

Supporting Information

Synthesis of Triarylmethanes via Palladium-Catalyzed Suzuki Coupling of Trimethylammonium Salts and Arylboronic Acids

Zhenming Zhang, Hui Wang, Nianli Qiu, Yujing Kong, Wenjuan Zeng, Yongquan Zhang, Junfeng Zhao*

Key Laboratory of Chemical Biology of Jiangxi Province, College of Chemistry and Chemical Engineering, Jiangxi Normal University, Nanchang, 330022, Jiangxi, P. R. China

Email: zhaojf@jxnu.edu.cn

Content

1. Mechanistic study by employing ESI-MS.....	S2
2. Copies of ^1H -NMR & ^{13}C - NMR Spectra.....	S4

1. Mechanistic study by monitoring the reaction with ESI-MS analysis

Figure 1 shows the ESI-MS spectrum of the reaction mixture of cross-coupling between 1,1-diphenylmethyl-trimethylammonium triflate with phenylboronic acid. The reaction mixture diluted by MeOH was injected to ESI-MS after reaction time of 0.5 h. Diphenylmethylium **A** (m/z 166), oxidative addition intermediate **B** (m/z 798) and **D** (m/z 1126), and transmetalation intermediate **C** (m/z 874) were detected.

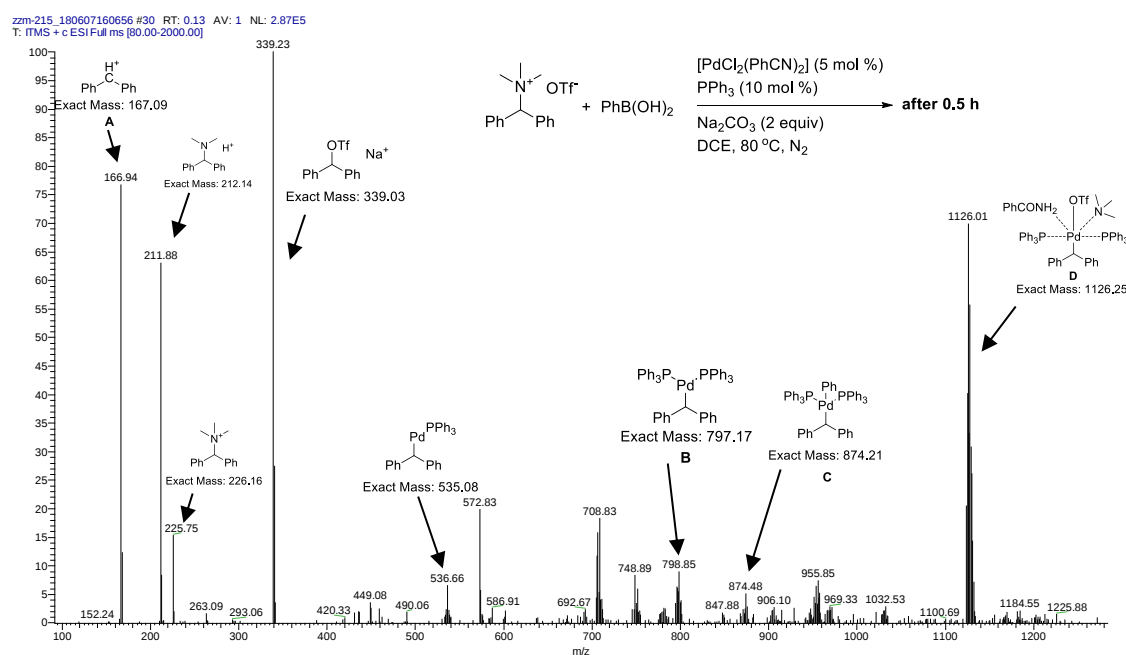


Figure 1

Figure 2 shows the ESI-MS spectrum of the reaction mixture of stoichiometric reaction of 1,1-diphenylmethyl-trimethylammonium triflate in the absence of phenylboronic acid. The reaction mixture diluted by MeOH was injected to ESI-MS after reaction time of 0.5 h. Diphenylmethylium **A** (m/z 166), oxidative addition intermediate **B** (m/z 795), **D** (m/z 1127) and **E** (m/z 749) were detected.

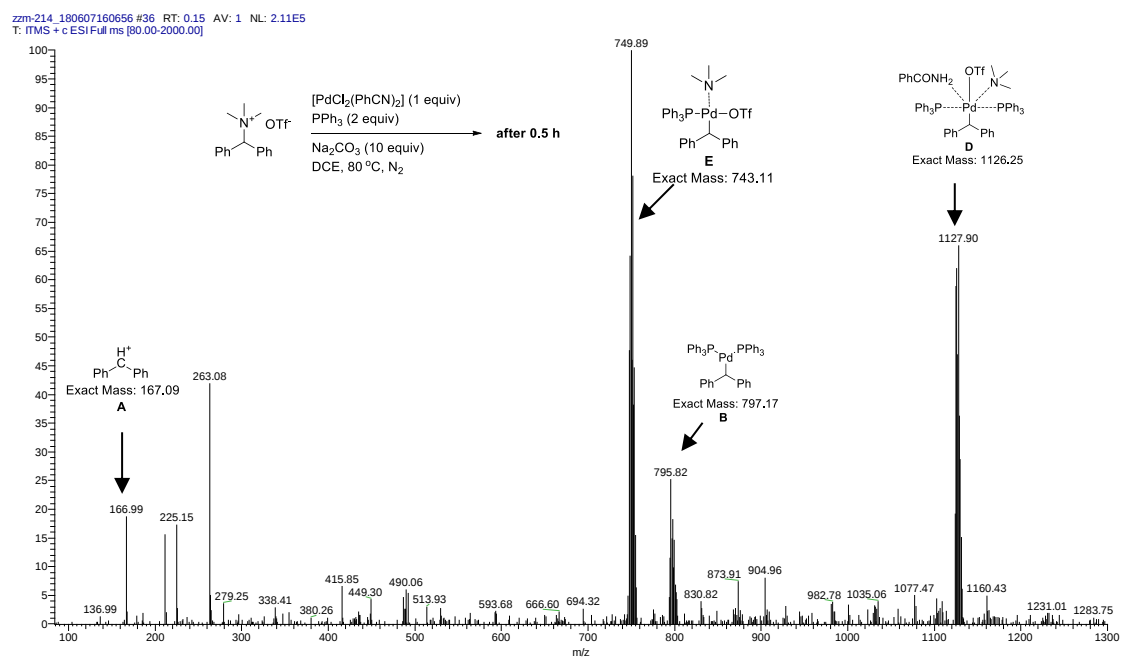
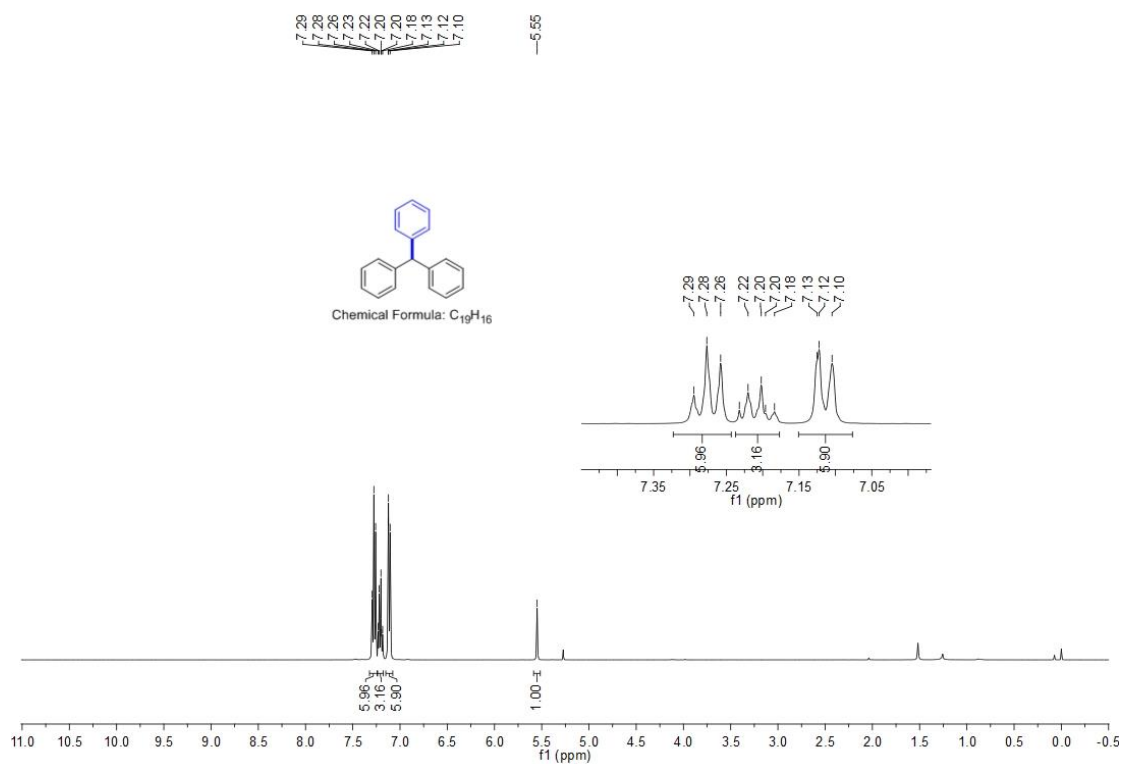
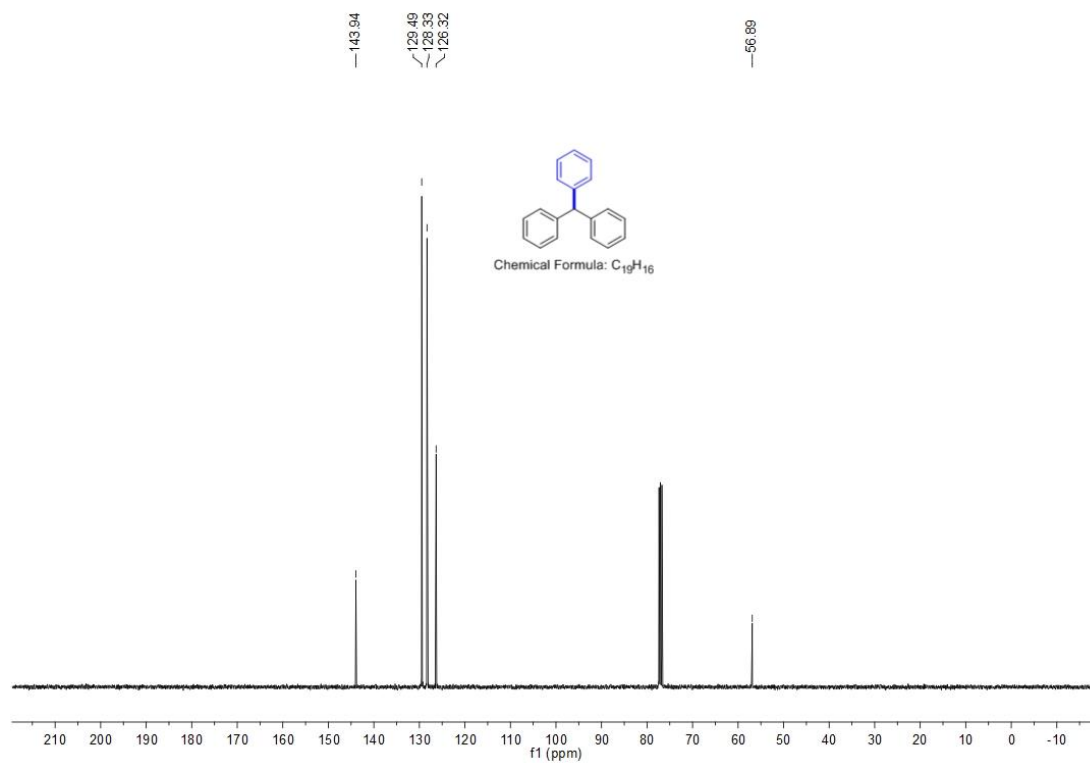


Figure 2

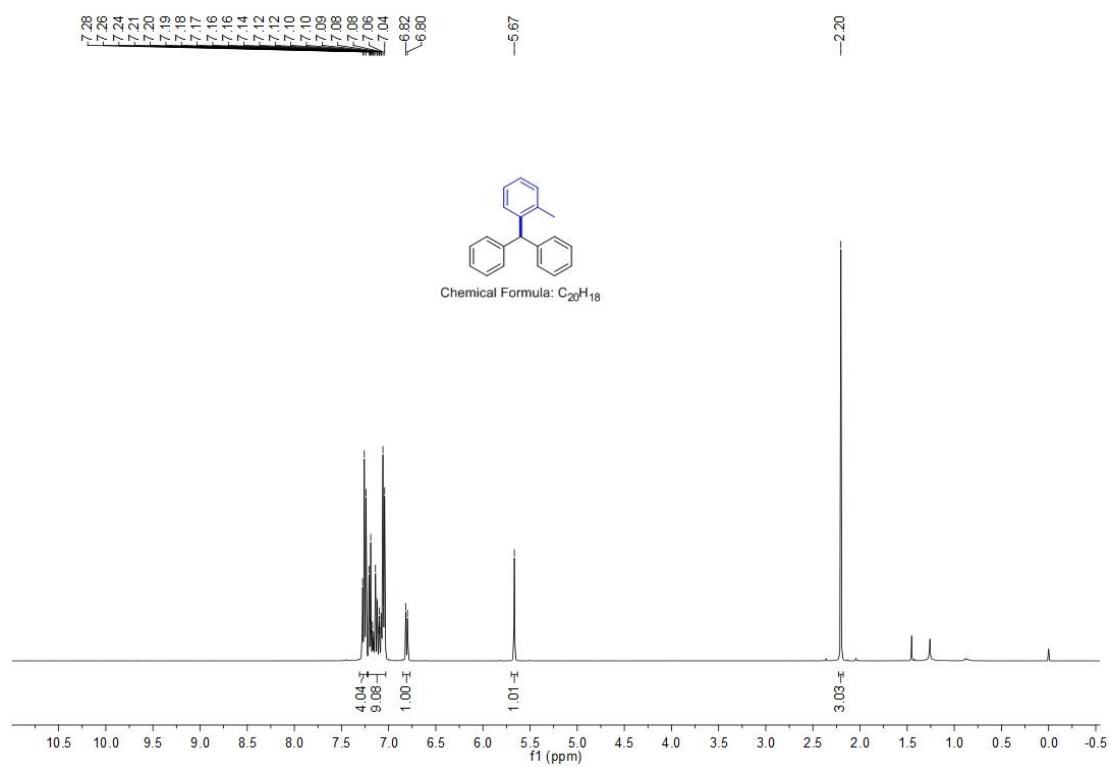
2. Copies of ^1H -NMR & ^{13}C - NMR Spectra



