

**Cu-catalyzed late-stage diversification and anti-proliferative activity  
evaluation of evodiamine**

Jing Wang, Yang Yang, Ming-Li Zhou, Feng Gao,\* Jin-Bu Xu,\* Lian Sun\*

Sichuan Engineering Research Center for Biomimetic Synthesis of Natural Drugs, School of Life Science and Engineering, Southwest Jiaotong University, Chengdu 610031, People's Republic of China

**\* Corresponding Author:**

Prof. Feng Gao

E-mail: [gaof@swjtu.edu.cn](mailto:gaof@swjtu.edu.cn)

Dr. Jin-Bu Xu

E-mail: [xujinbu@swjtu.edu.cn](mailto:xujinbu@swjtu.edu.cn)

Dr. Lian Sun

E-mail: [liansun@swjtu.edu.cn](mailto:liansun@swjtu.edu.cn)

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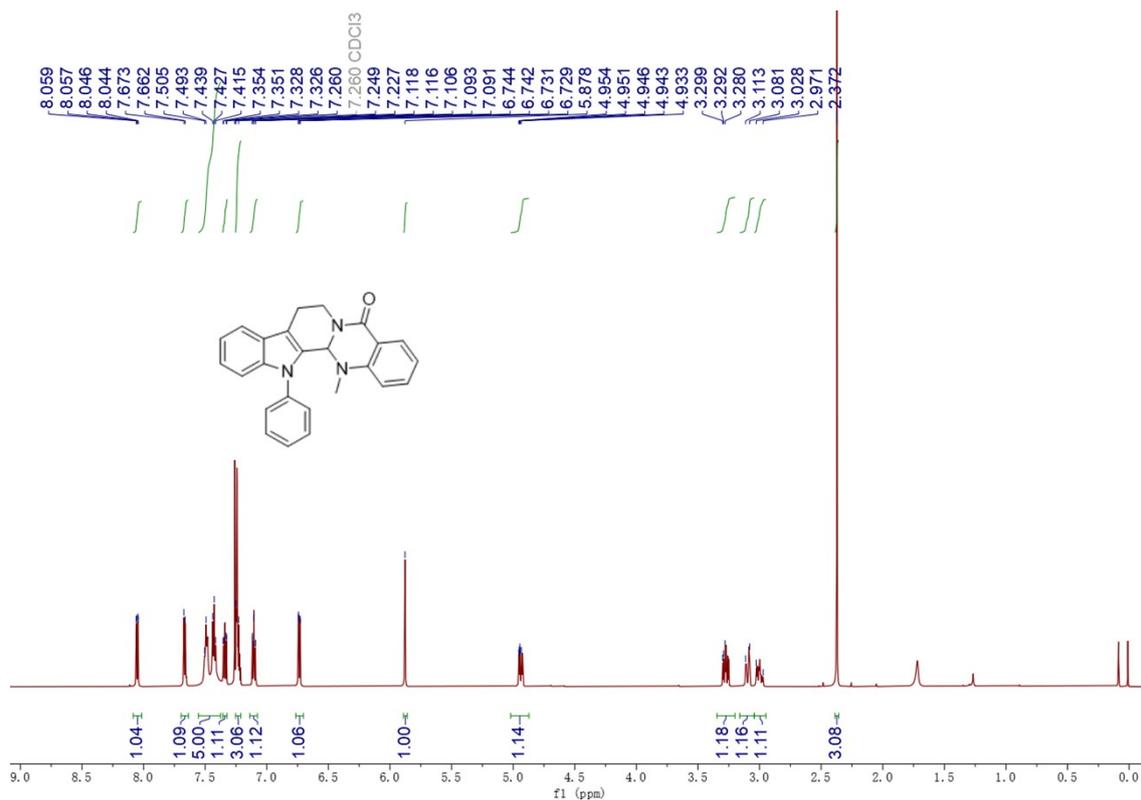


Figure 1.  $^1\text{H}$  NMR spectrum of compound 3a (600 MHz,  $\text{CDCl}_3$ )

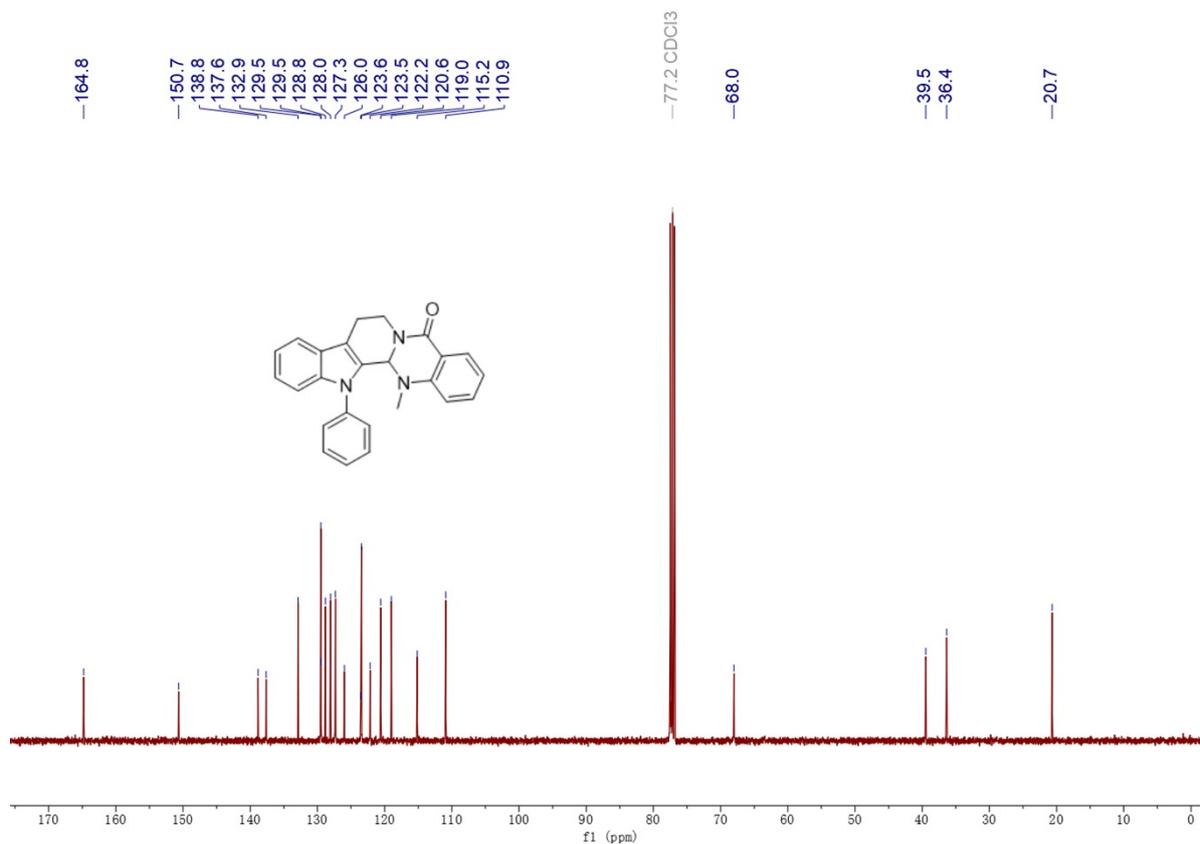
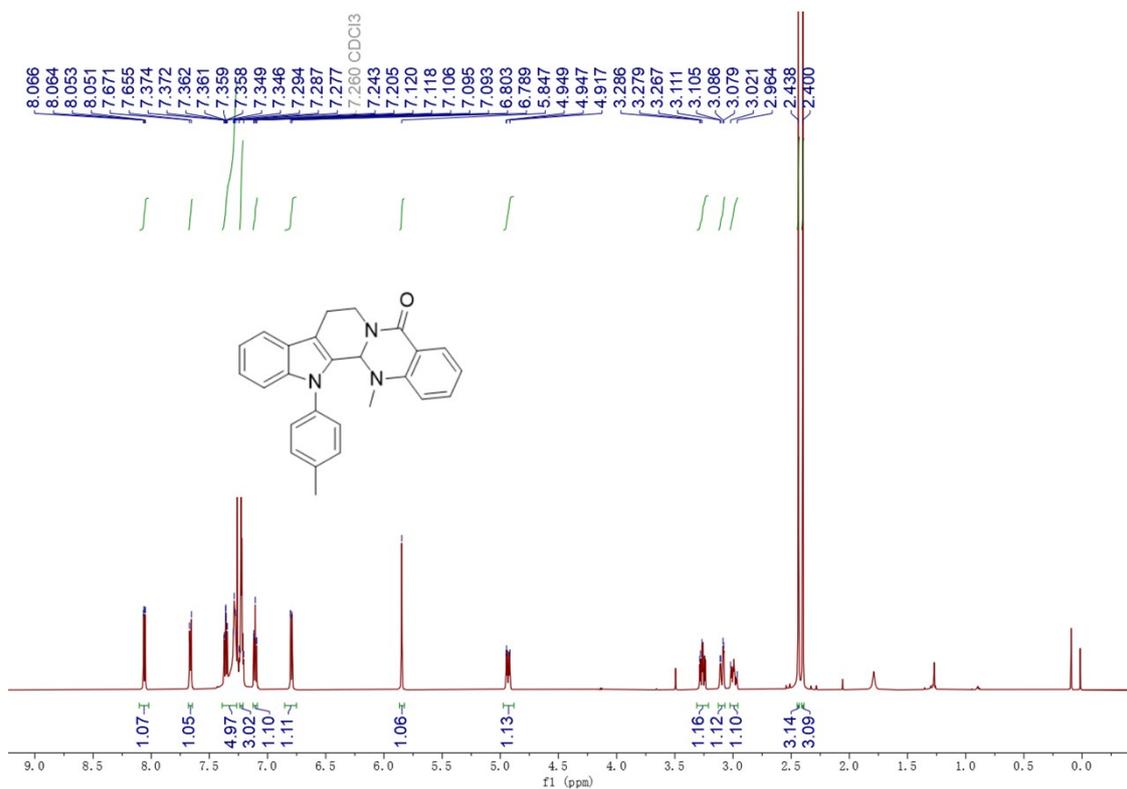
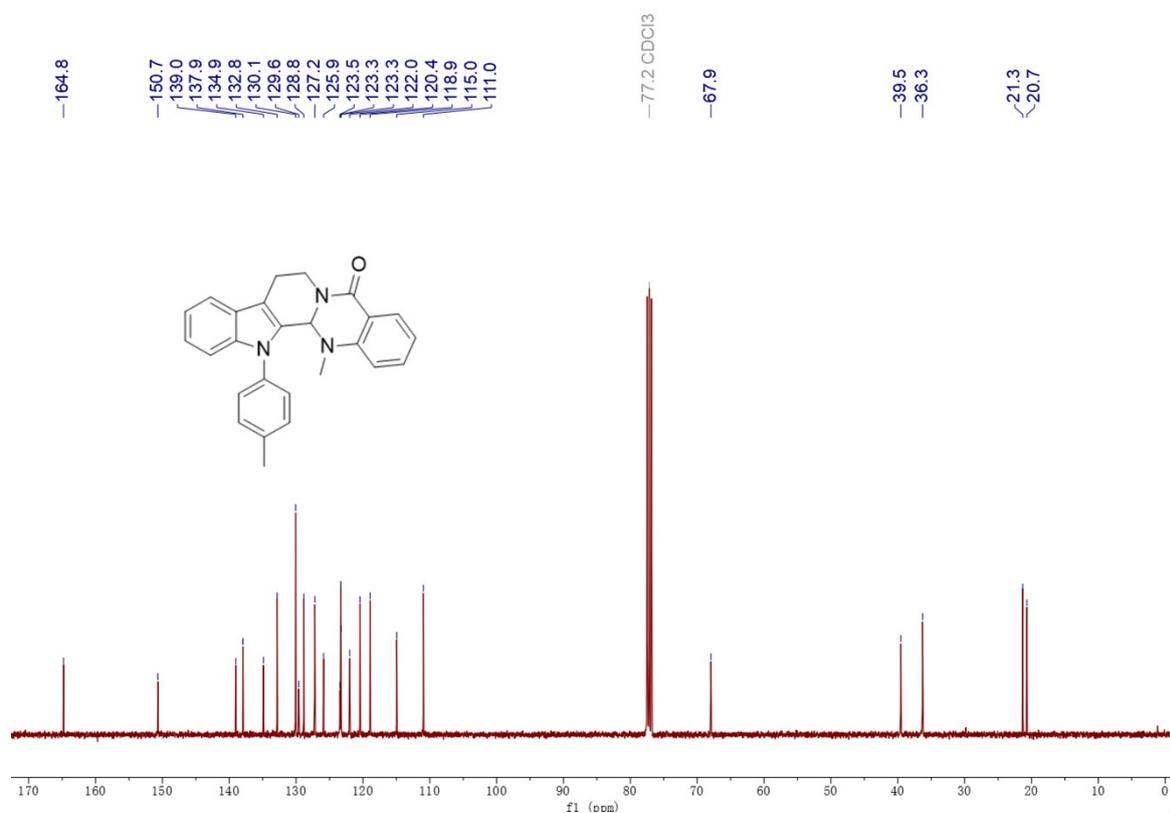


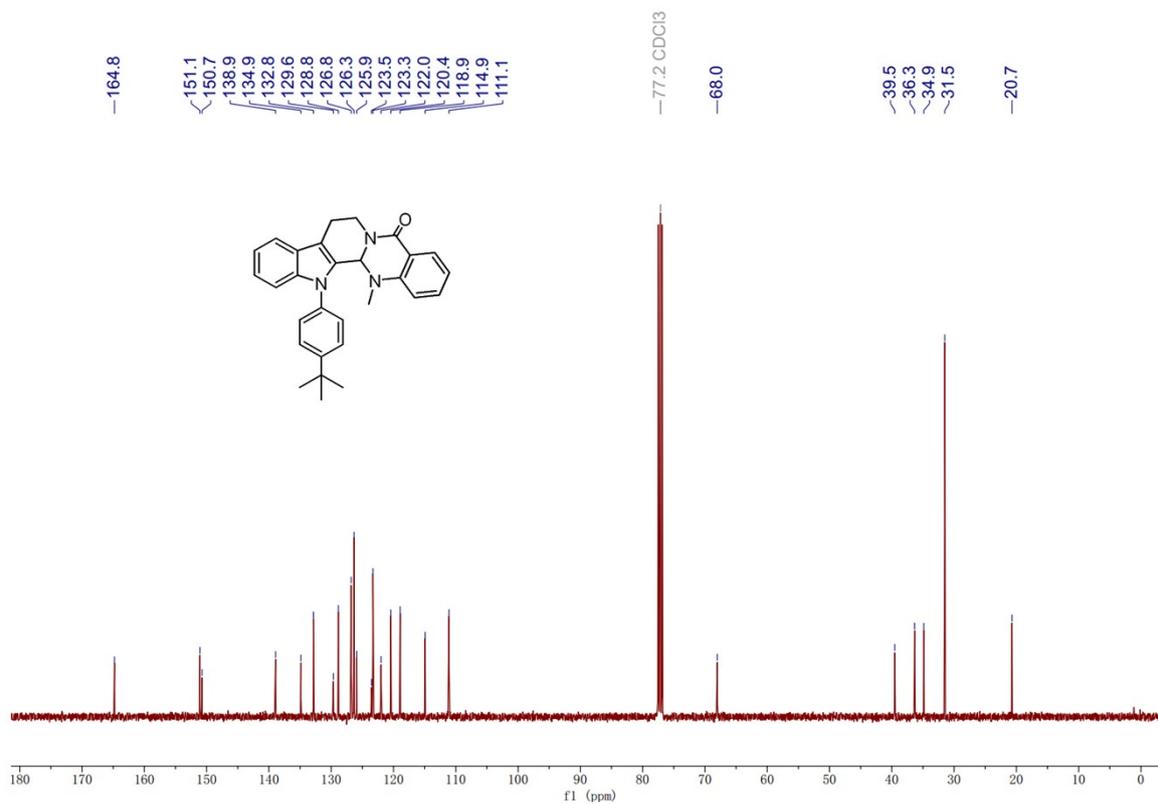
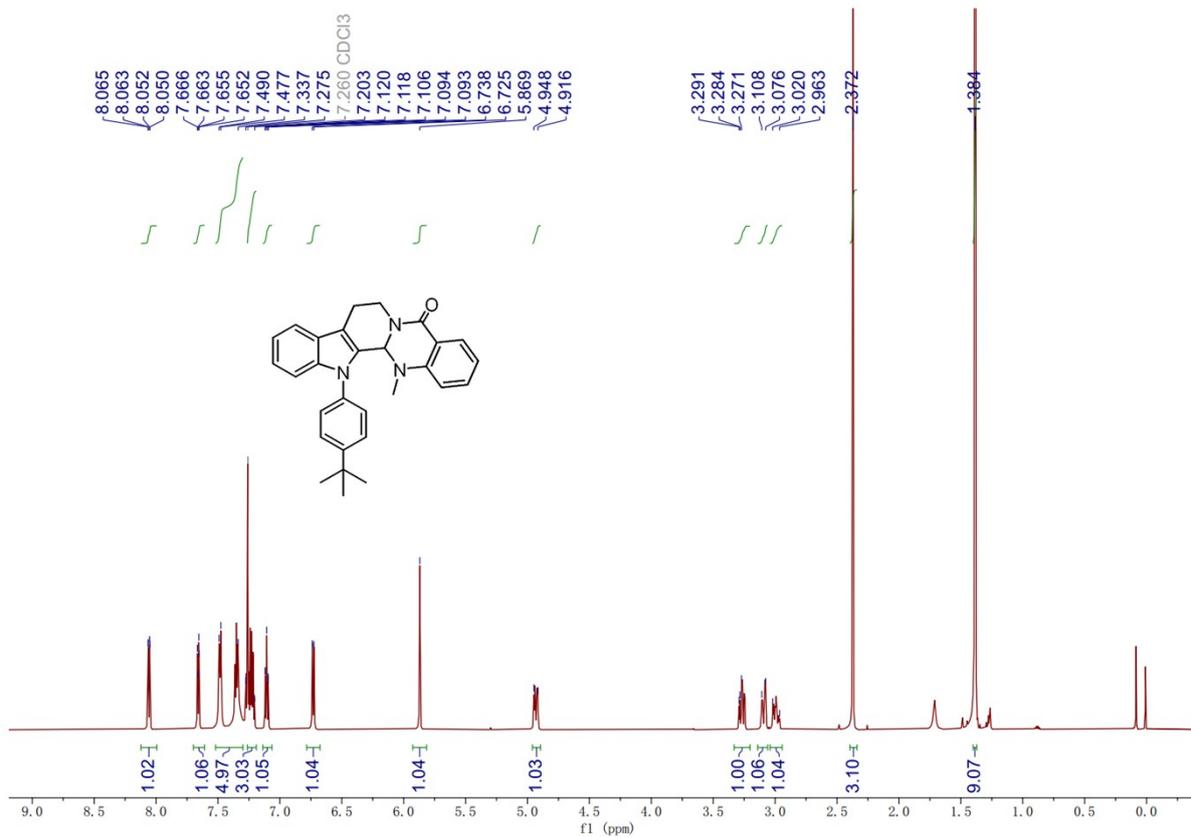
Figure 2.  $^{13}\text{C}$  NMR spectrum of compound 2 (100 MHz,  $\text{CDCl}_3$ )

