figure 1.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **7a**



**Figure 2.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7a**



**Figure 3.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7b**

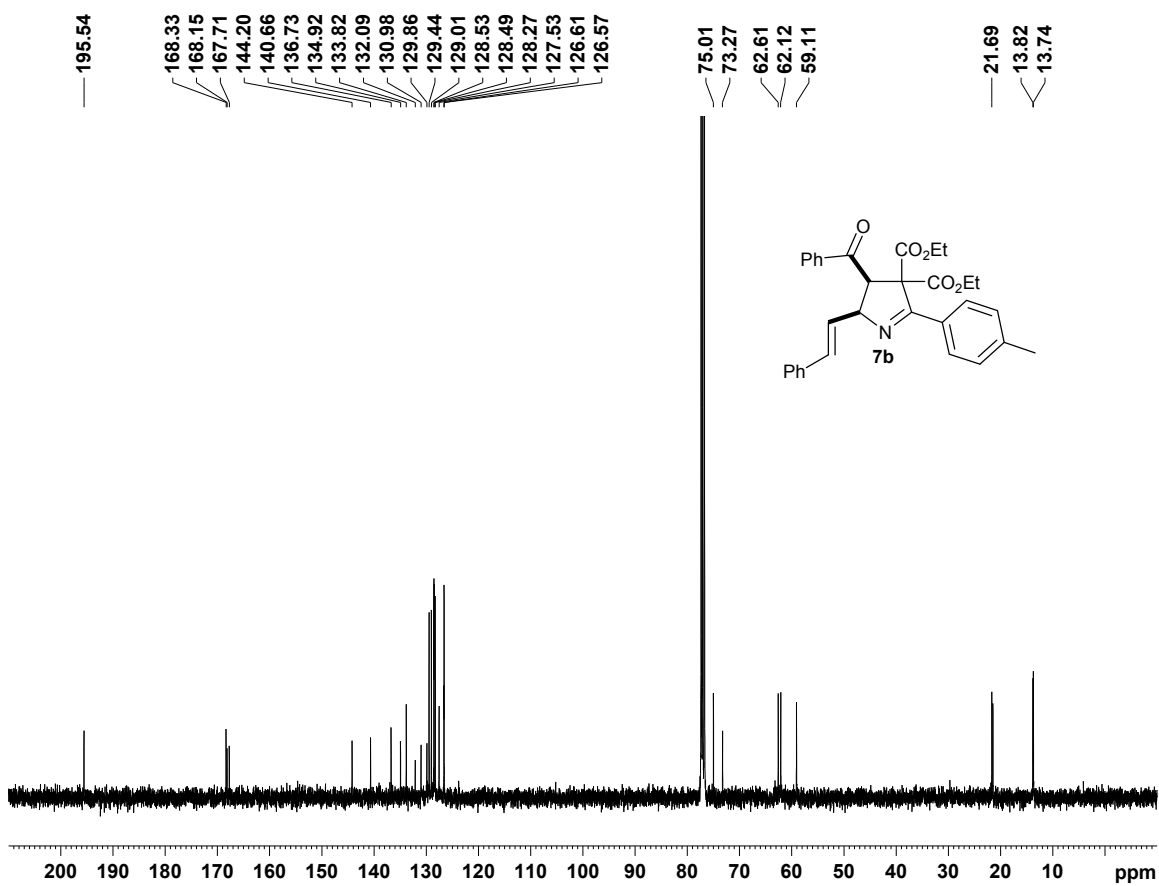
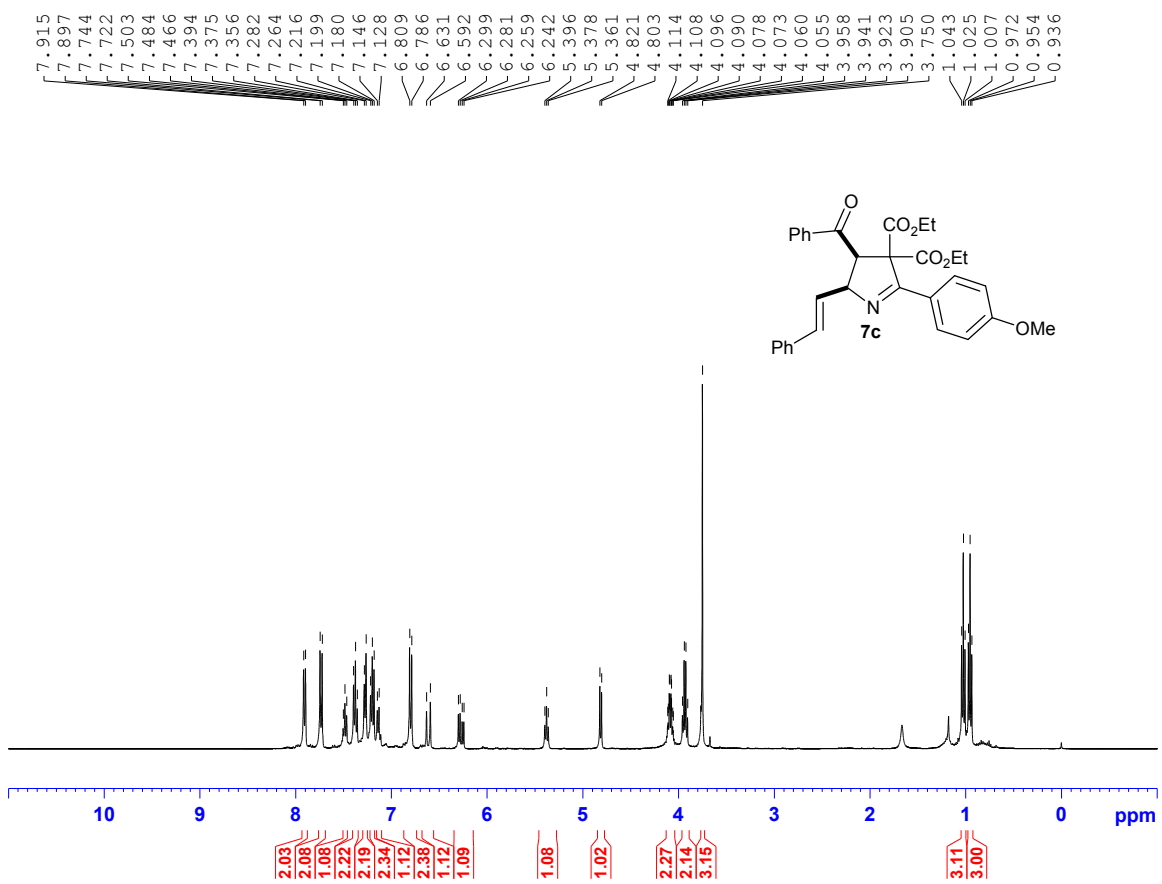
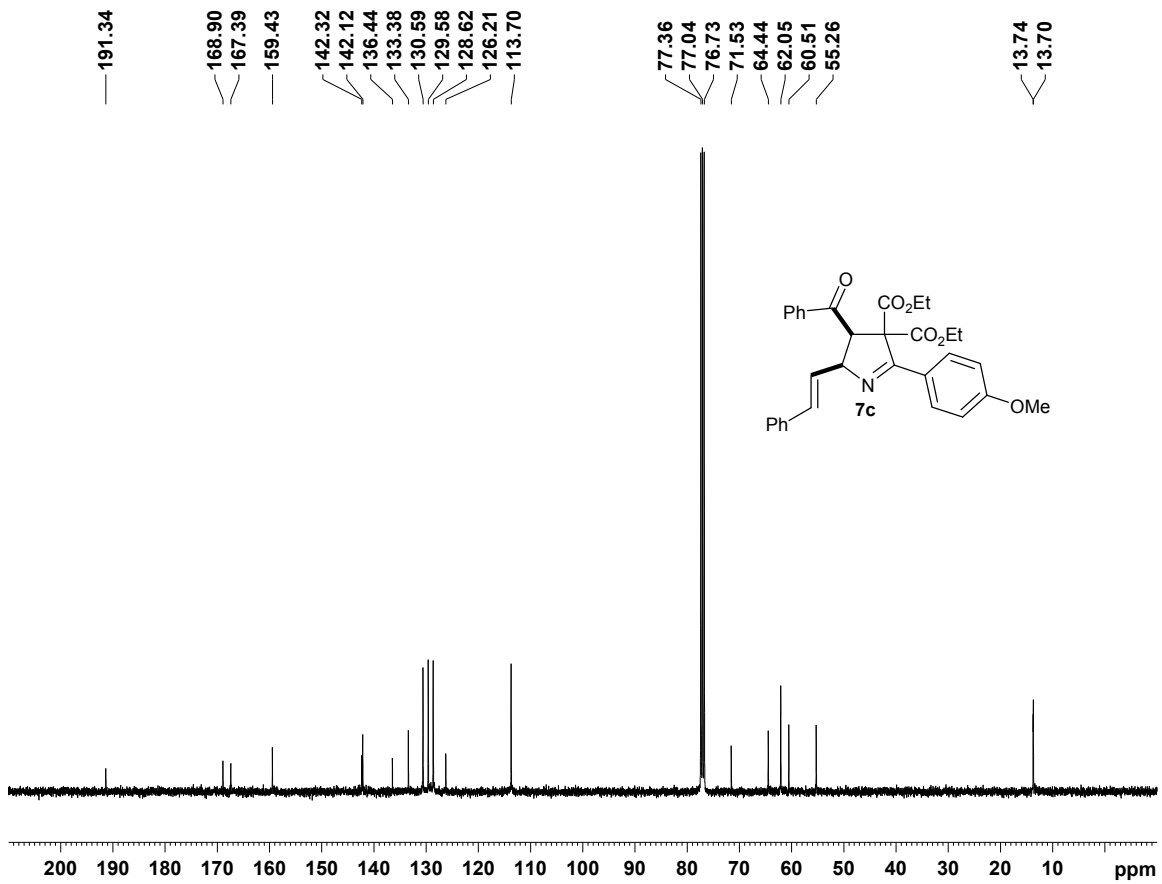


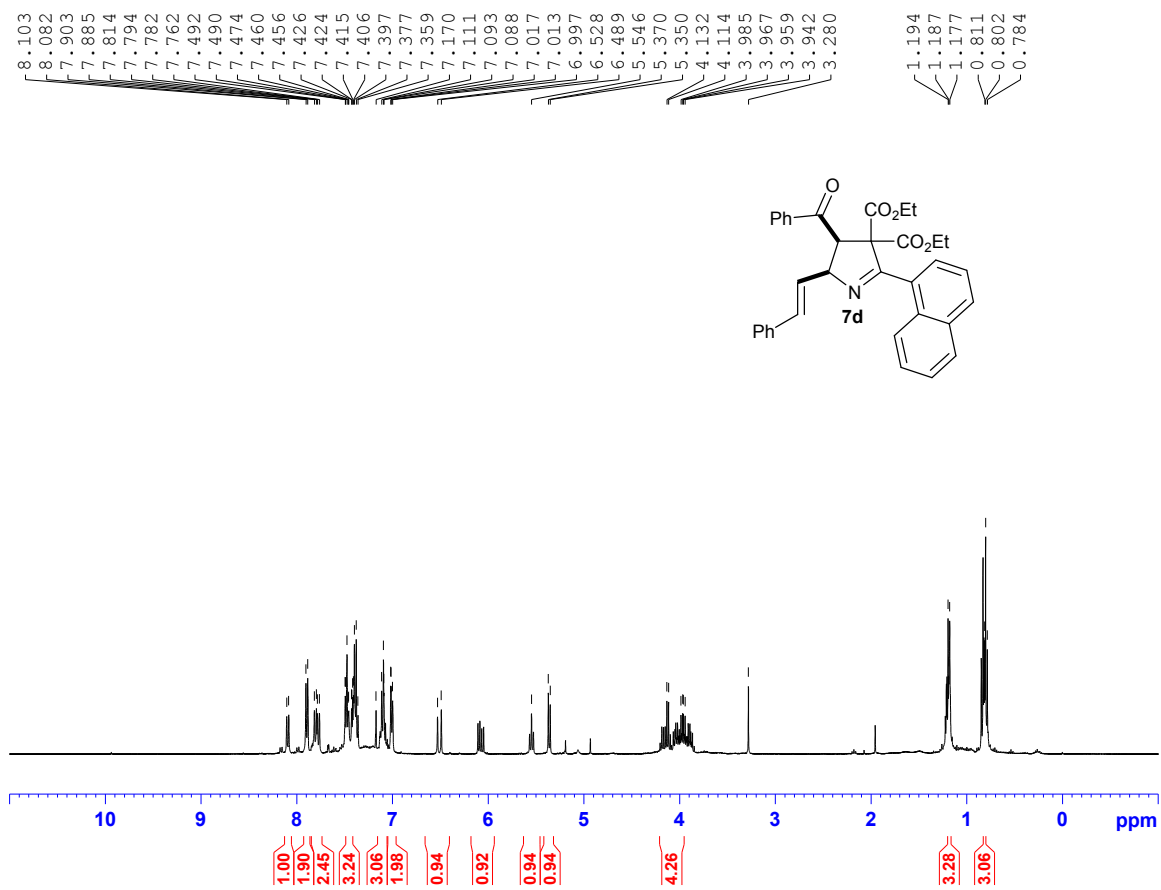
Figure 4. <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7b**