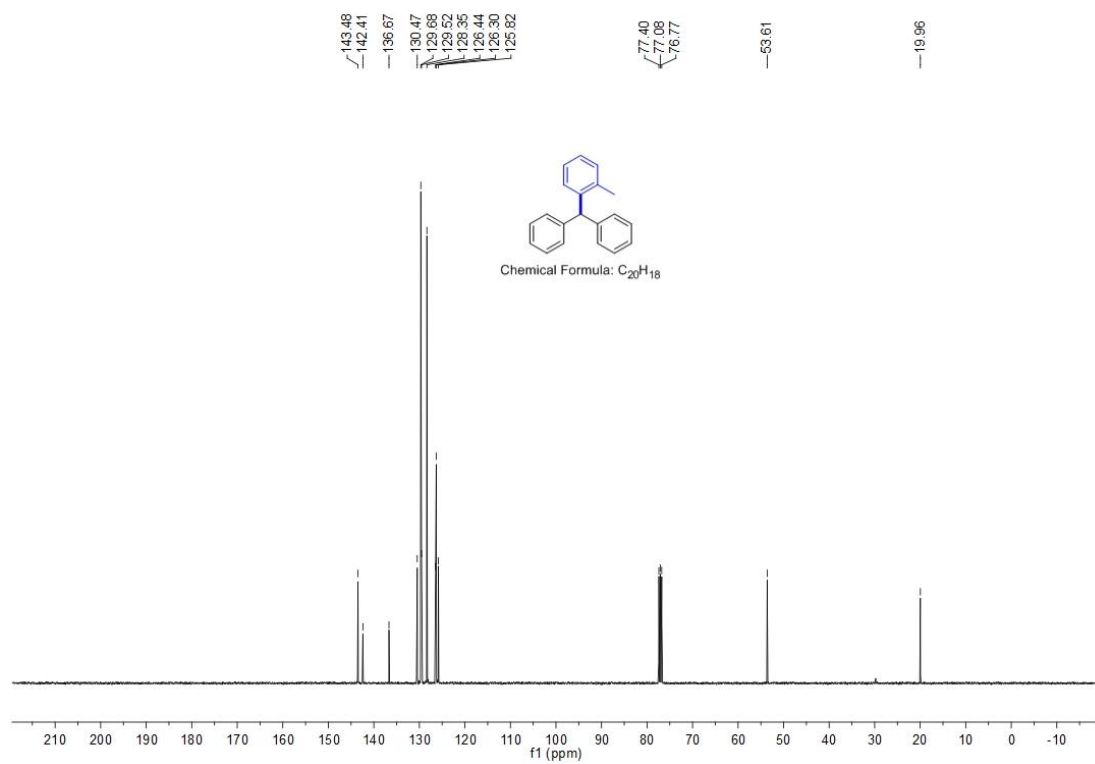
^1H NMR of **3a**



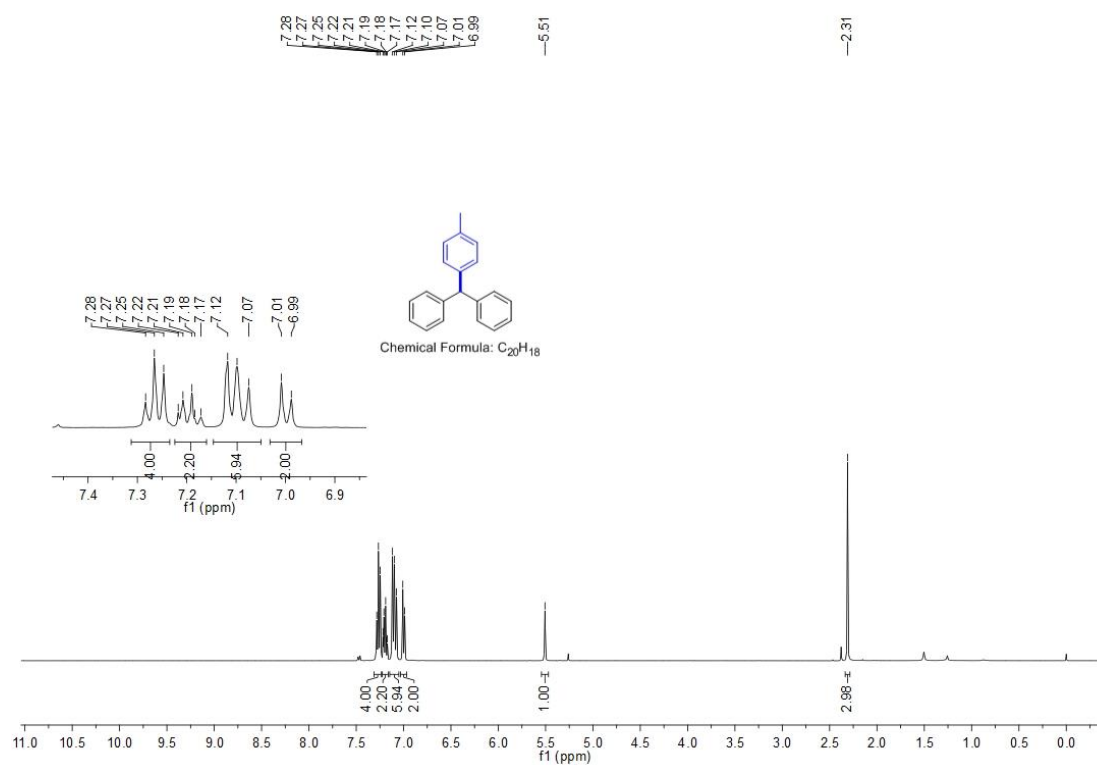
^{13}C NMR of **3a**



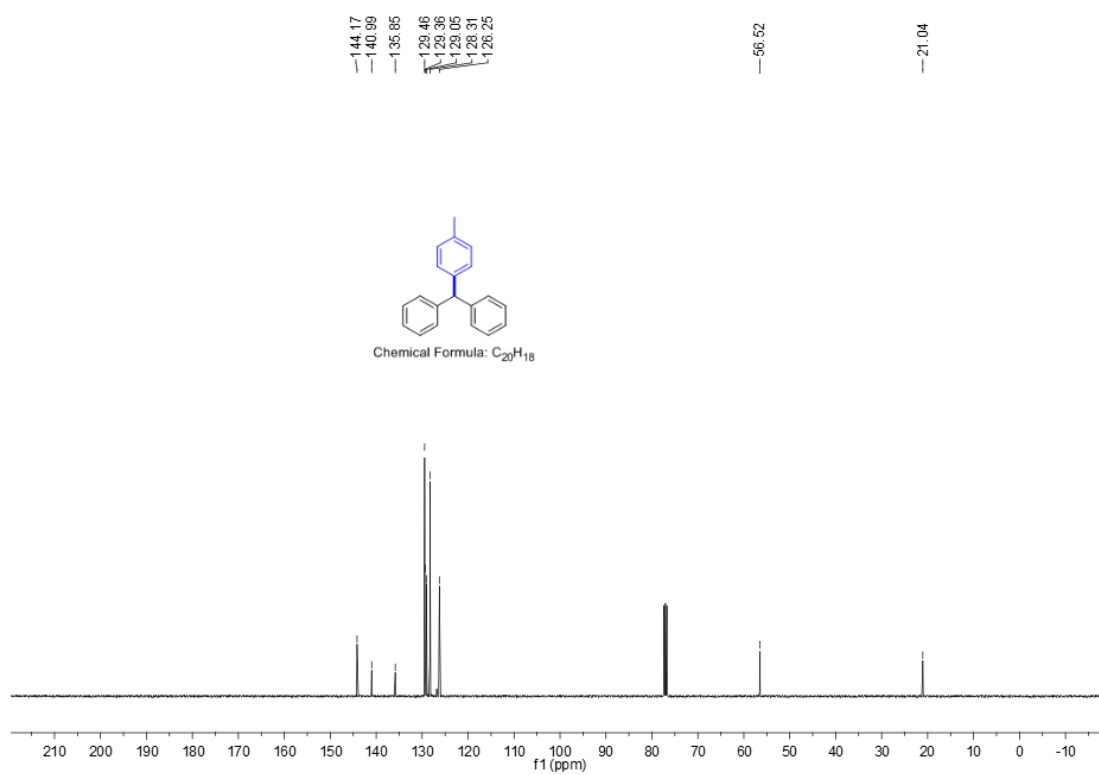
1H NMR of **3b**



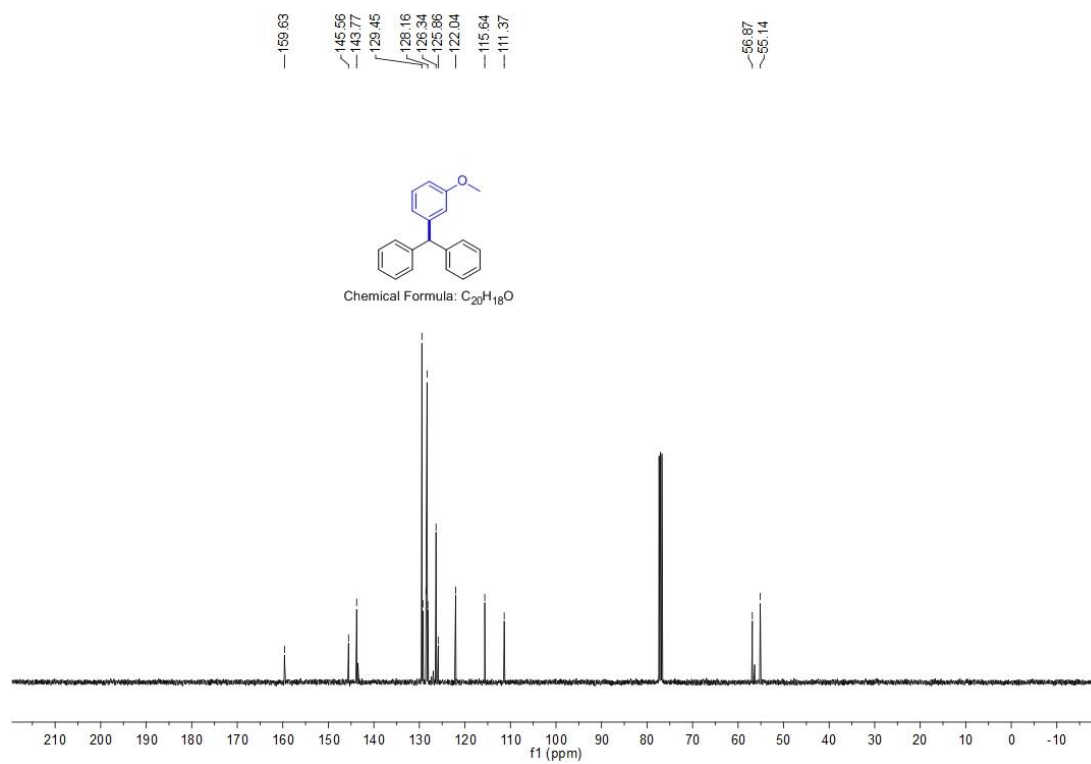
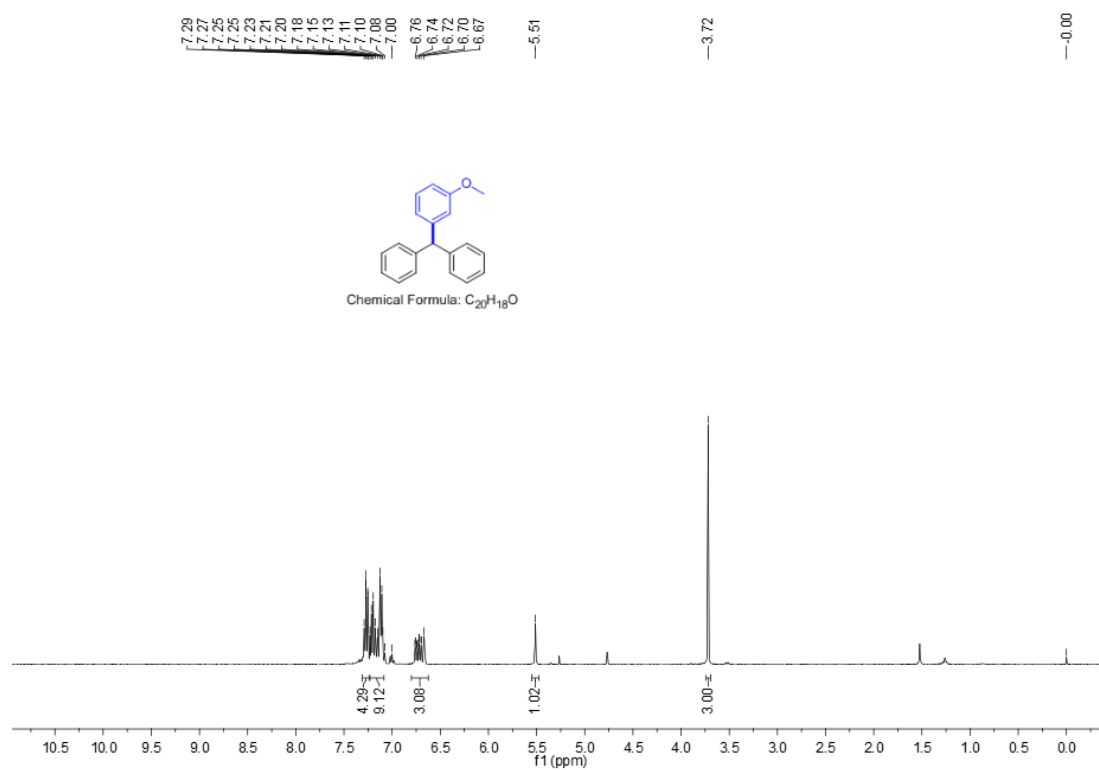
^{13}C NMR of **3b**