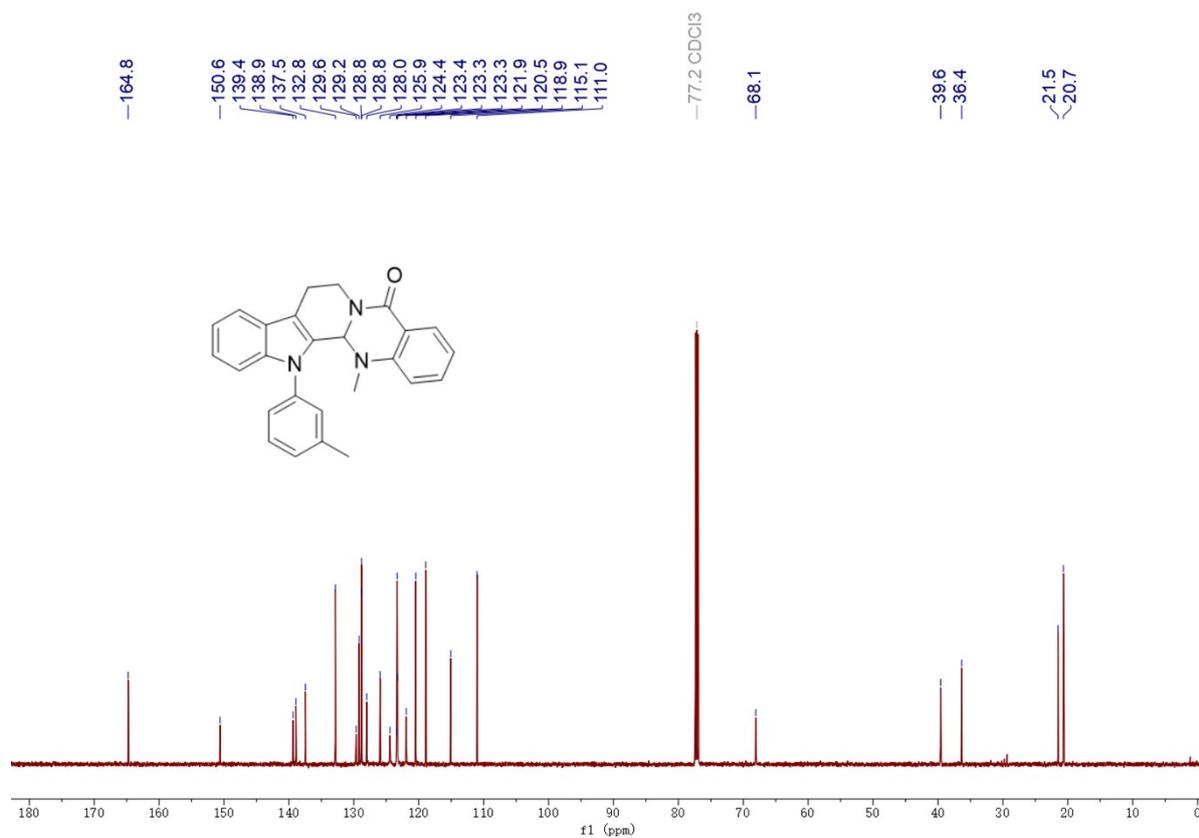
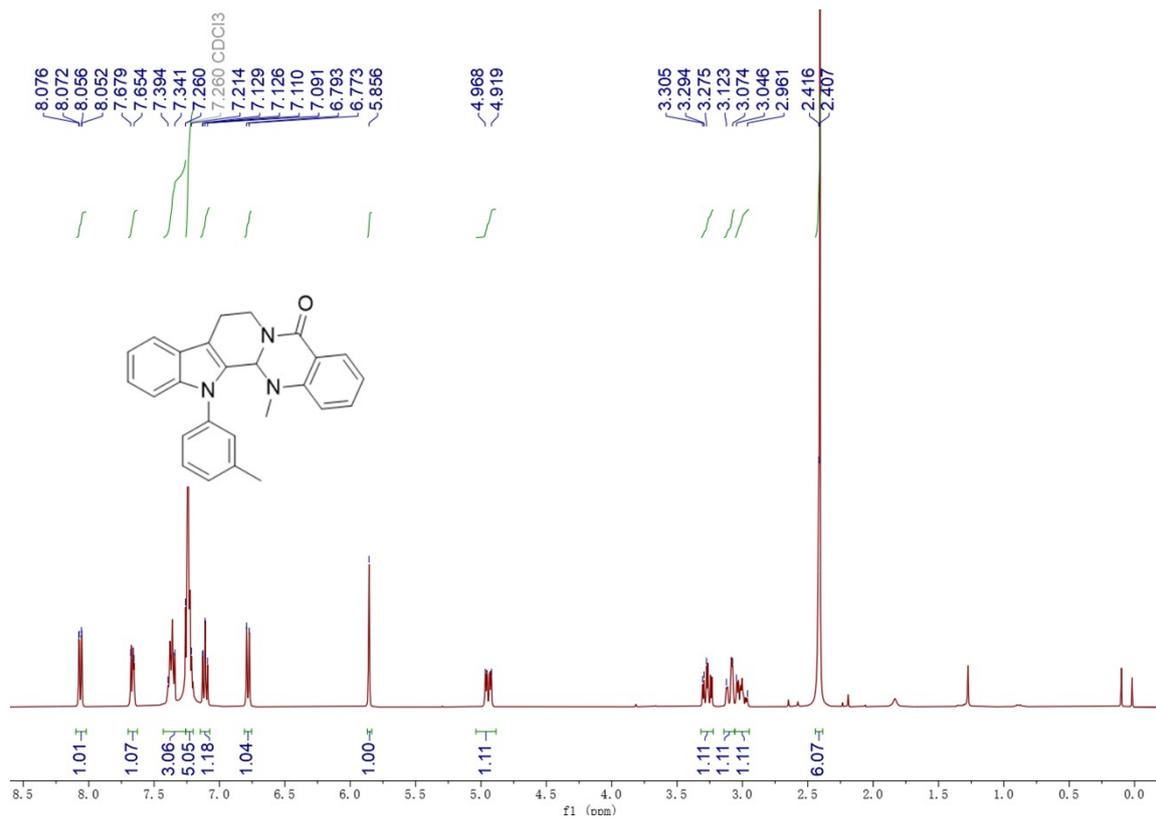


**Figure 3.** <sup>1</sup>H NMR spectrum of compound **3b** (600 MHz, CDCl<sub>3</sub>)



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





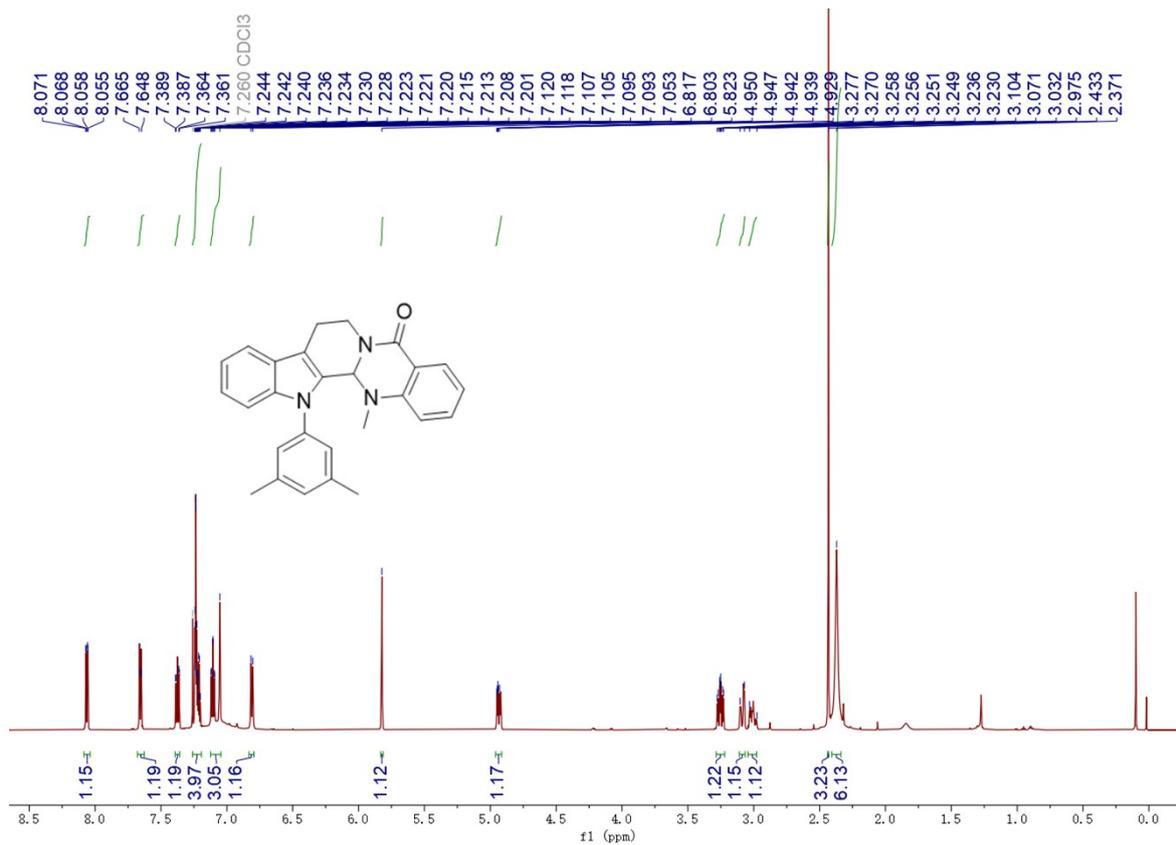


Figure 9. <sup>1</sup>H NMR spectrum of compound 3e (600 MHz, CDCl<sub>3</sub>)