**Figure 5.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7c**

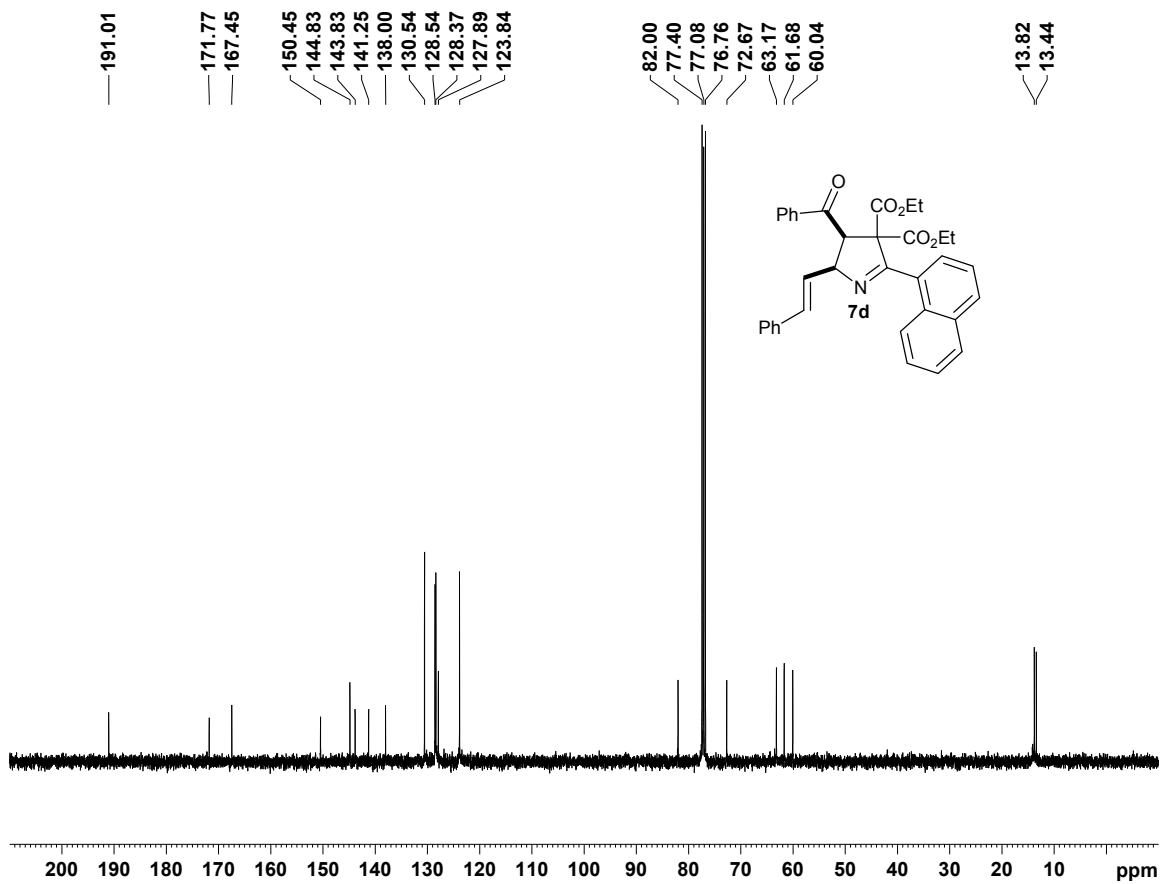


**Figure 6 .**  $^{13}\text{C}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **7c**

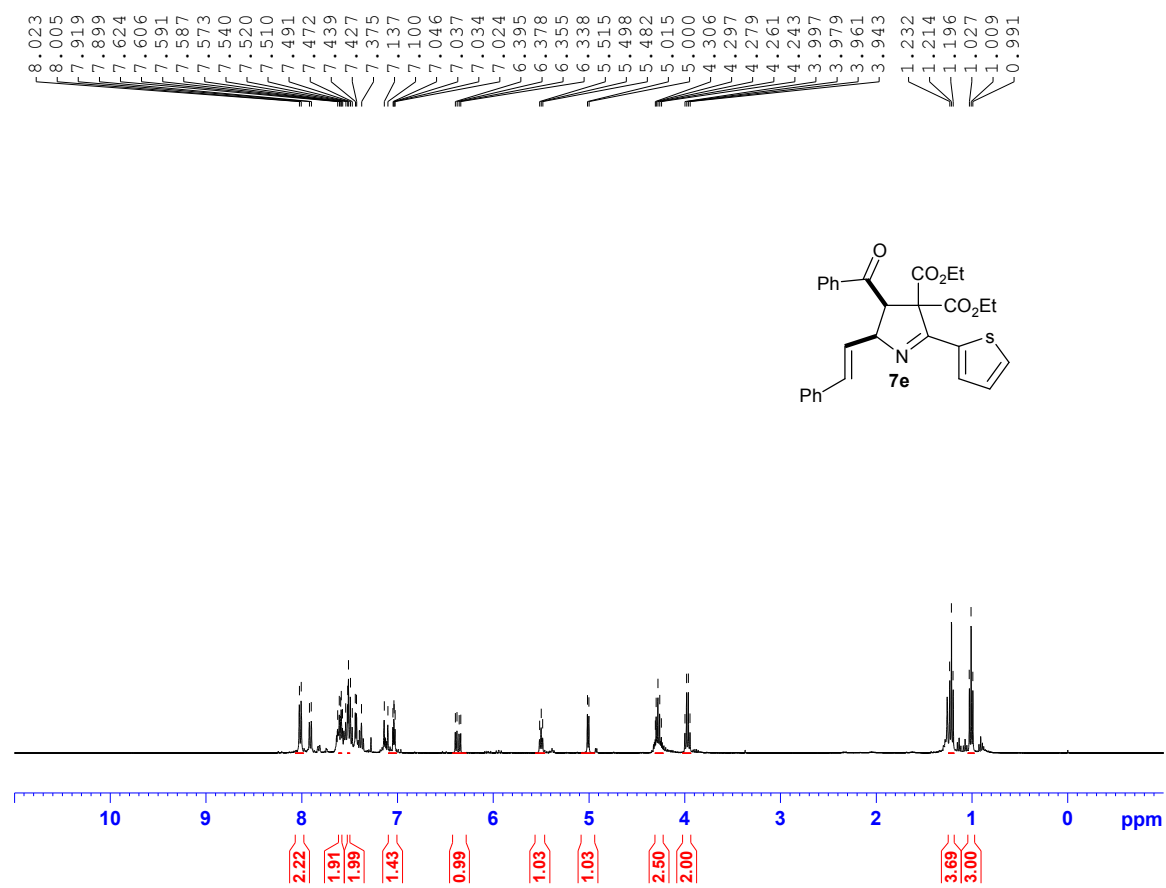


**Figure 7.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7d**





**Figure 8.**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7d**



**Figure 9.