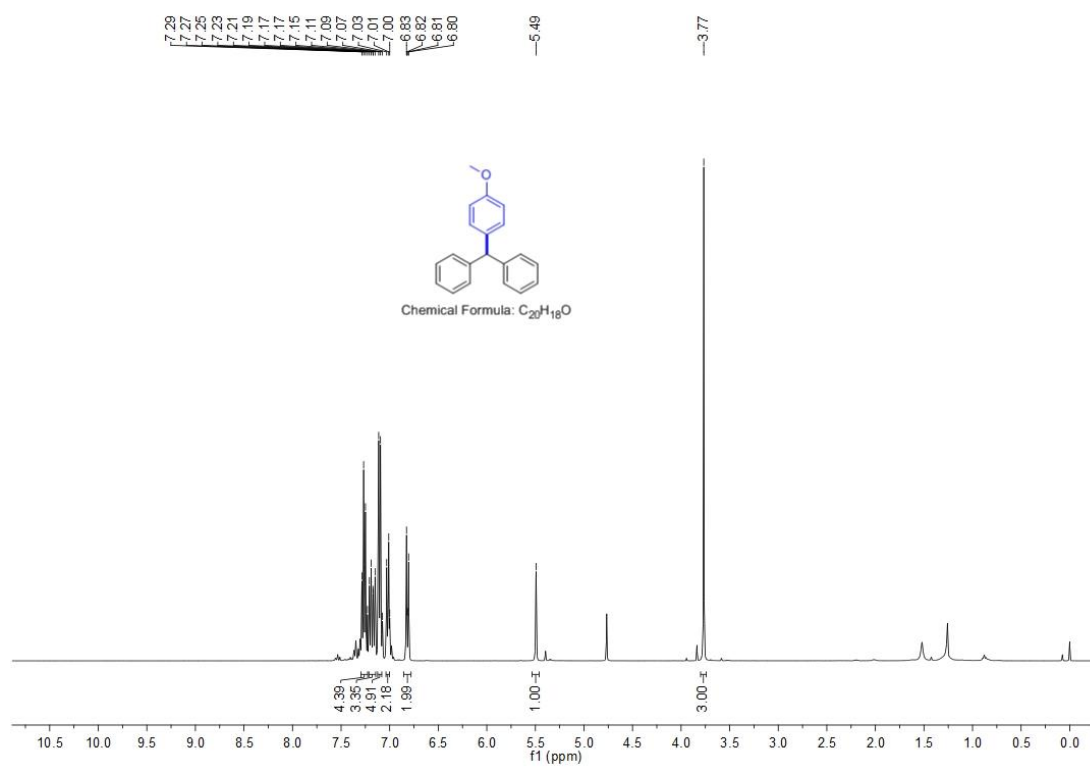


1H NMR of **3c**

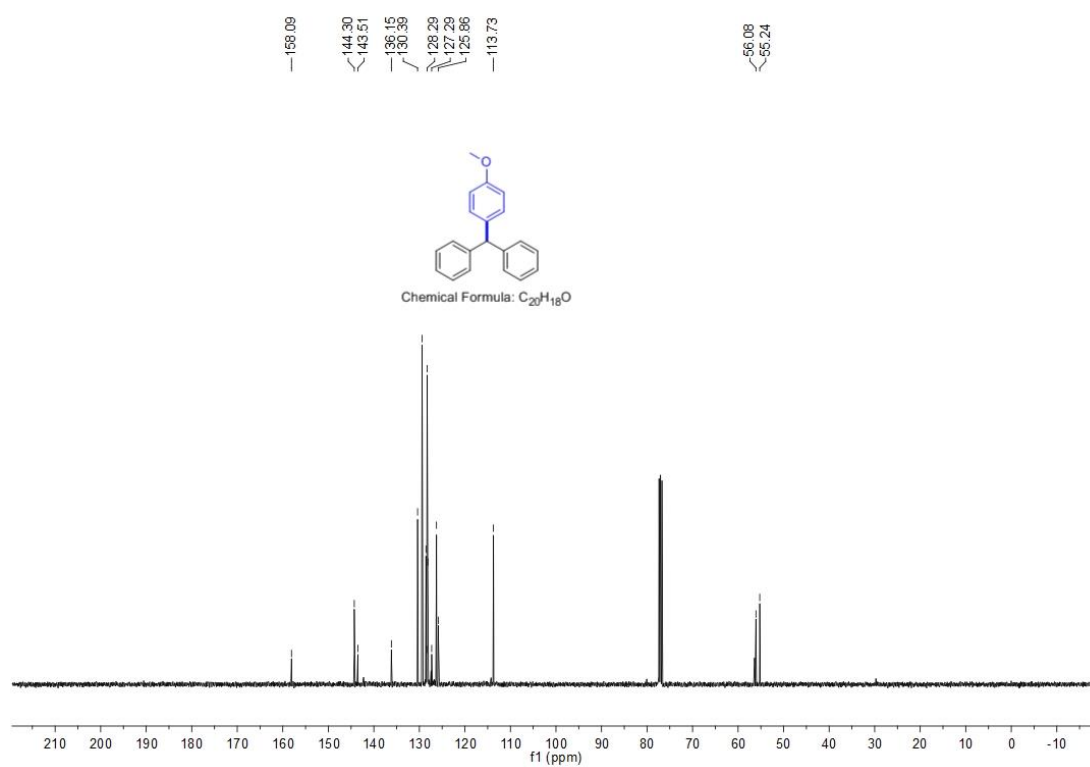


^{13}C NMR of **3c**

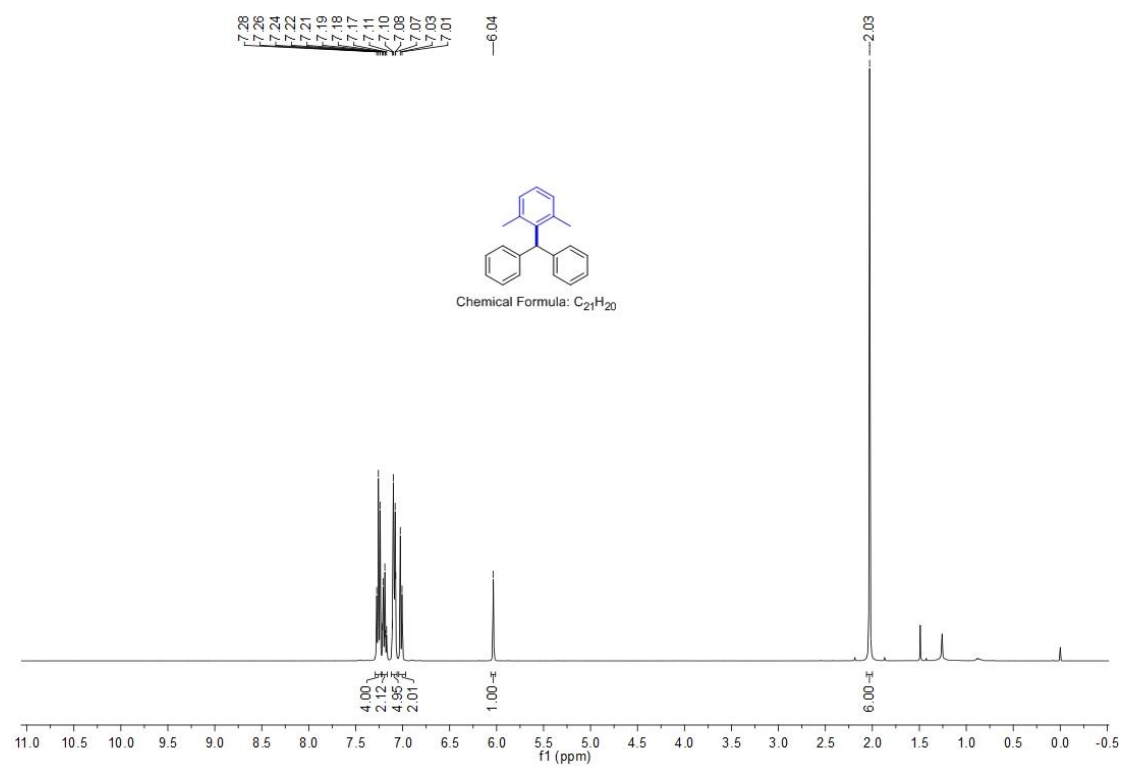




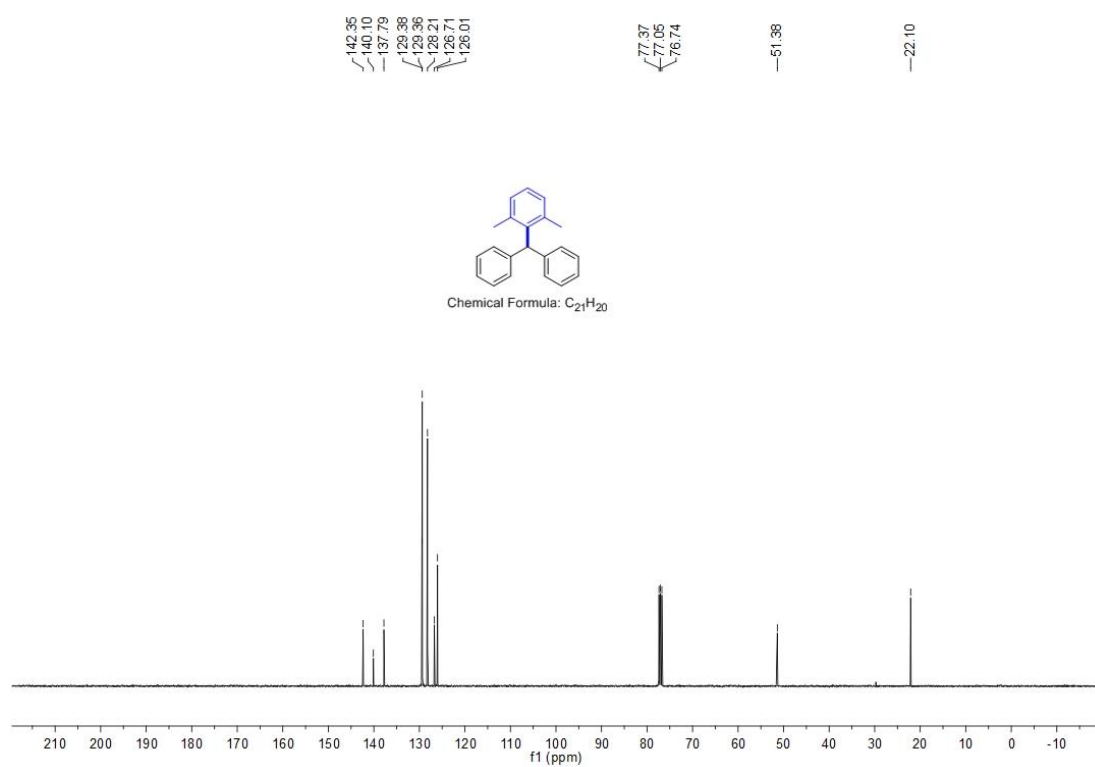
1H NMR of **3e**



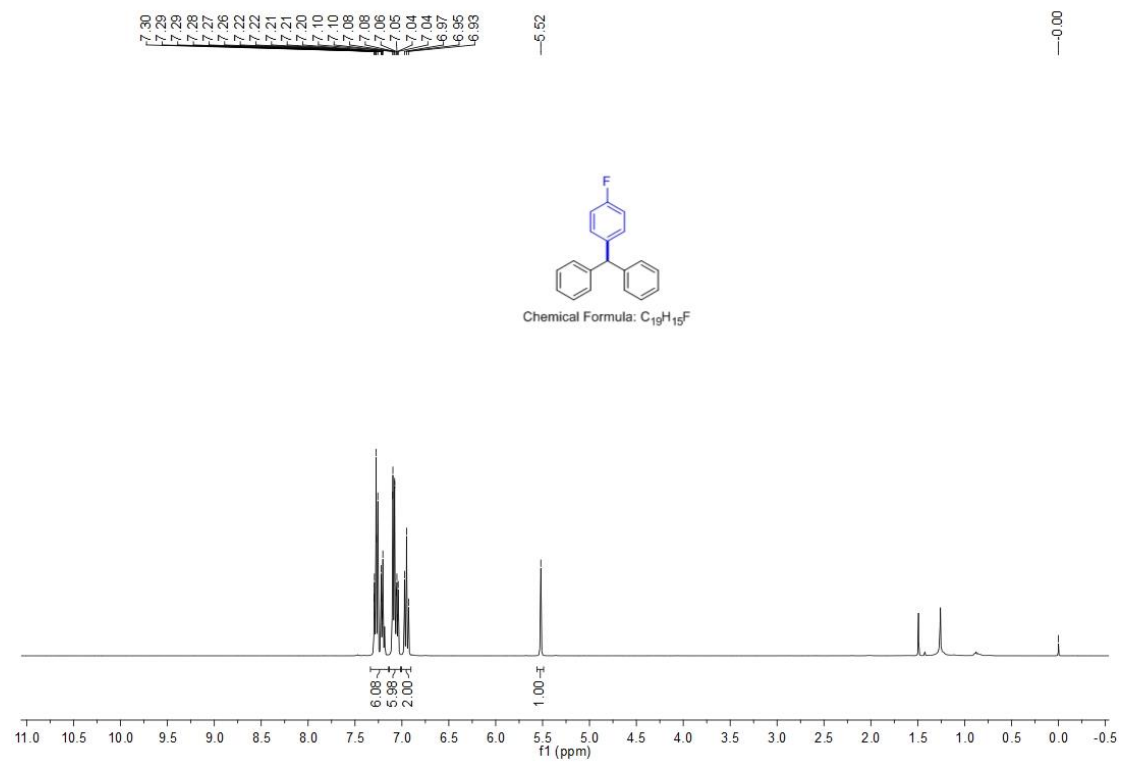
^{13}C NMR of **3e**



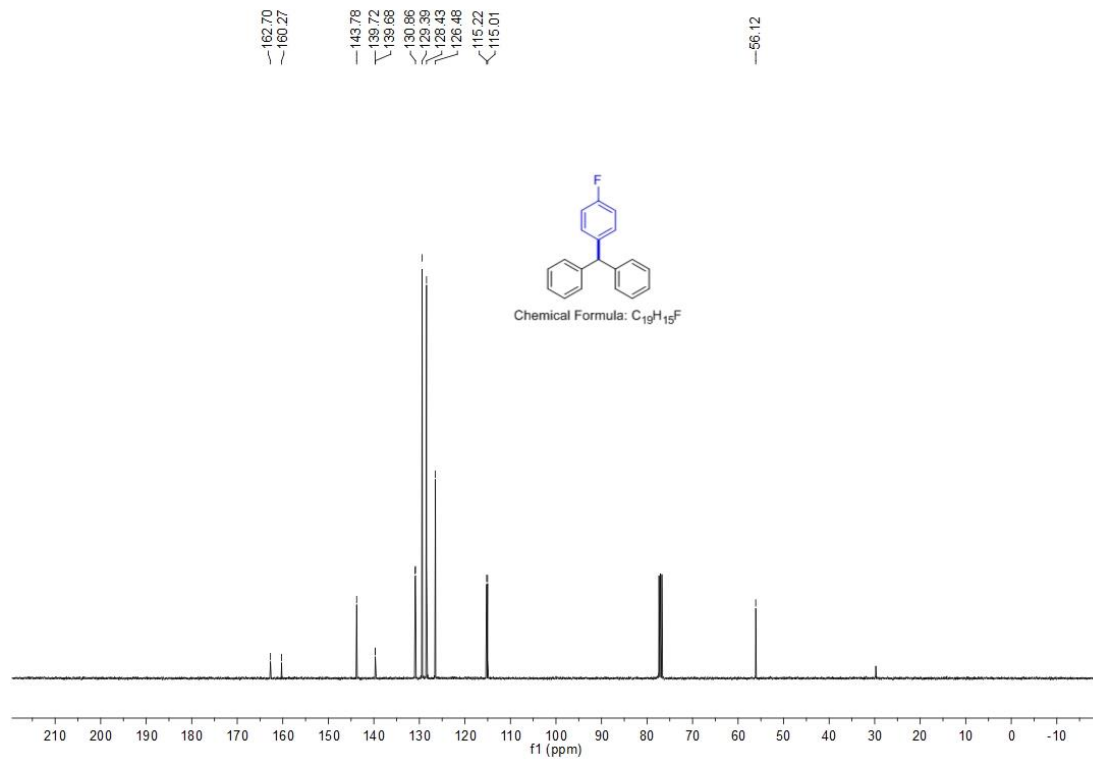
¹H NMR of **3f**



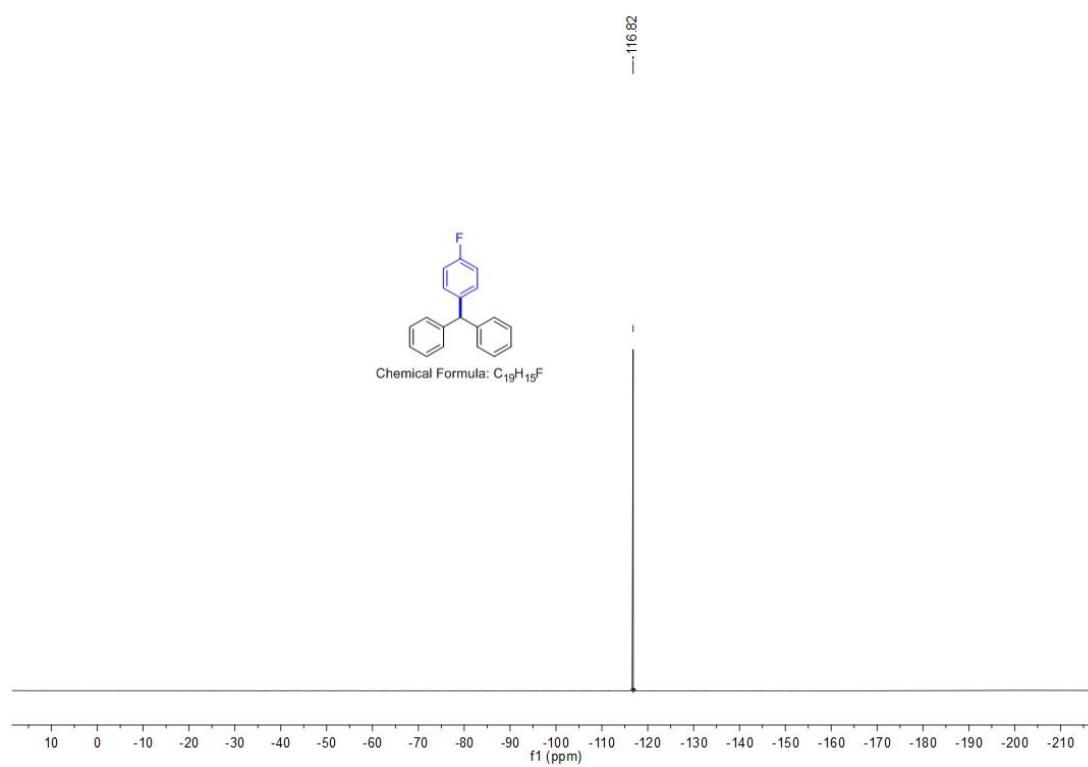
¹³C NMR of **3f**



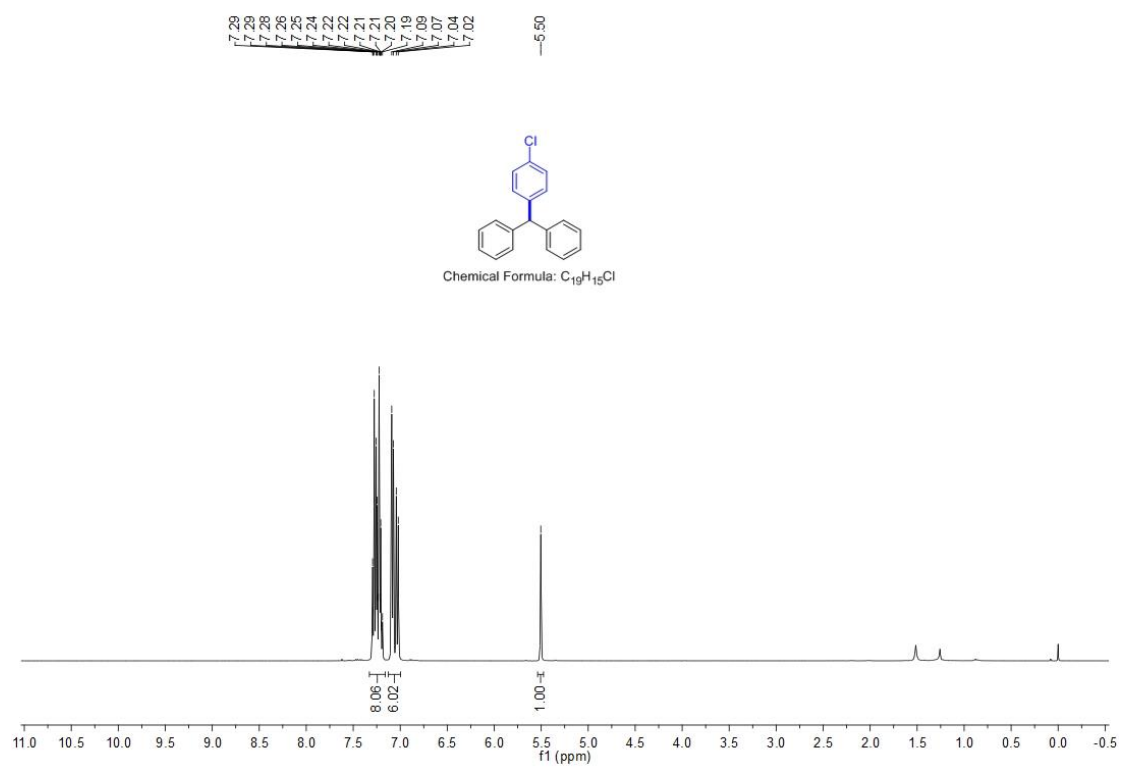
1H NMR of **3g**



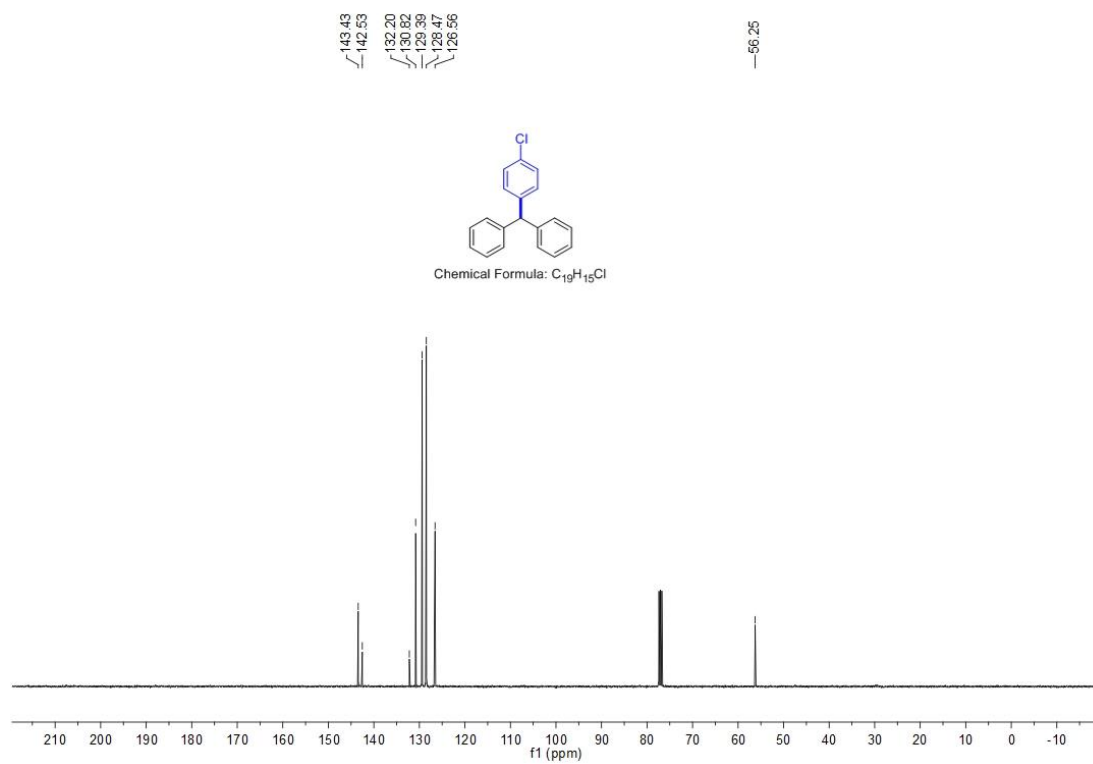
^{13}C NMR of **3g**



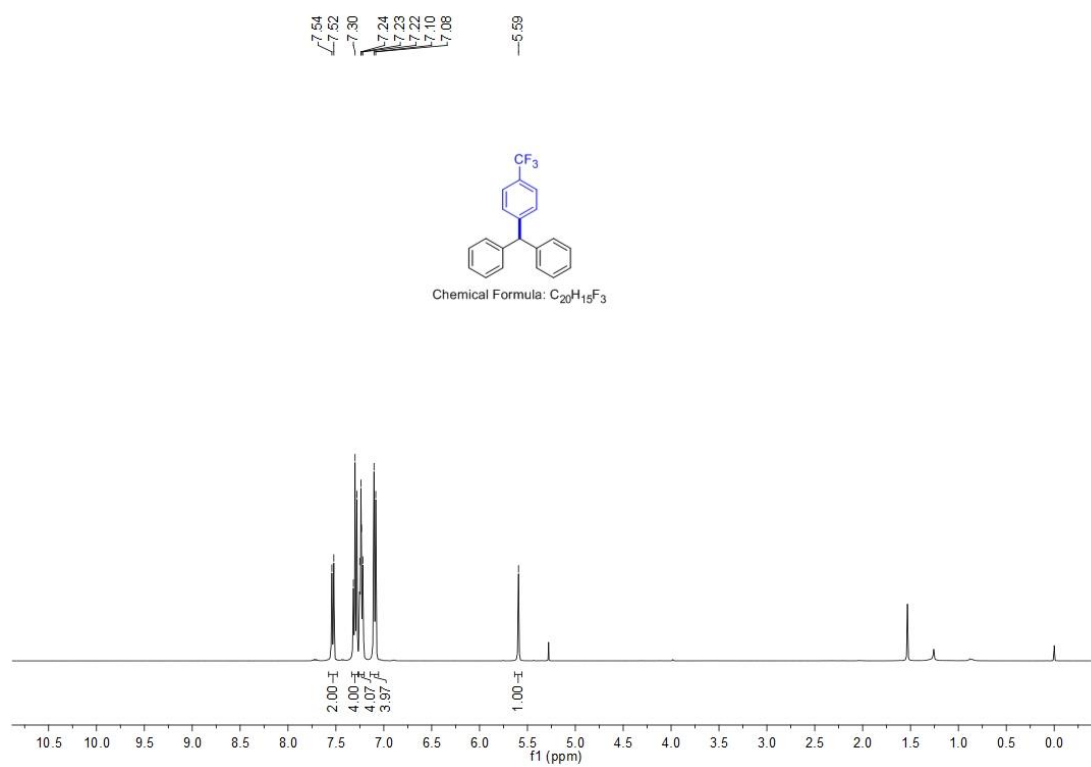
^{19}F NMR of **3g**



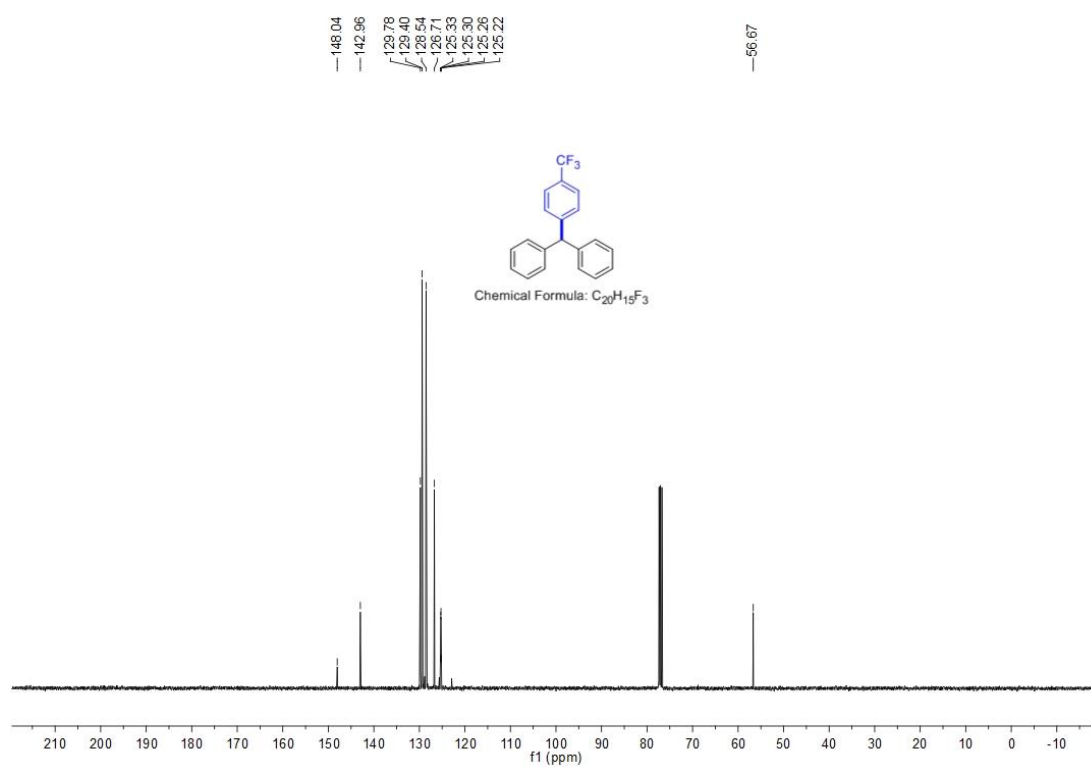
¹H NMR of **3h**



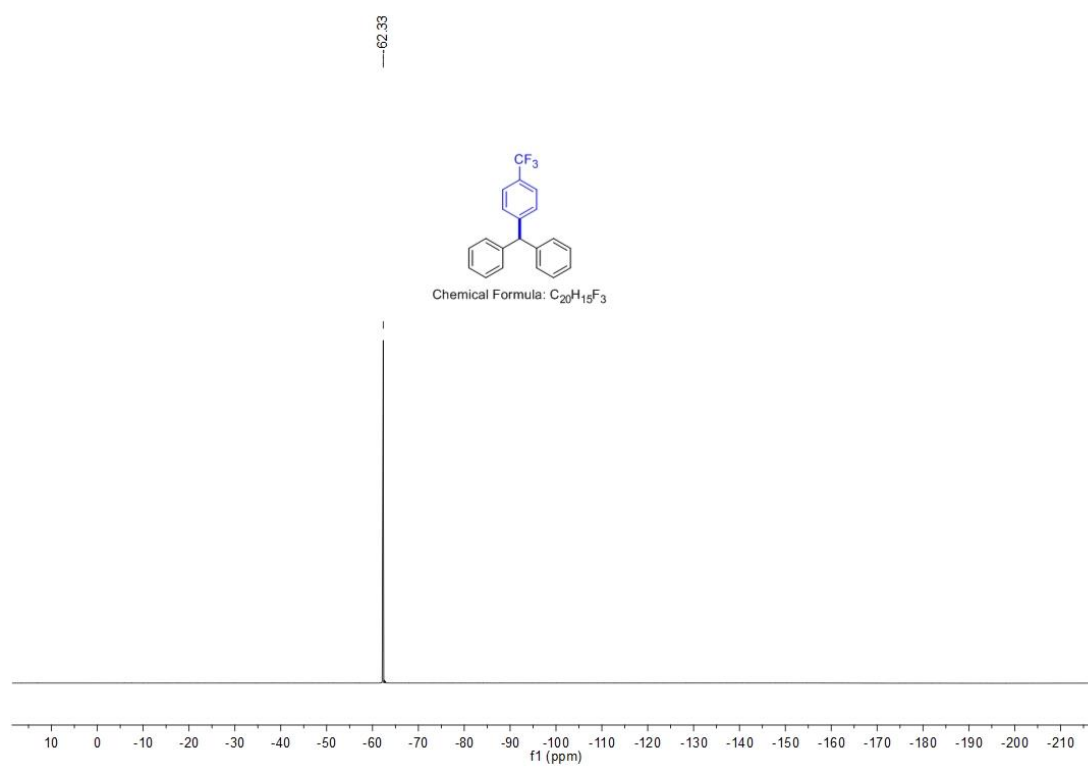
¹³C NMR of **3h**