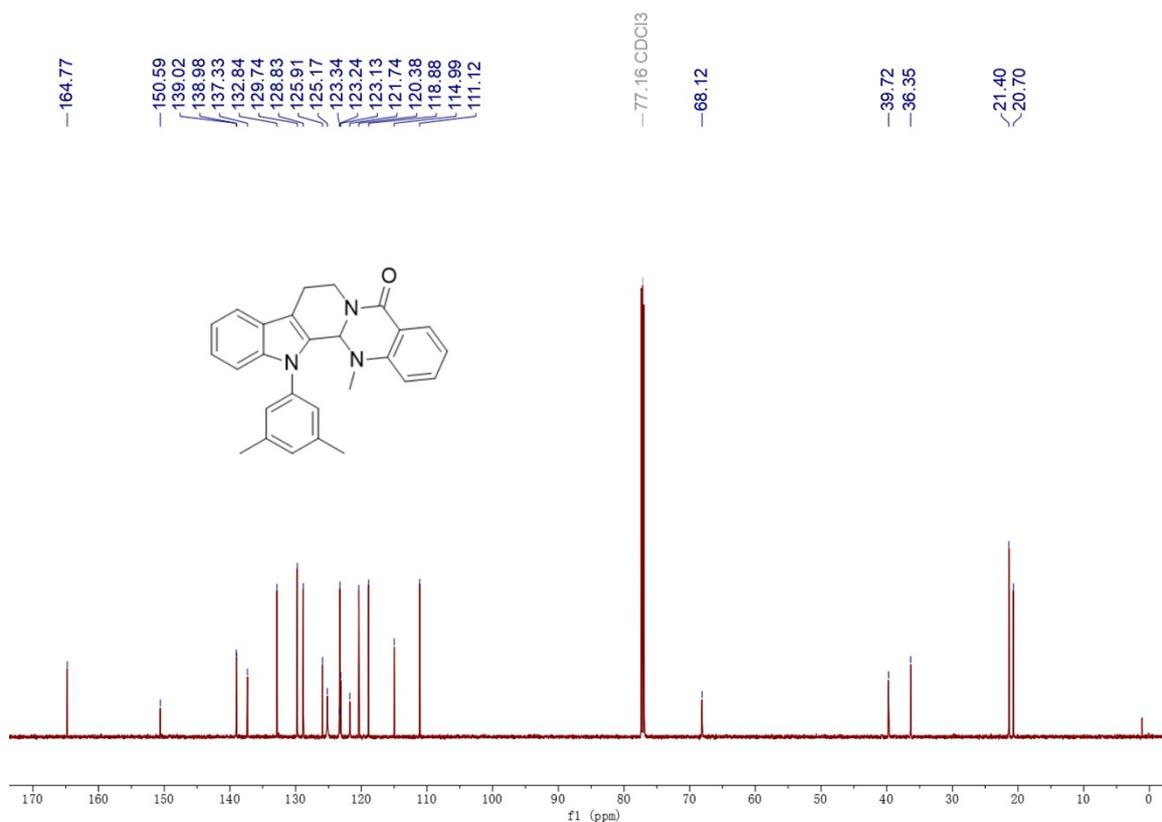
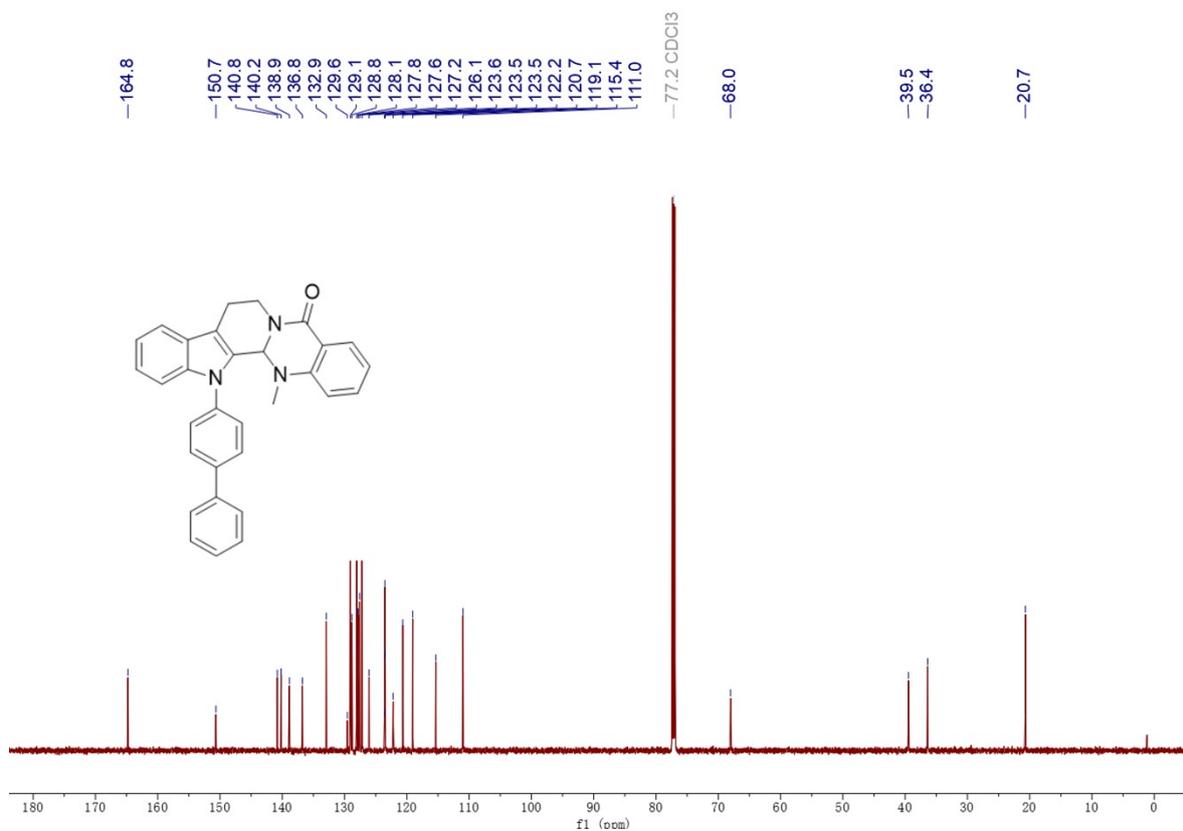
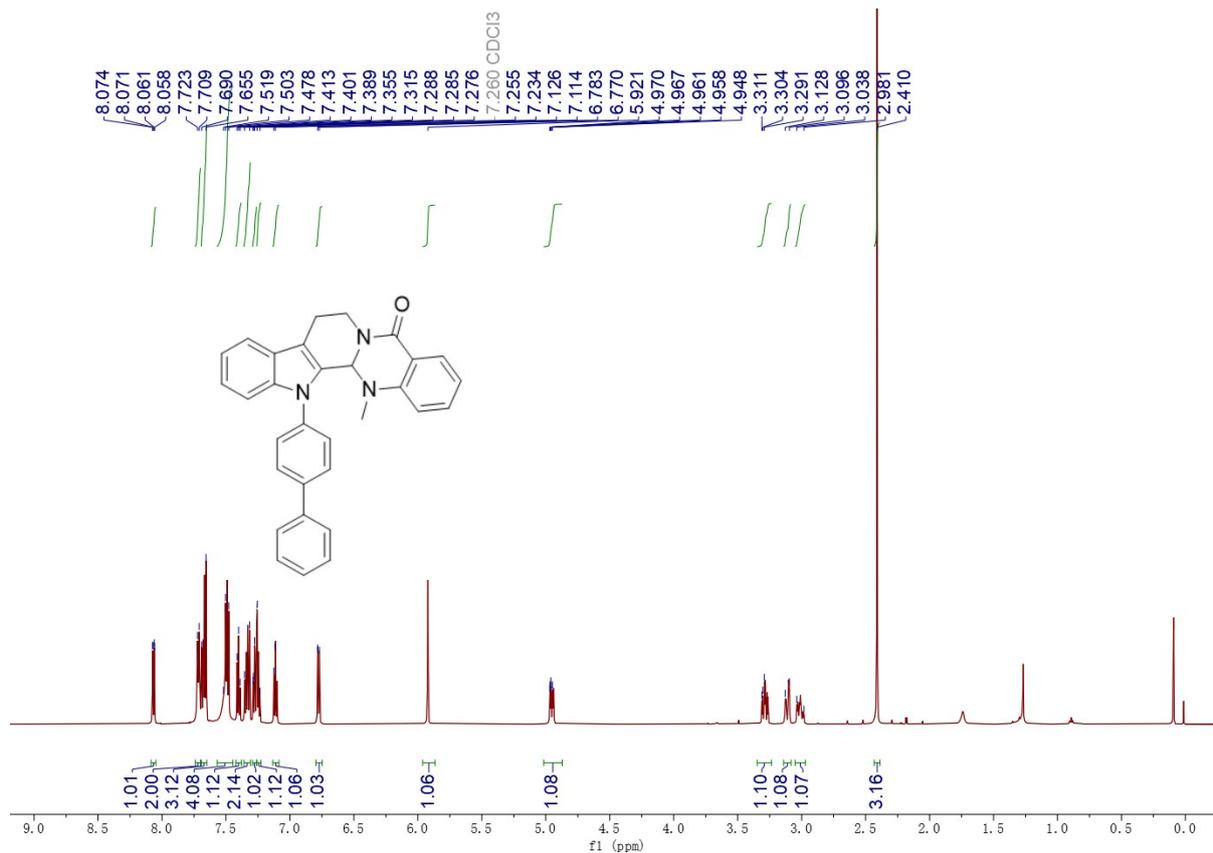
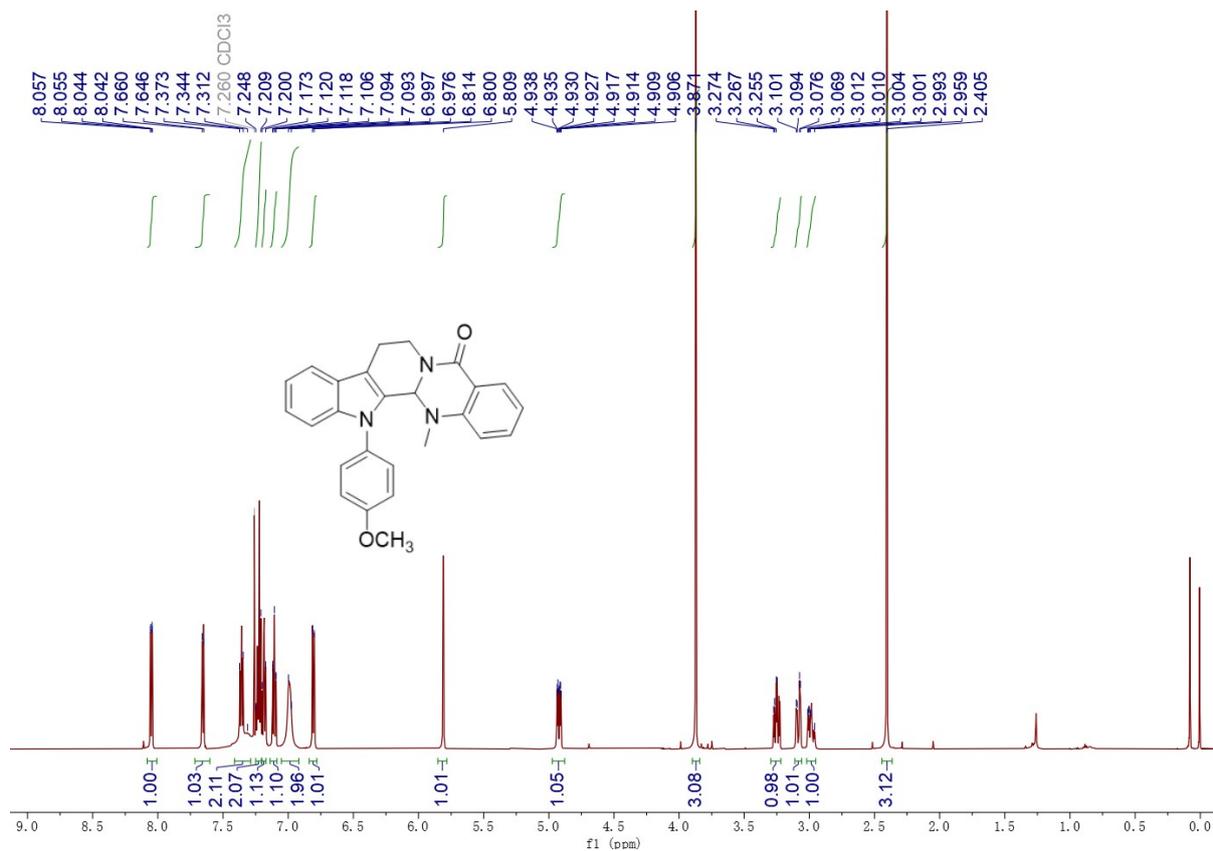
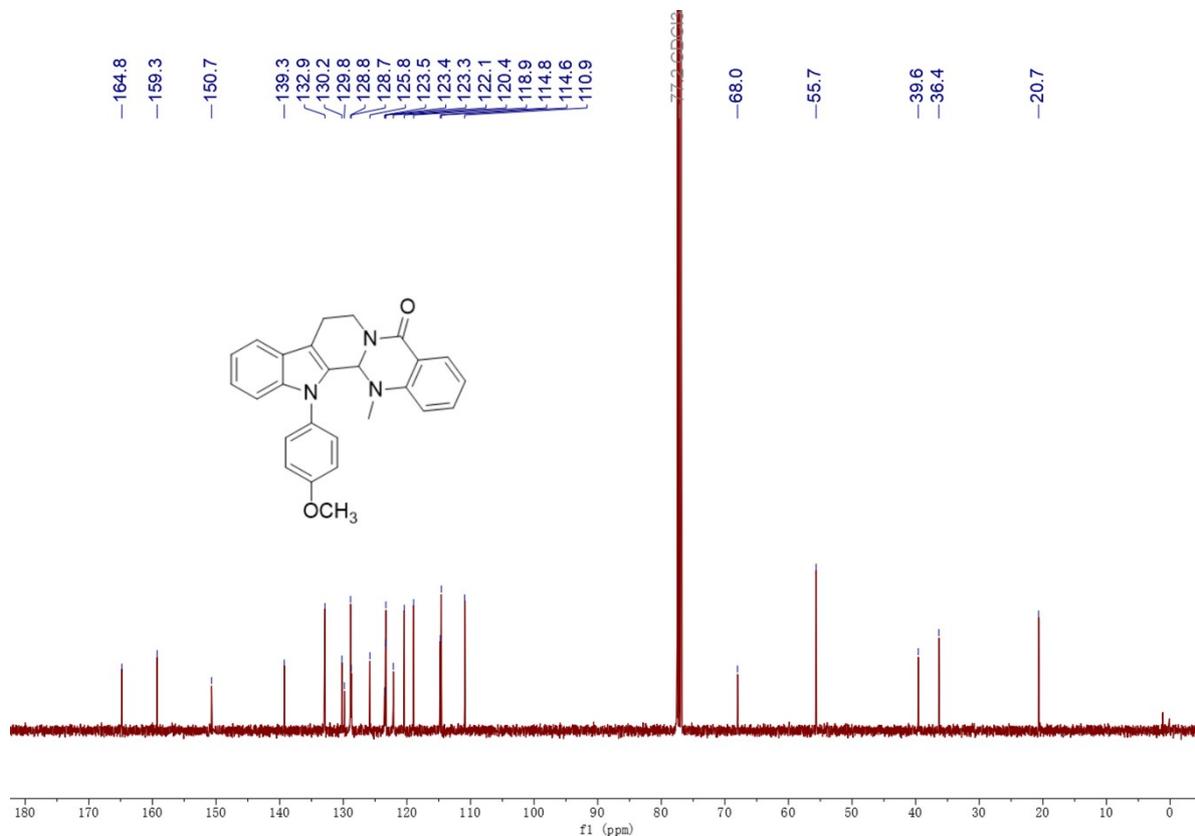


Figure 10. <sup>13</sup>C NMR spectrum of compound 3e (150 MHz, CDCl<sub>3</sub>)

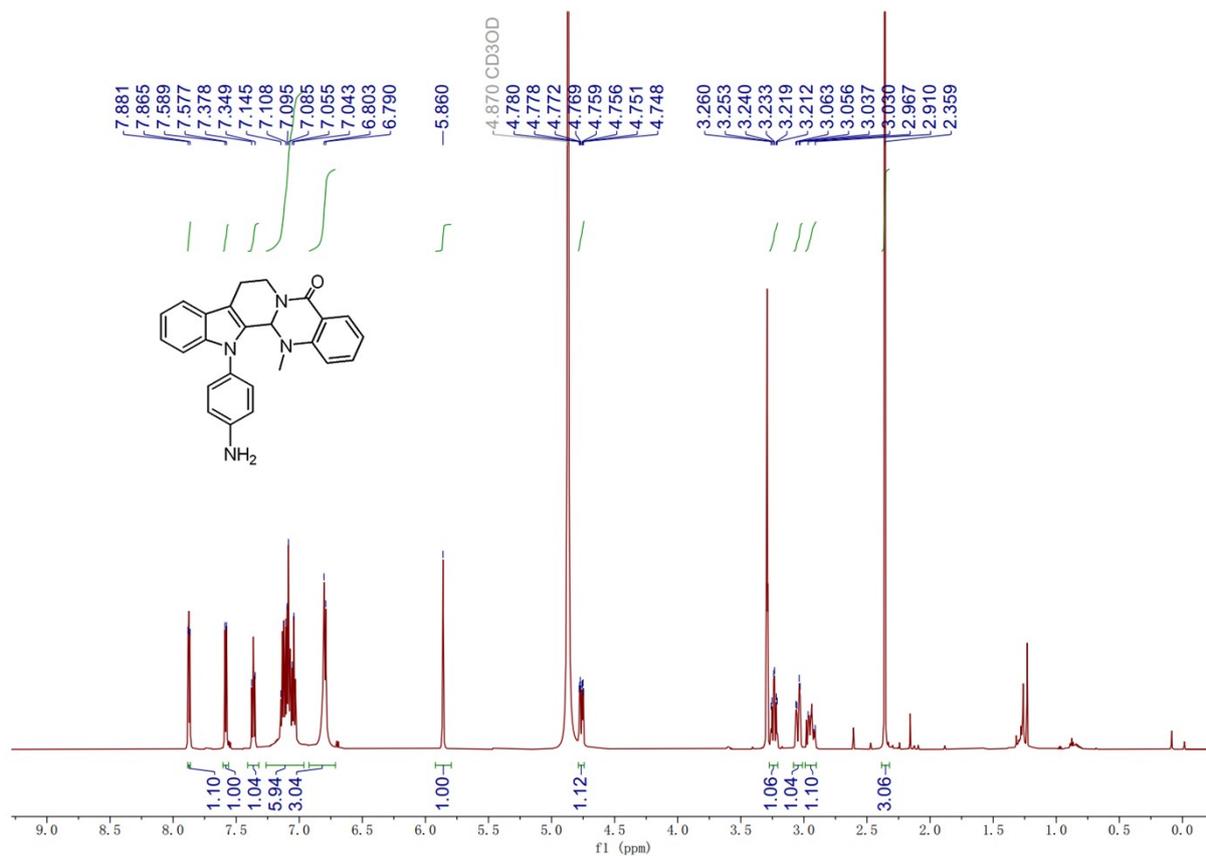




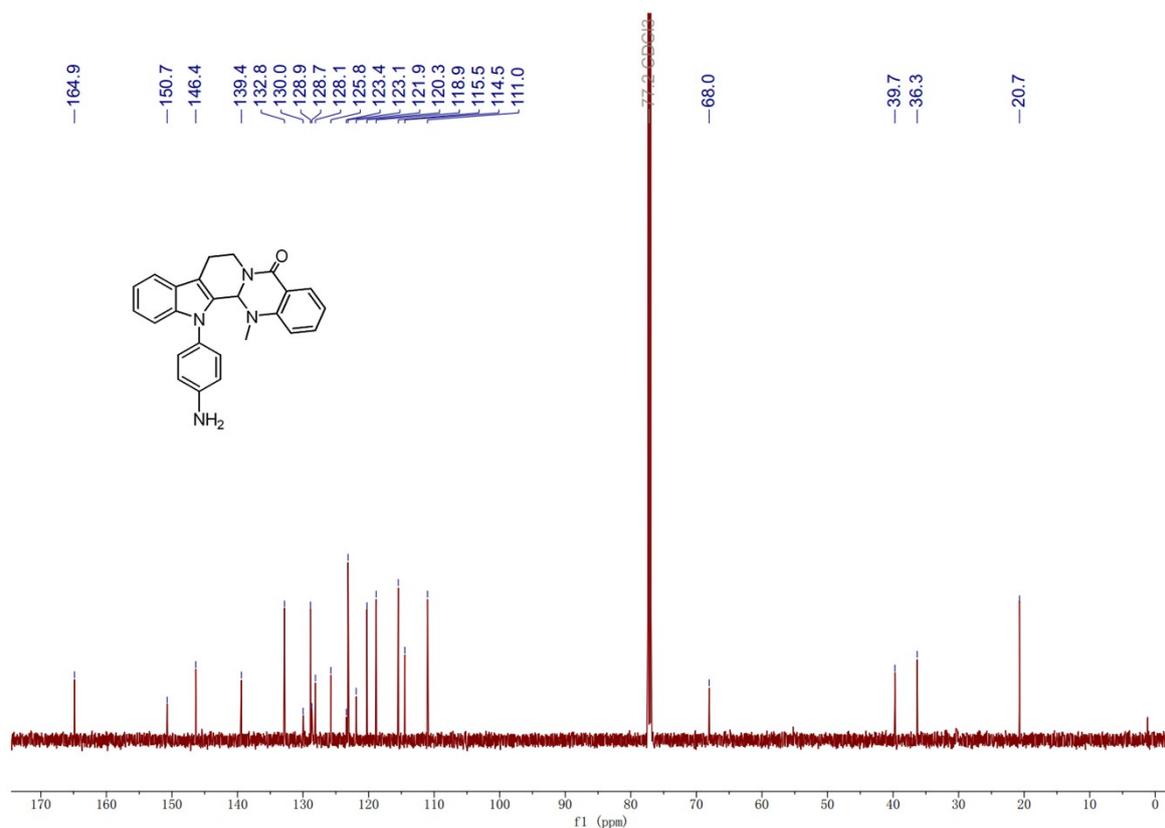
**Figure 13.** <sup>1</sup>H NMR spectrum of compound **3g** (600 MHz, CDCl<sub>3</sub>)



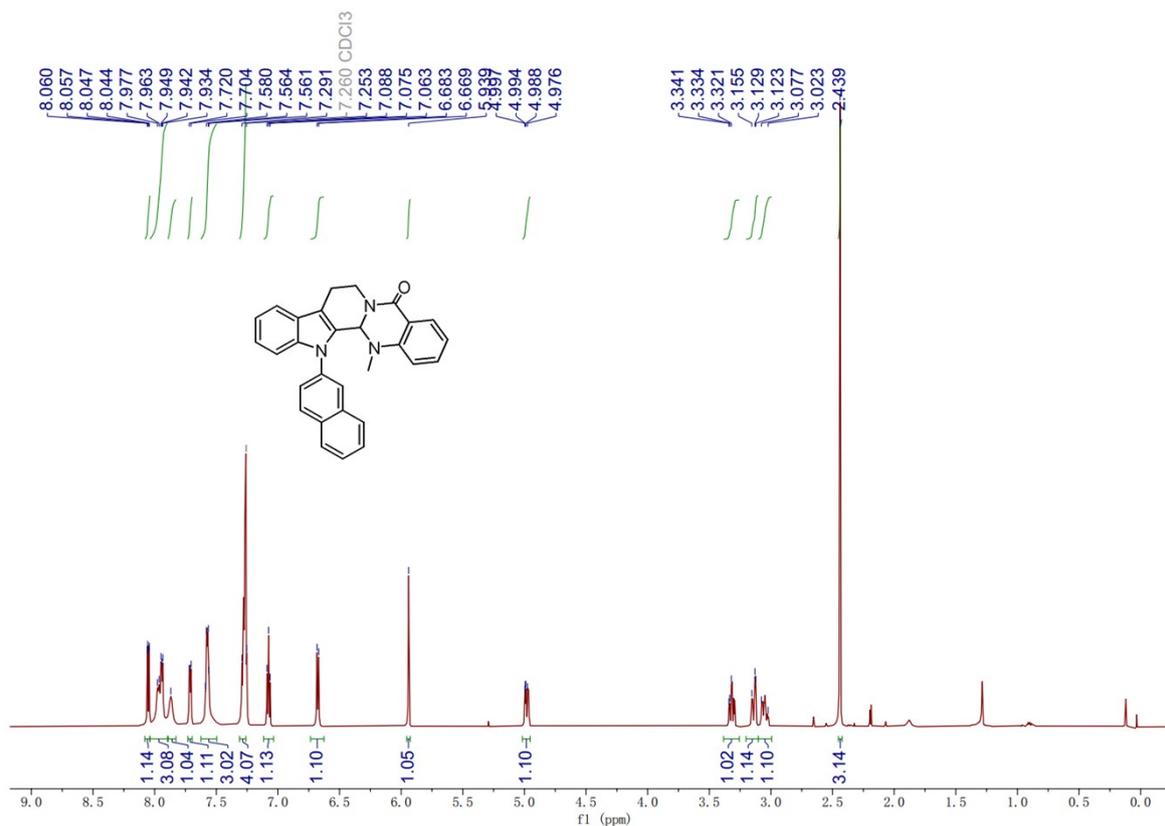
**Figure 14.** <sup>13</sup>C NMR spectrum of compound **3g** (100 MHz, CDCl<sub>3</sub>)