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7e**

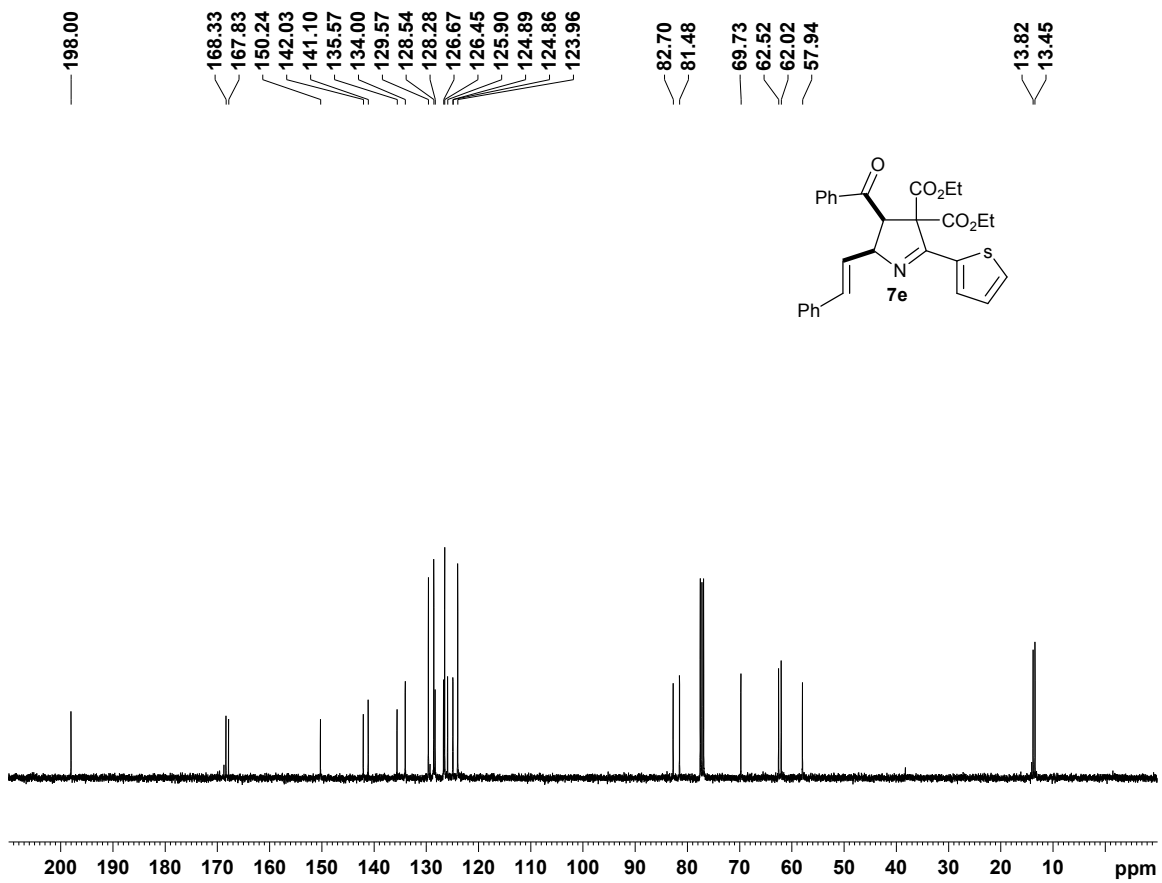


Figure 10. <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7e**

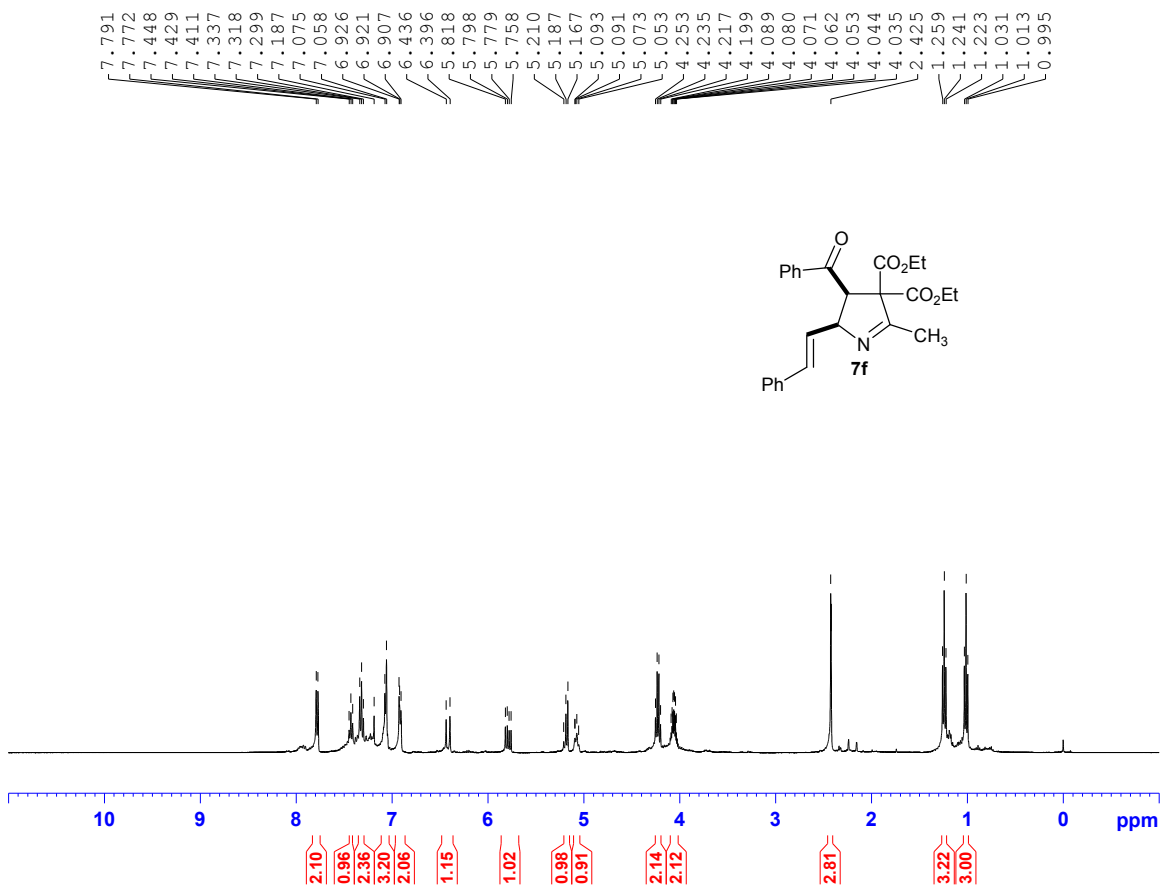


Figure 11. <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7f**

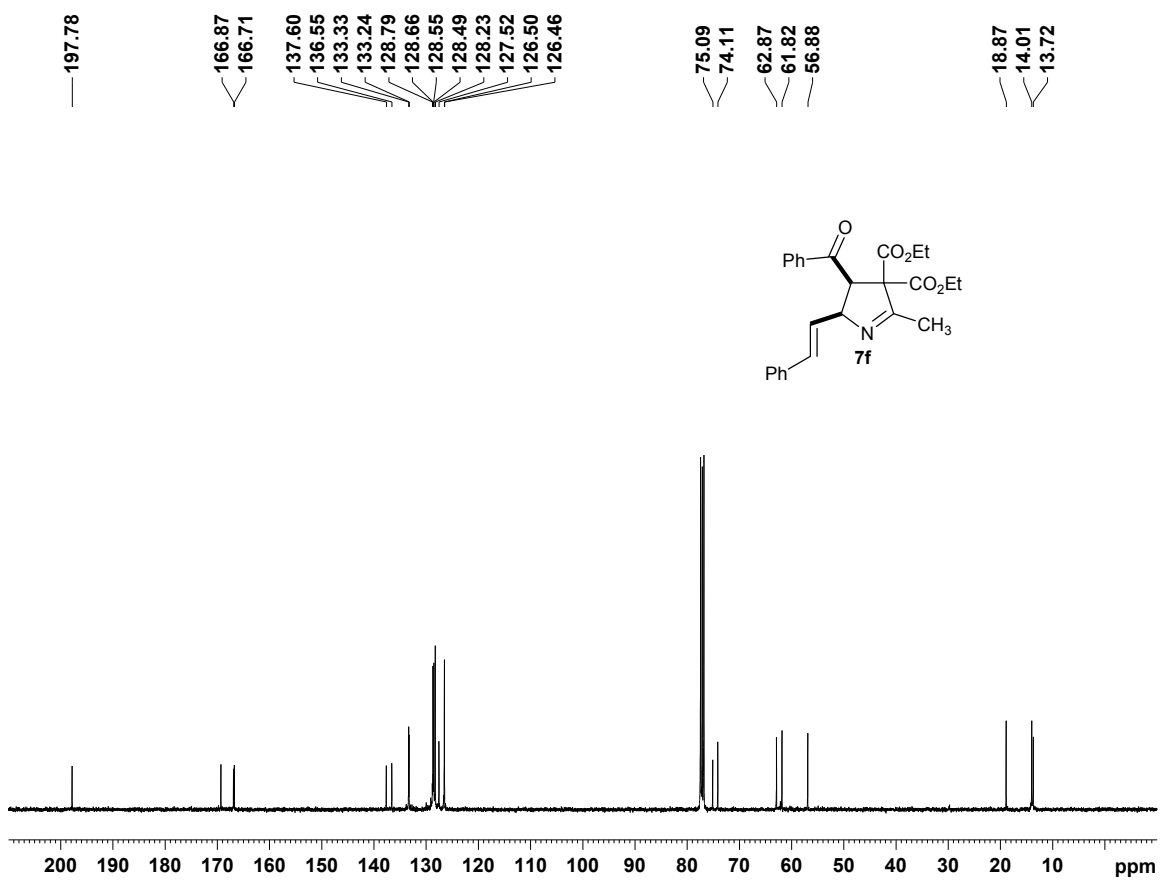
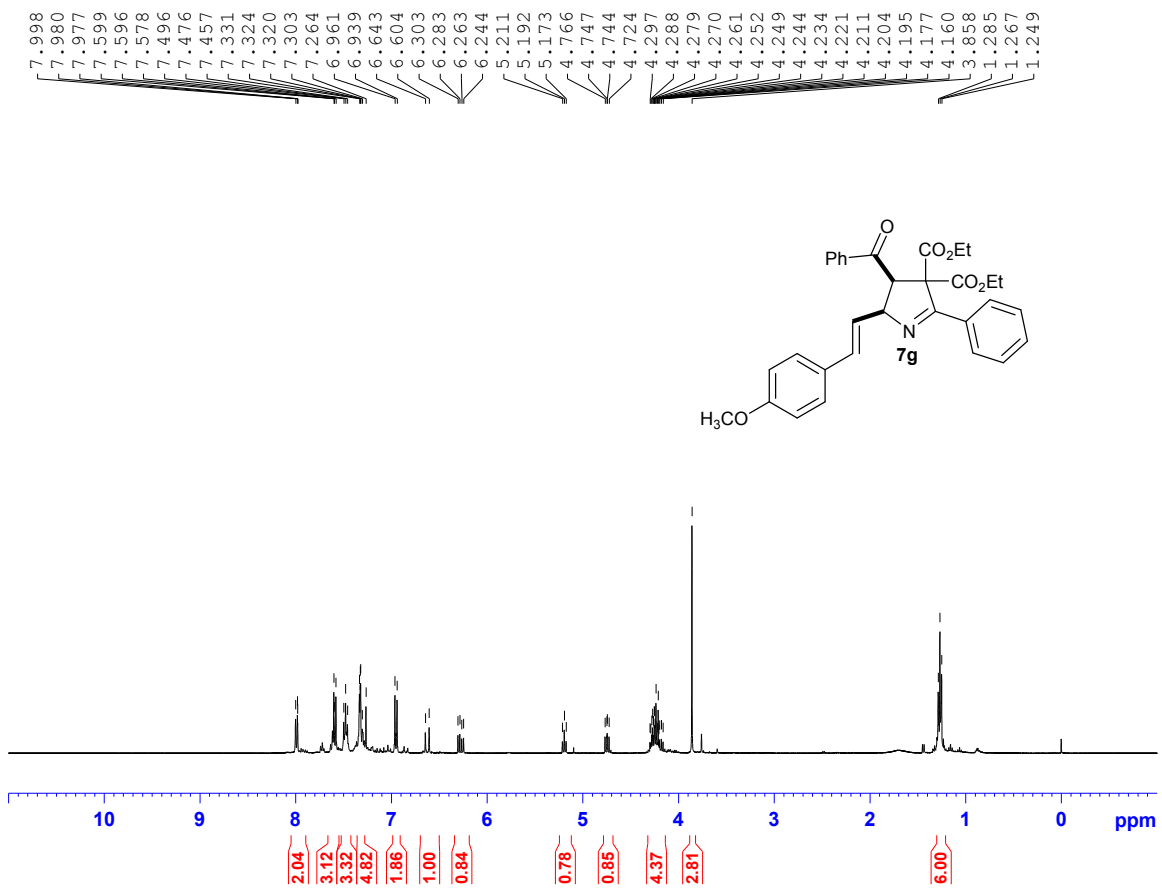
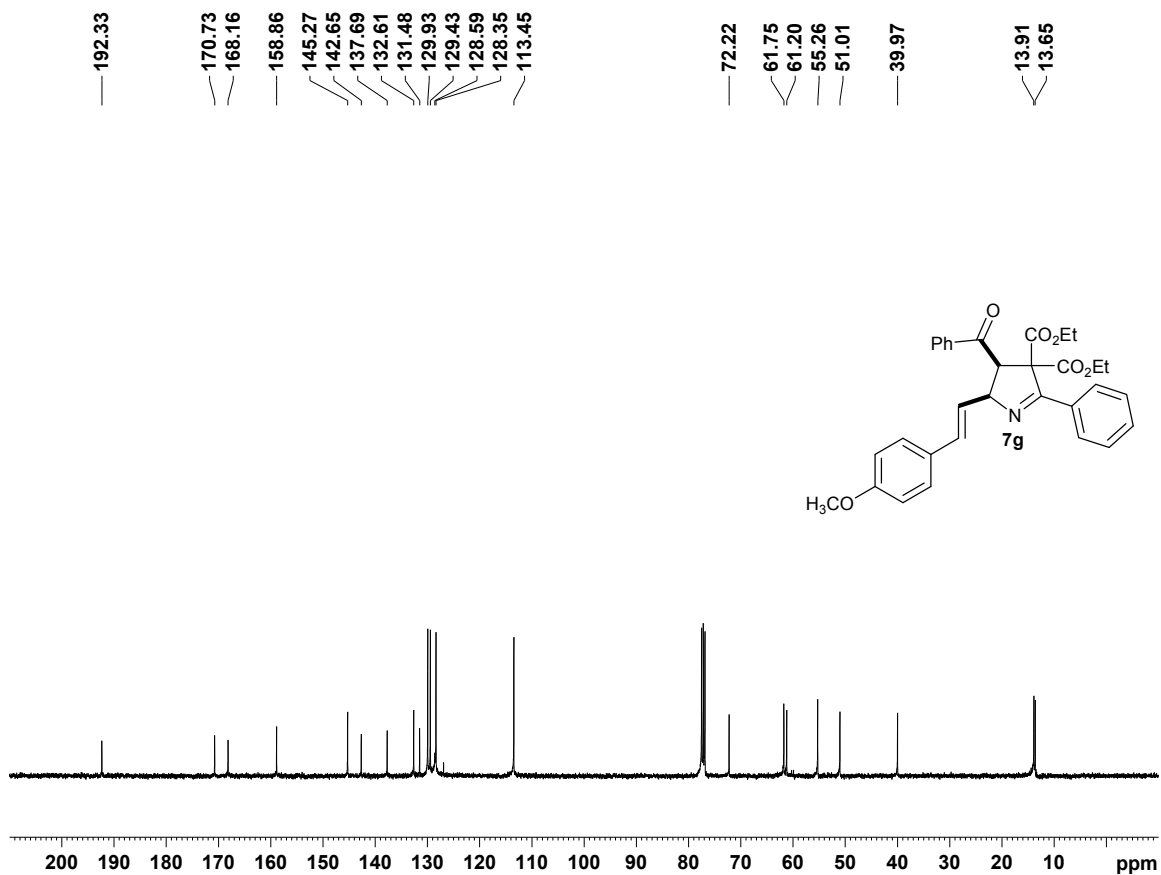