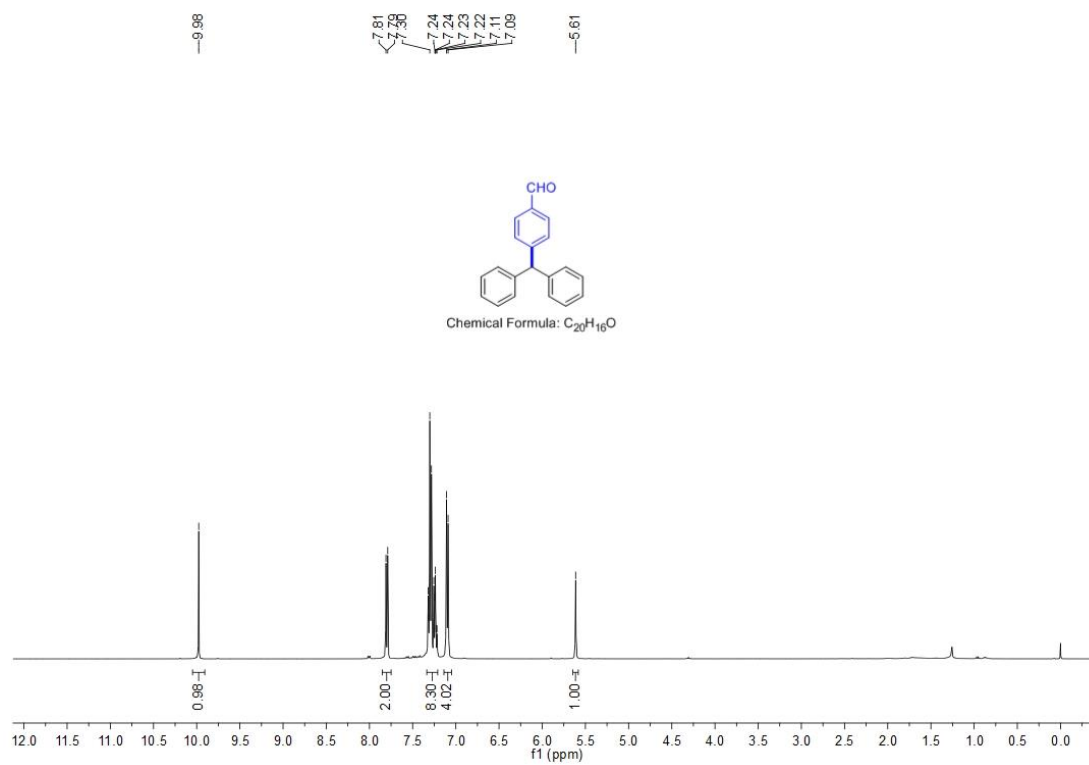
¹H NMR of **3j**



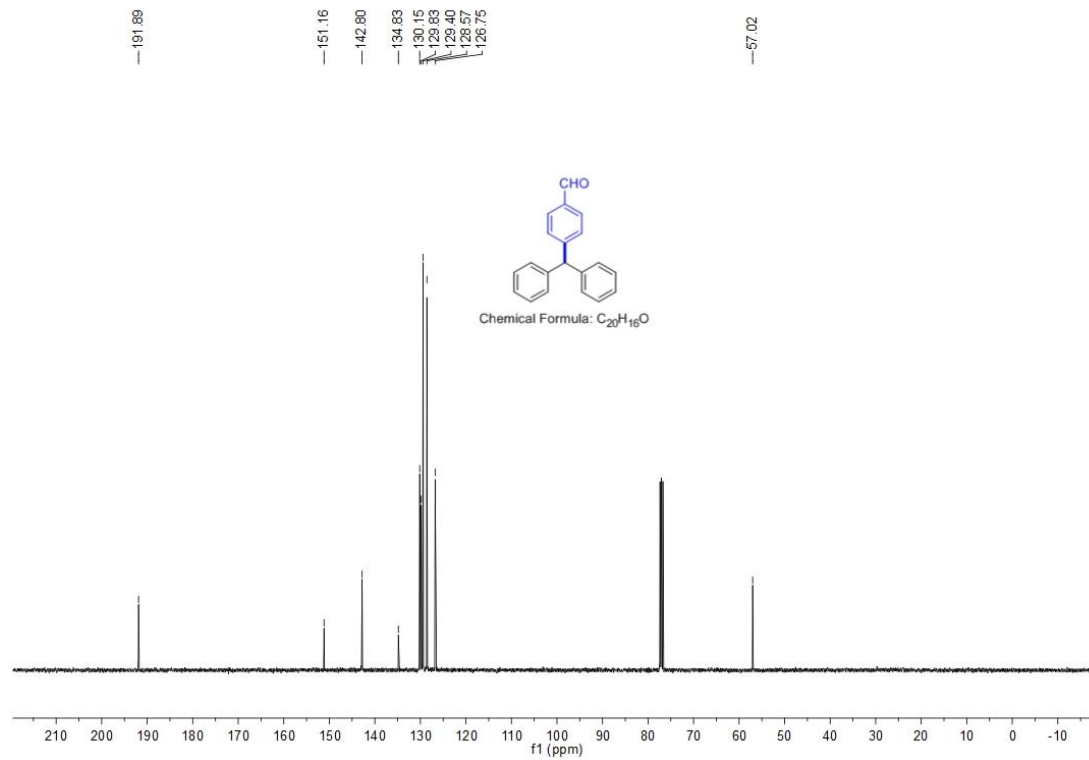
¹³C NMR of **3j**



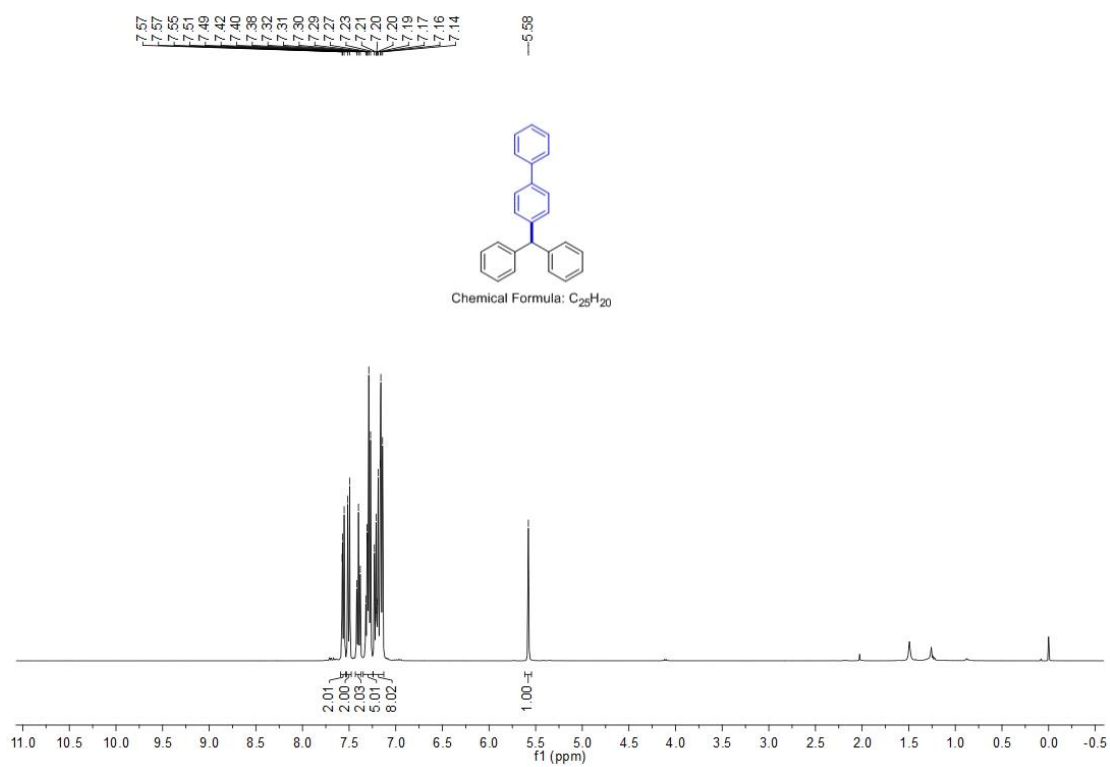
^{19}F NMR of **3j**



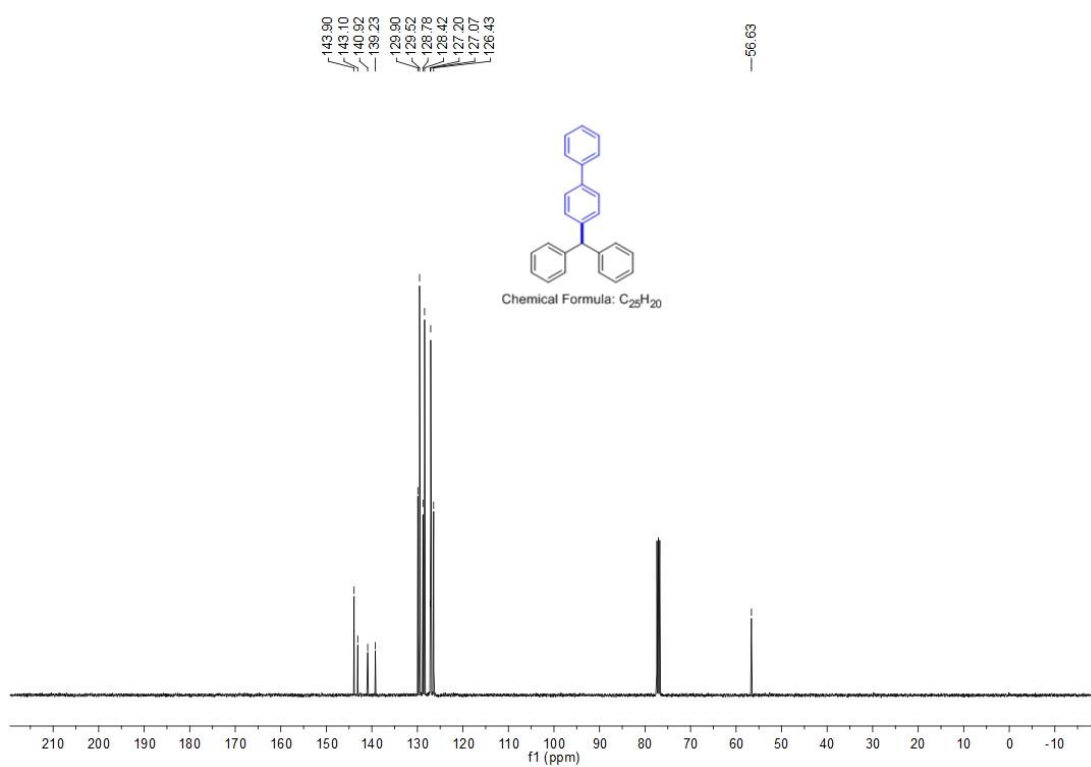
¹H NMR of **3k**



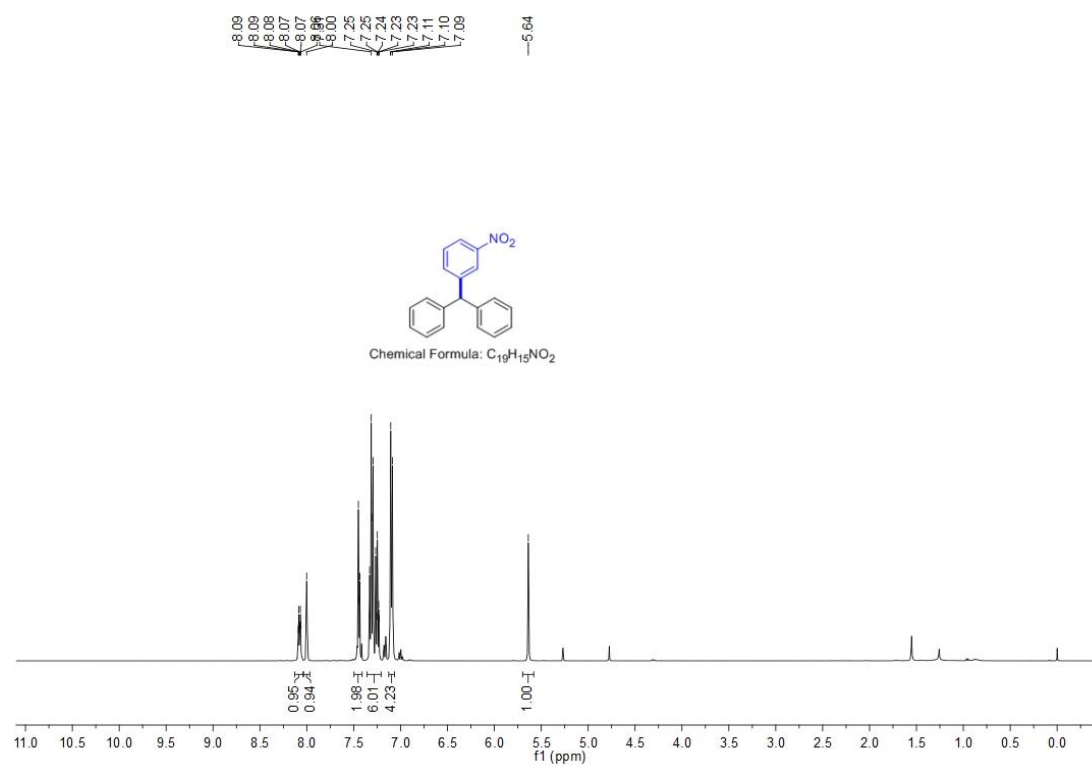
¹³C NMR of **3k**



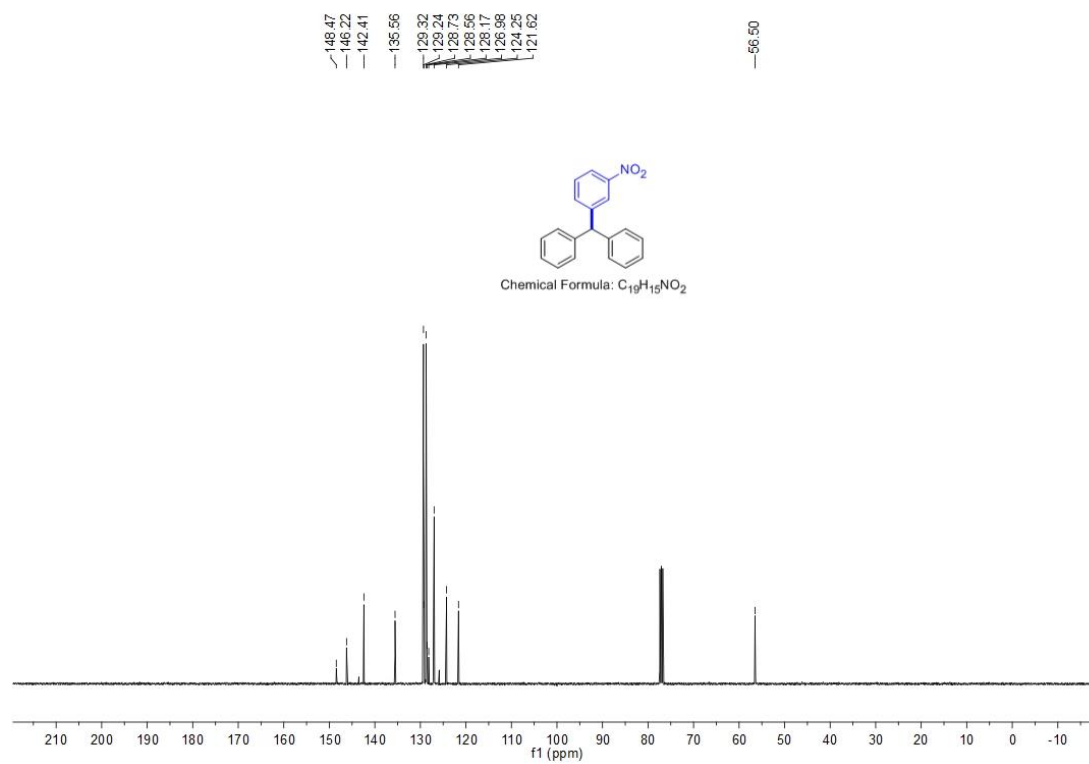
1H NMR of **3I**



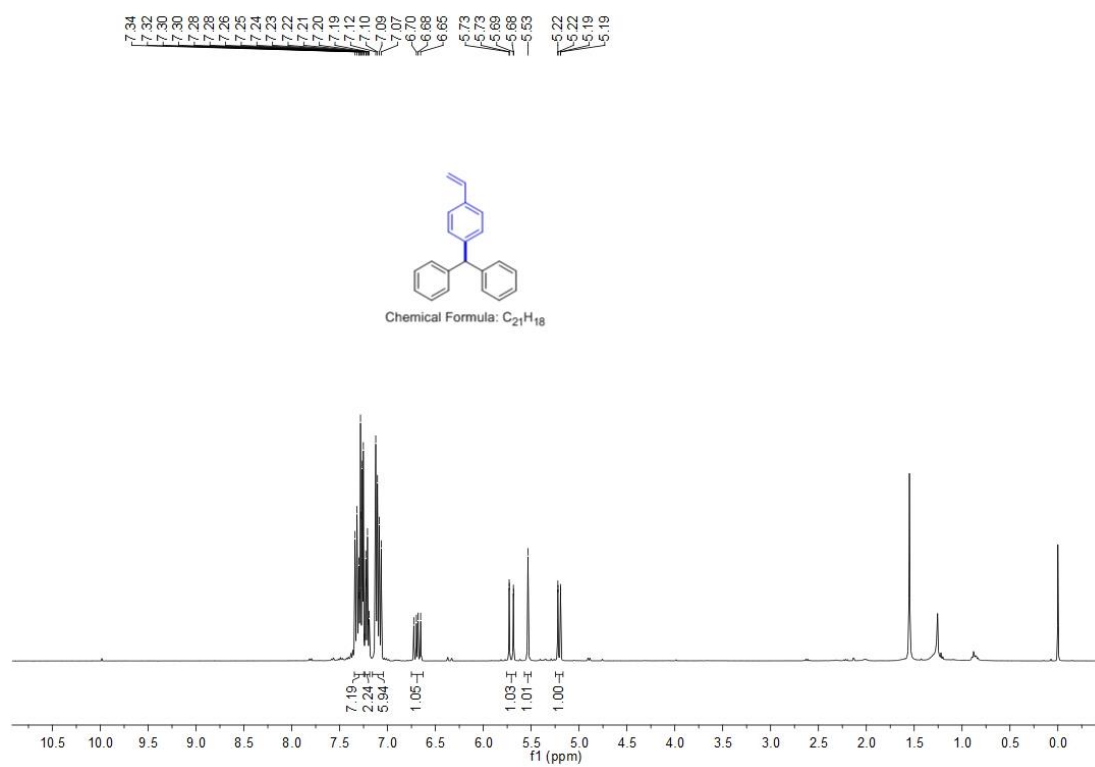
^{13}C NMR of **3I**



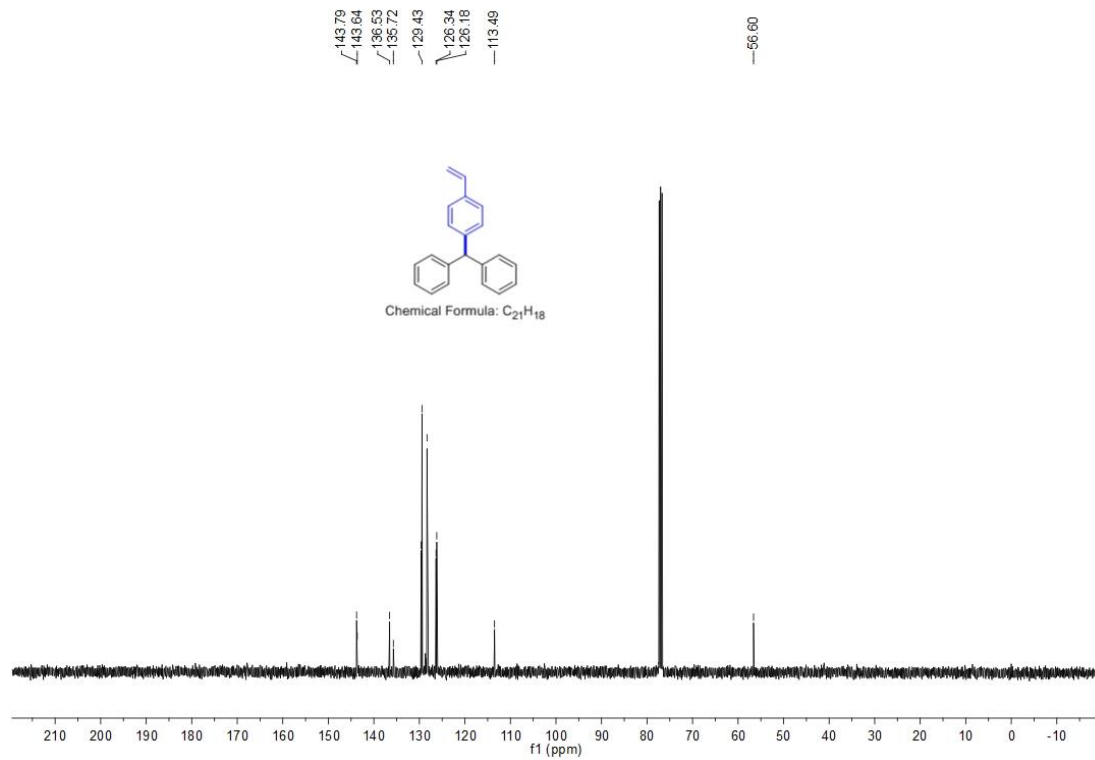
1H NMR of **3m**



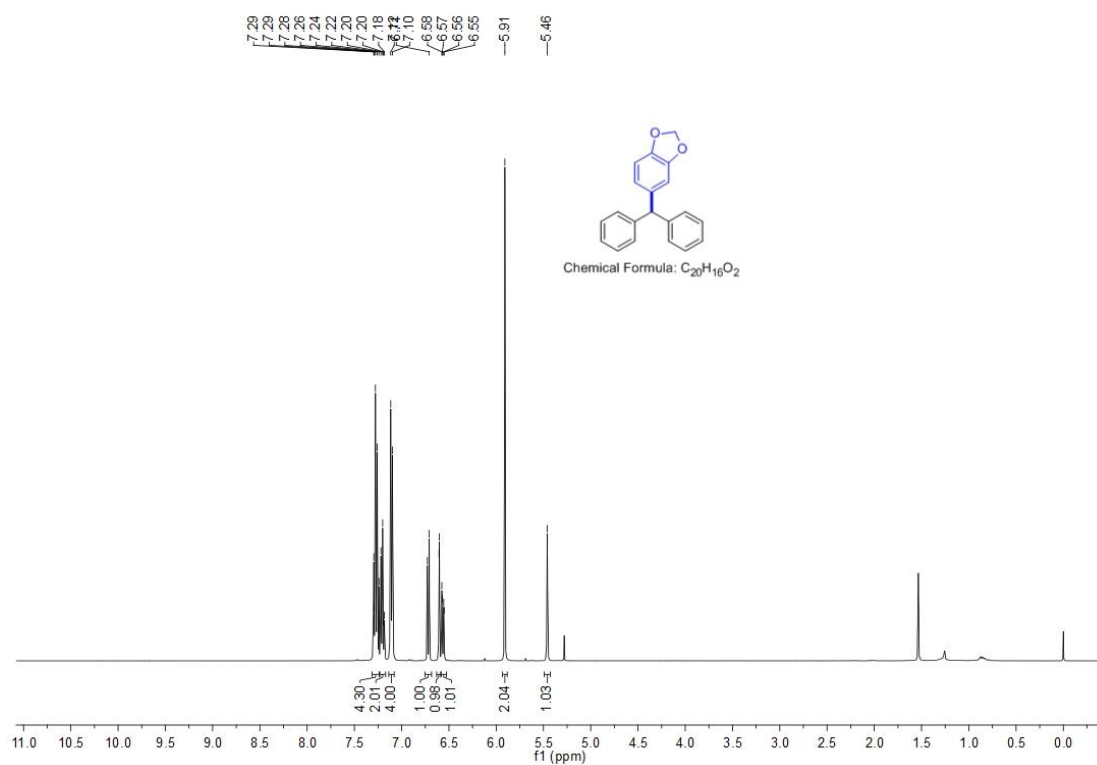
^{13}C NMR of **3m**



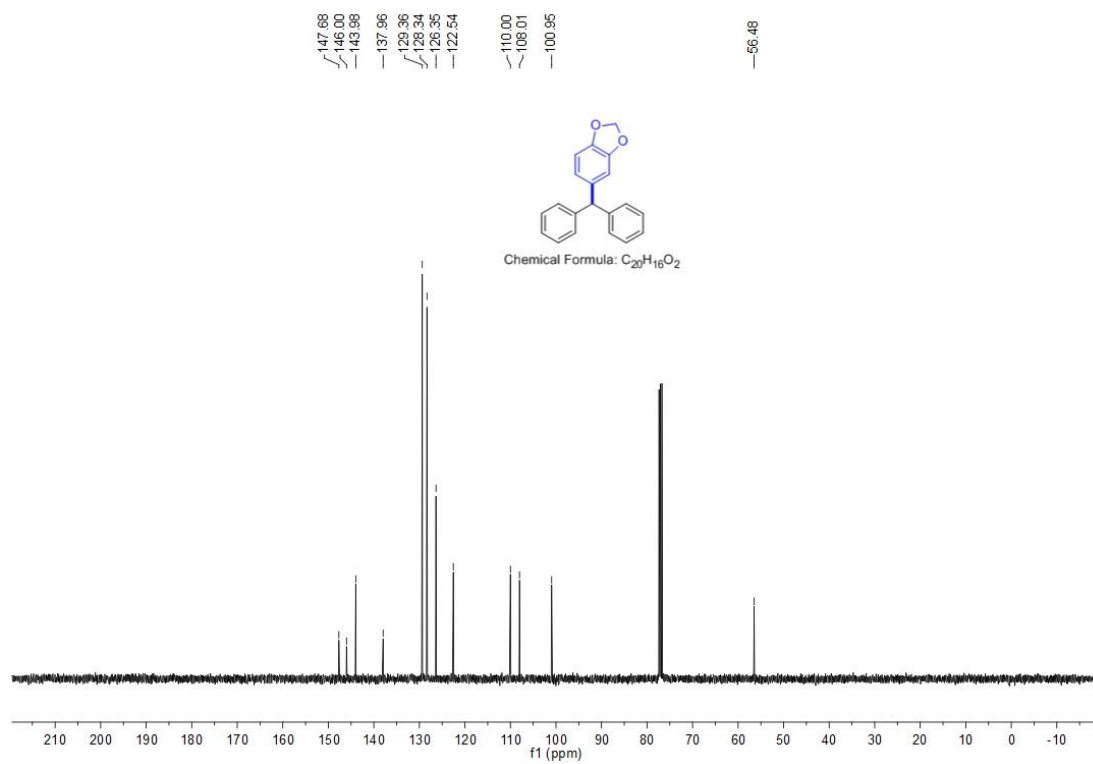
¹H NMR of **3n**



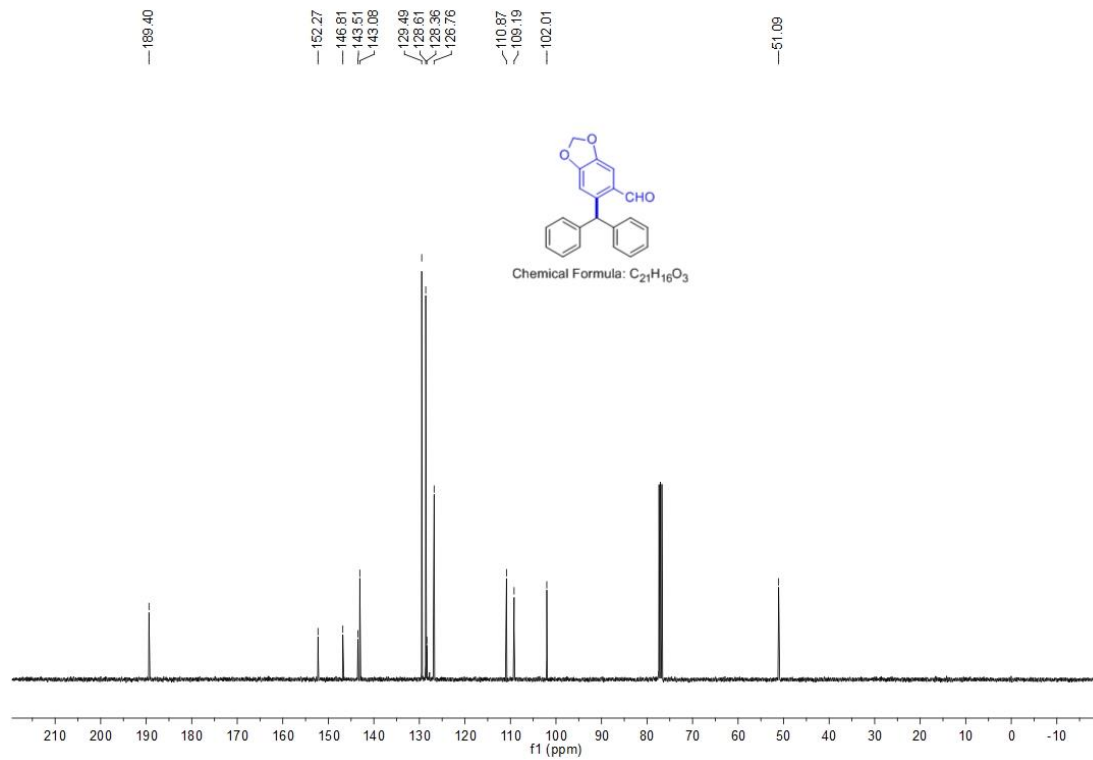
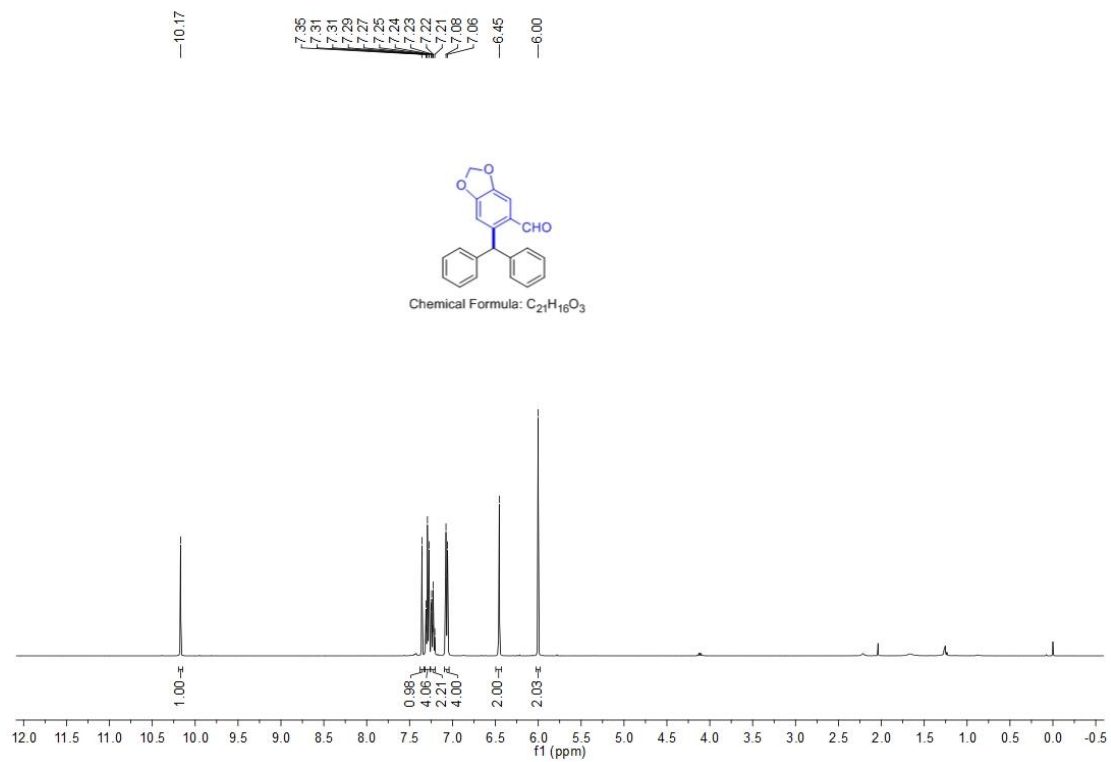
¹³C NMR of **3n**