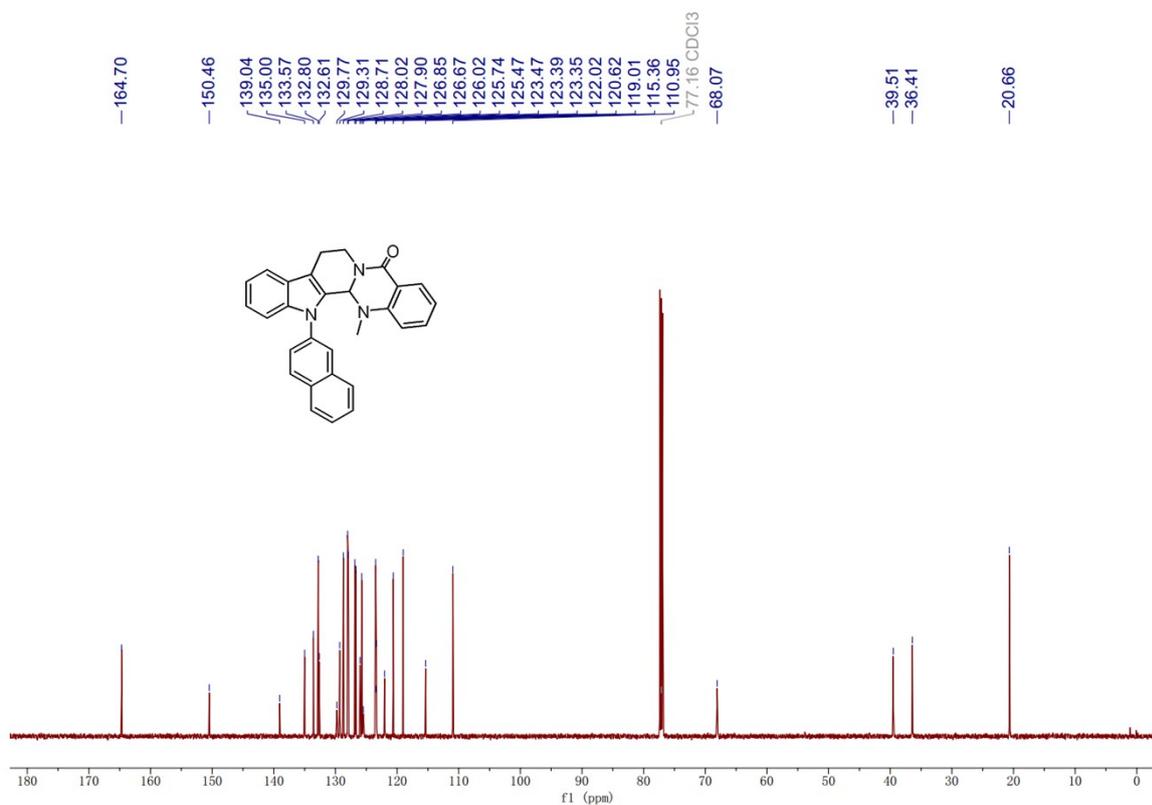
**Figure 15.  $^1\text{H}$  NMR spectrum of compound **3h** (600 MHz,  $\text{CD}_3\text{OD}$ )**



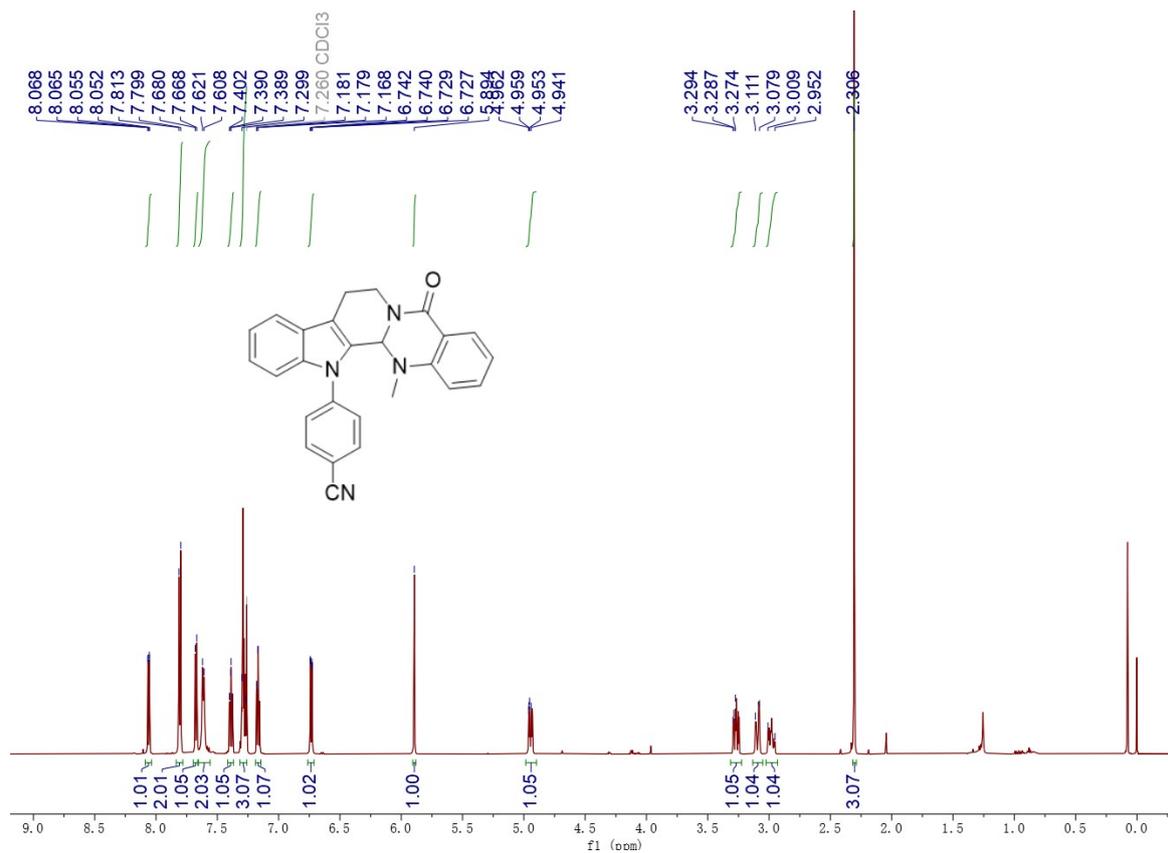
**Figure 16.  $^{13}\text{C}$  NMR spectrum of compound **3h** (150 MHz,  $\text{CDCl}_3$ )**



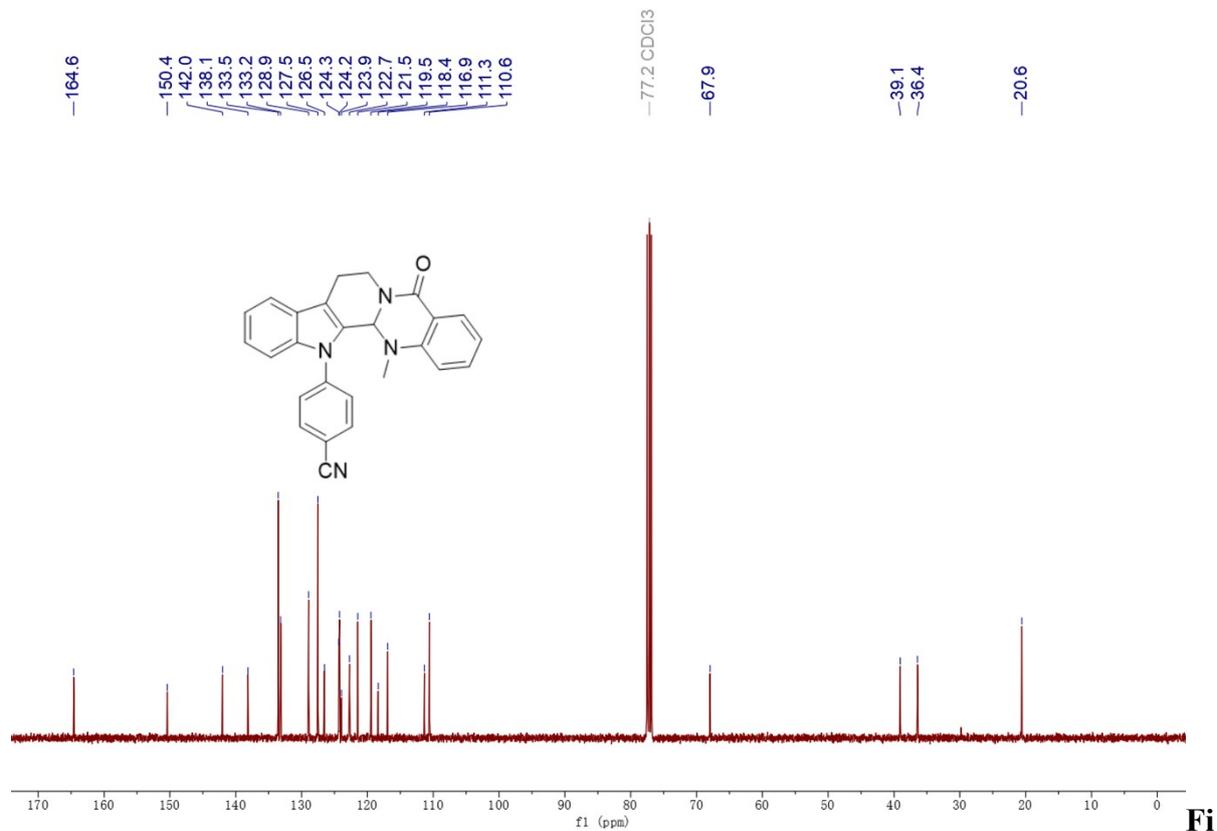
**Figure 17.**  $^1\text{H}$  NMR spectrum of compound **3i** (600 MHz,  $\text{CDCl}_3$ )



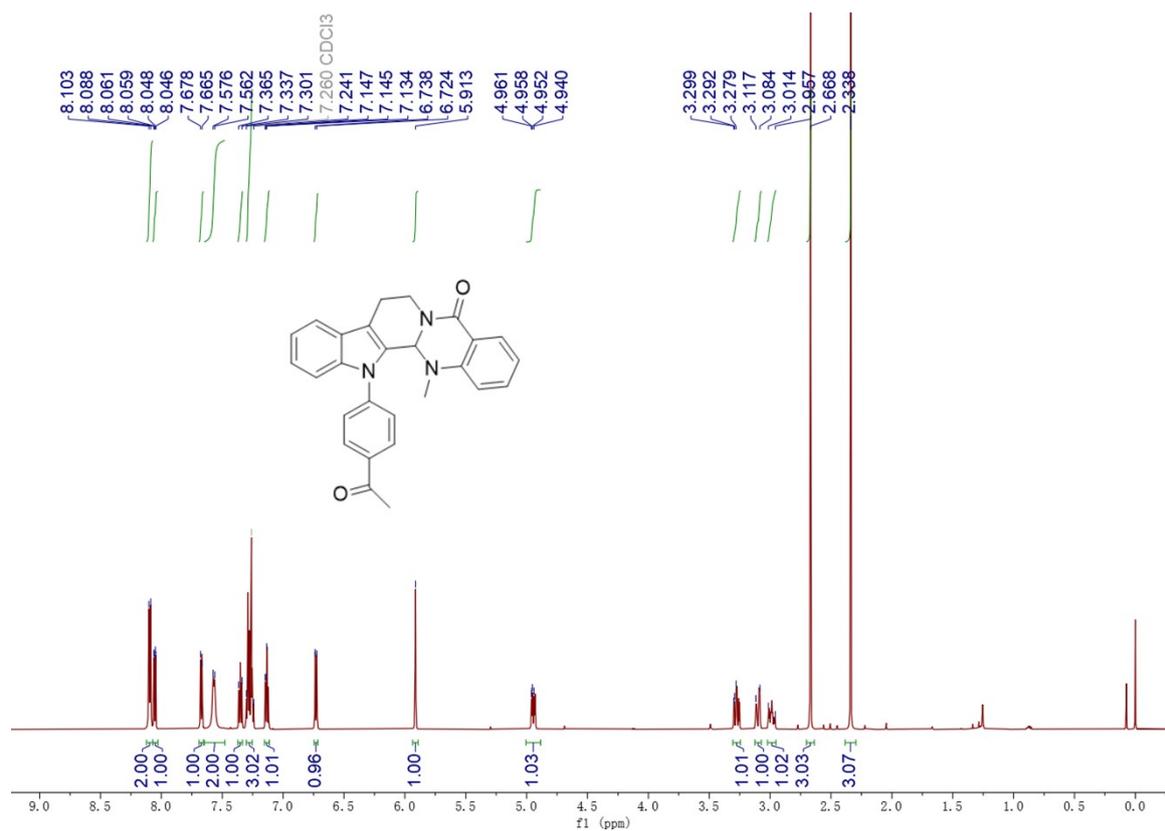
**Figure 18.**  $^{13}\text{C}$  NMR spectrum of compound **3i** (150 MHz,  $\text{CDCl}_3$ )



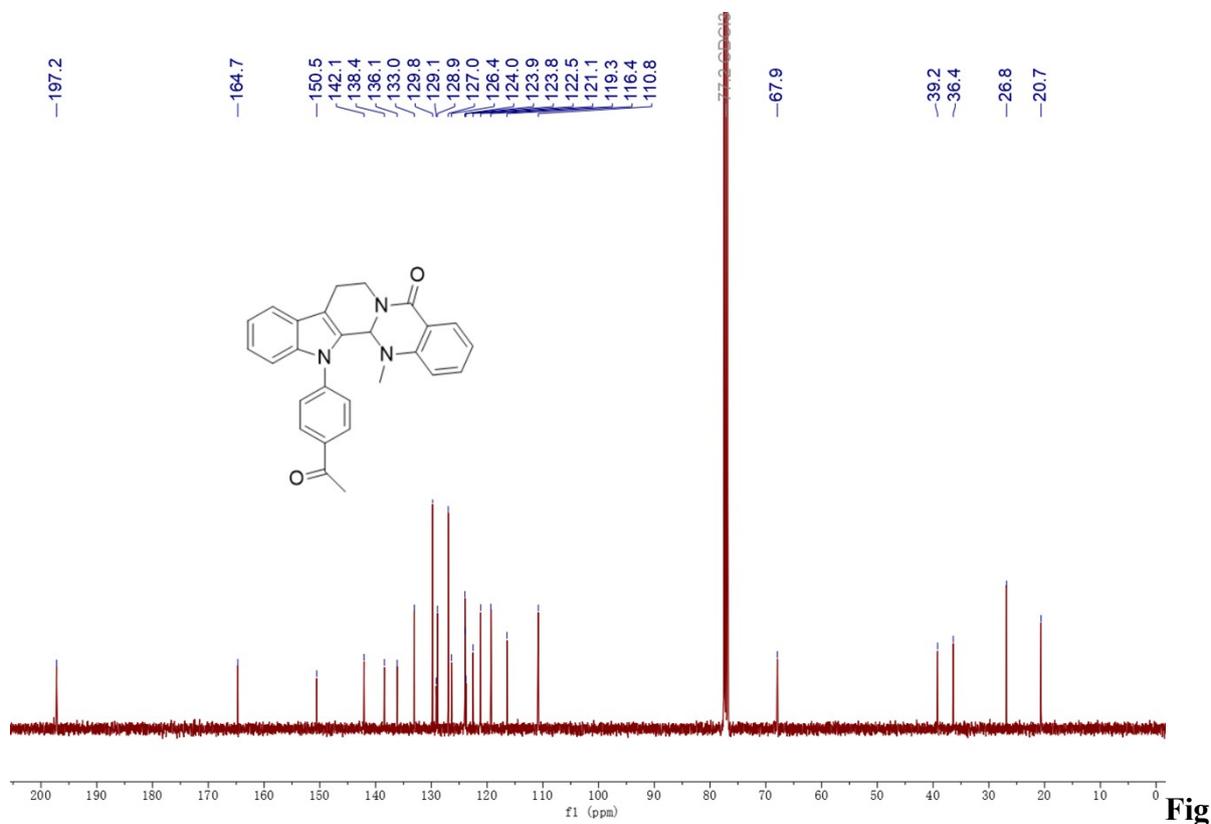
**Figure 19.**  $^1\text{H}$  NMR spectrum of compound **3j** (600 MHz,  $\text{CDCl}_3$ )