Figure 12.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7f**



**Figure 13.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **7g**



**Figure 14.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7g**

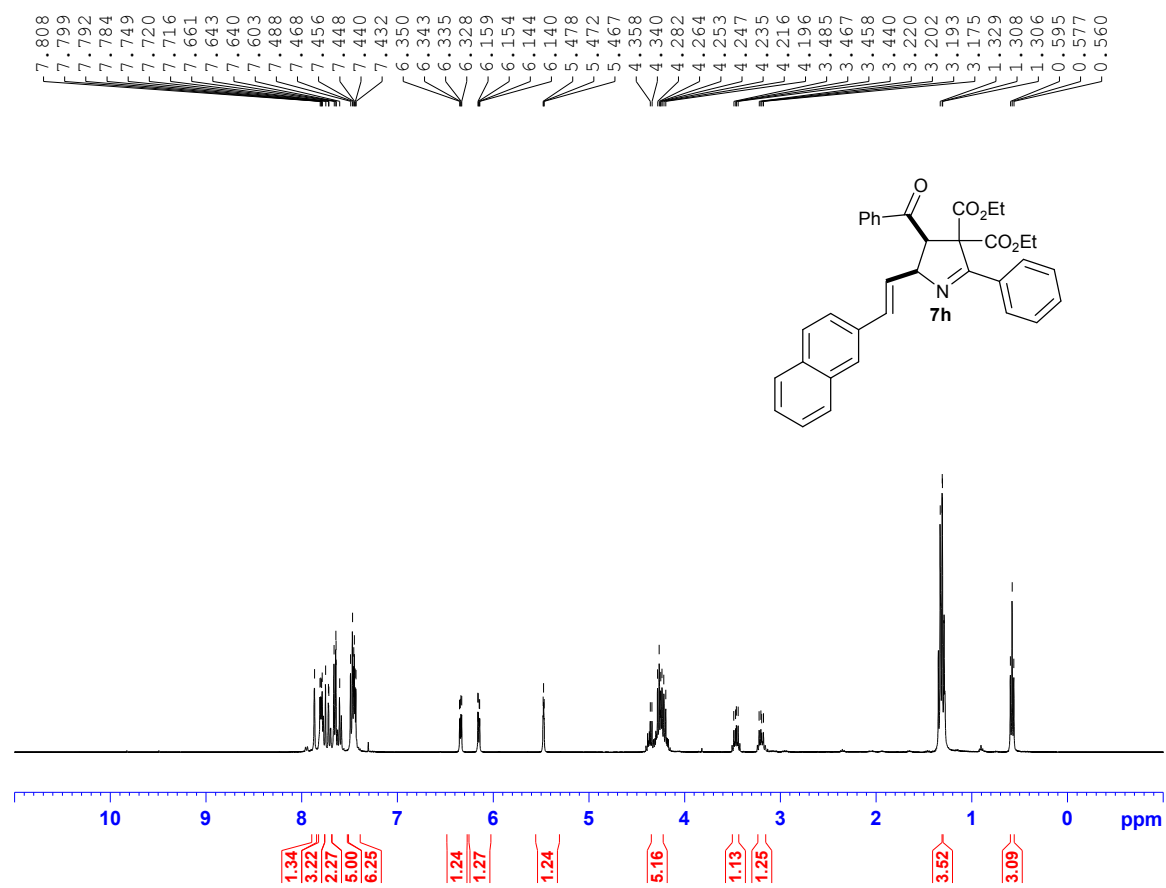


Figure 15. <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7h**



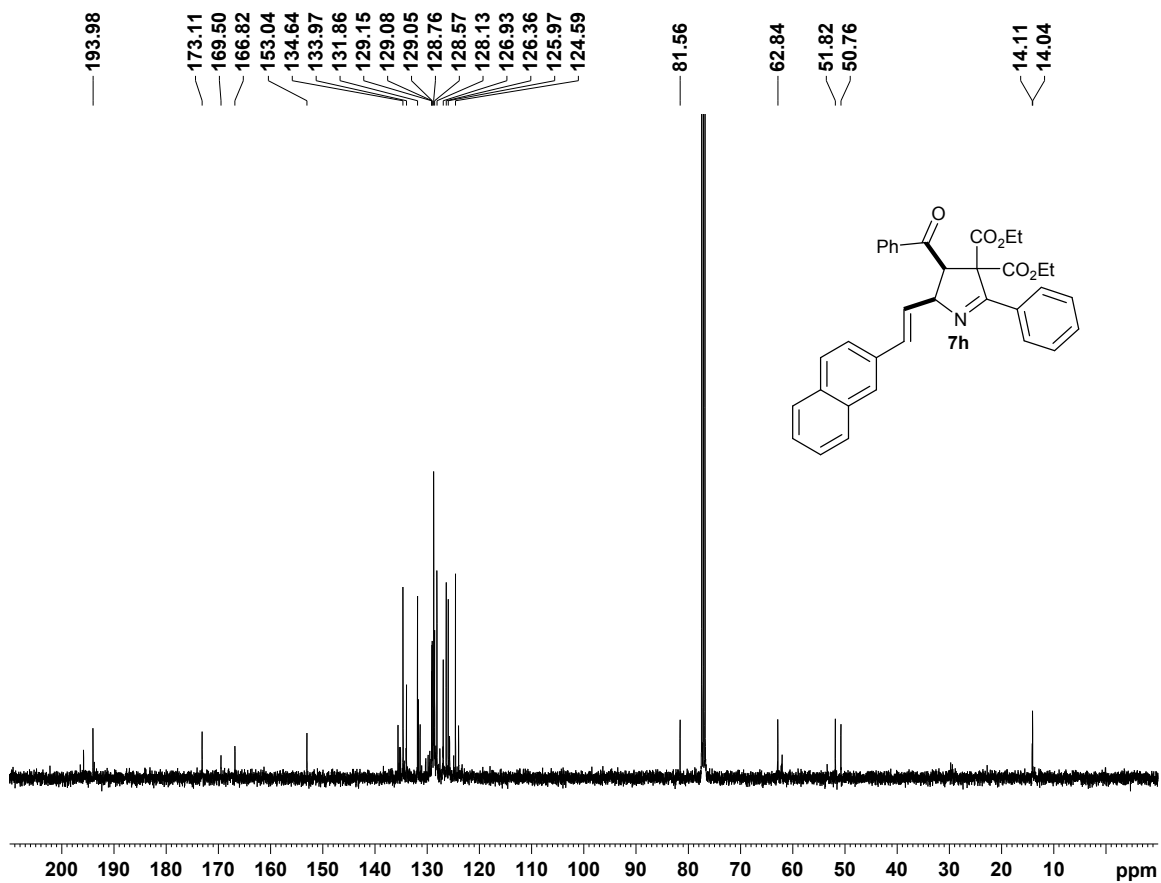
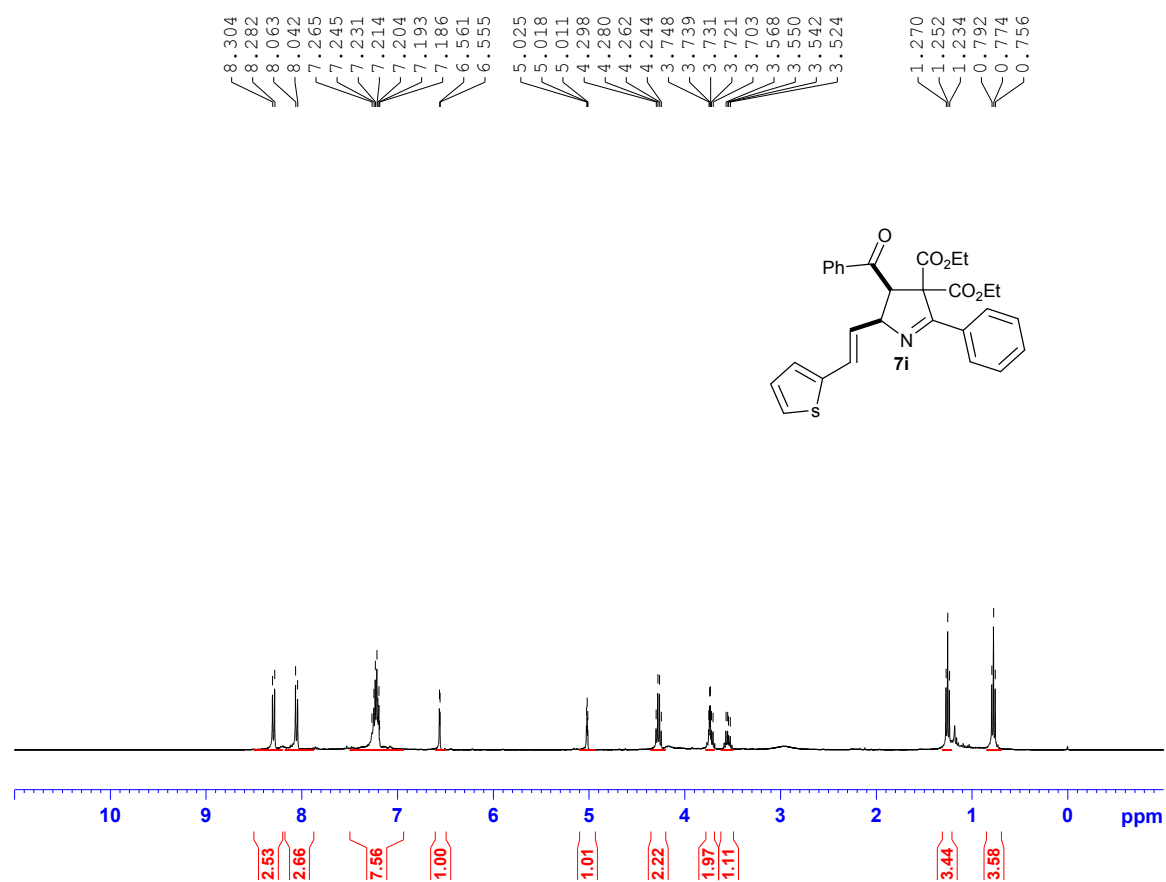