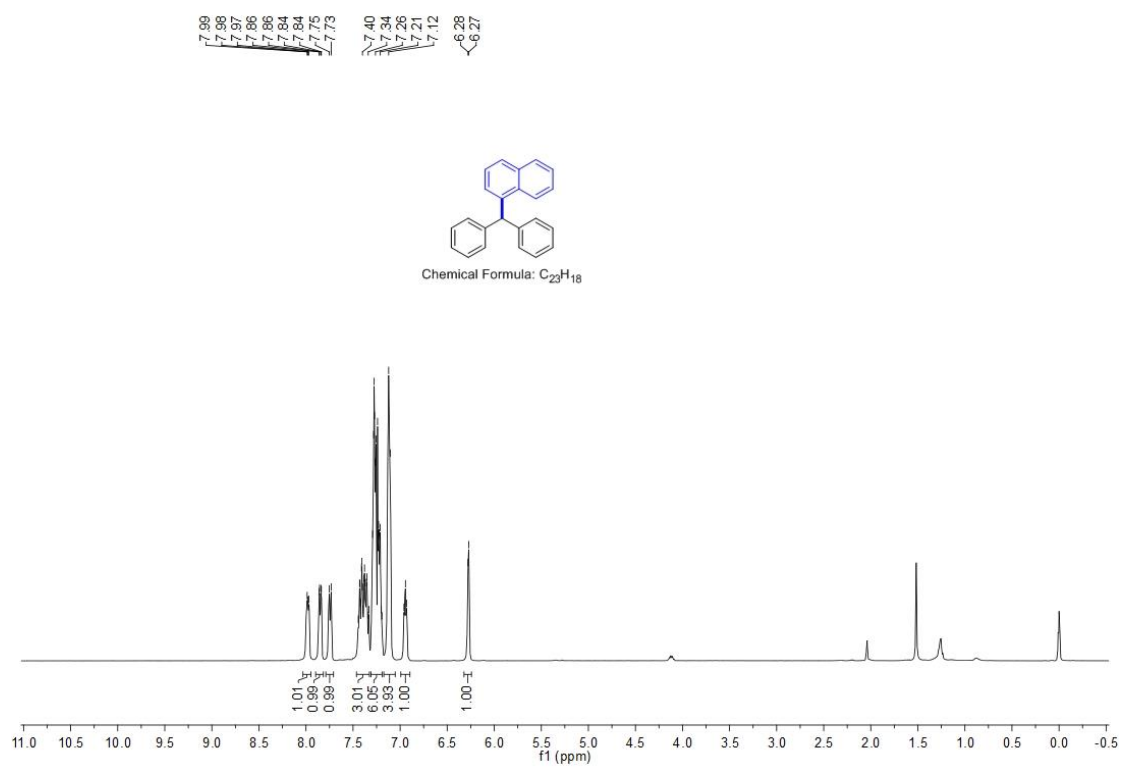


¹H NMR of **3o**

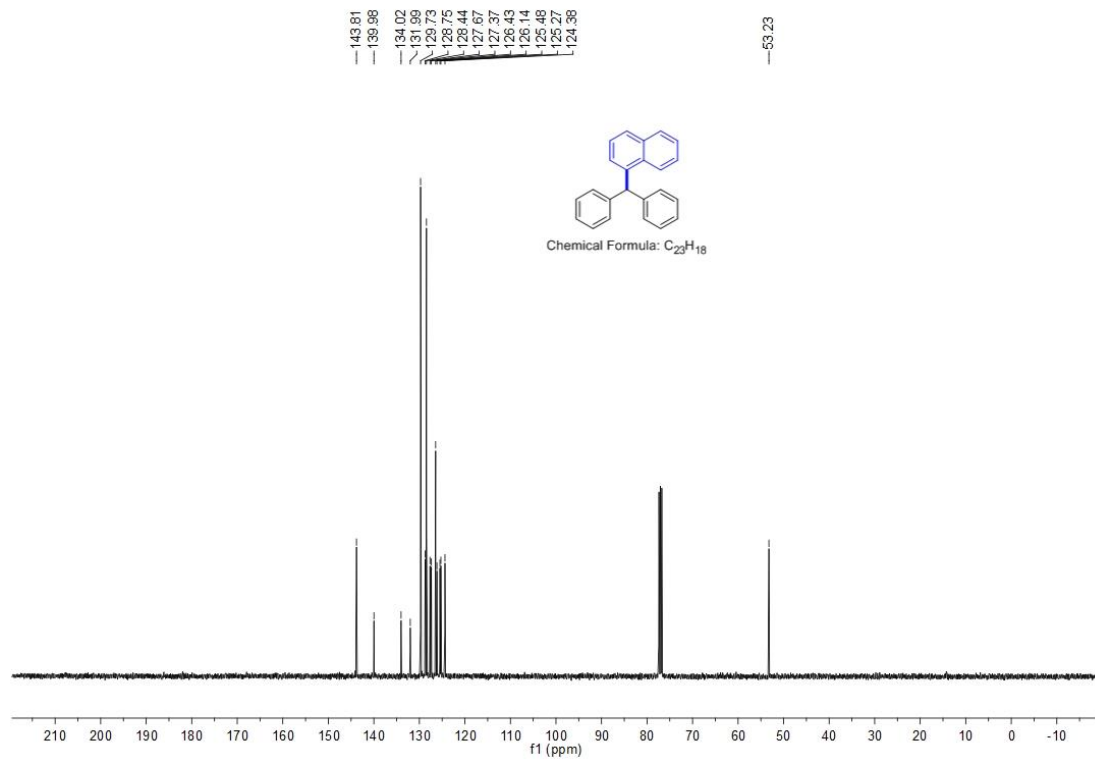


¹³C NMR of **3o**

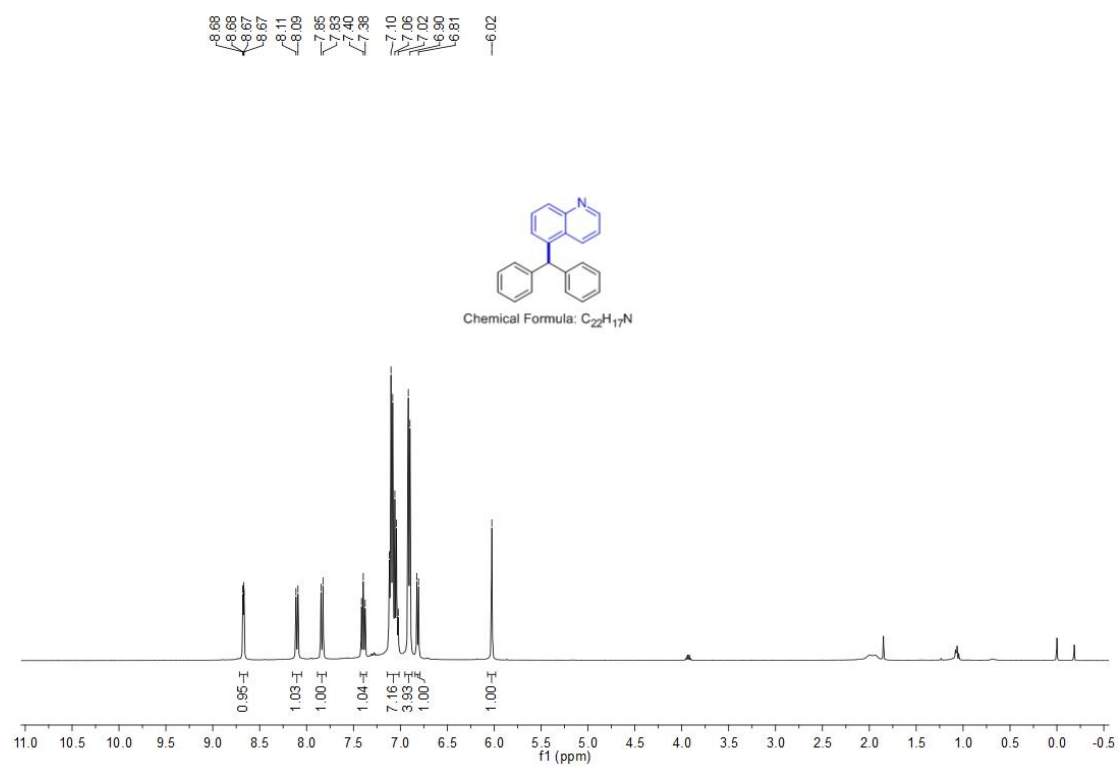




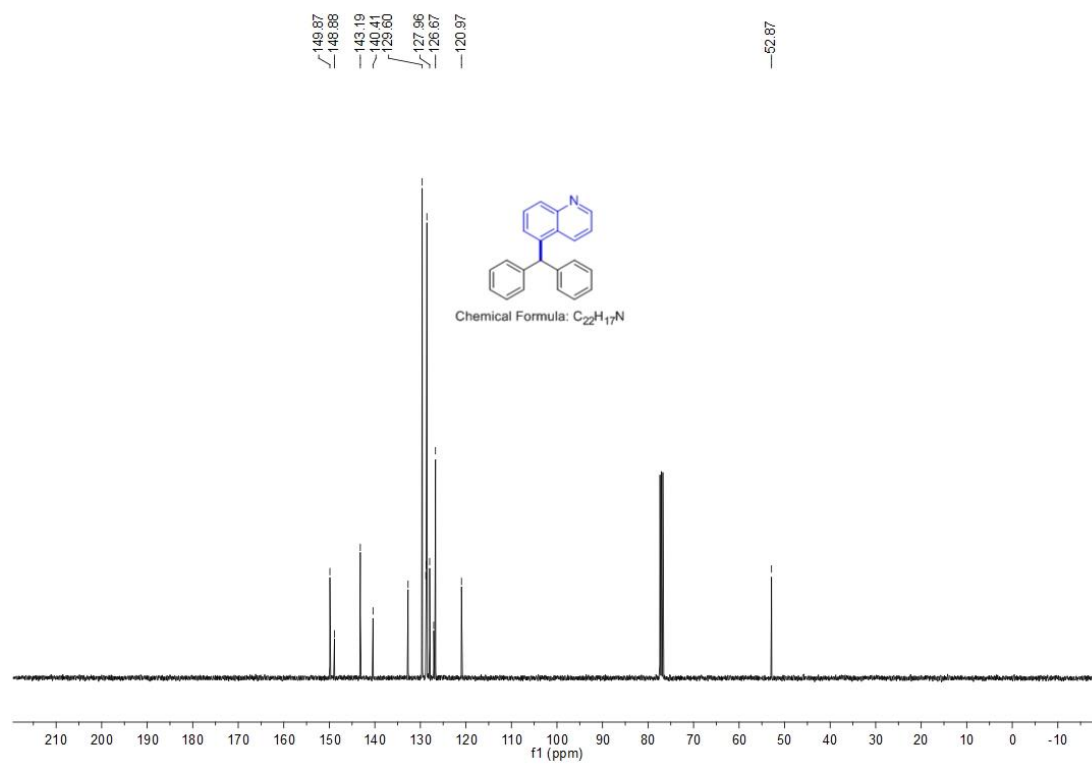
^1H NMR of **3q**



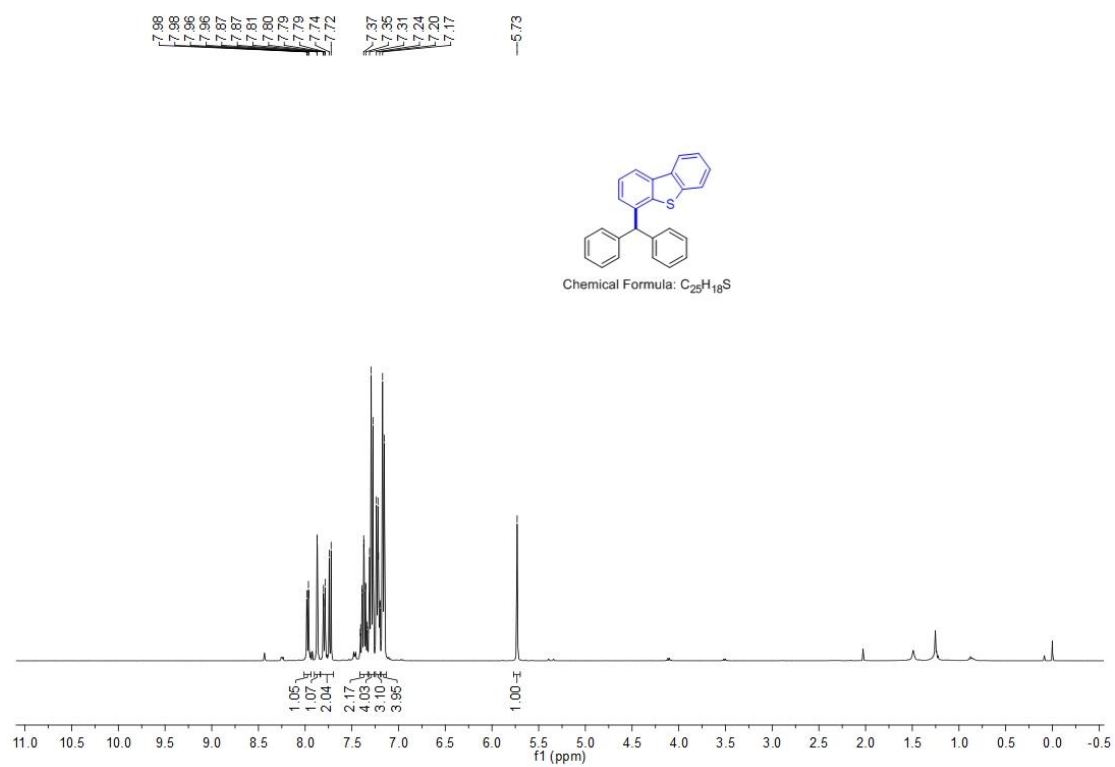
^{13}C NMR of **3q**



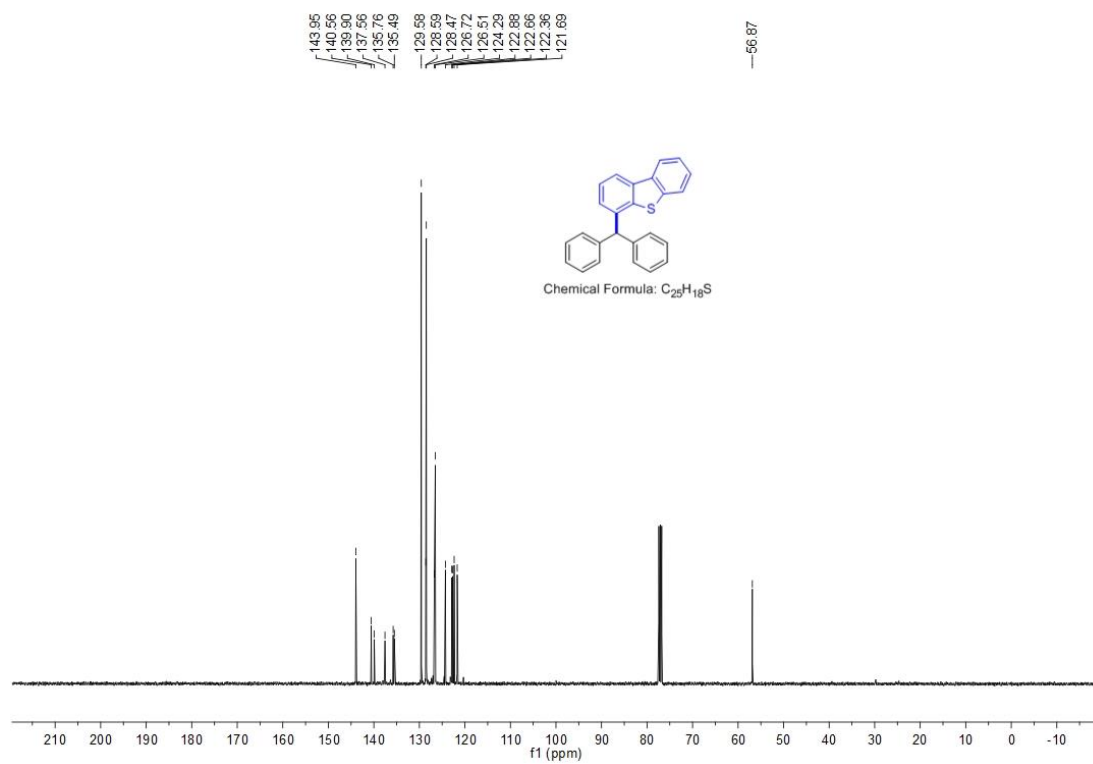
1H NMR of **3r**



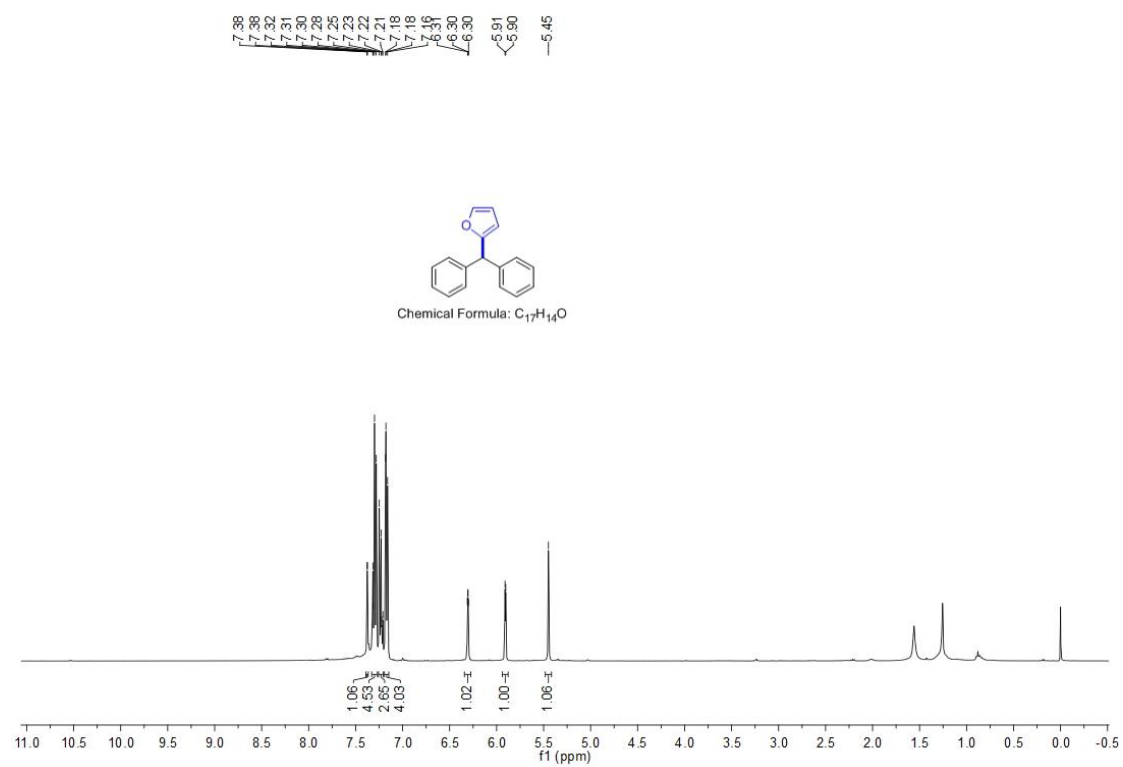
^{13}C NMR of **3r**



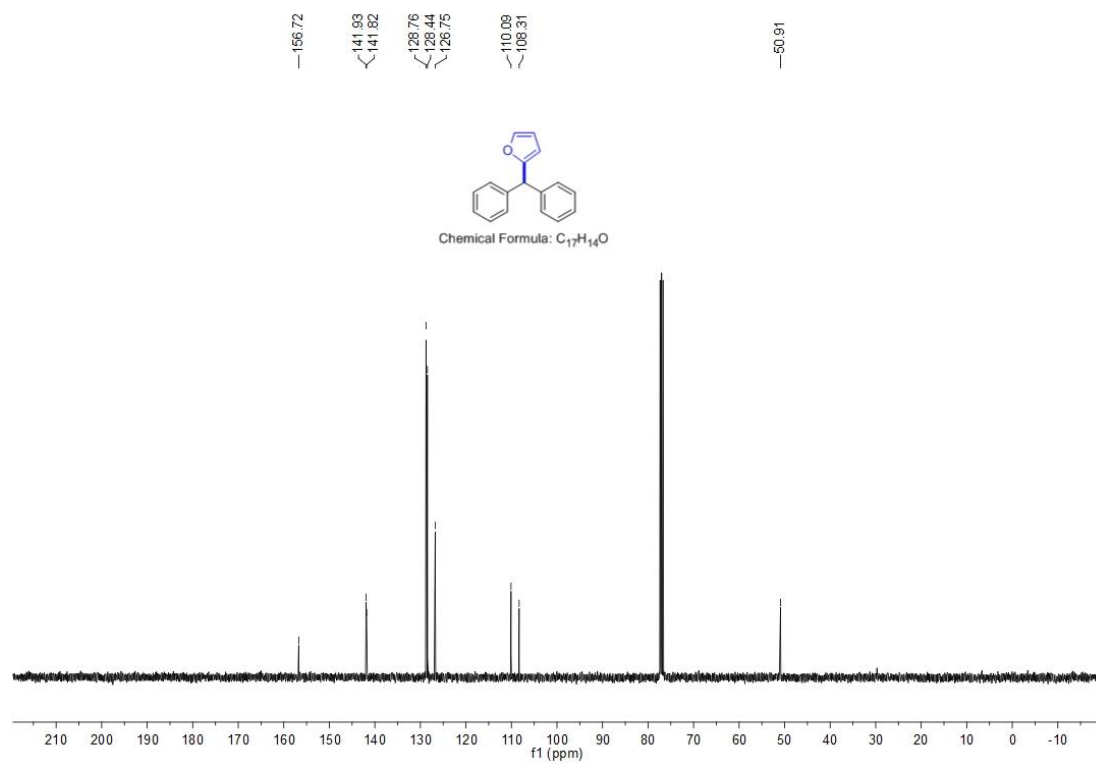
1H NMR of **3s**



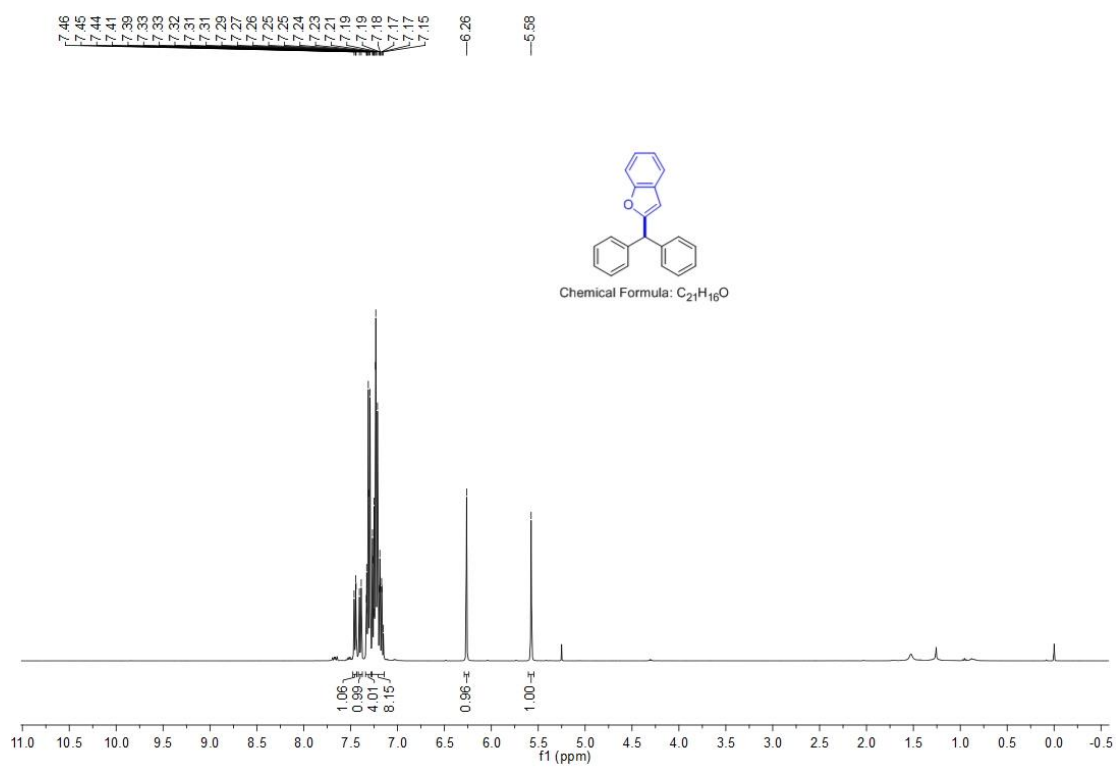