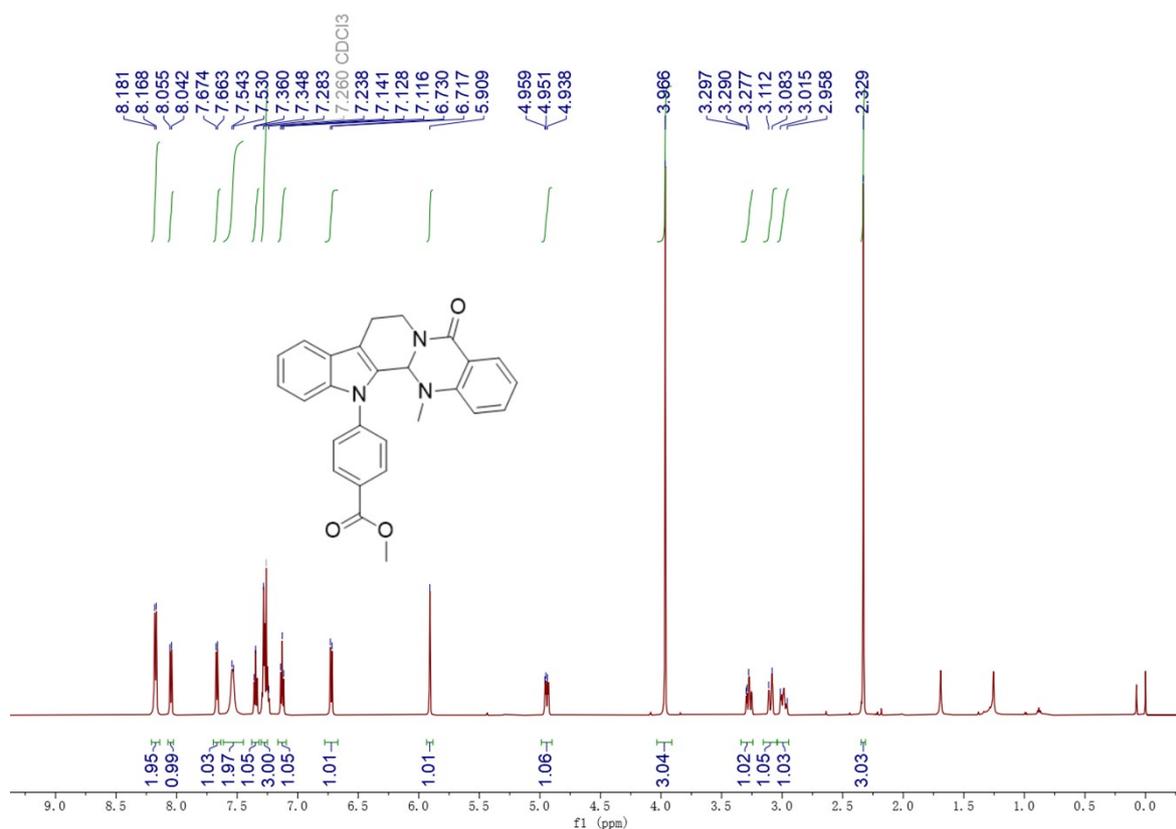
**Figure 20.**  $^{13}\text{C}$  NMR spectrum of compound **3j** (100 MHz,  $\text{CDCl}_3$ )



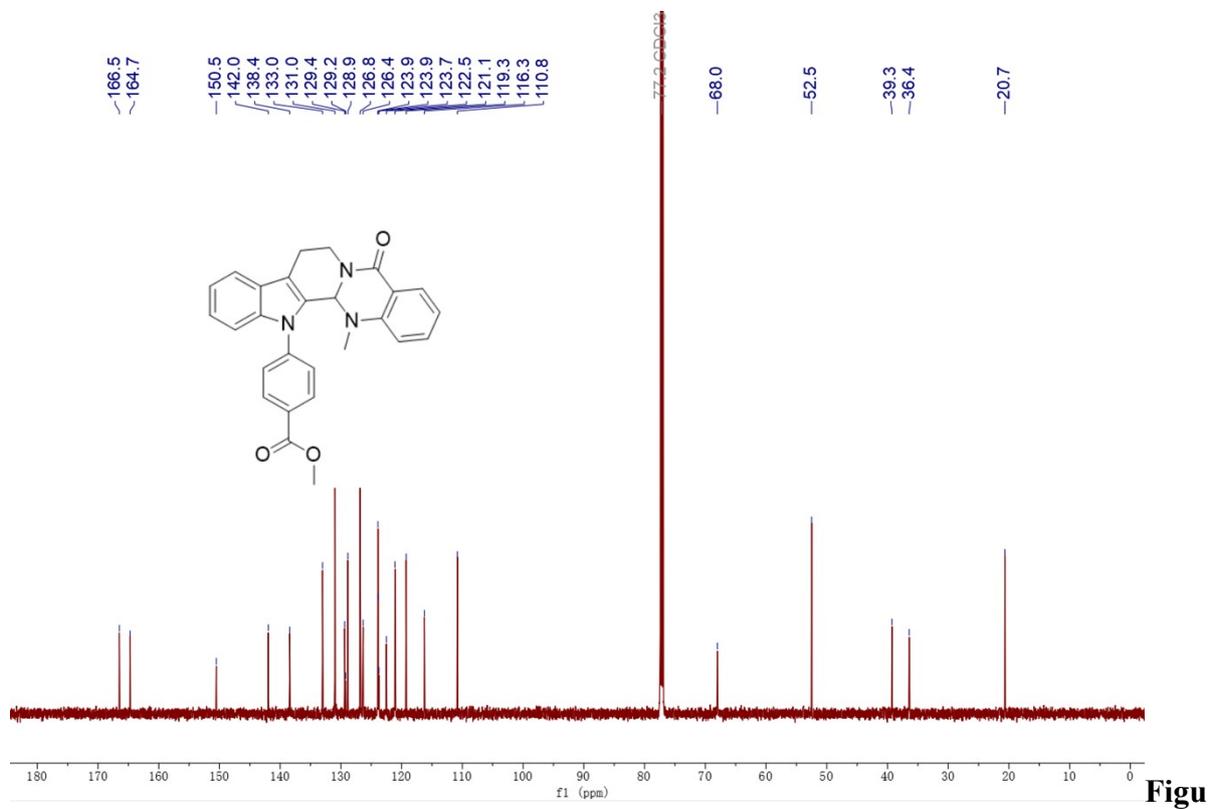
**Figure 21.** <sup>1</sup>H NMR spectrum of compound 3k (600 MHz, CDCl<sub>3</sub>)



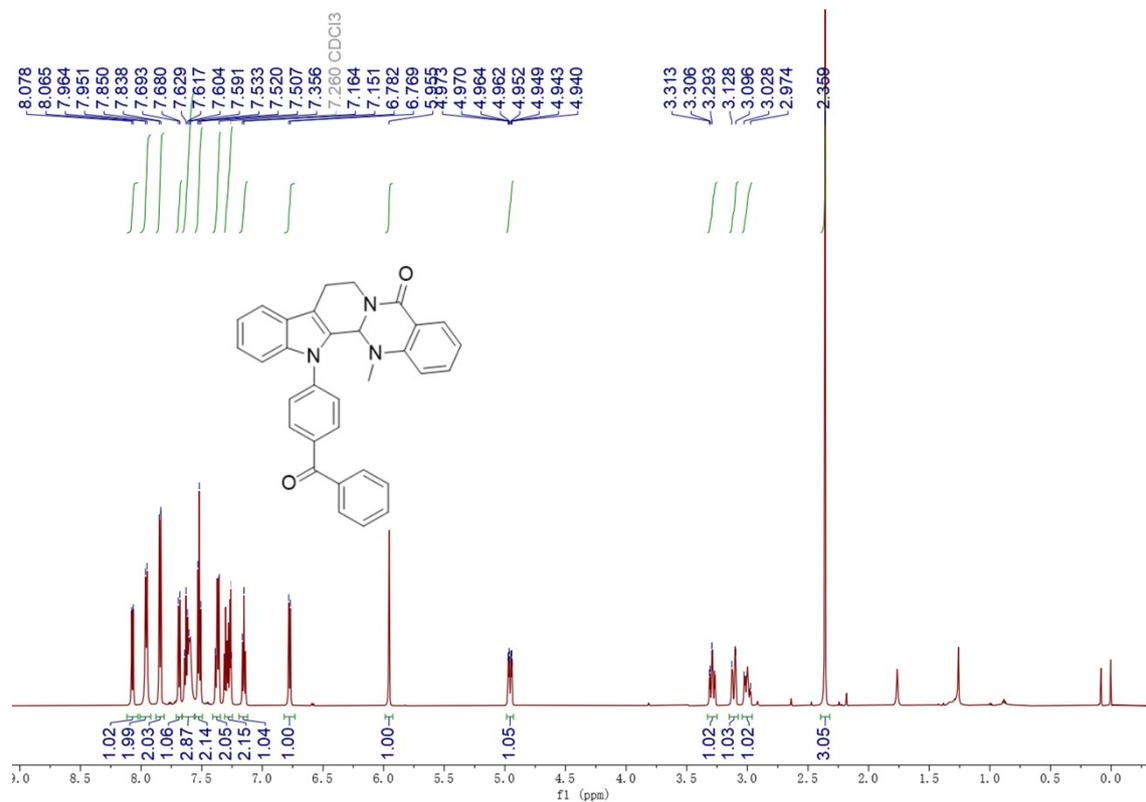
**Figure 22.** <sup>13</sup>C NMR spectrum of compound 3k (100 MHz, CDCl<sub>3</sub>)



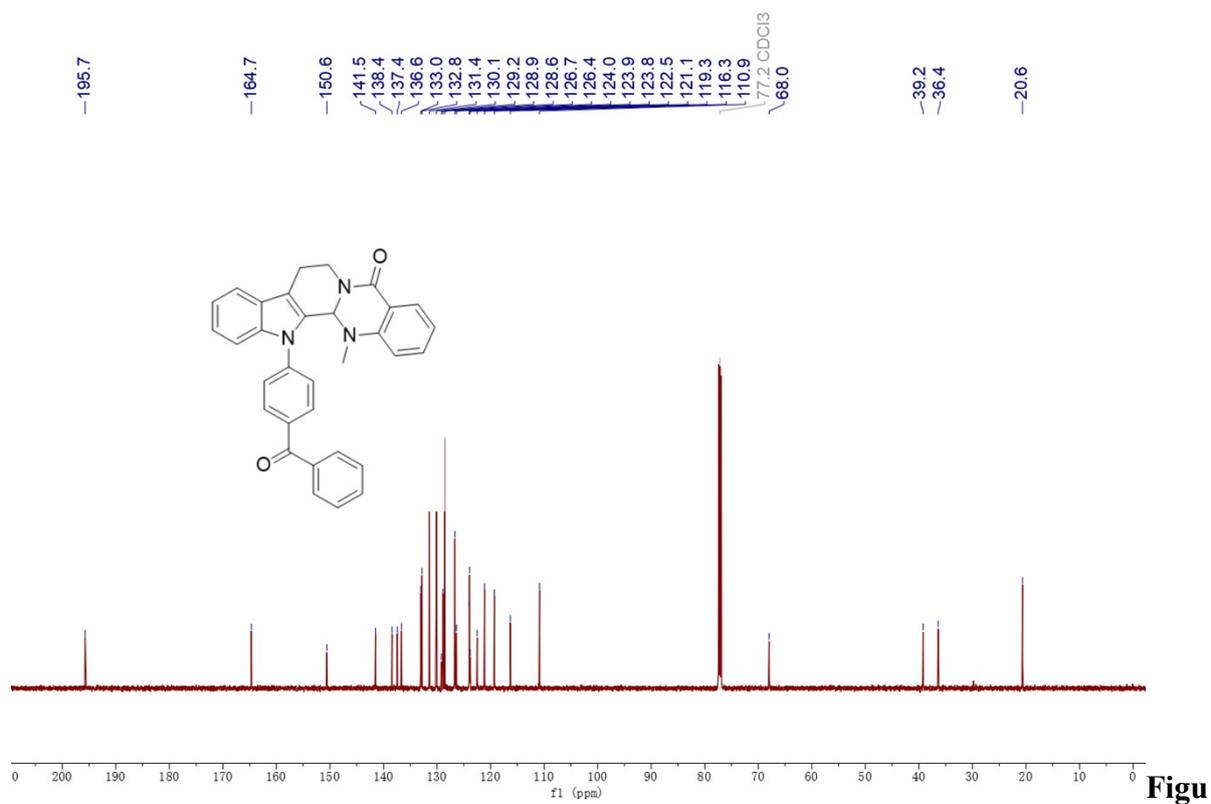
**Figure 23.** <sup>1</sup>H NMR spectrum of compound **31** (600 MHz, CDCl<sub>3</sub>)



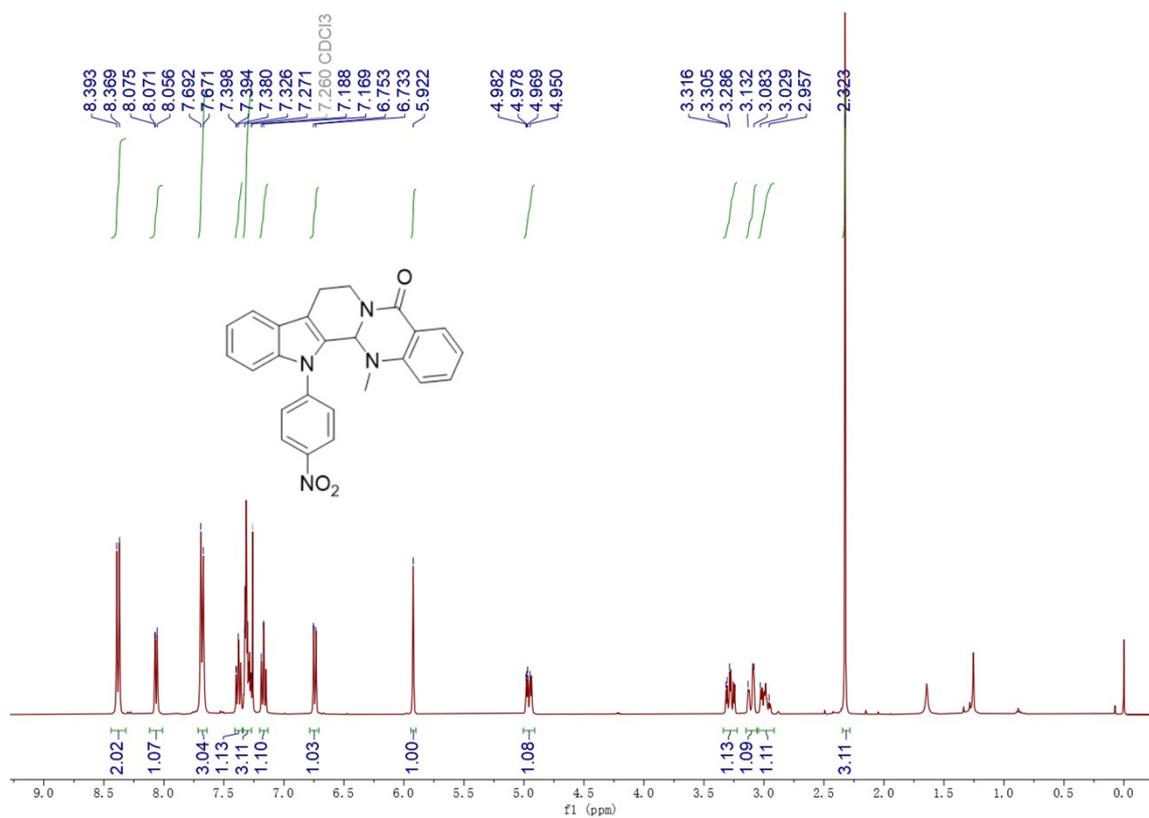
**Figure 24.** <sup>13</sup>C NMR spectrum of compound **31** (150 MHz, CDCl<sub>3</sub>)



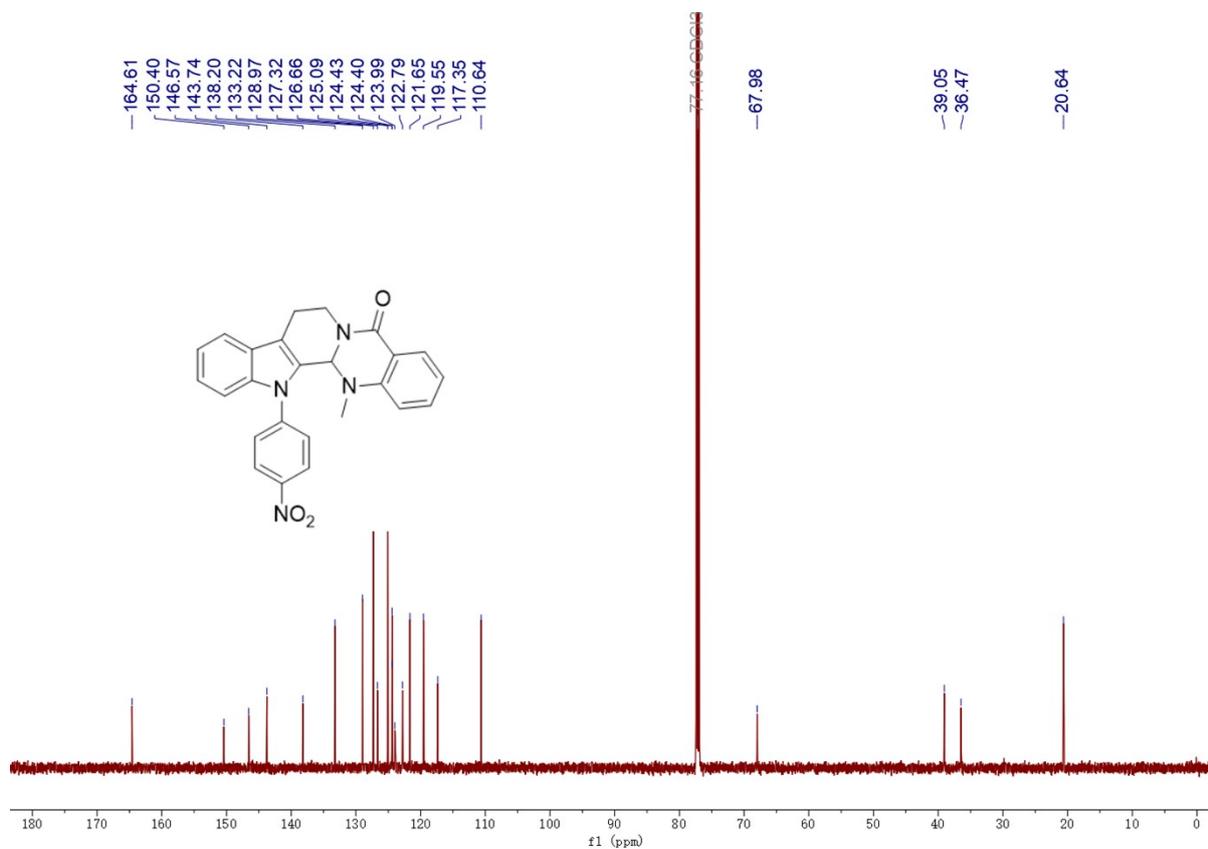
**Figure 25.**  $^1\text{H}$  NMR spectrum of compound **3m** (600 MHz,  $\text{CDCl}_3$ )