Figure 16.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7h**



**Figure 17.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7i**

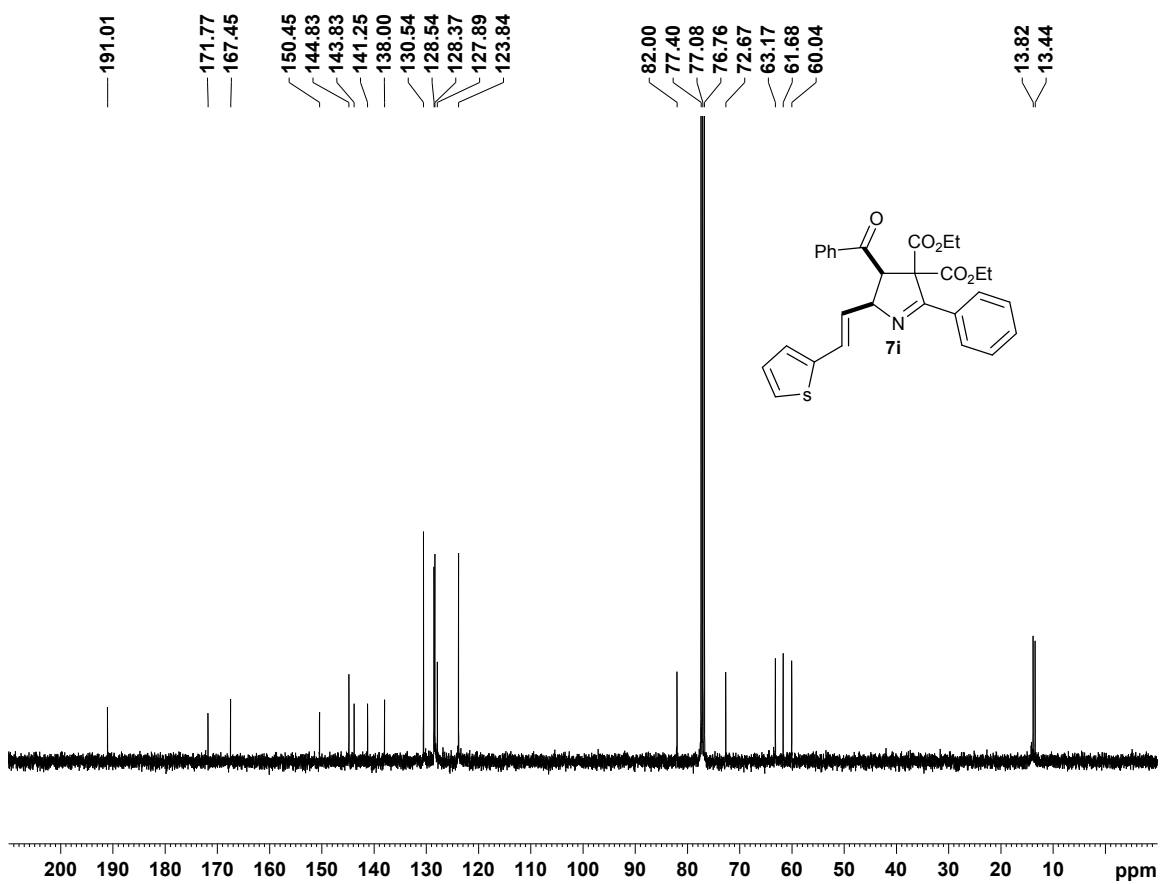


Figure 18.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7i**

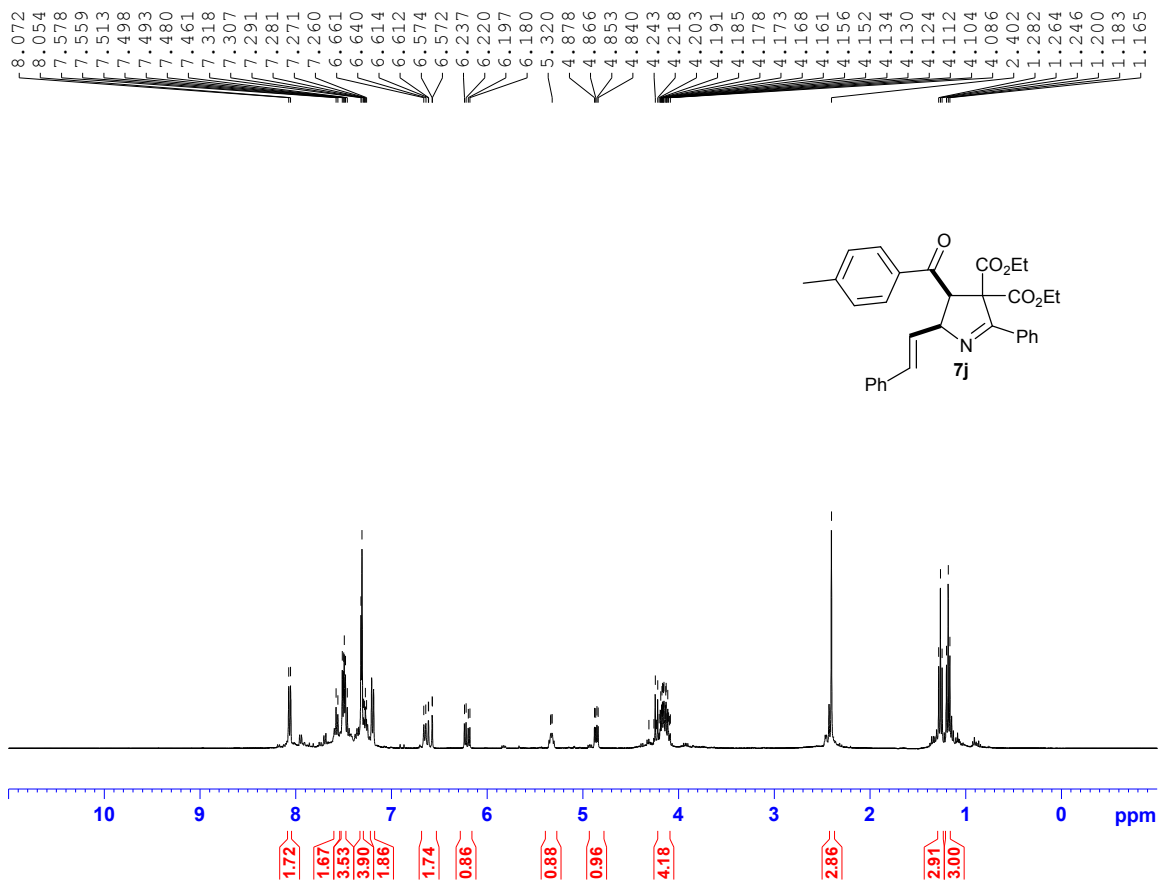


Figure 19. <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of 7j

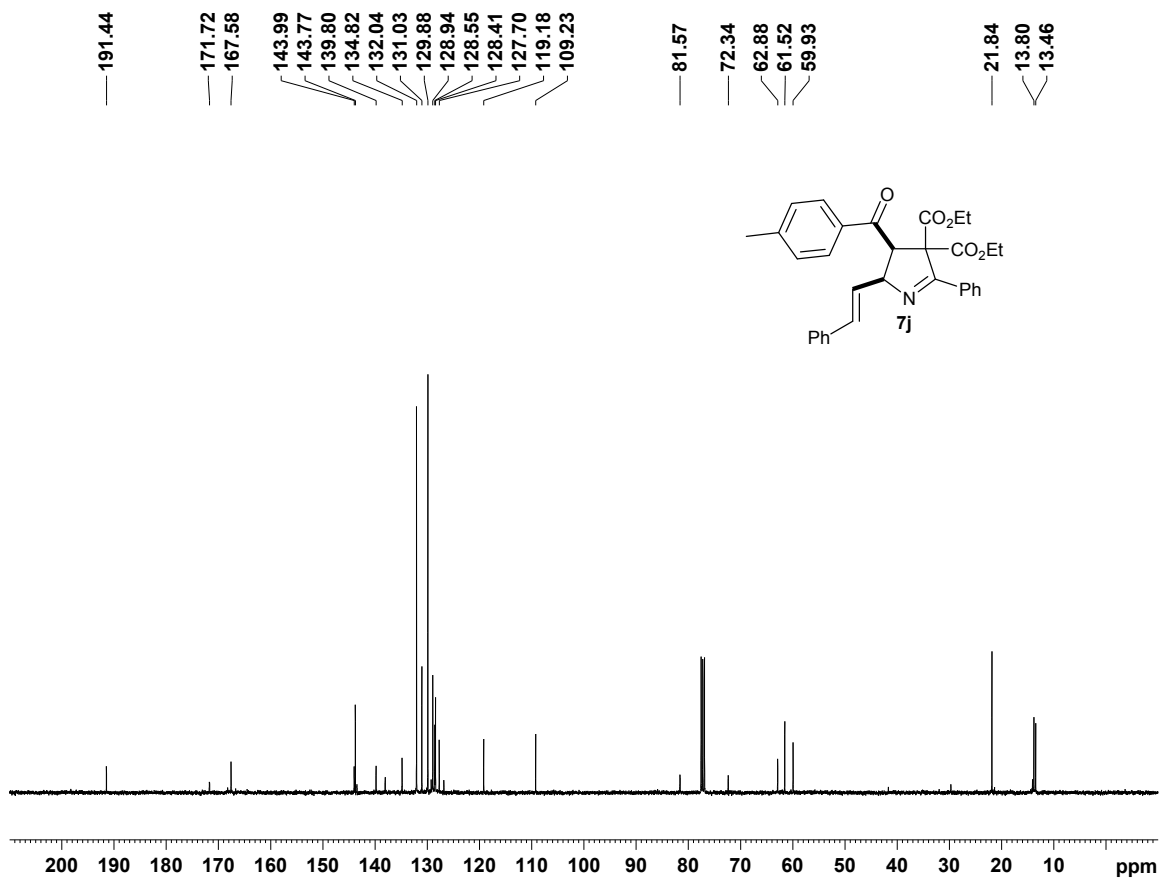
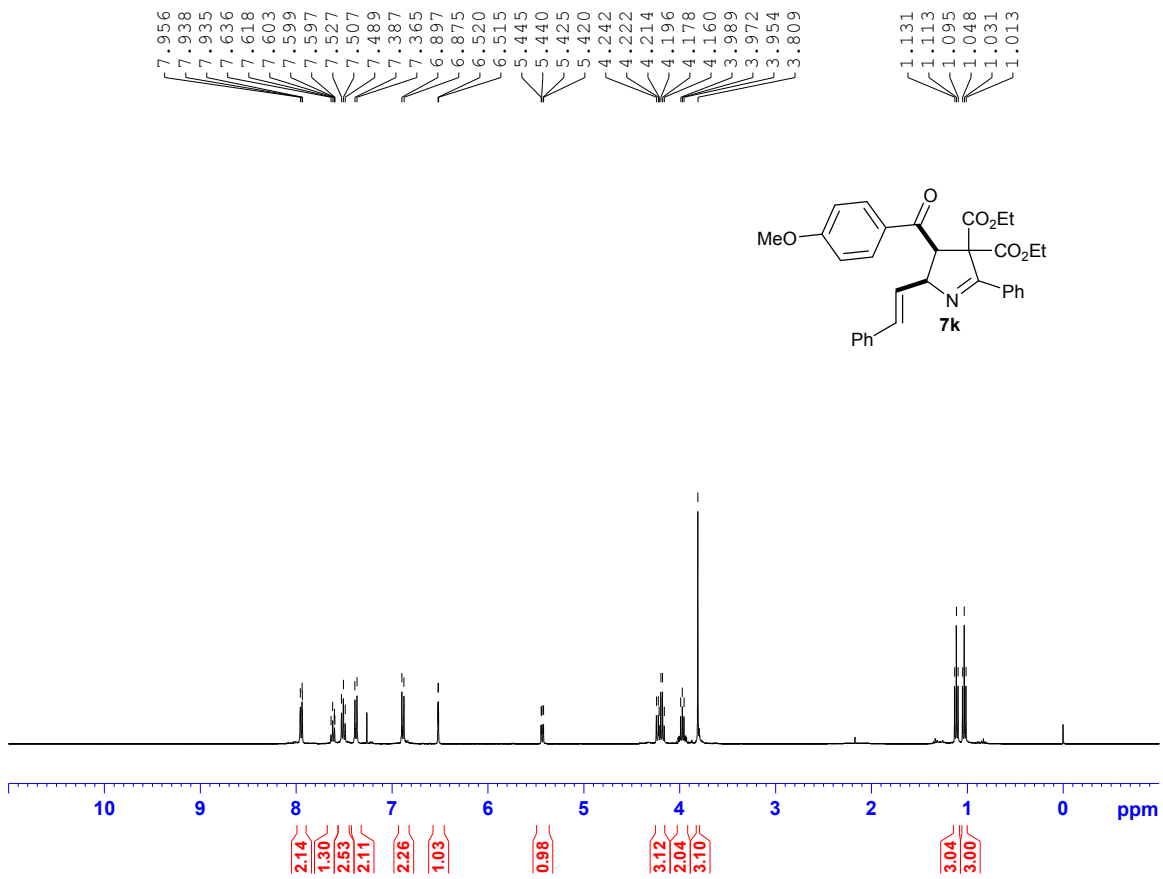


Figure 20.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7j**



**Figure 21.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7k**

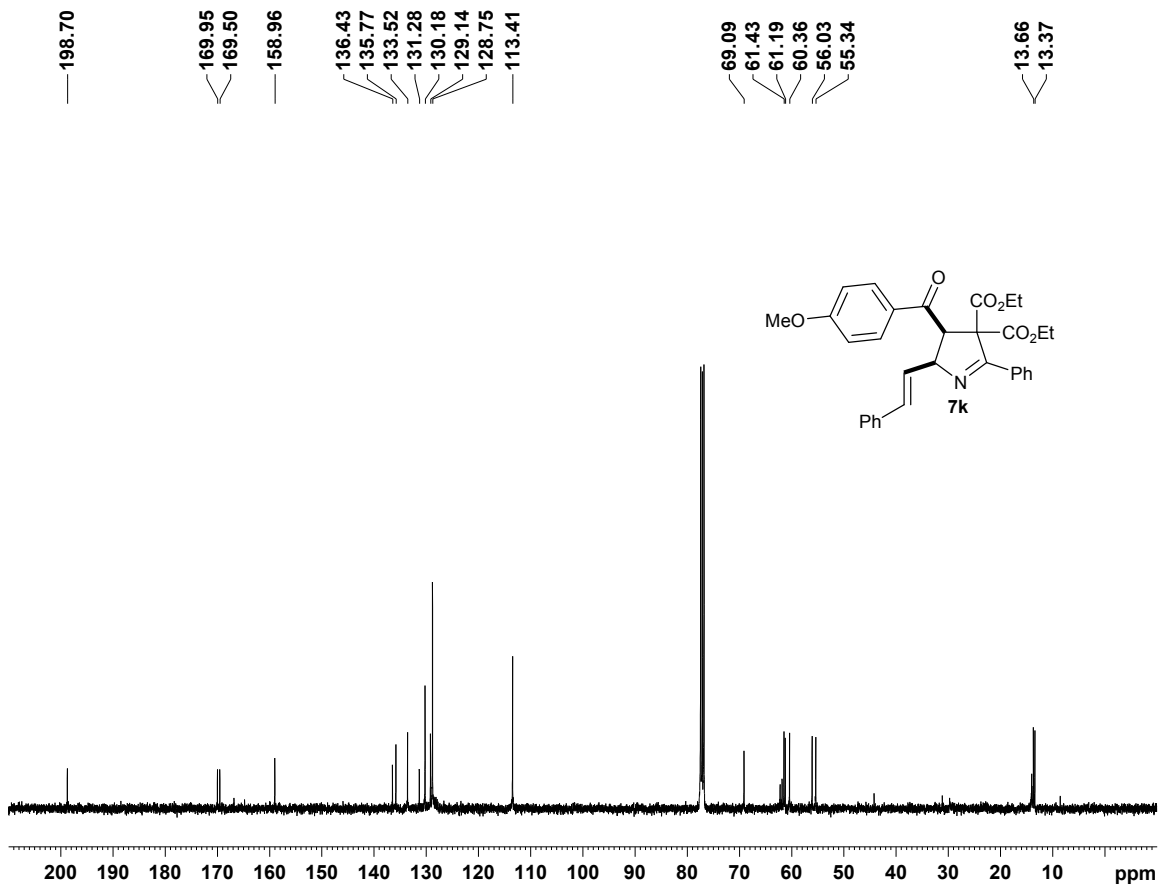
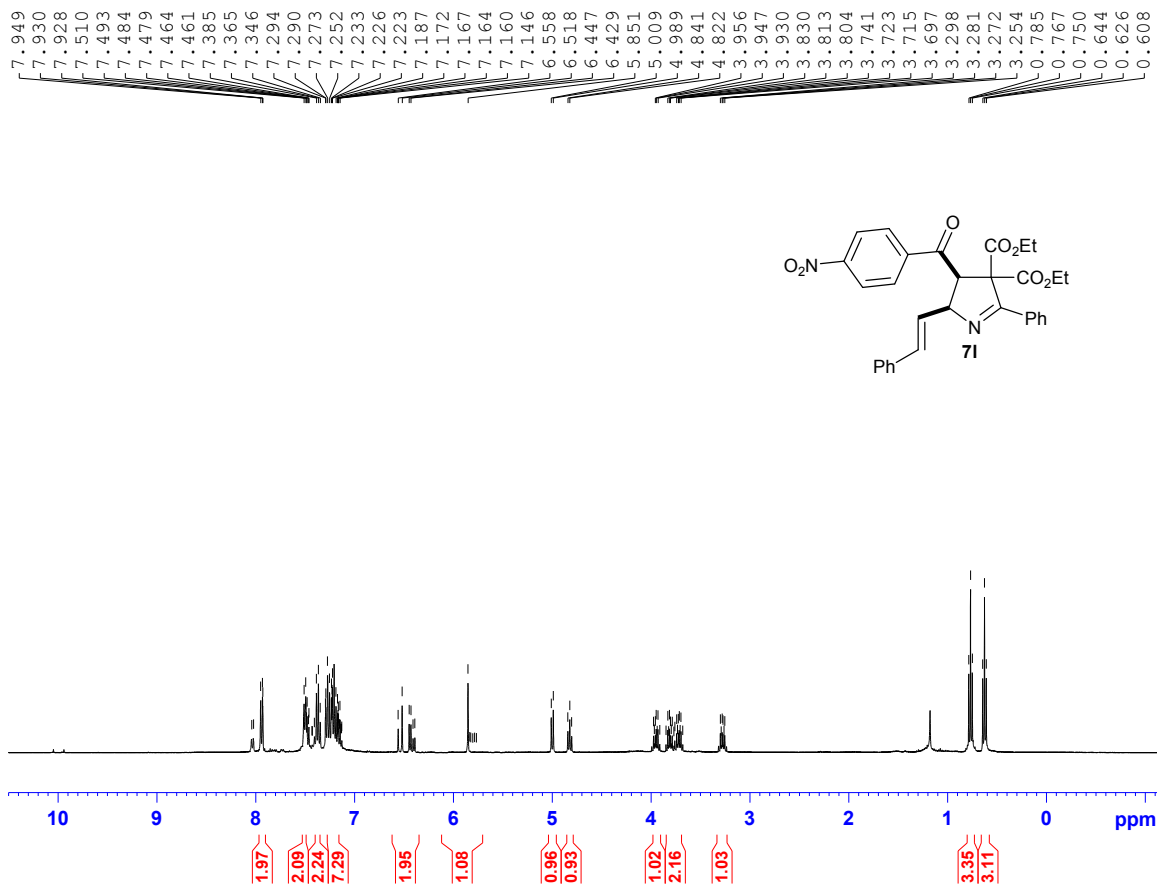