^{13}C NMR of **3s**



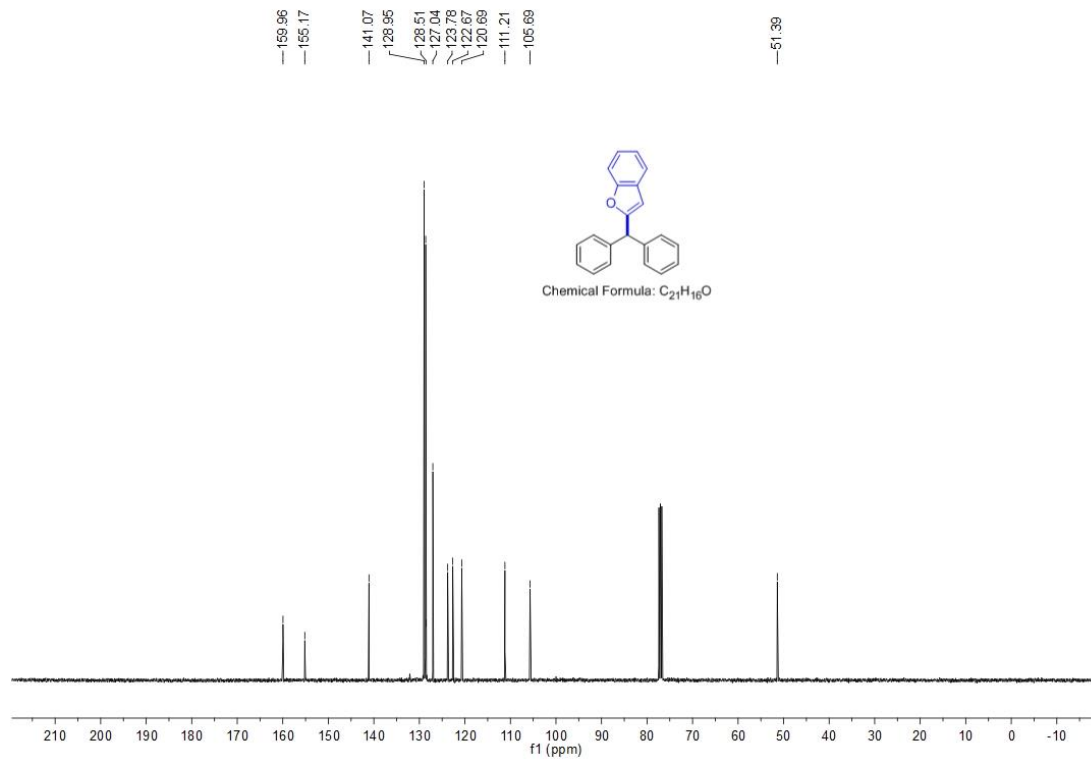
1H NMR of **3t**



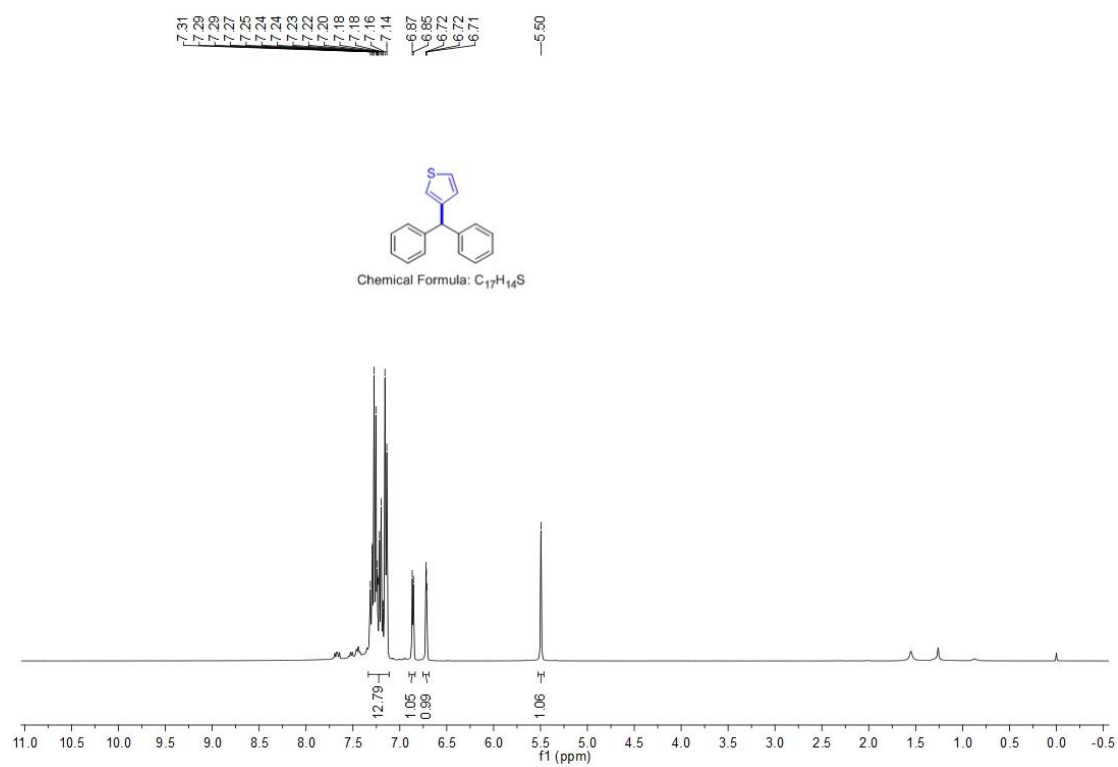
^{13}C NMR of **3t**



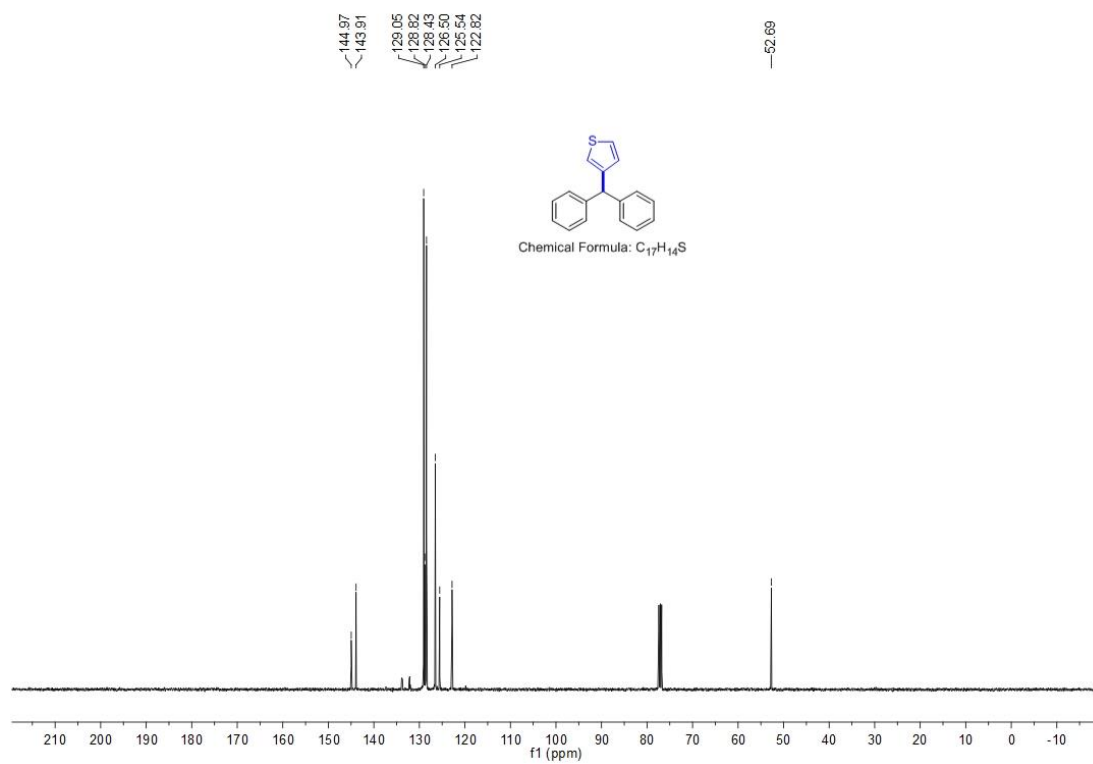
1H NMR of **3u**



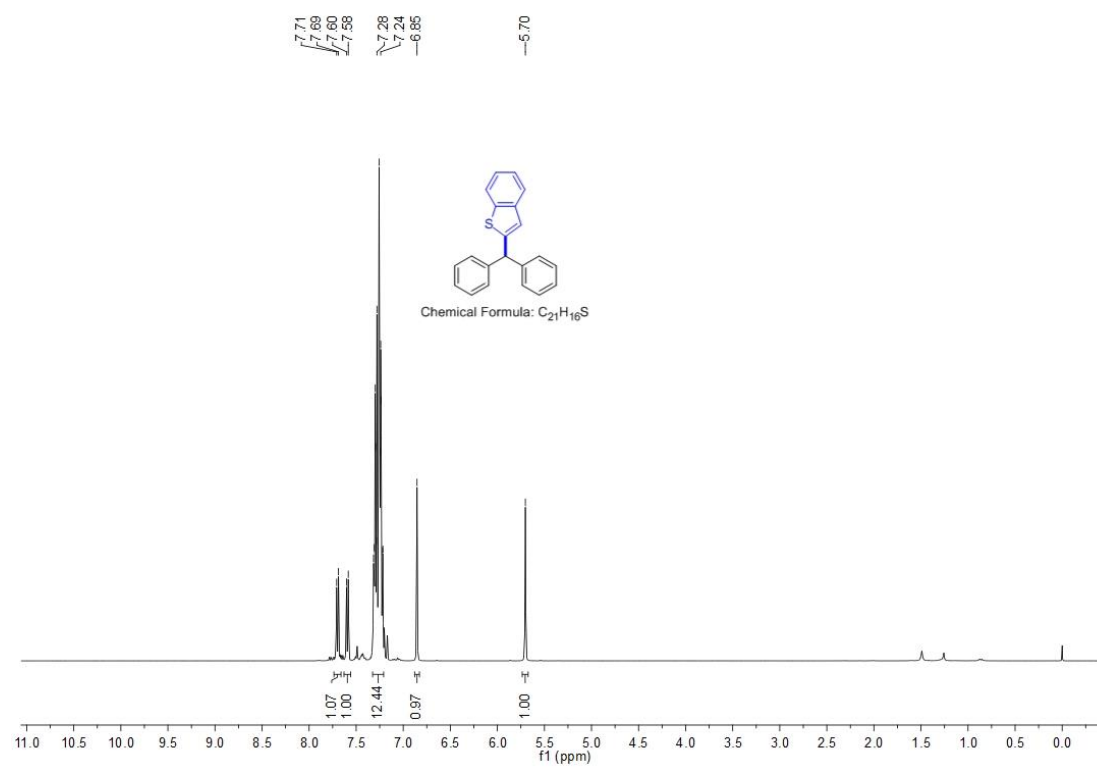
^{13}C NMR of **3u**



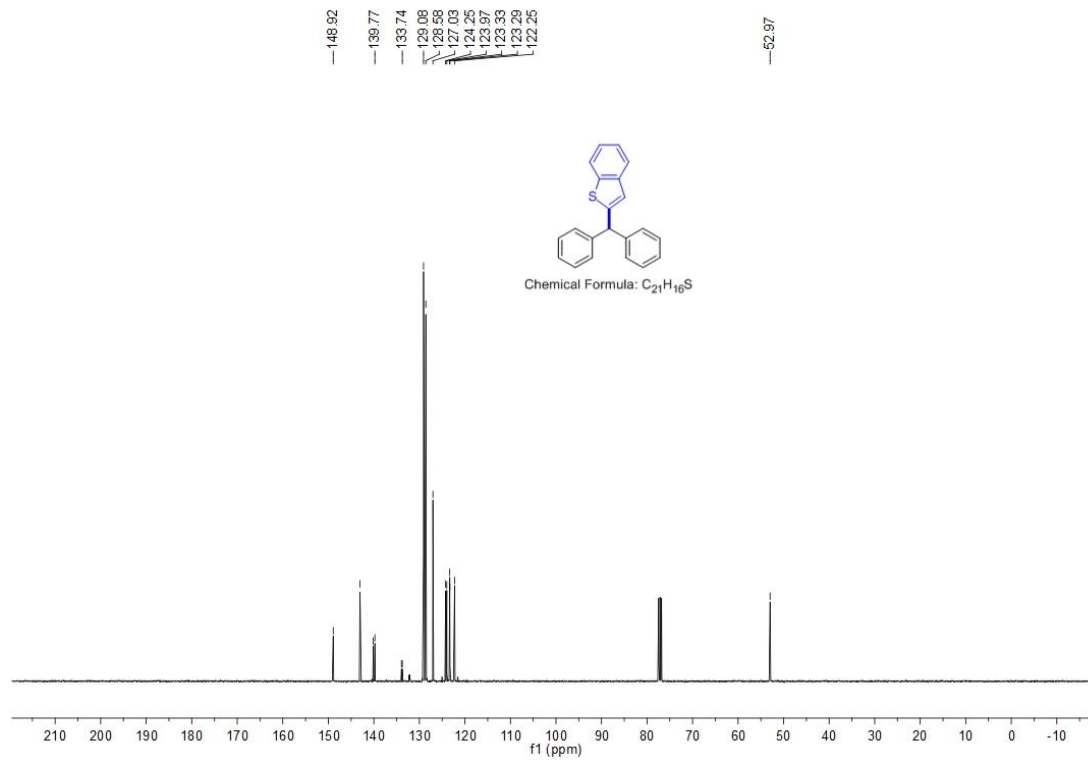
1H NMR of **3v**



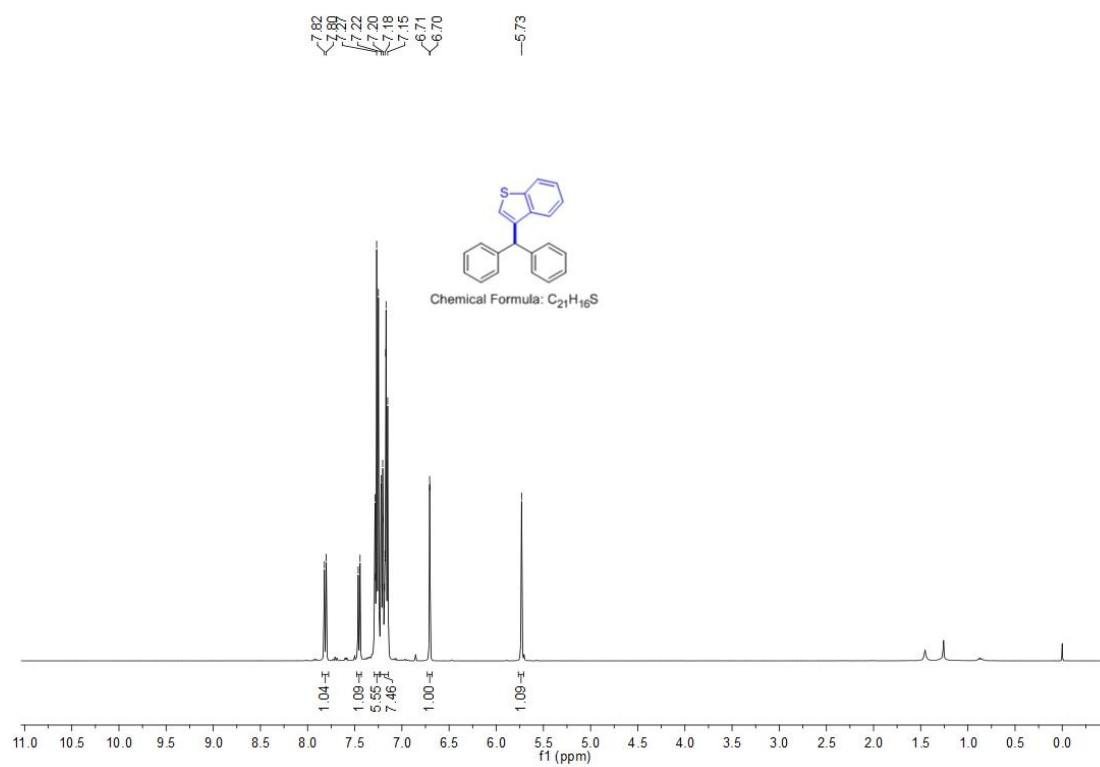
^{13}C NMR of **3v**



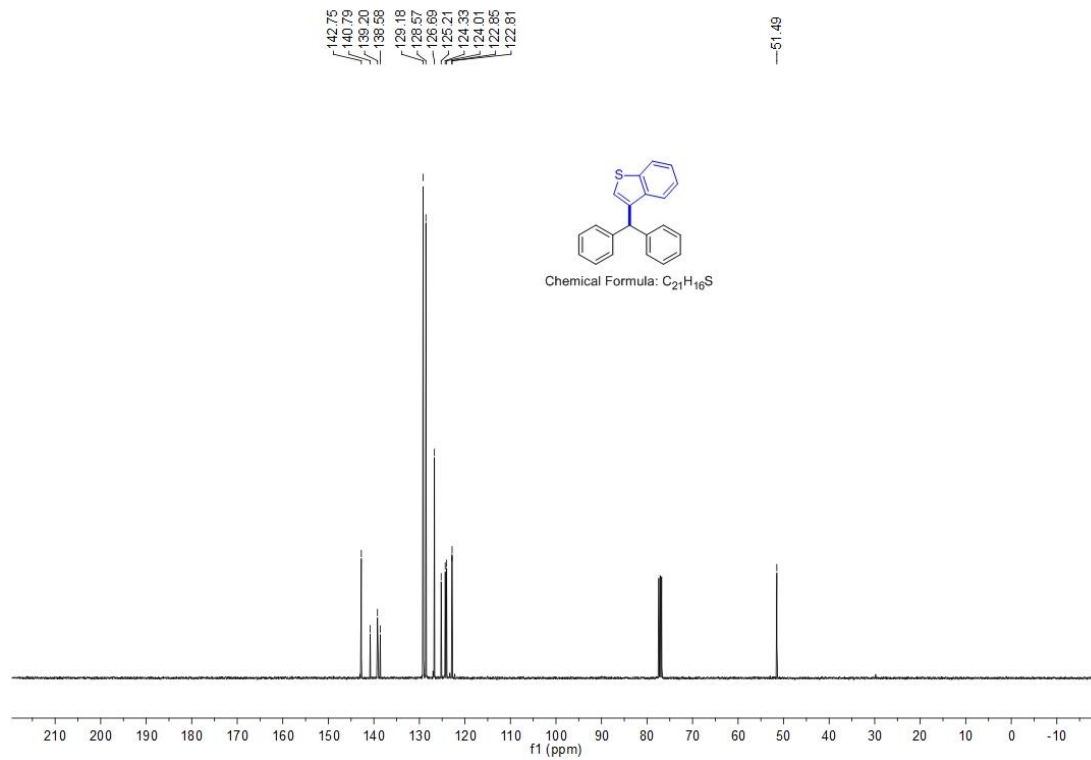
¹H NMR of **3w**



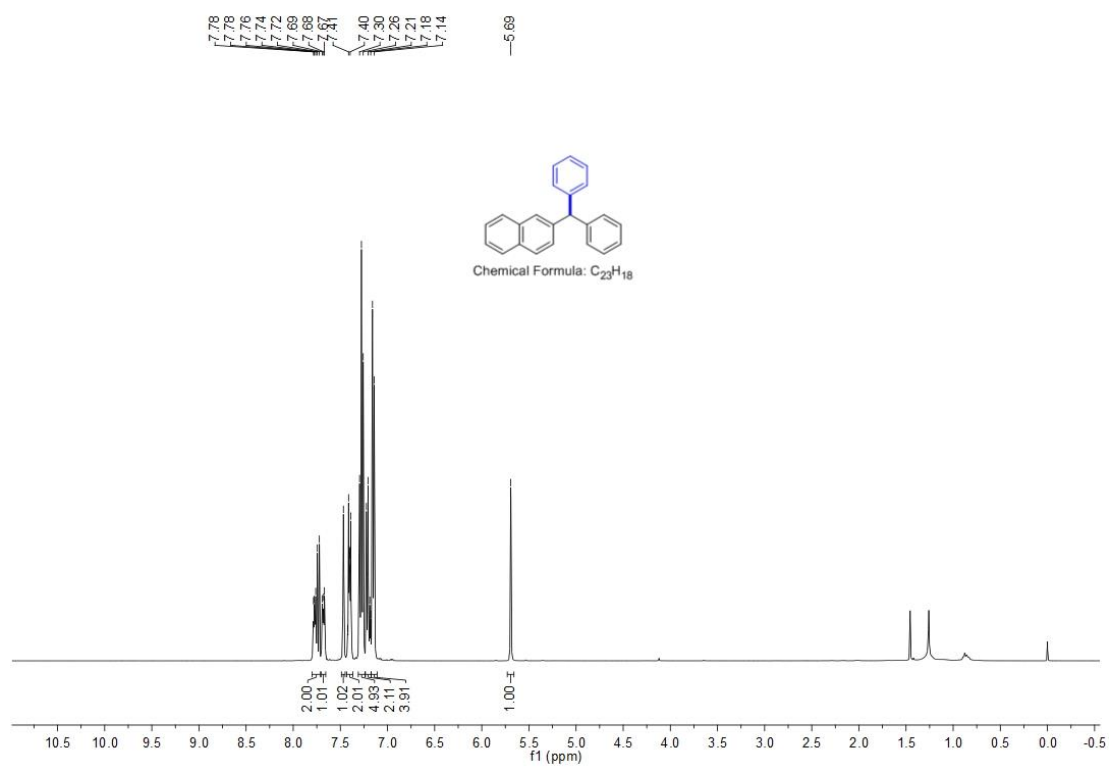
¹³C NMR of **3w**