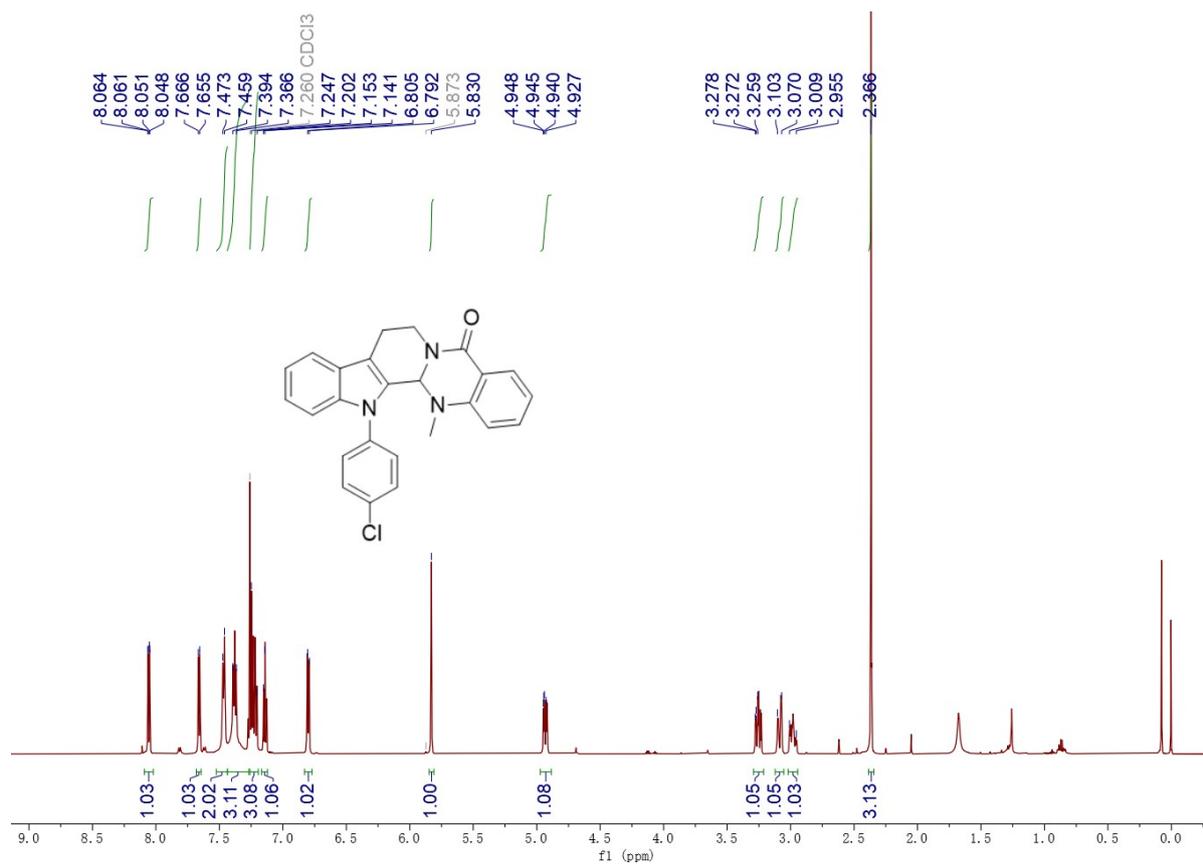
**Figure 26.**  $^{13}\text{C}$  NMR spectrum of compound **3m** (150 MHz,  $\text{CDCl}_3$ )



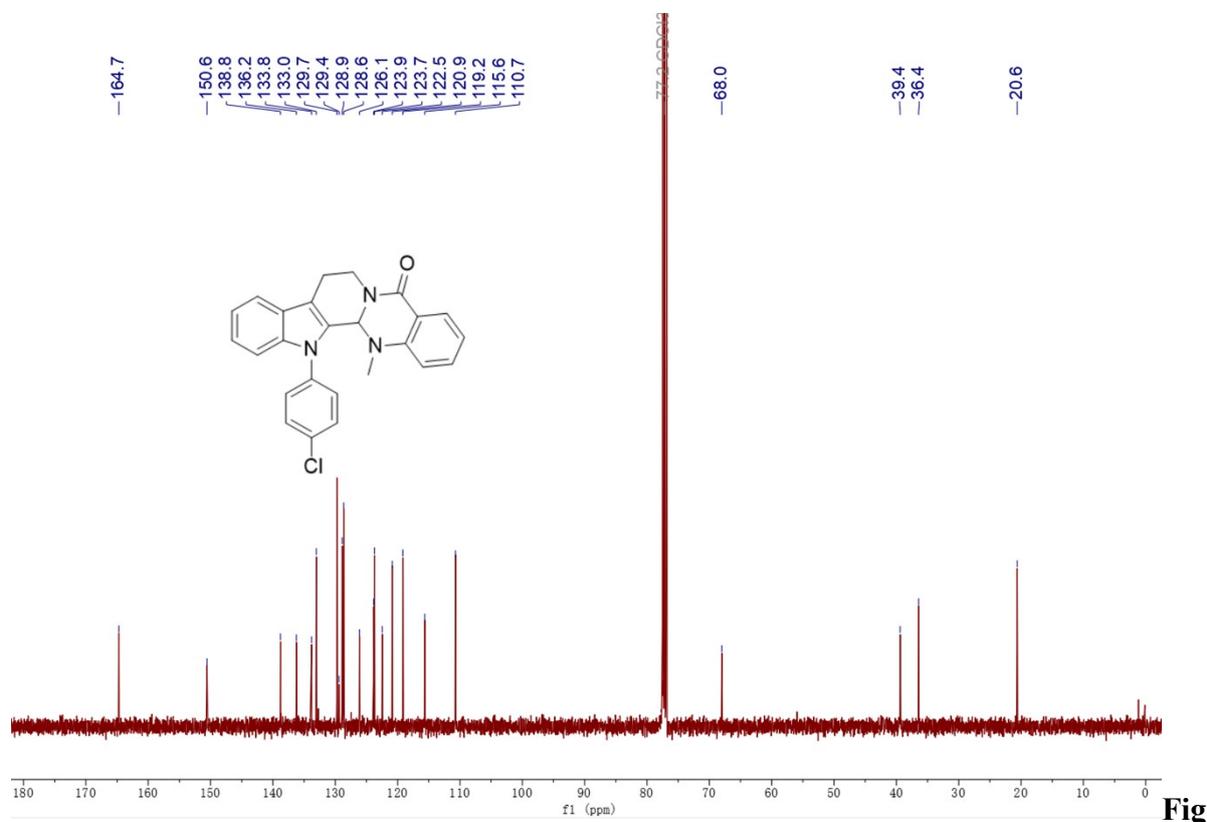
**Figure 27.**  $^1\text{H}$  NMR spectrum of compound **3n** (400 MHz,  $\text{CDCl}_3$ )



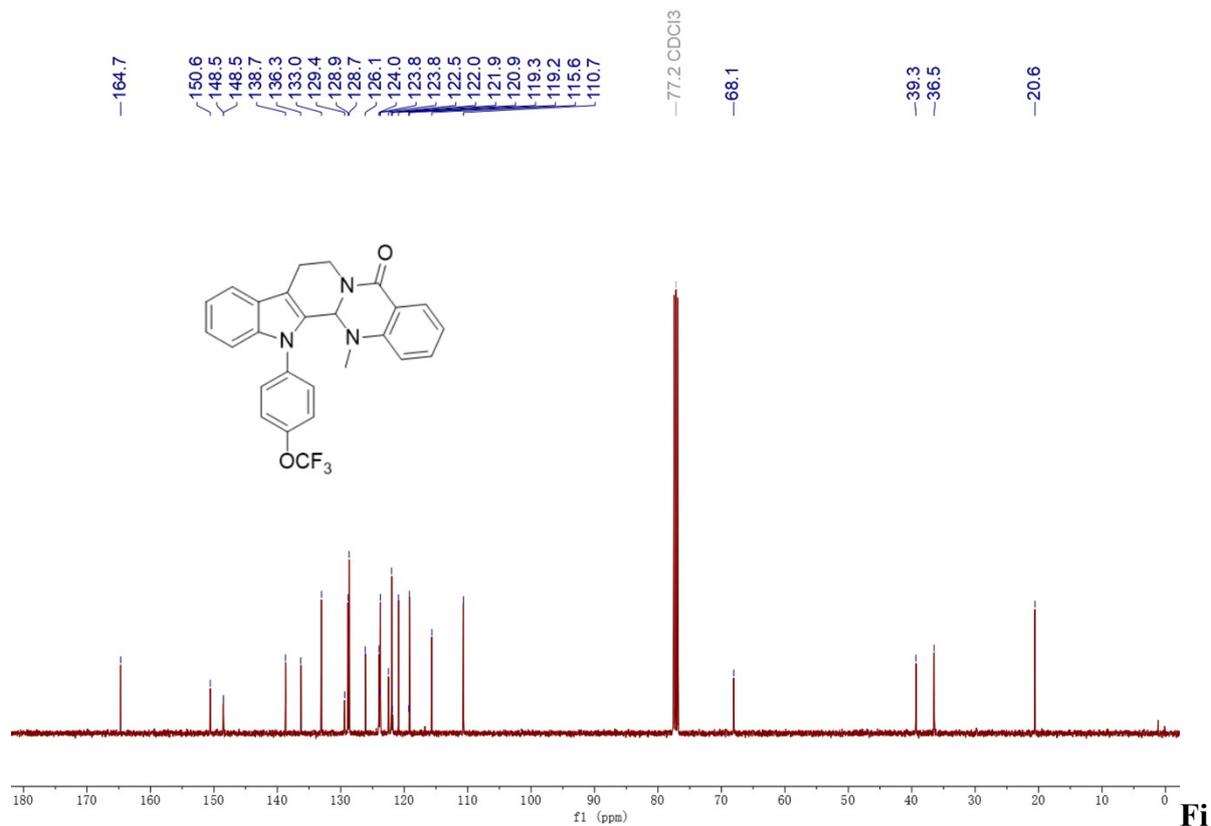
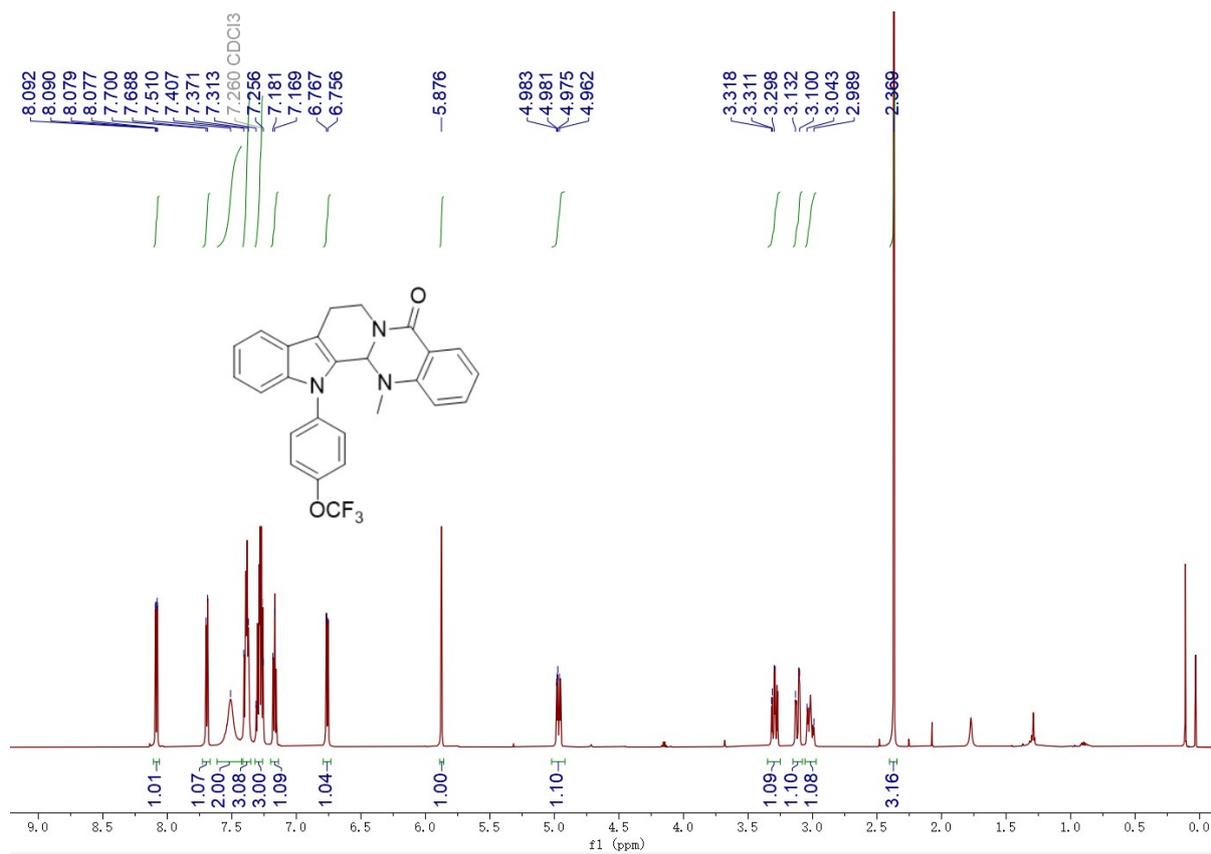
**Figure 28.**  $^{13}\text{C}$  NMR spectrum of compound **3n** (150 MHz,  $\text{CDCl}_3$ )



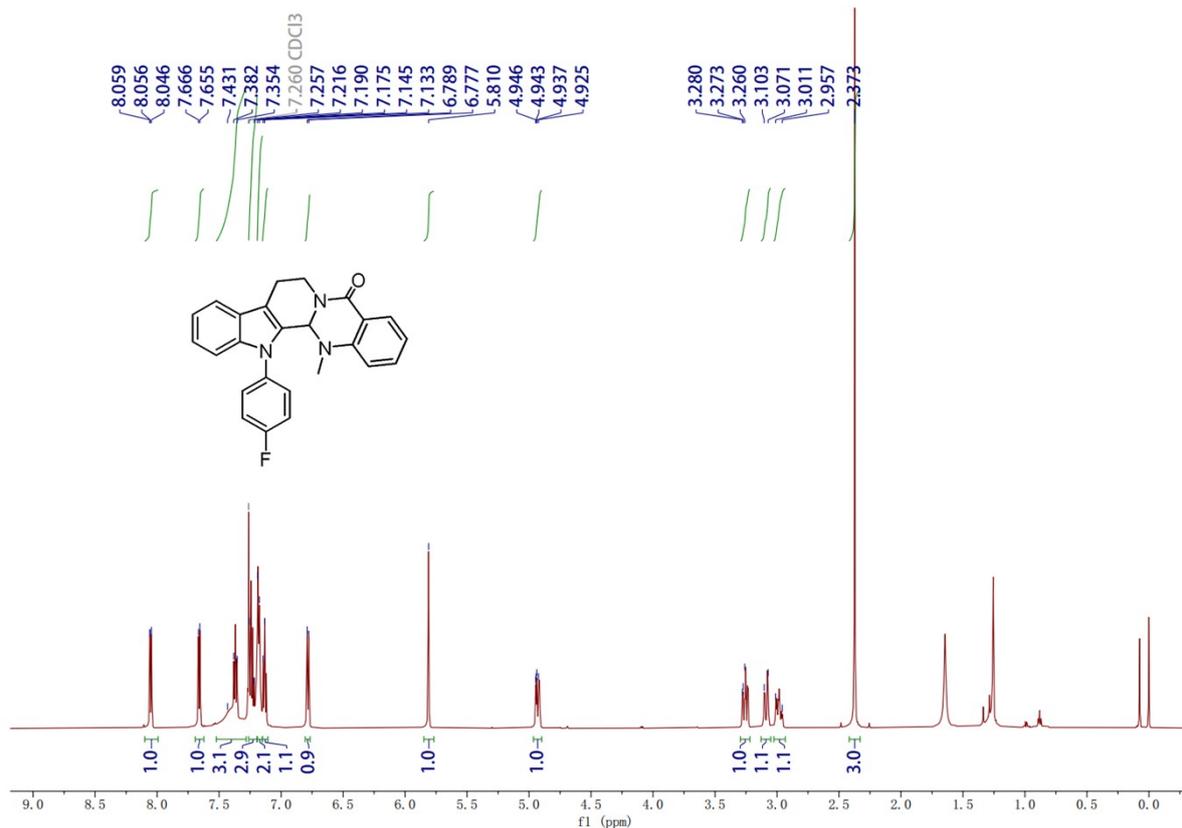
**Figure 29.**  $^1\text{H}$  NMR spectrum of compound **3o** (600 MHz,  $\text{CDCl}_3$ )