Figure 22.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of 7k



**Figure 23.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **71**



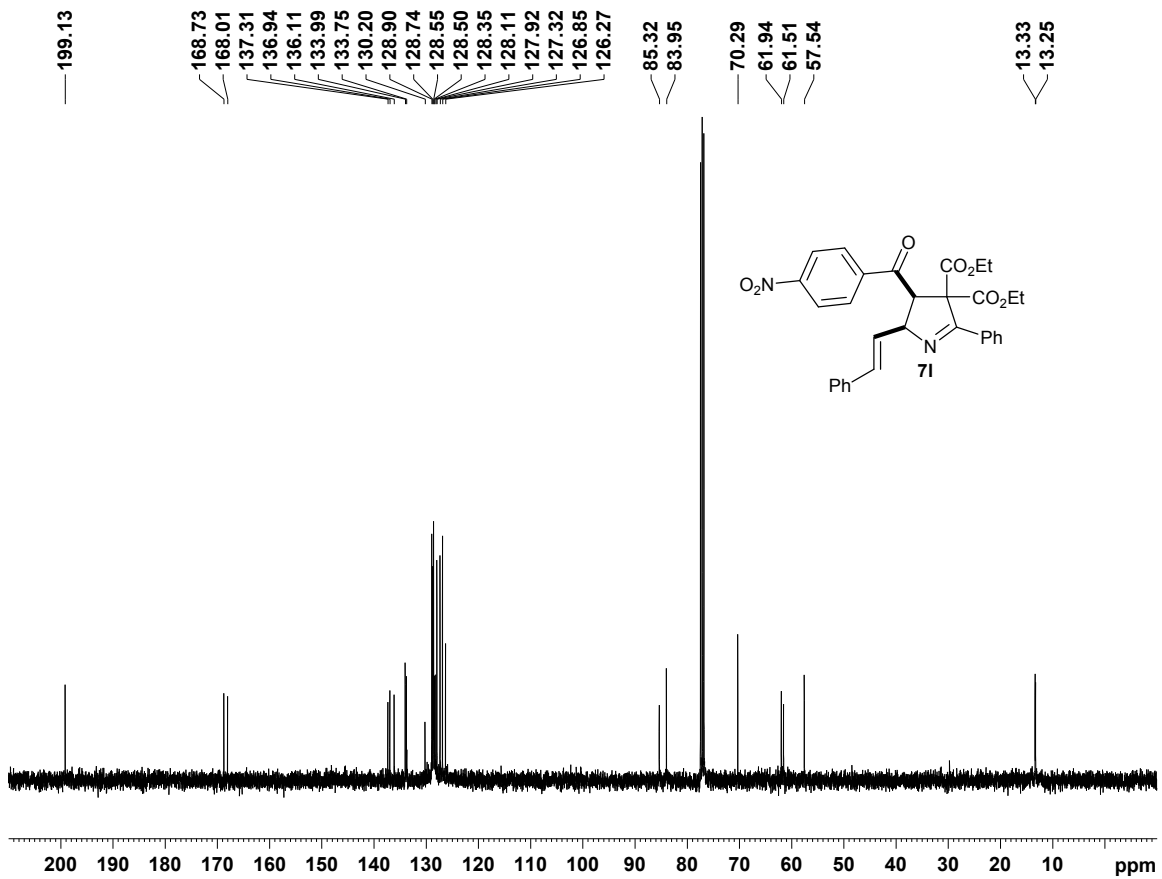
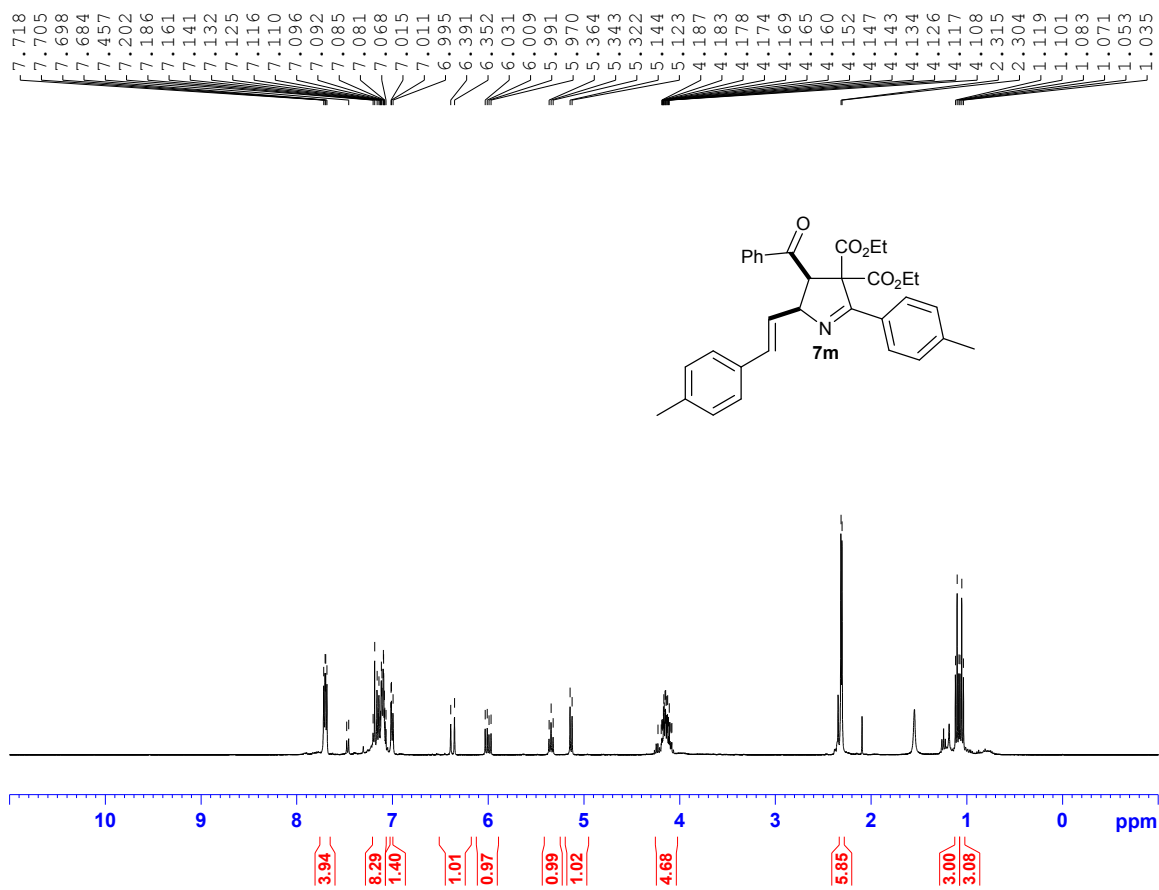
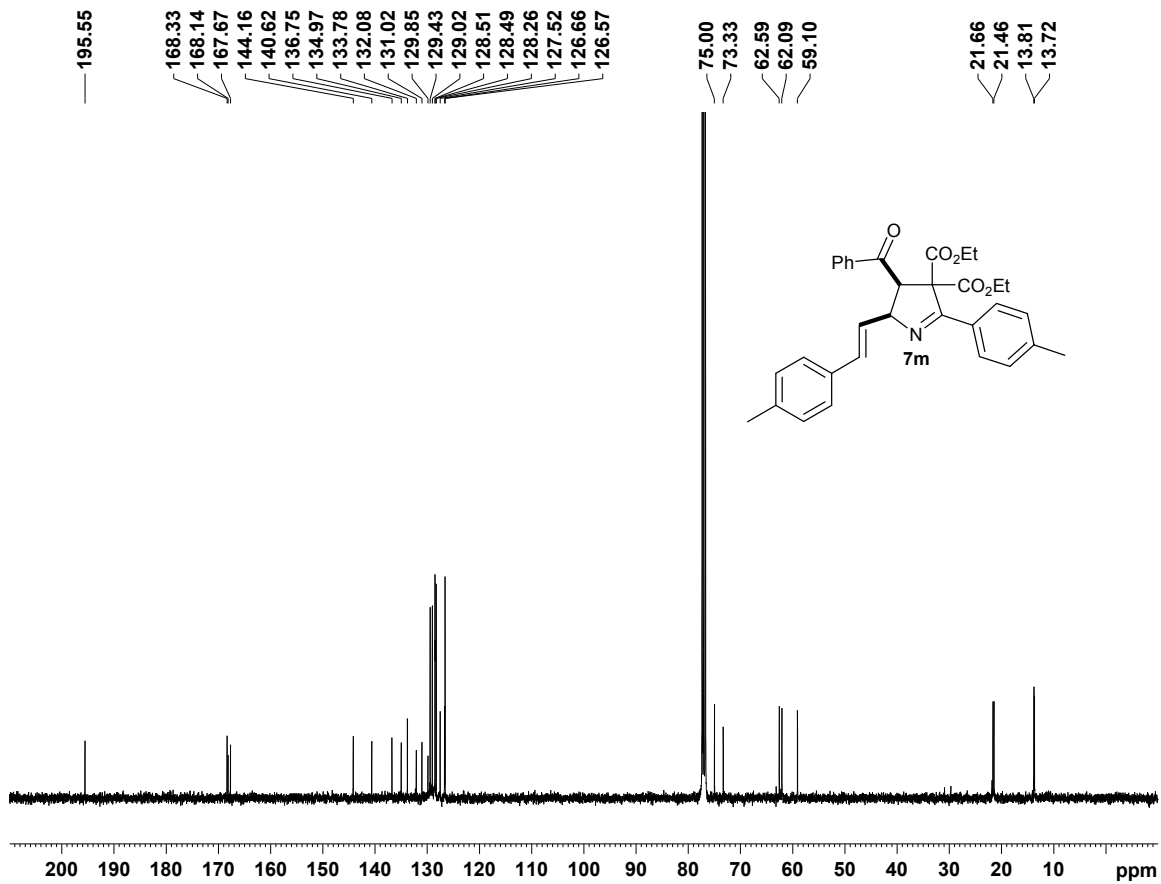


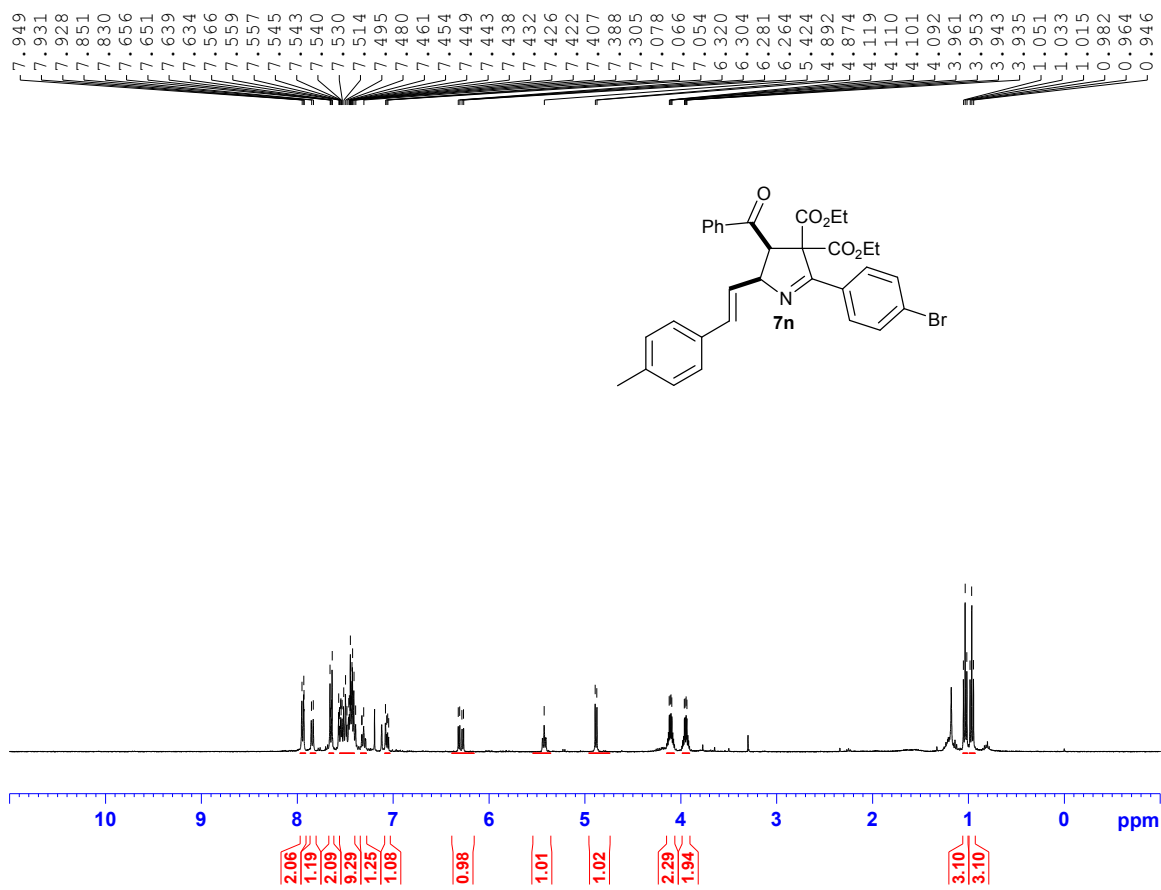
Figure 24.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **71**