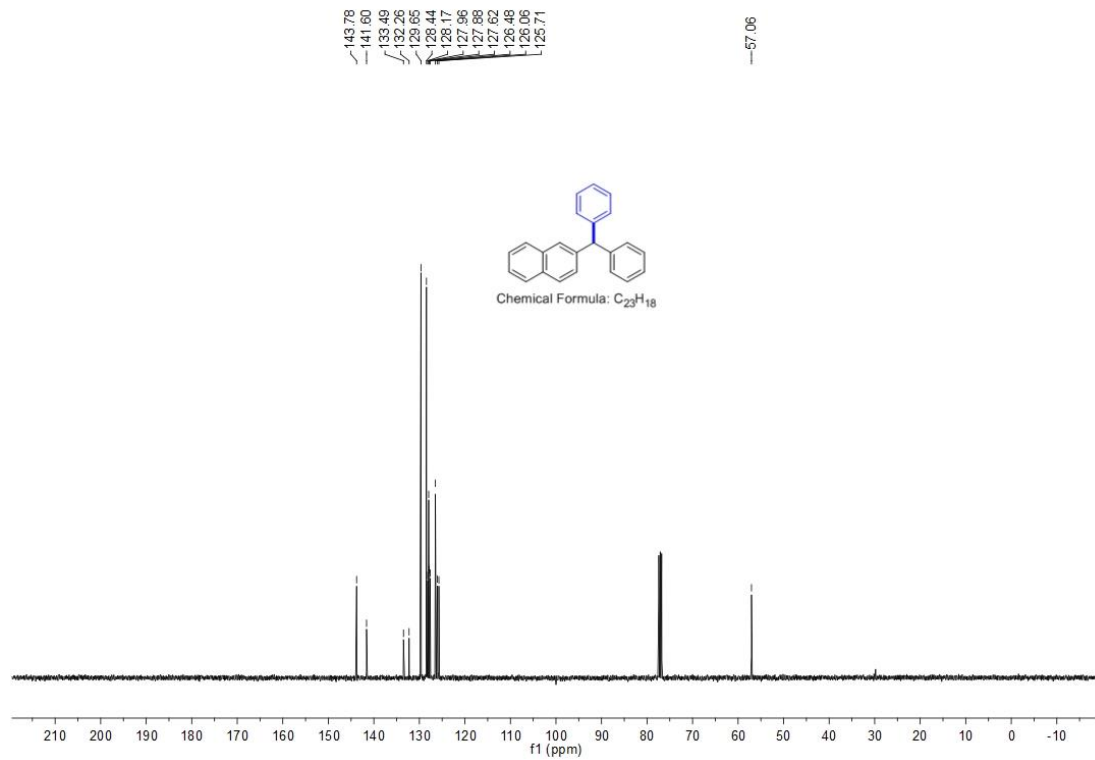
¹H NMR of **3x**



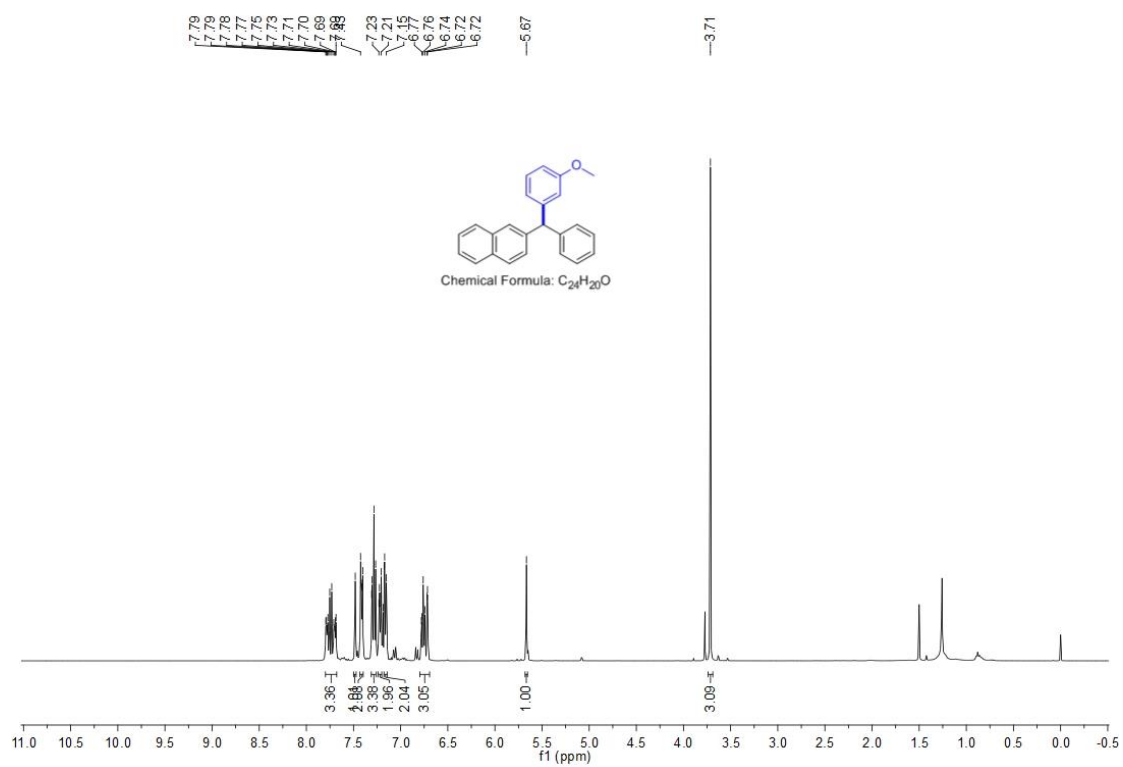
¹³C NMR of **3x**



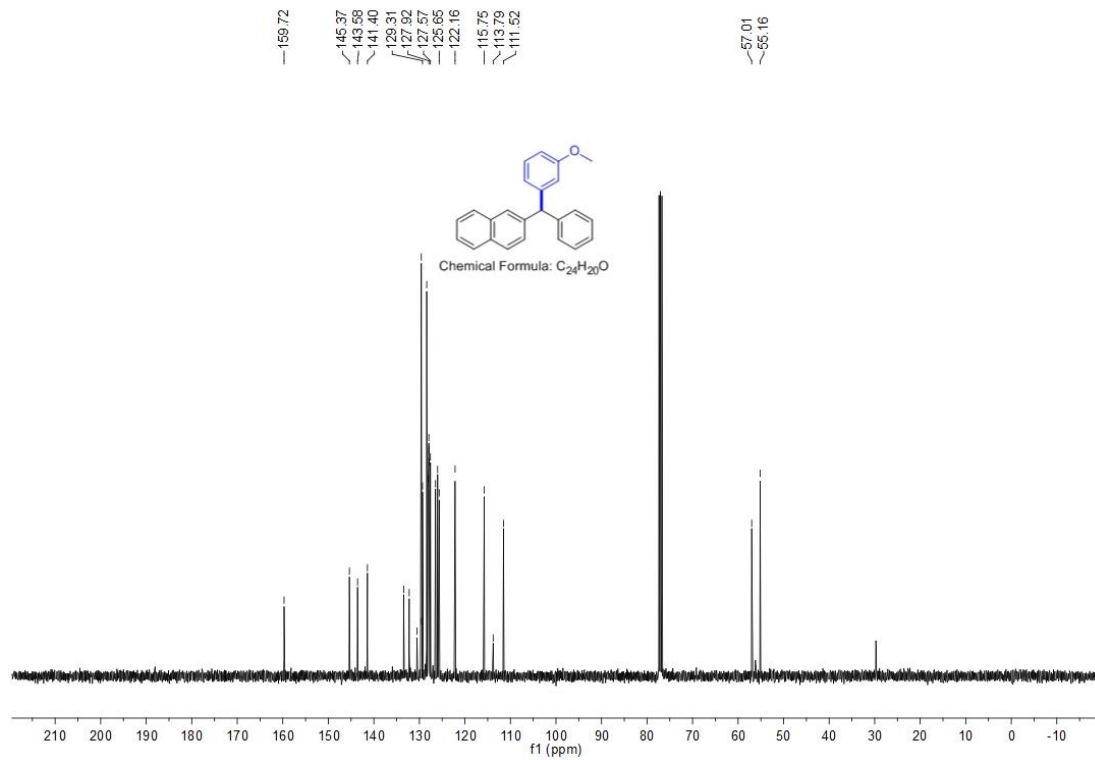
¹H NMR of **4a**



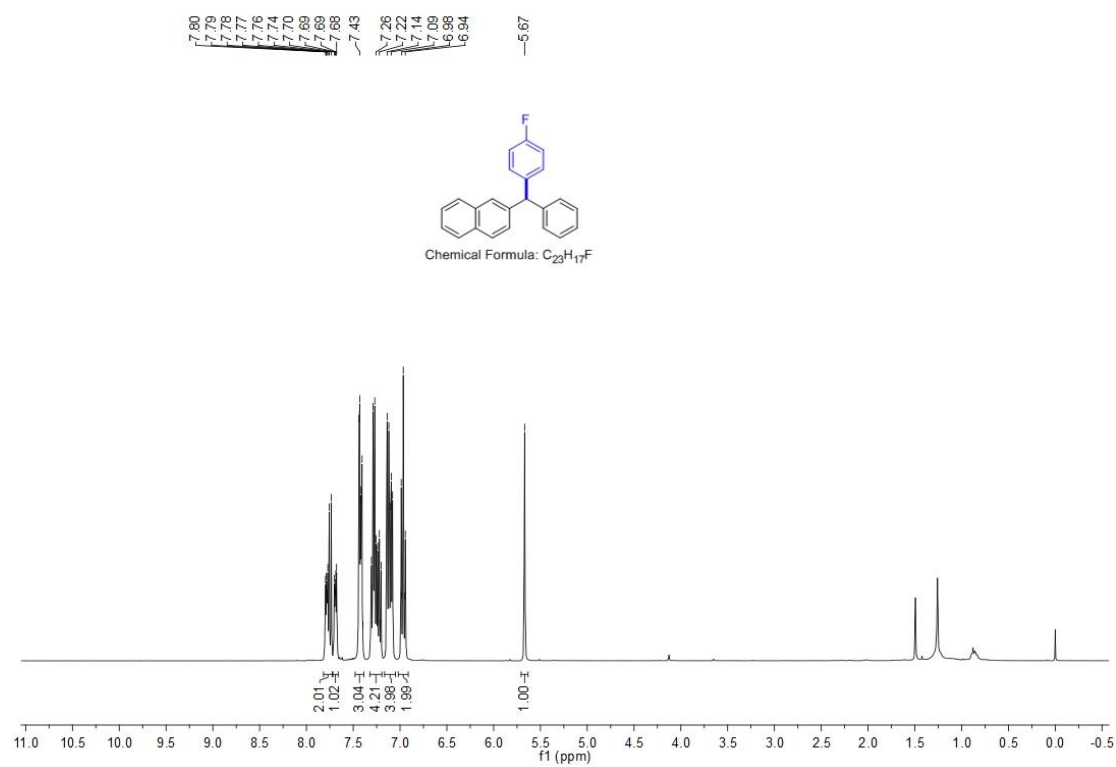
¹³C NMR of **4a**



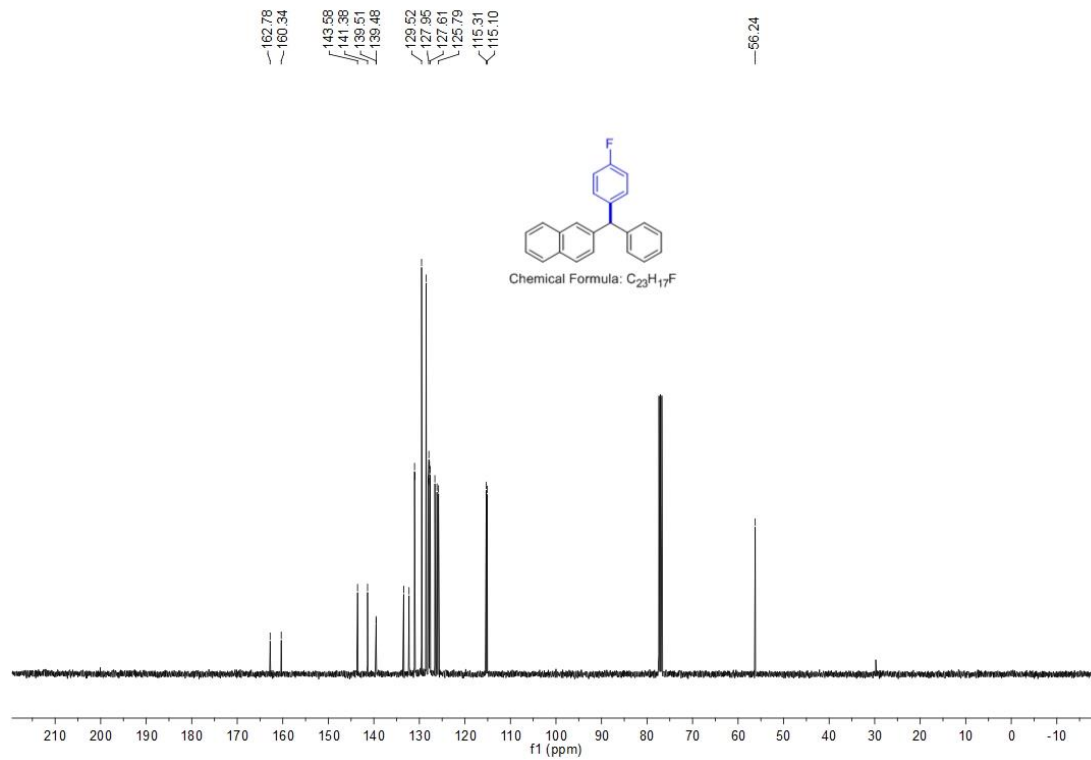
¹H NMR of **4b**



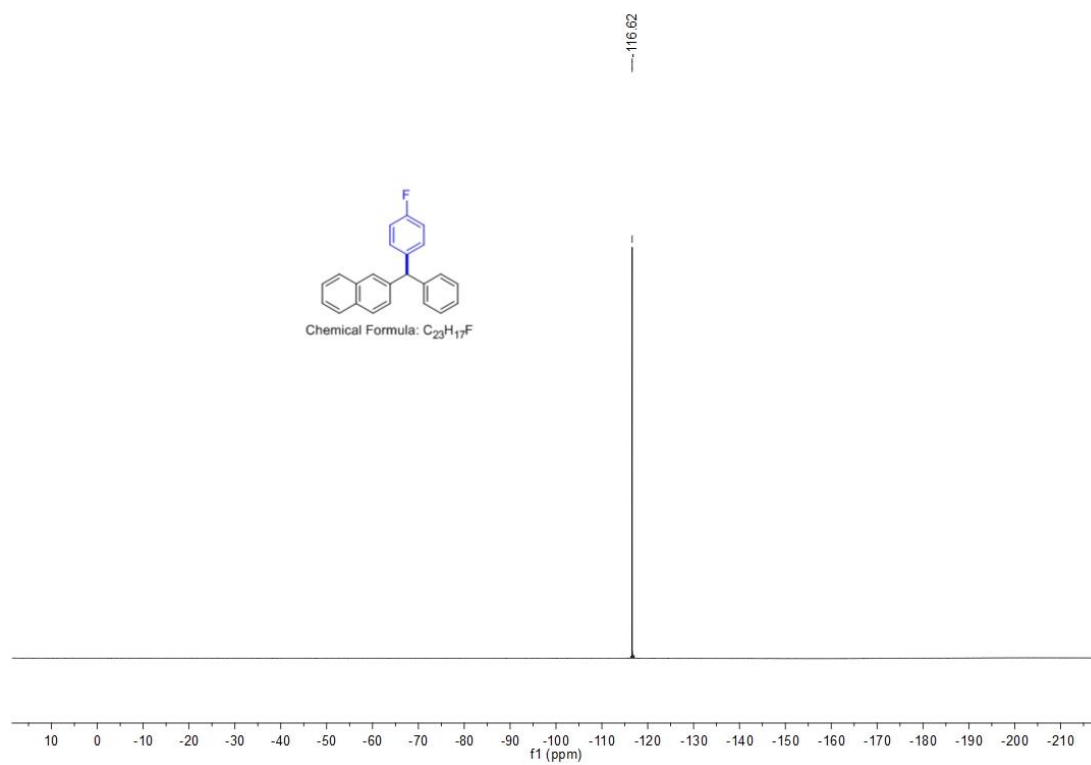
¹³C NMR of **4b**



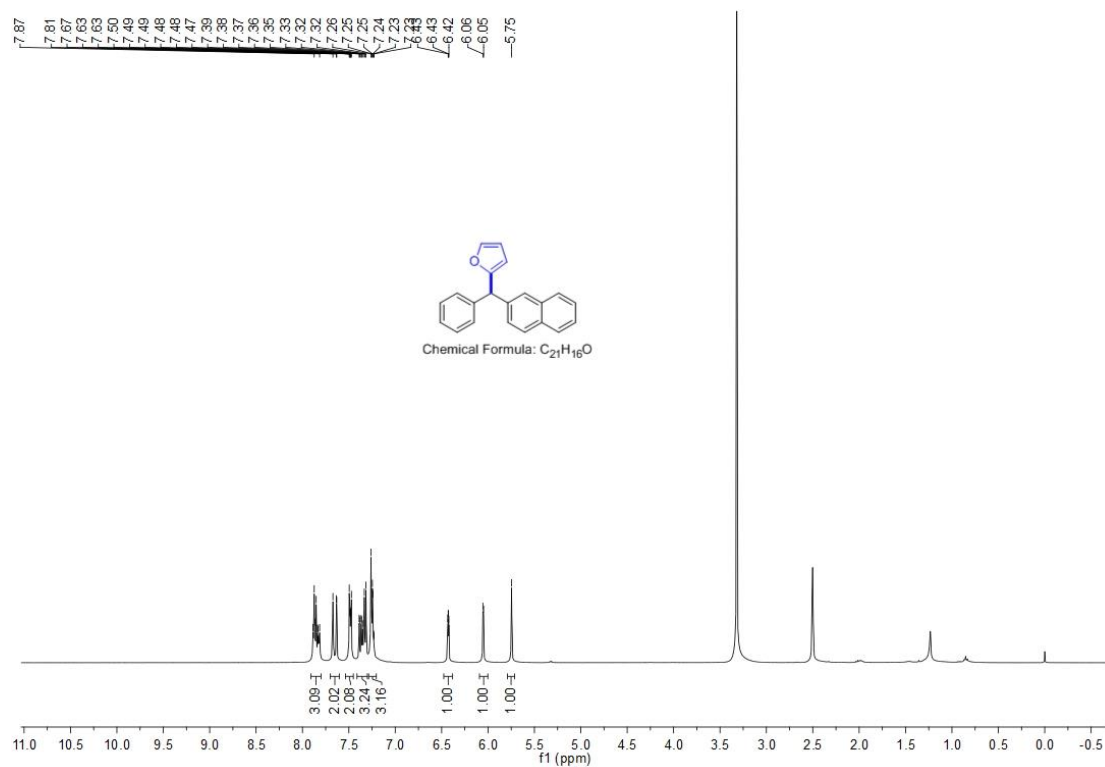
1H NMR of **4c**



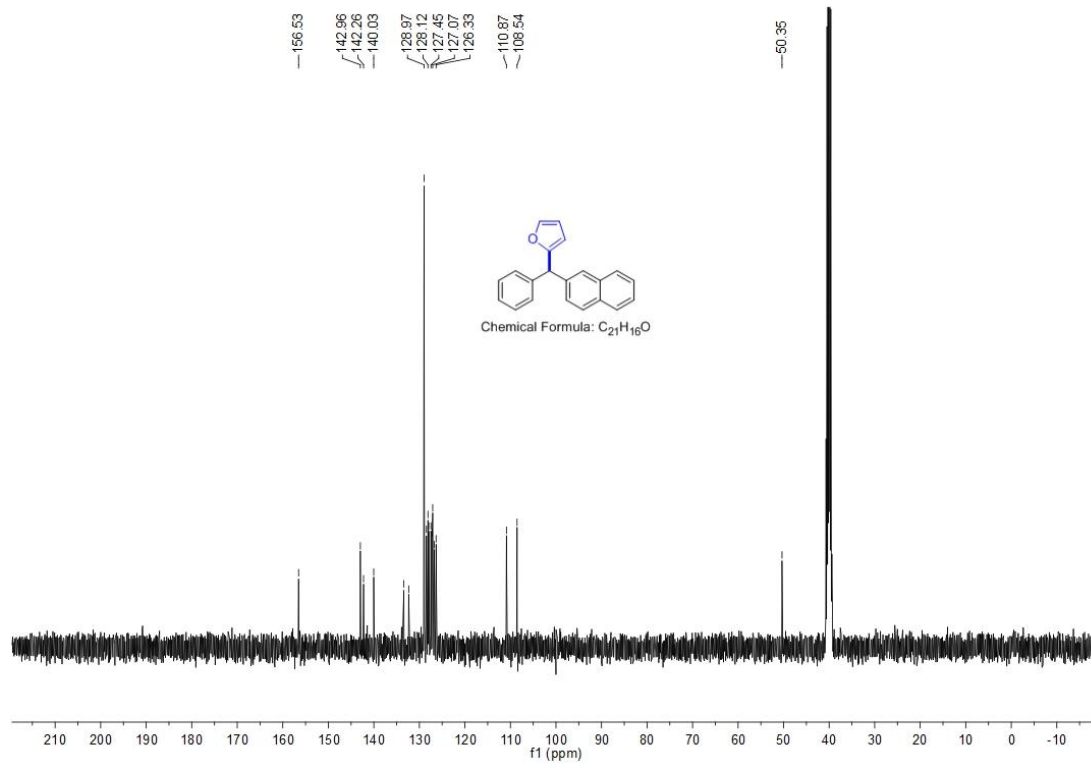
^{13}C NMR of **4c**



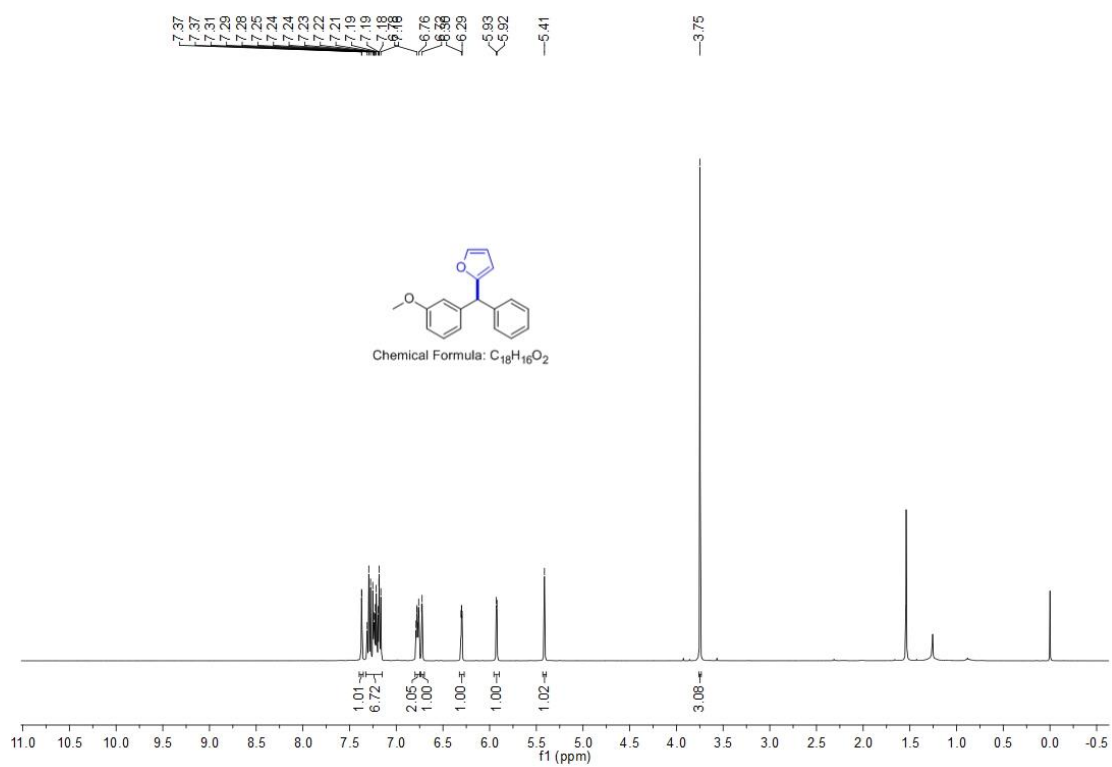