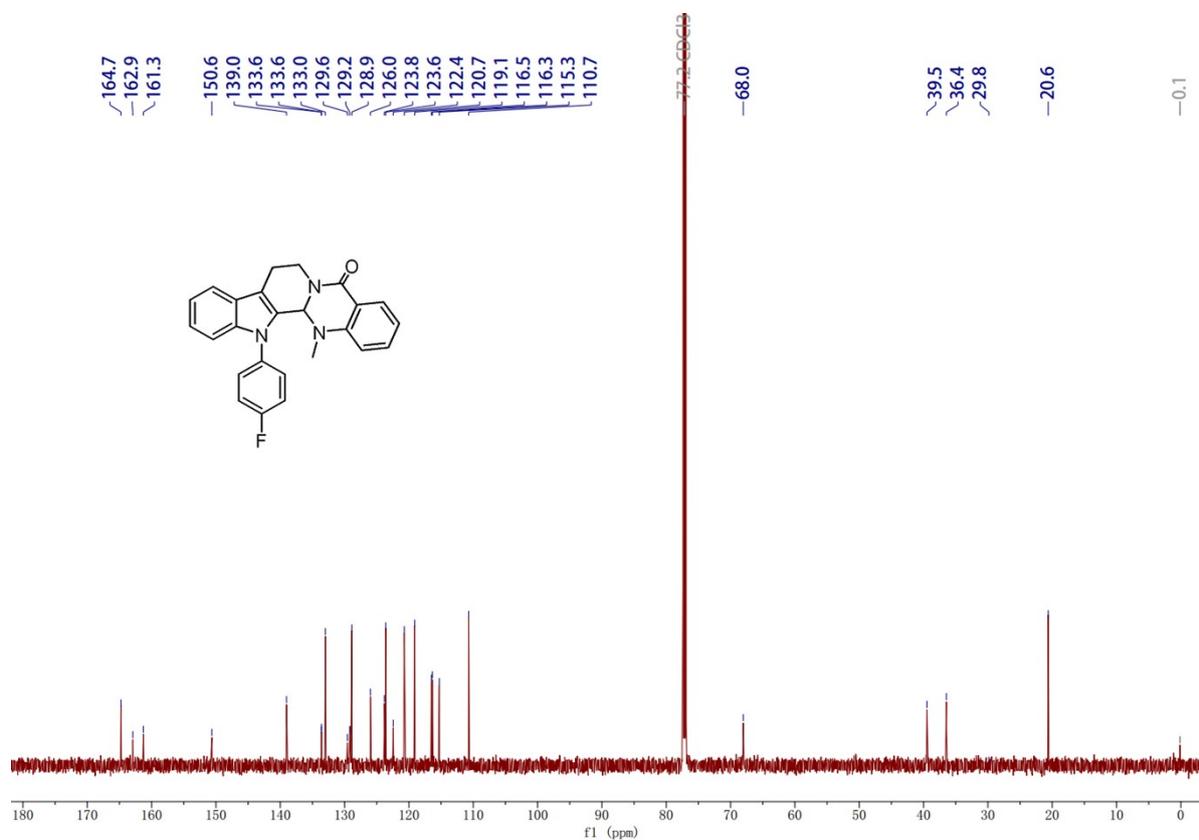
**Figure 30.**  $^{13}\text{C}$  NMR spectrum of compound **3o** (100 MHz,  $\text{CDCl}_3$ )



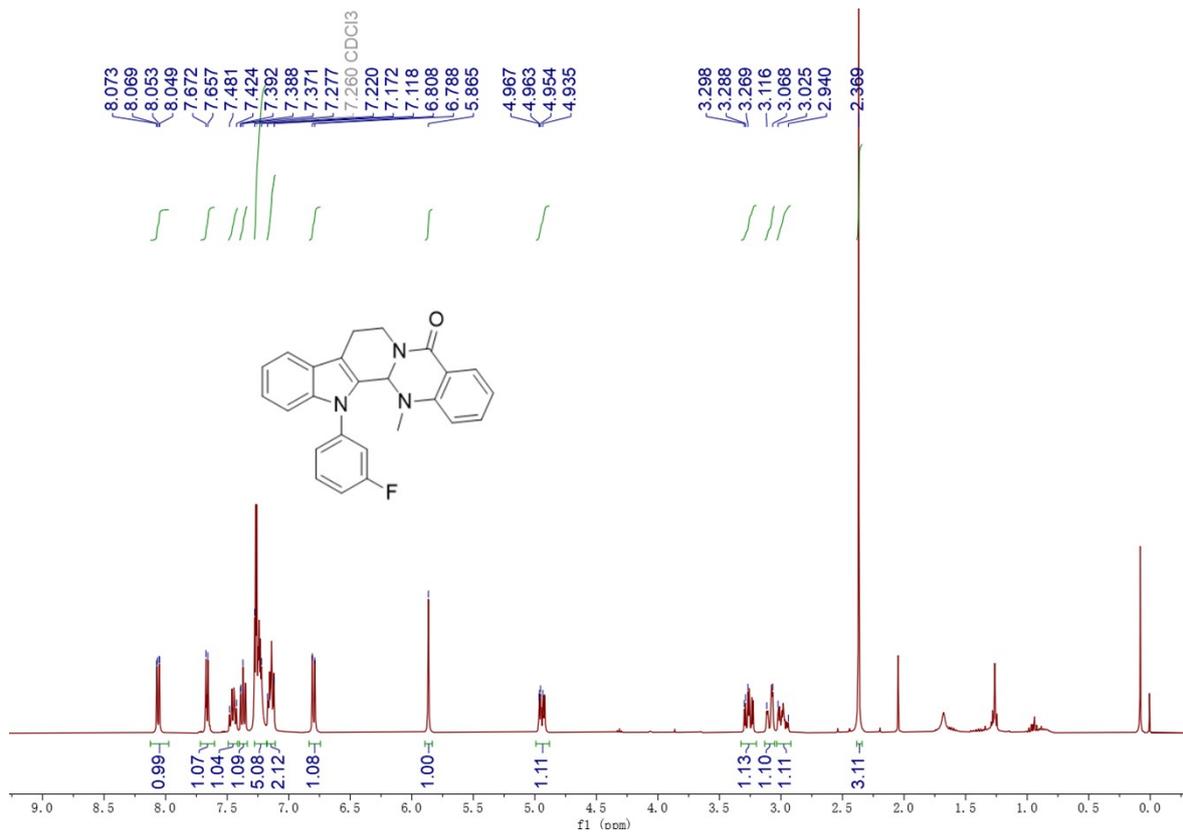
**Figure 32. <sup>13</sup>C NMR spectrum of compound 3p (100 MHz, CDCl<sub>3</sub>)**



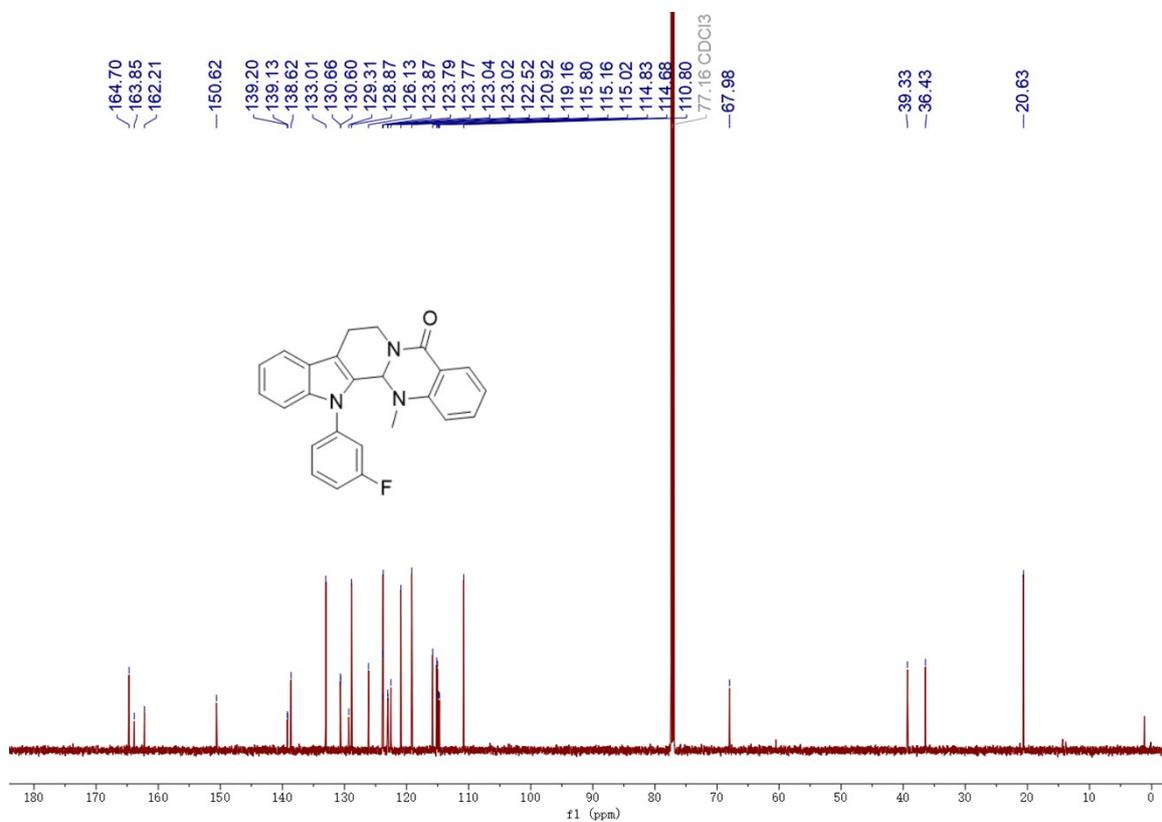
**Figure 33.** <sup>1</sup>H NMR spectrum of compound **3q** (600 MHz, CDCl<sub>3</sub>)



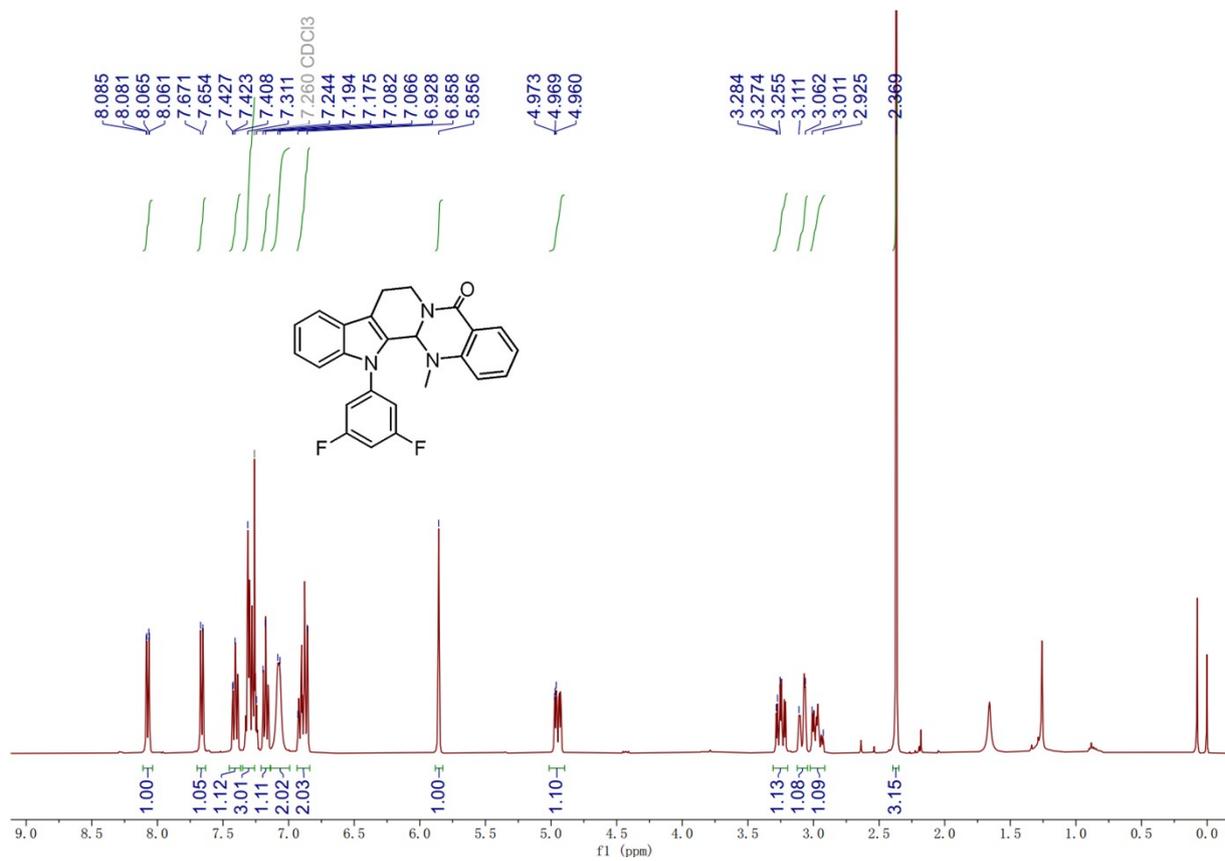
**Figure 34.** <sup>13</sup>C NMR spectrum of compound **3q** (150 MHz, CDCl<sub>3</sub>)



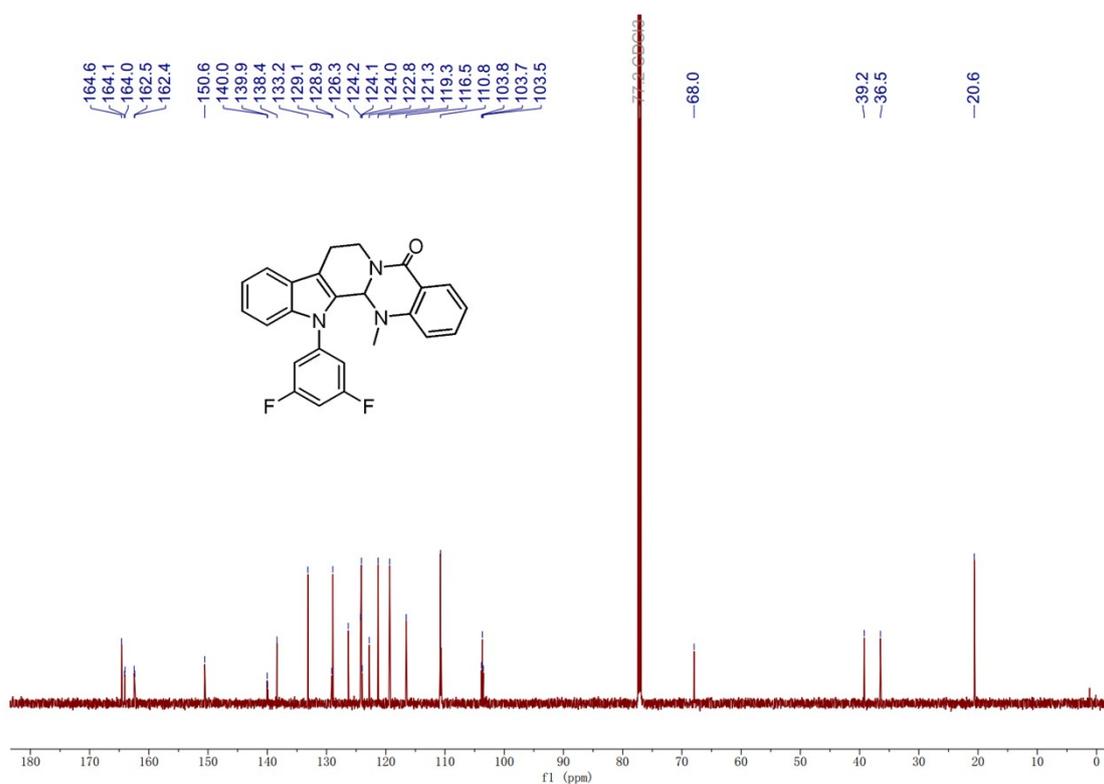
**Figure 35.** <sup>1</sup>H NMR spectrum of compound **3r** (400 MHz, CDCl<sub>3</sub>)