**Figure 25.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7m**



**Figure 26.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7m**



**Figure 27.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7n**

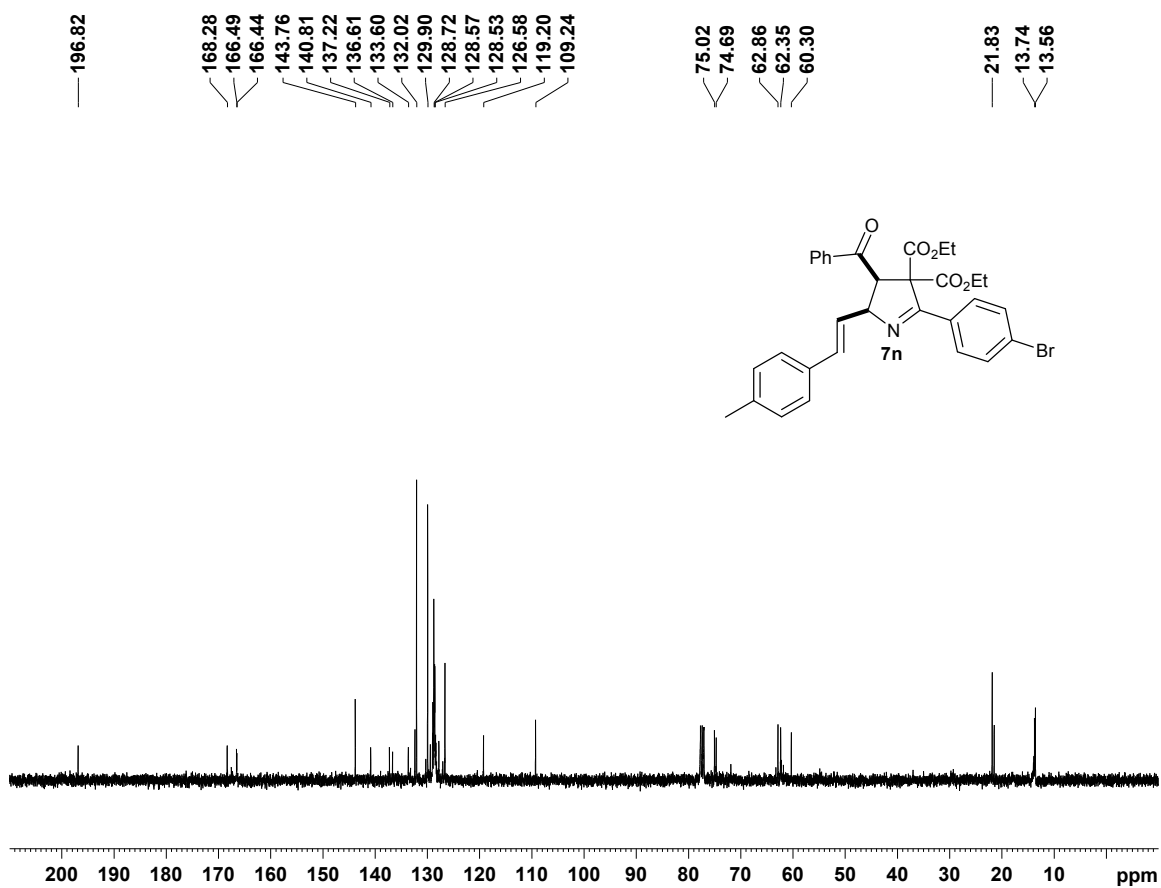


Figure 28.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7n**

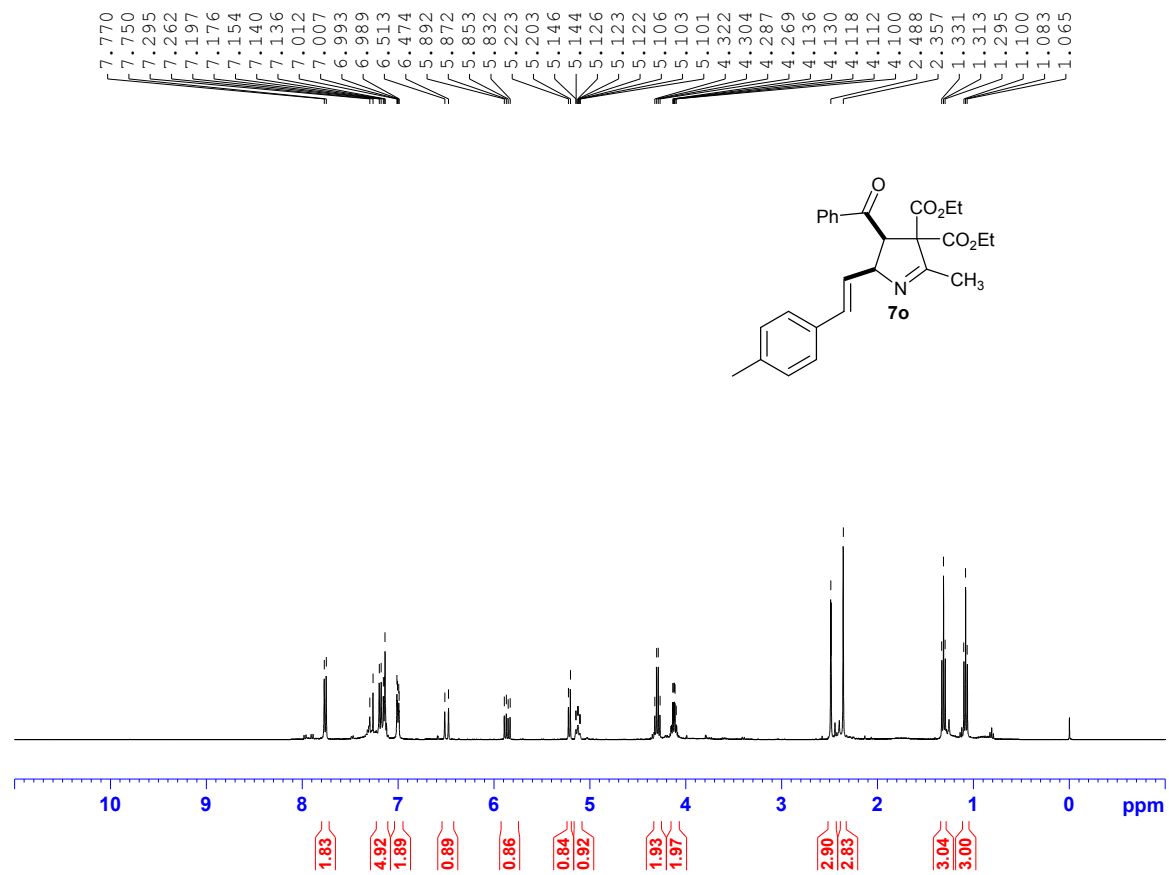


Figure 29. <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7o**

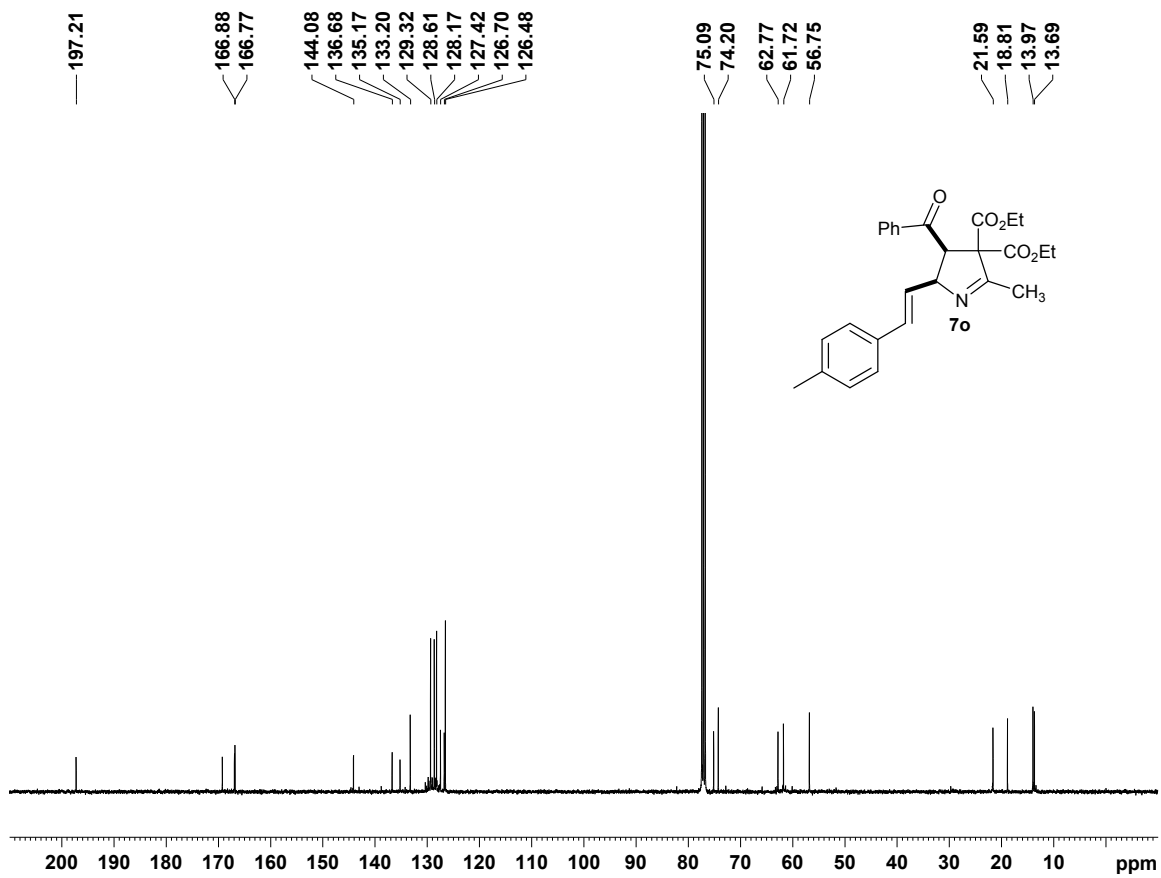
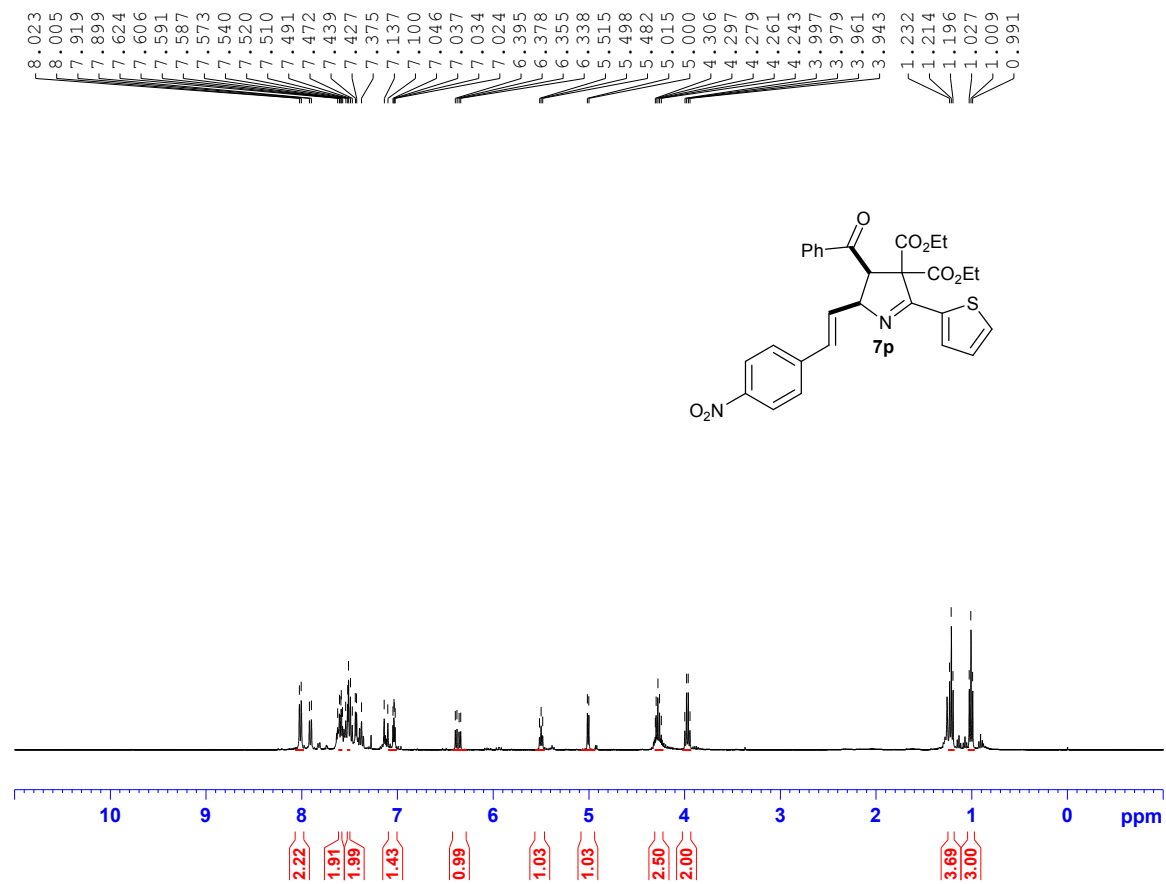
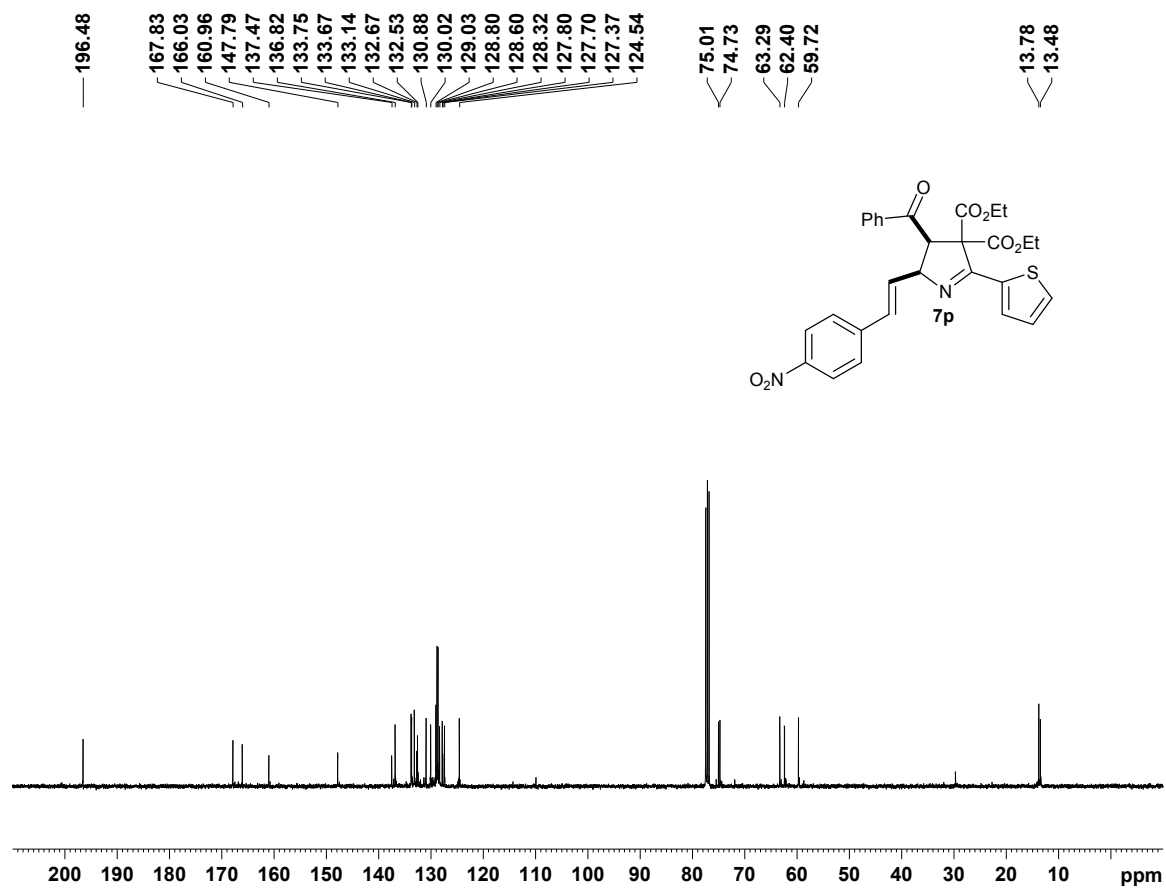