¹⁹F NMR of **4c**



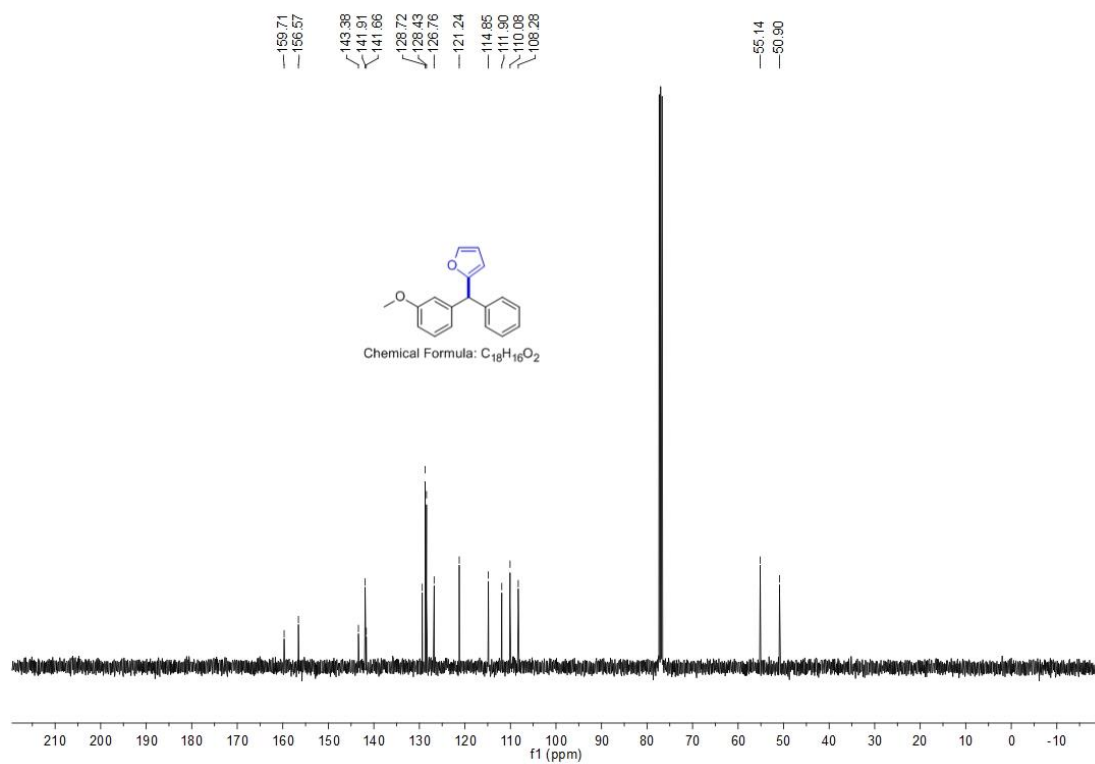
1H NMR of **4d**



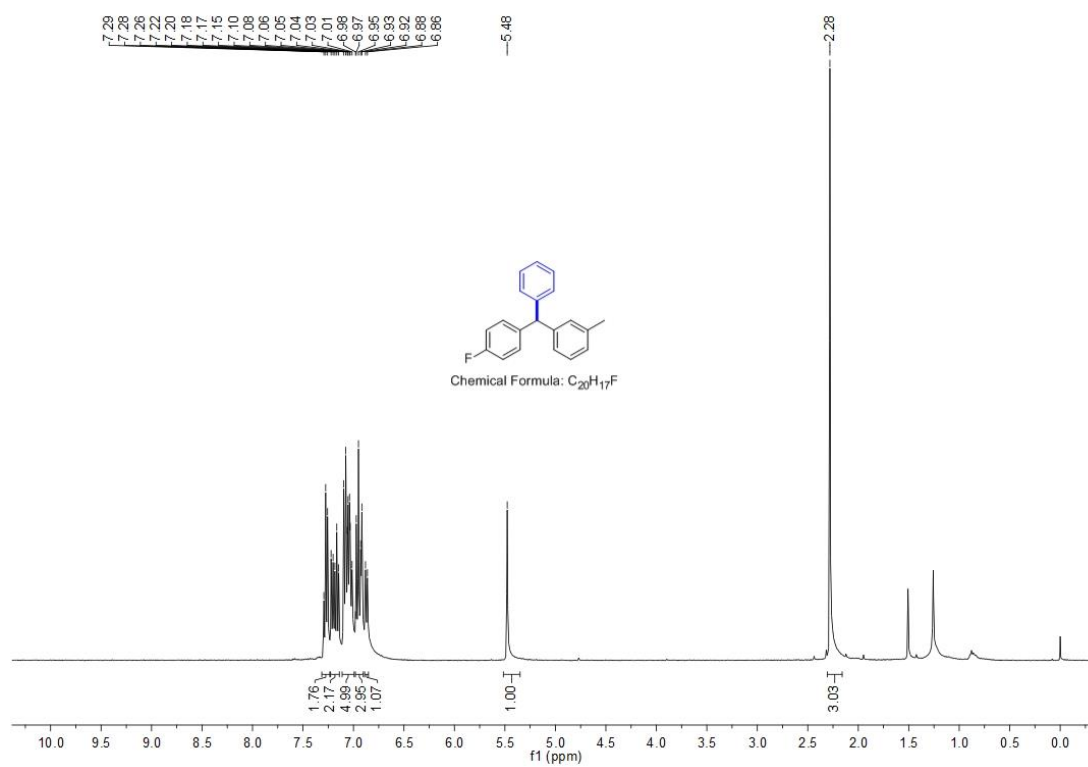
^{13}C NMR of **4d**



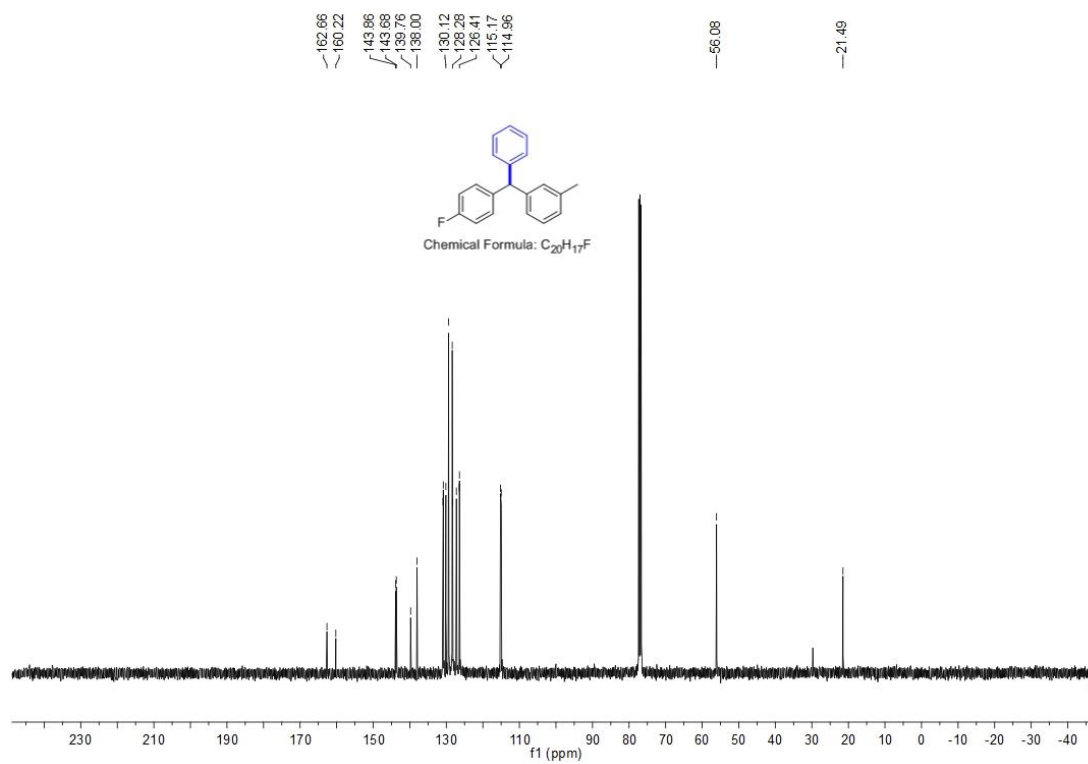
1H NMR of **4e**



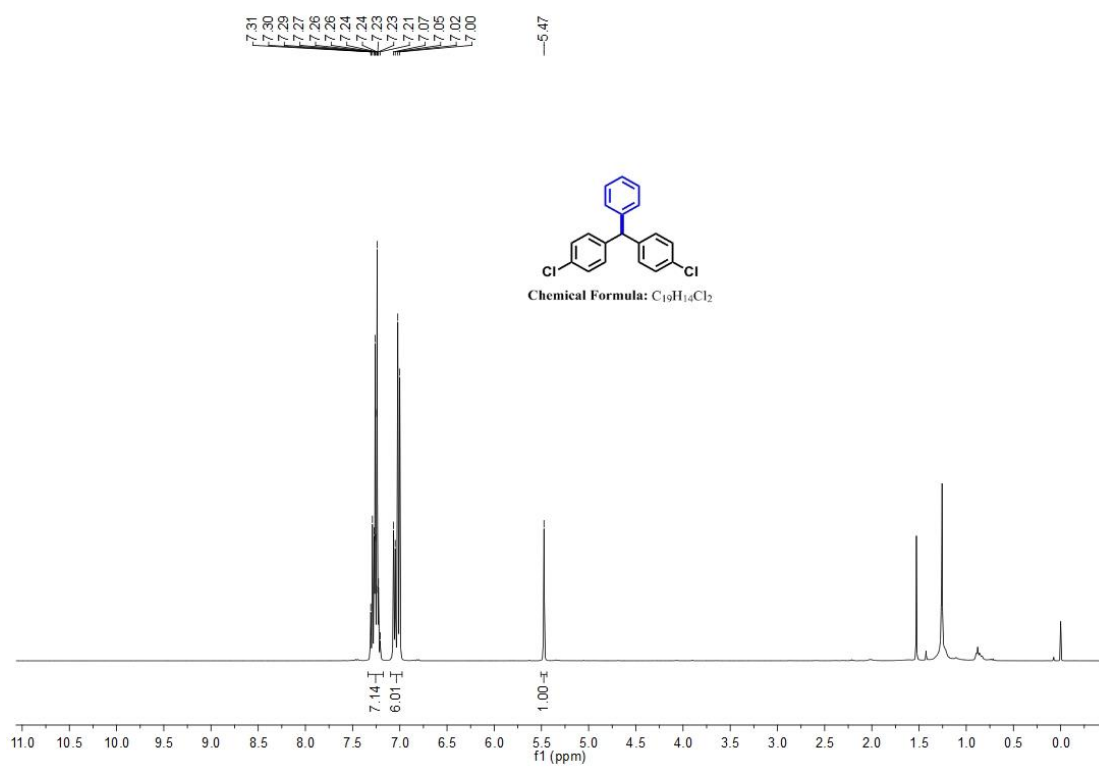
^{13}C NMR of **4e**



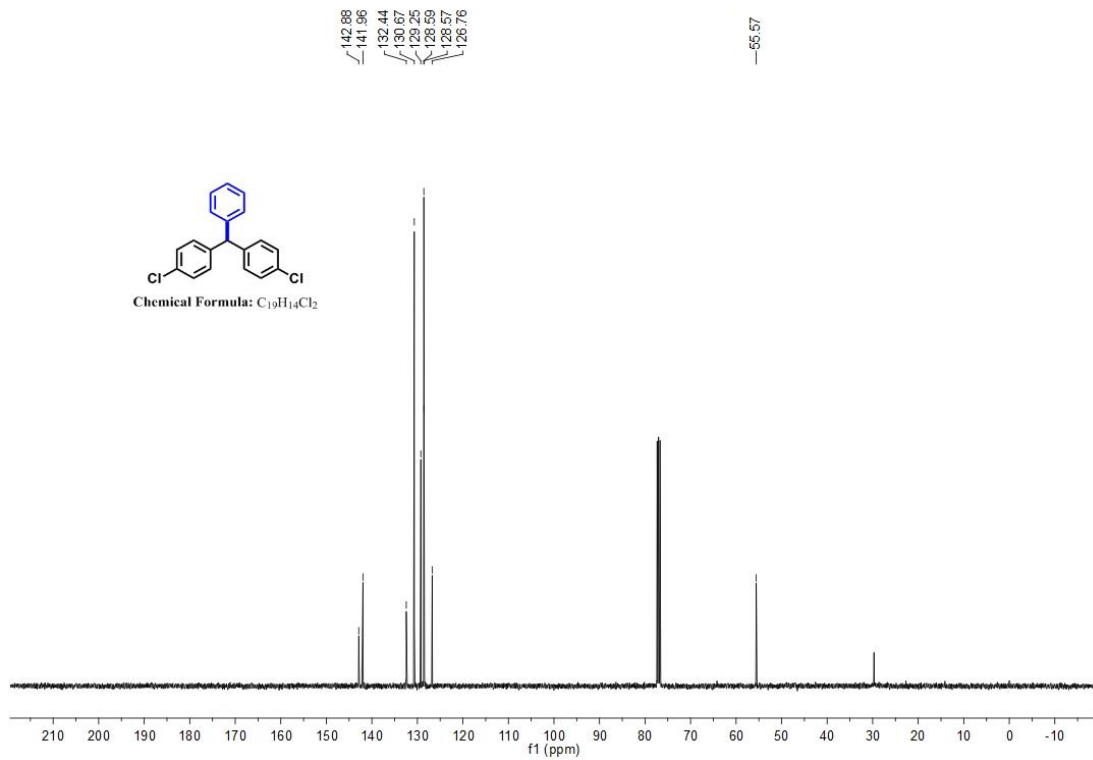
1H NMR of **4f**



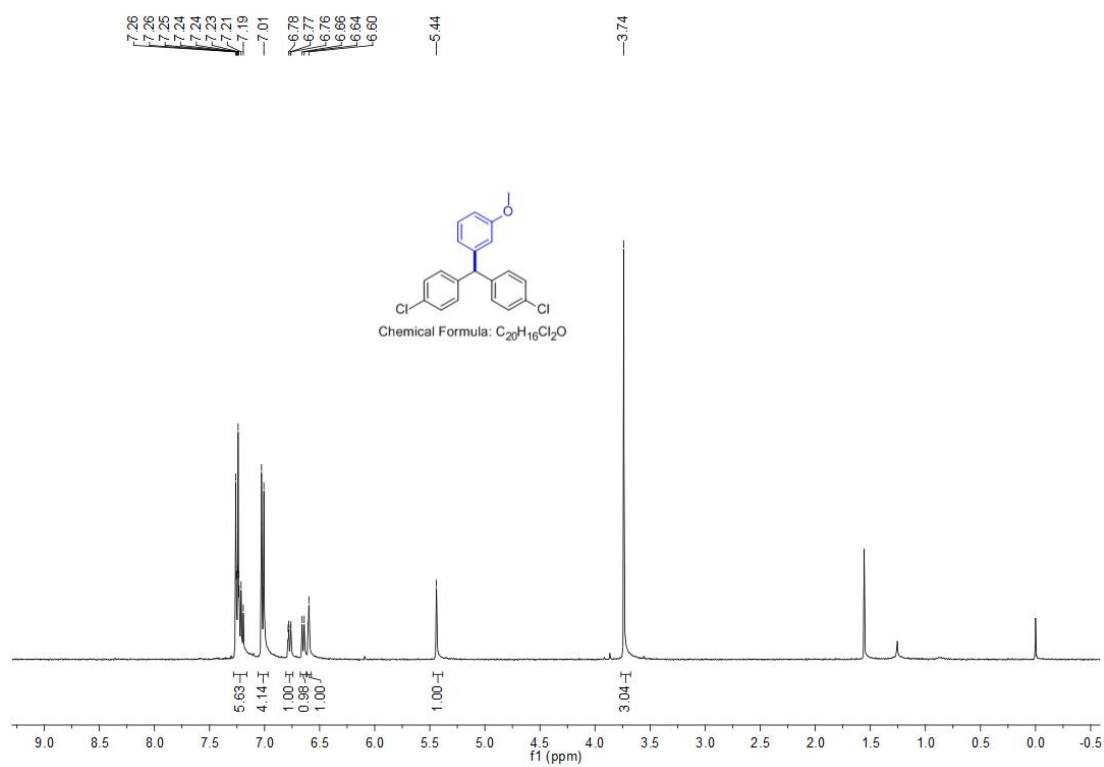
^{13}C NMR of **4f**



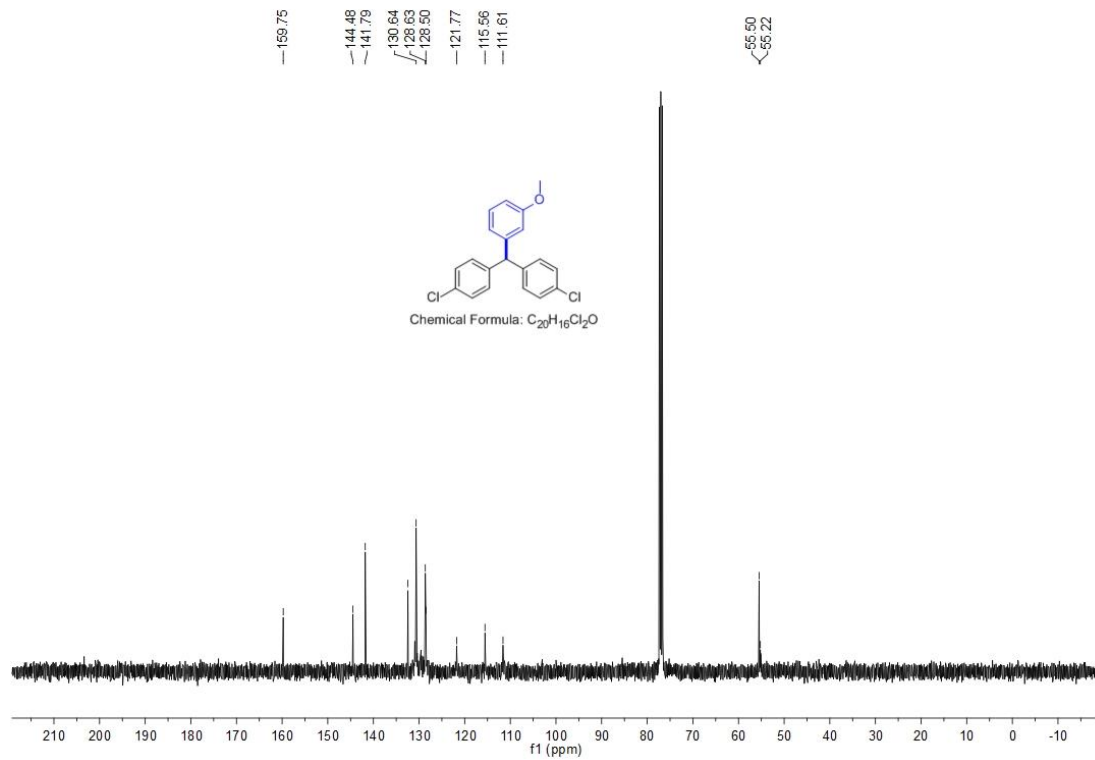
1H NMR of **4g**



^{13}C NMR of **4g**



1H NMR of **4h**



^{13}C NMR of **4h**