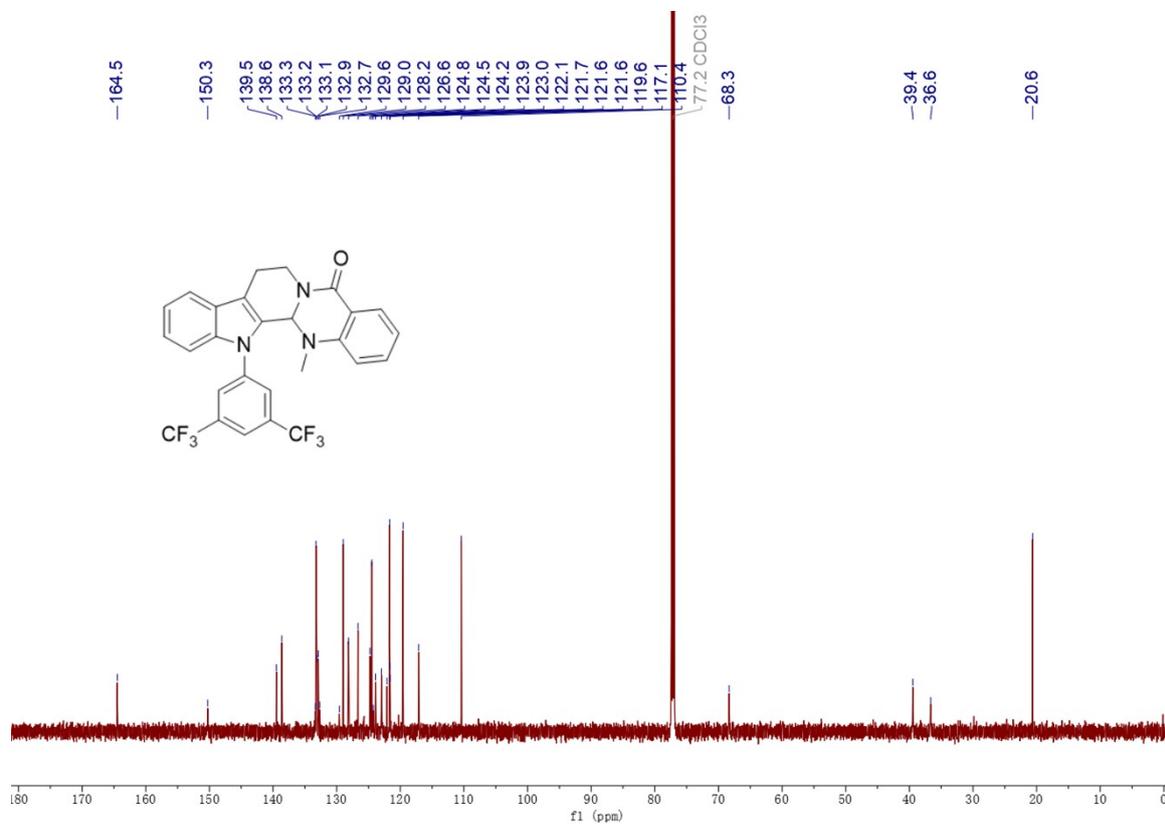
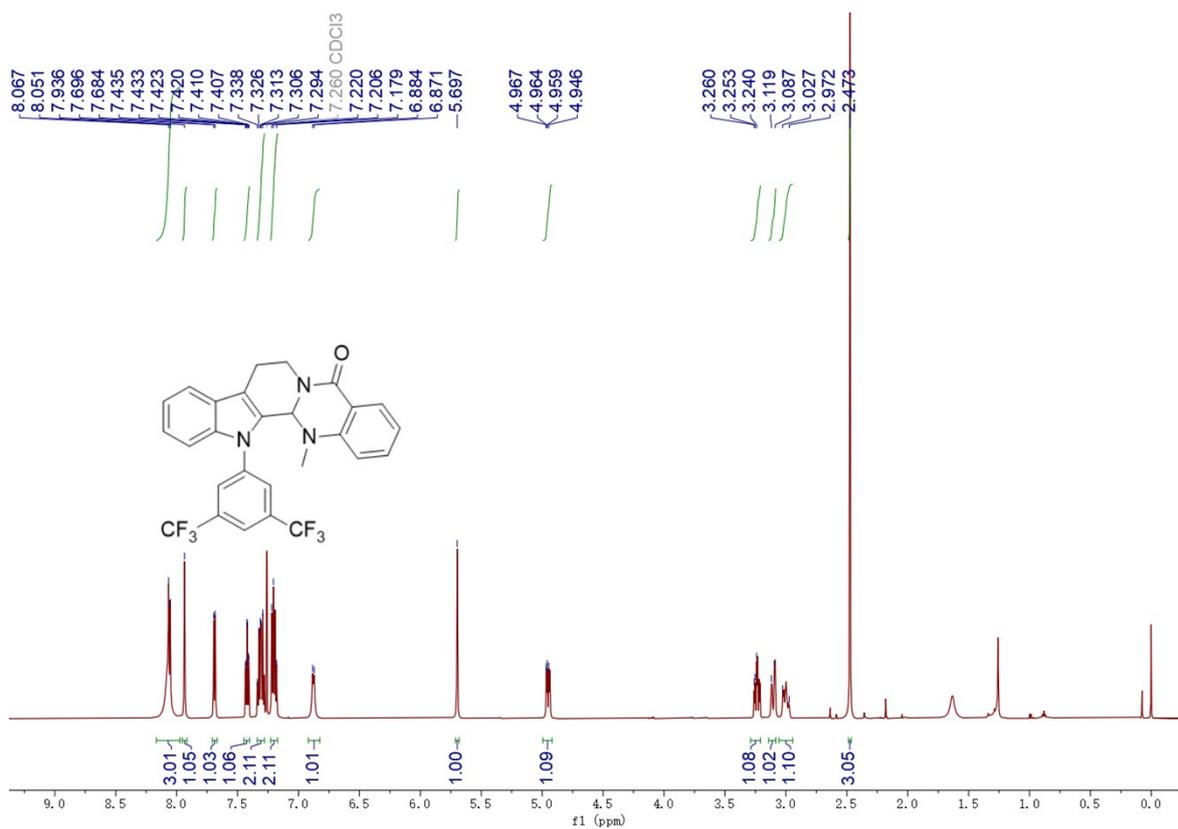
**Figure 36.** <sup>13</sup>C NMR spectrum of compound **3r** (150 MHz, CDCl<sub>3</sub>)



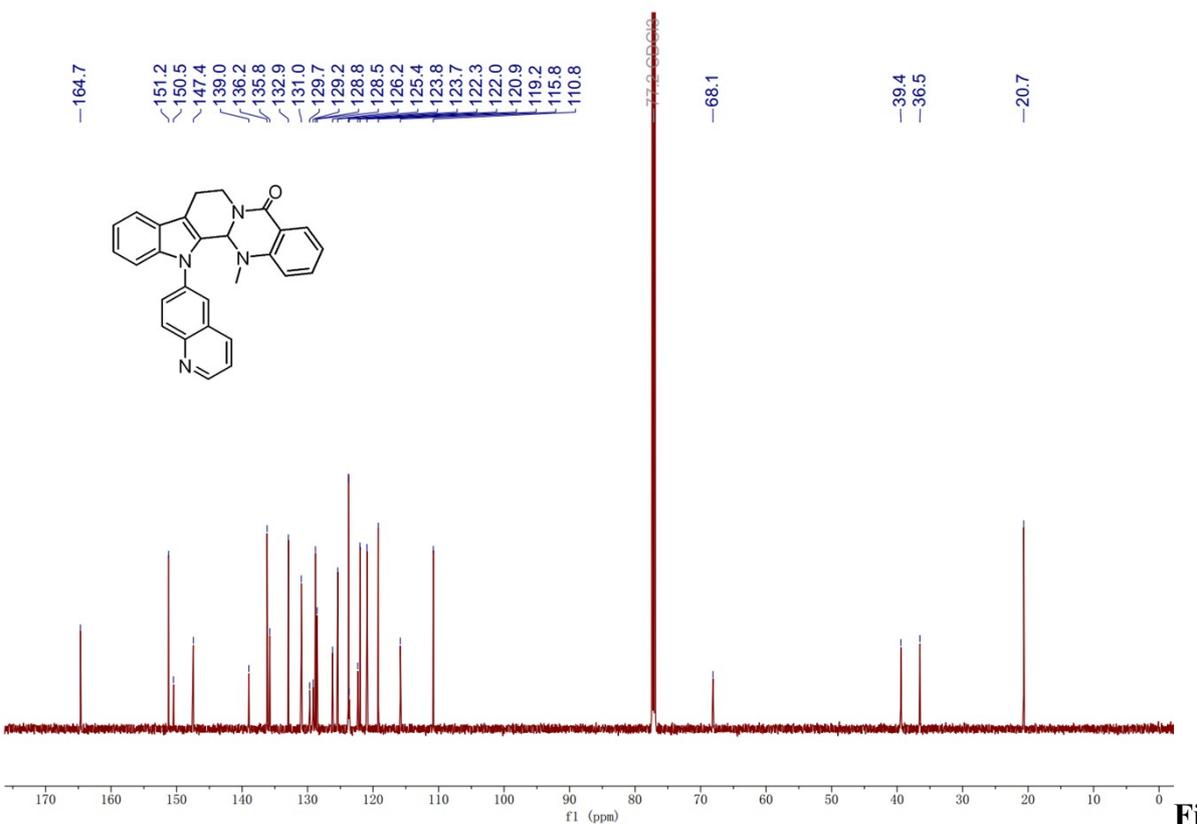
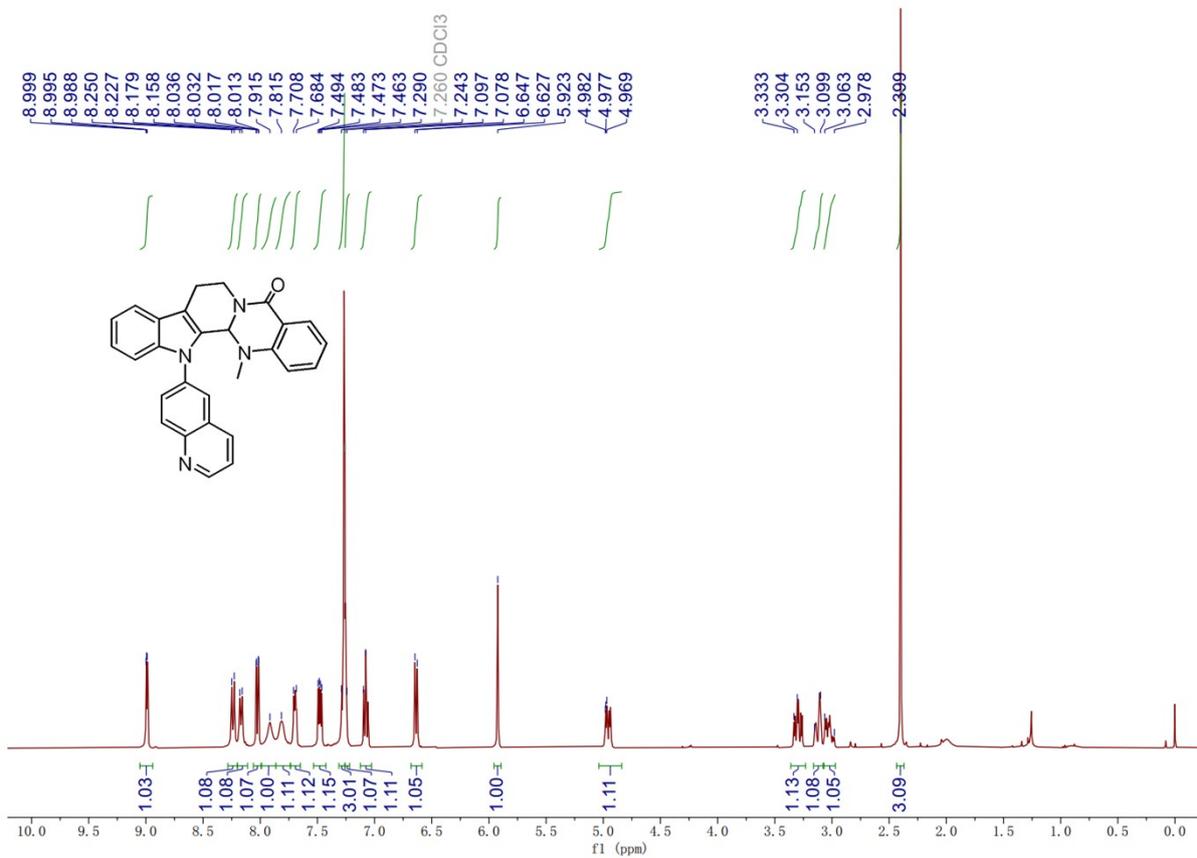
**Figure 37.** <sup>1</sup>H NMR spectrum of compound **3s** (400 MHz, CDCl<sub>3</sub>)



**Figure 38.** <sup>13</sup>C NMR spectrum of compound **3s** (150 MHz, CDCl<sub>3</sub>)



**Figure 40.** <sup>13</sup>C NMR spectrum of compound **3t** (150 MHz, CDCl<sub>3</sub>)



**Figure 42.**  $^{13}\text{C}$  NMR spectrum of compound **3u** (150 MHz,  $\text{CDCl}_3$ )

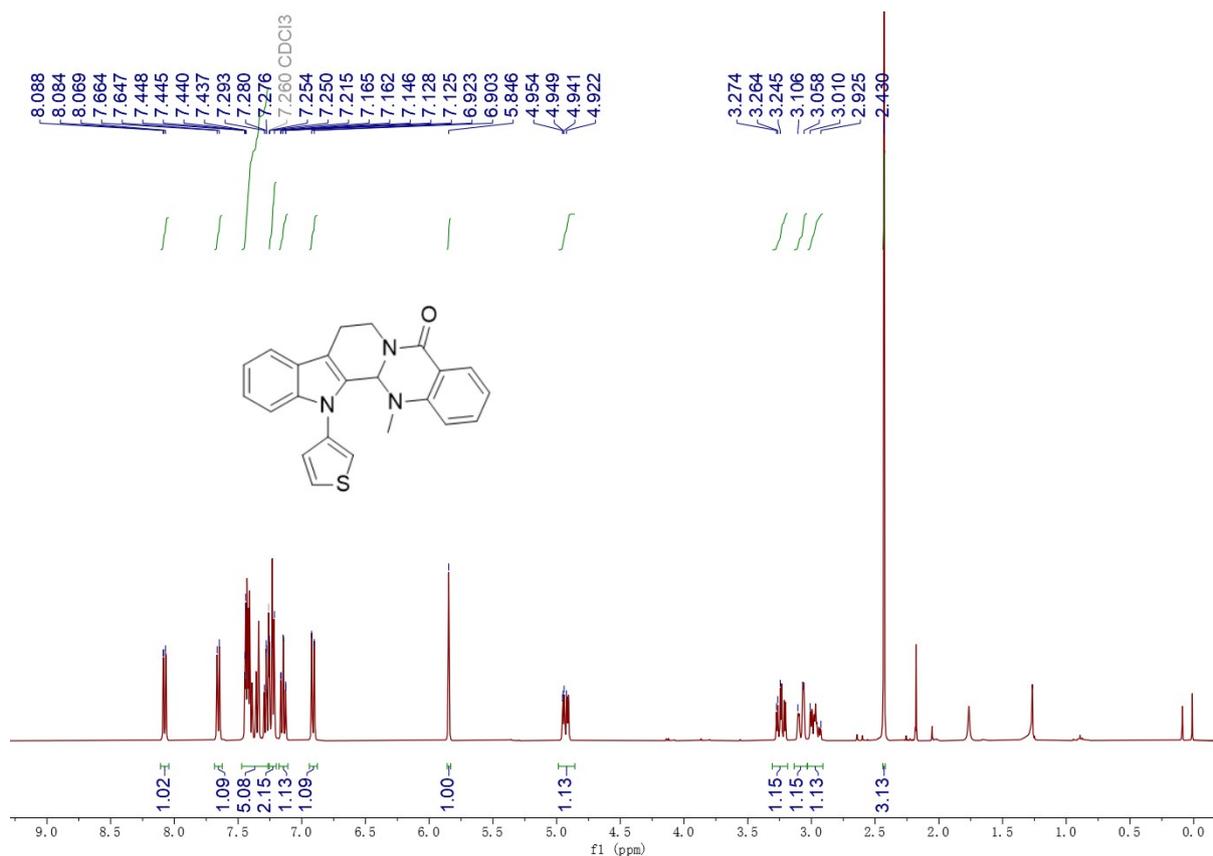


Figure 43. <sup>1</sup>H NMR spectrum of compound 3v (400 MHz, CDCl<sub>3</sub>)

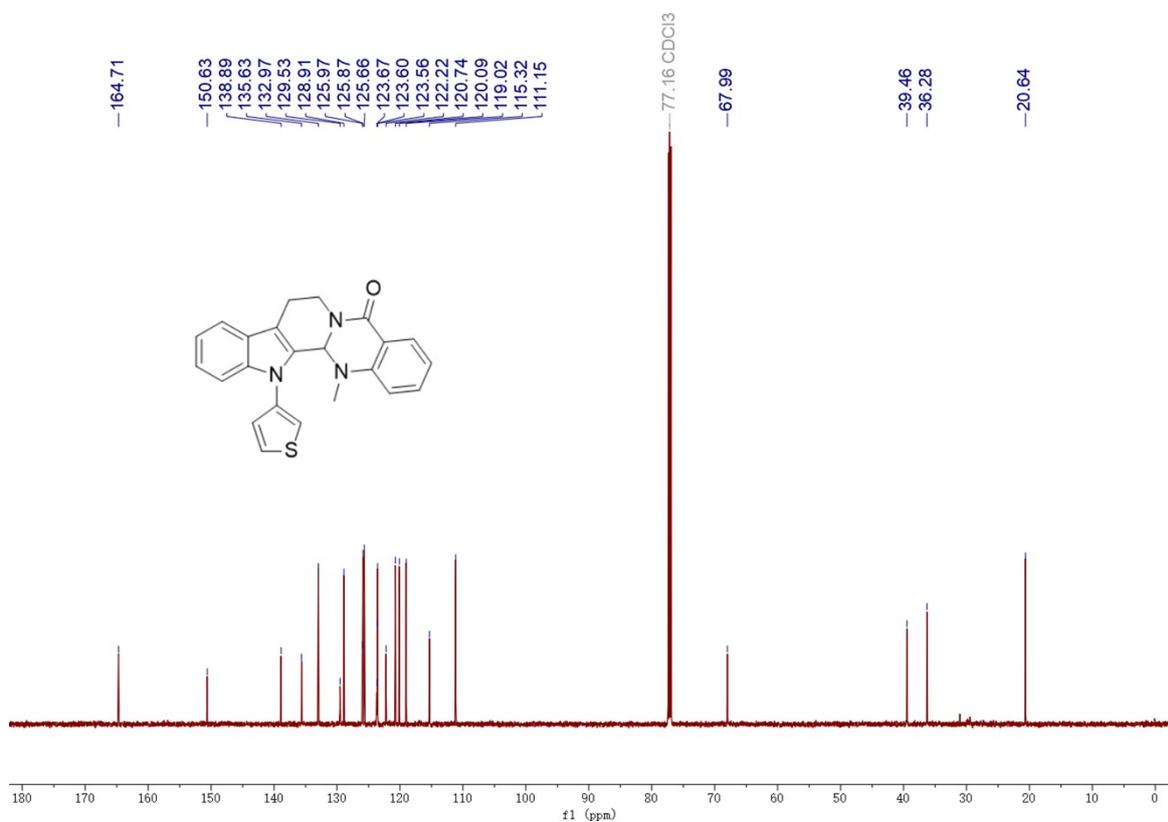


Figure 44. <sup>13</sup>C NMR spectrum of compound 3v (150 MHz, CDCl<sub>3</sub>)