Figure 30.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **7o**

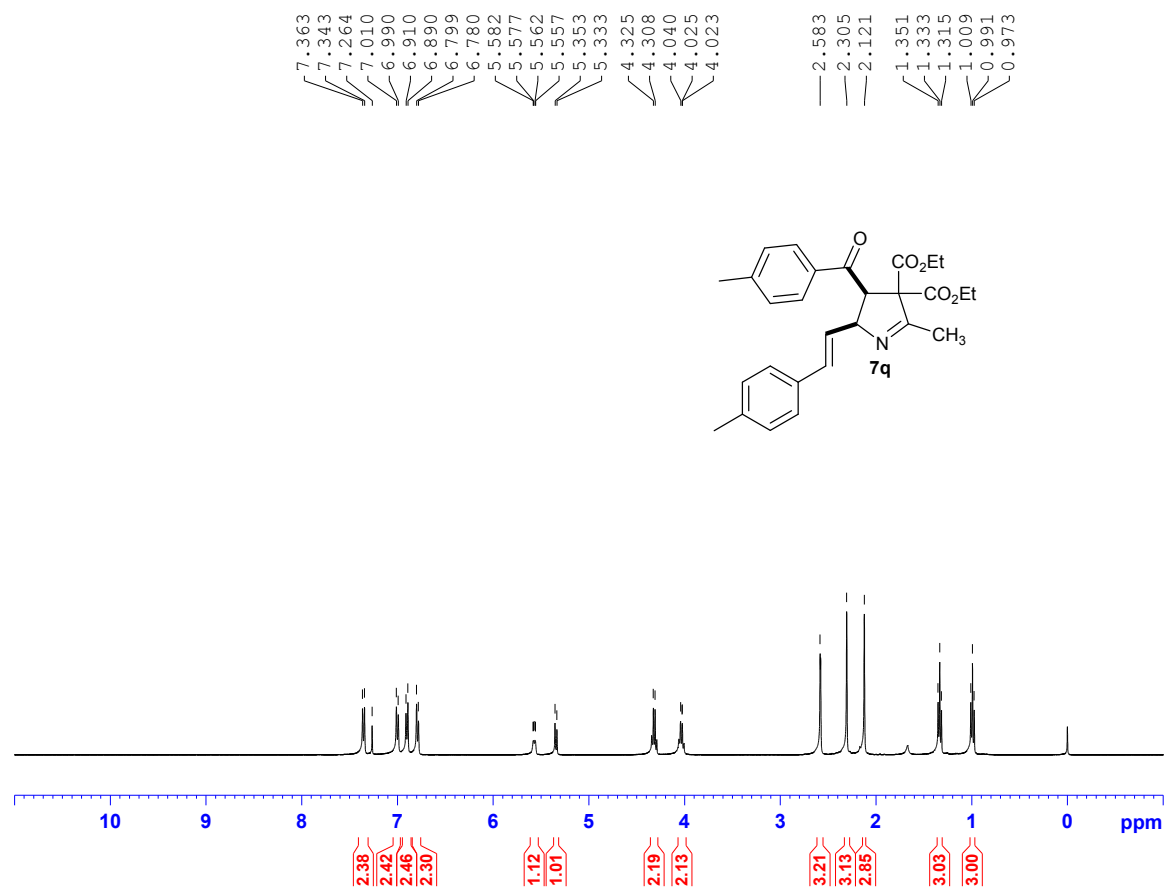


**Figure 31.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **7p**





**Figure 32.** <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7p**



**Figure 33.** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) spectrum of **7q**

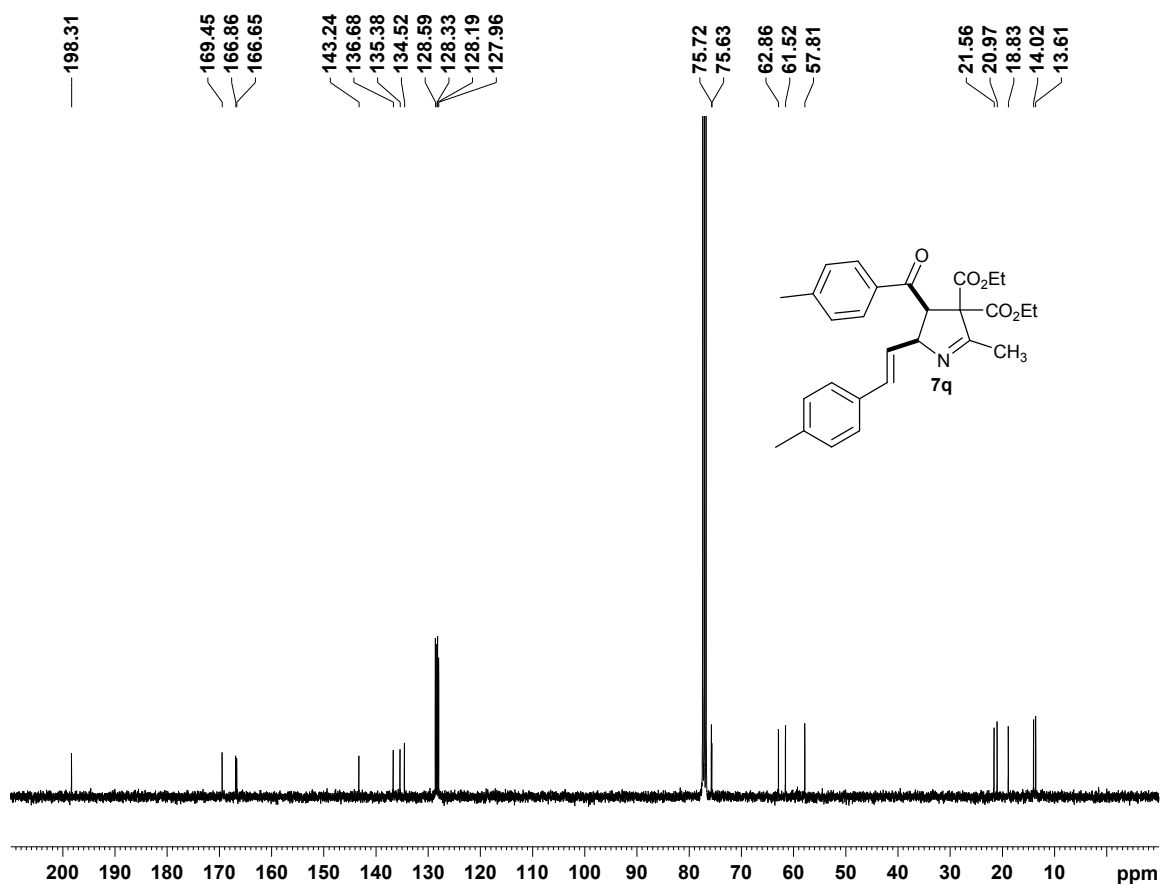
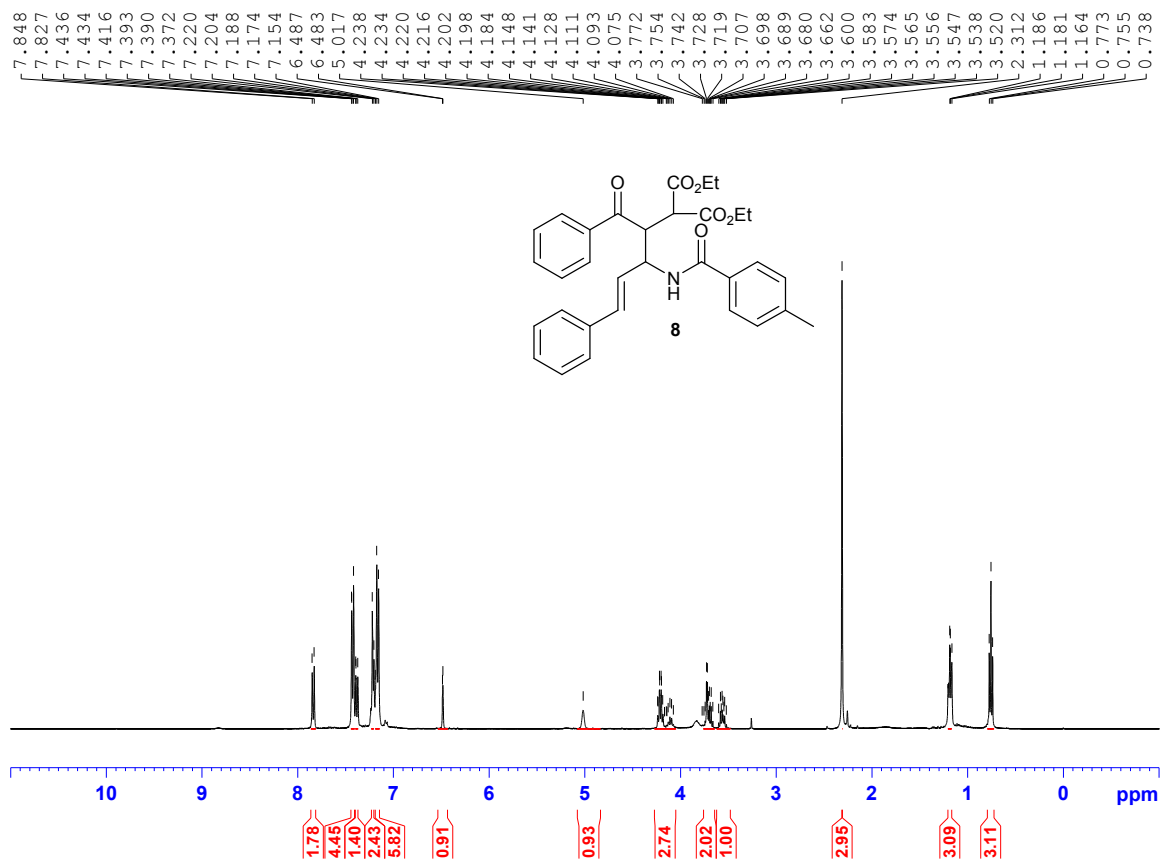


Figure 34. <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) spectrum of **7q**



**Figure 35.**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) spectrum of **8**

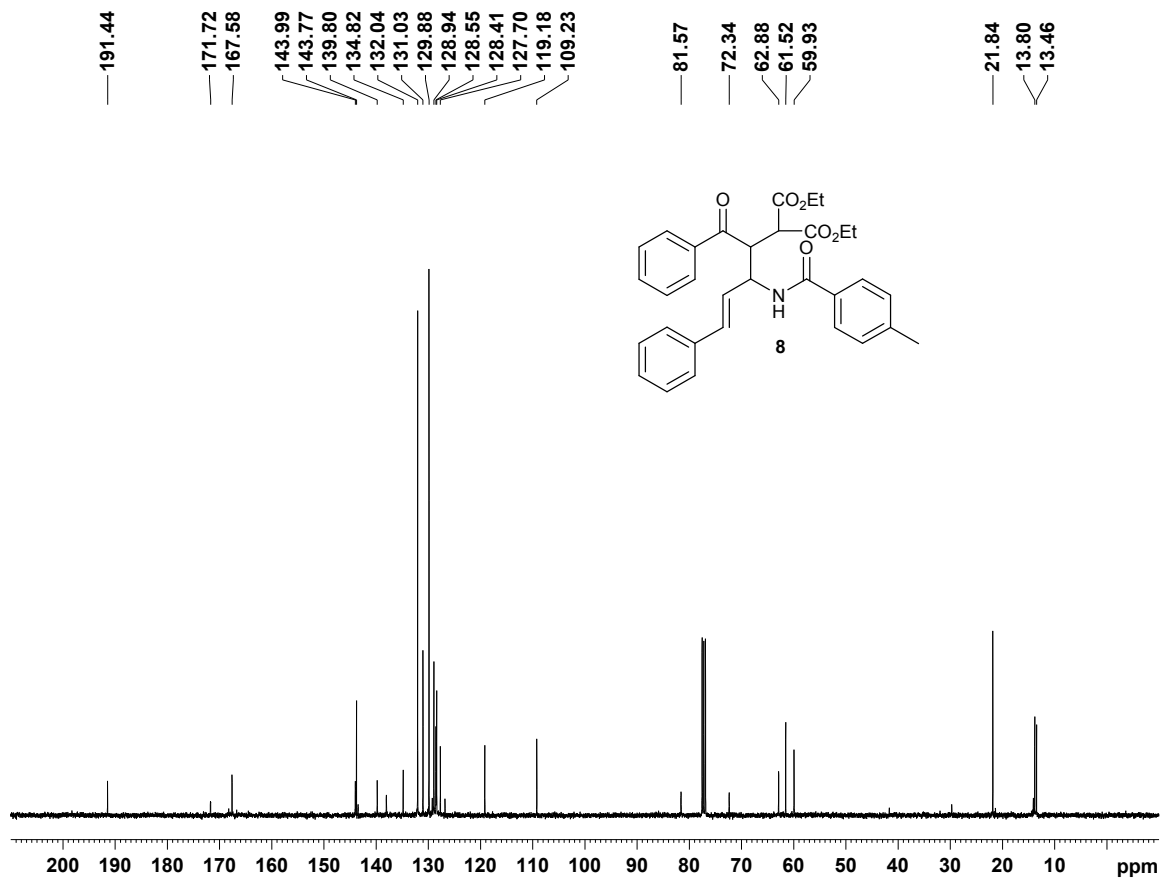


Figure 36.  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) spectrum of **8**