

Supporting Information

A Room-Temperature Protocol to Access Isoquinolines through Silver (I) Catalysed Annulation of 2-Ethynyl Arylaldehydes and Ketones with NH₄OAc: Elaboration to Berberine and Palmatine

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CCCC#Cc1ccccc1C=O

¹H NMR (400 MHz, CDCl₃)

Chemical structure: CCCC#Cc1ccccc1C=O

Peak list (ppm): 10.56, 10.56, 7.96, 7.96, 7.95, 7.95, 7.94, 7.94, 7.93, 7.93, 7.64, 7.64, 7.62, 7.62, 7.58, 7.58, 7.57, 7.57, 7.56, 7.56, 7.49, 7.49, 7.46, 7.46, 7.45, 7.45, 7.45, 7.45, 7.44, 7.44, 7.44, 7.42, 7.42, 7.26, 7.26, 7.21, 7.21, 7.19, 2.65, 2.65, 2.63, 2.63, 2.62, 2.62, 2.61, 2.61, 1.61, 1.61, 1.59, 1.59, 1.50, 1.50, 1.37, 1.37, 1.36, 1.36, 1.35, 1.35, 1.34, 1.34, 1.34, 1.32, 1.32, 1.31, 1.31, 1.30, 1.30, 1.29, 1.29, 1.27, 1.27, 1.26, 1.26, 0.90, 0.90, 0.88, 0.88, 0.00, 0.00.

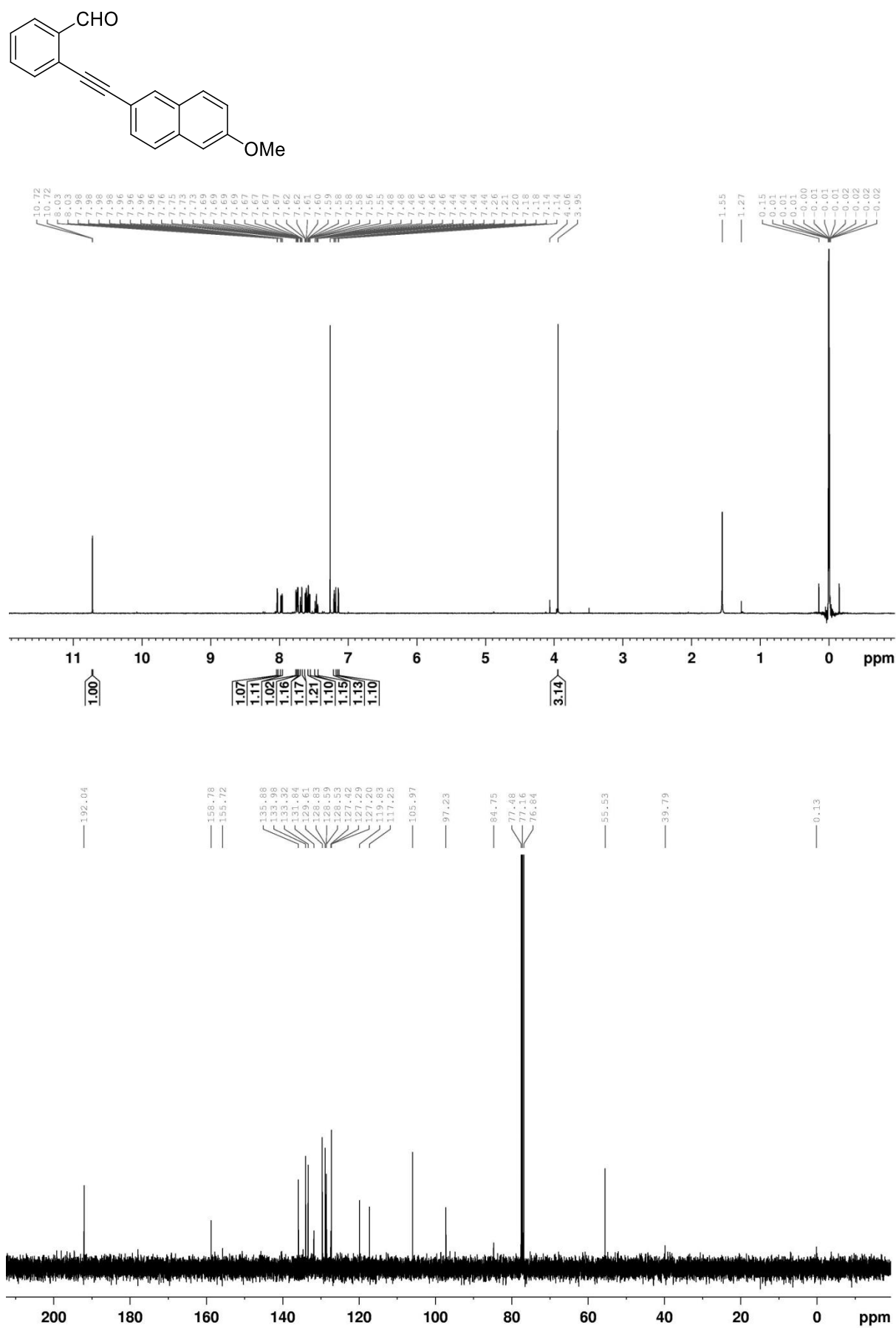
Integration values: 1.00, 1.06, 1.13, 1.22, 2.21, 1.21, 2.15, 2.20, 2.42, 4.25, 3.26.

¹³C NMR (100 MHz, CDCl₃)

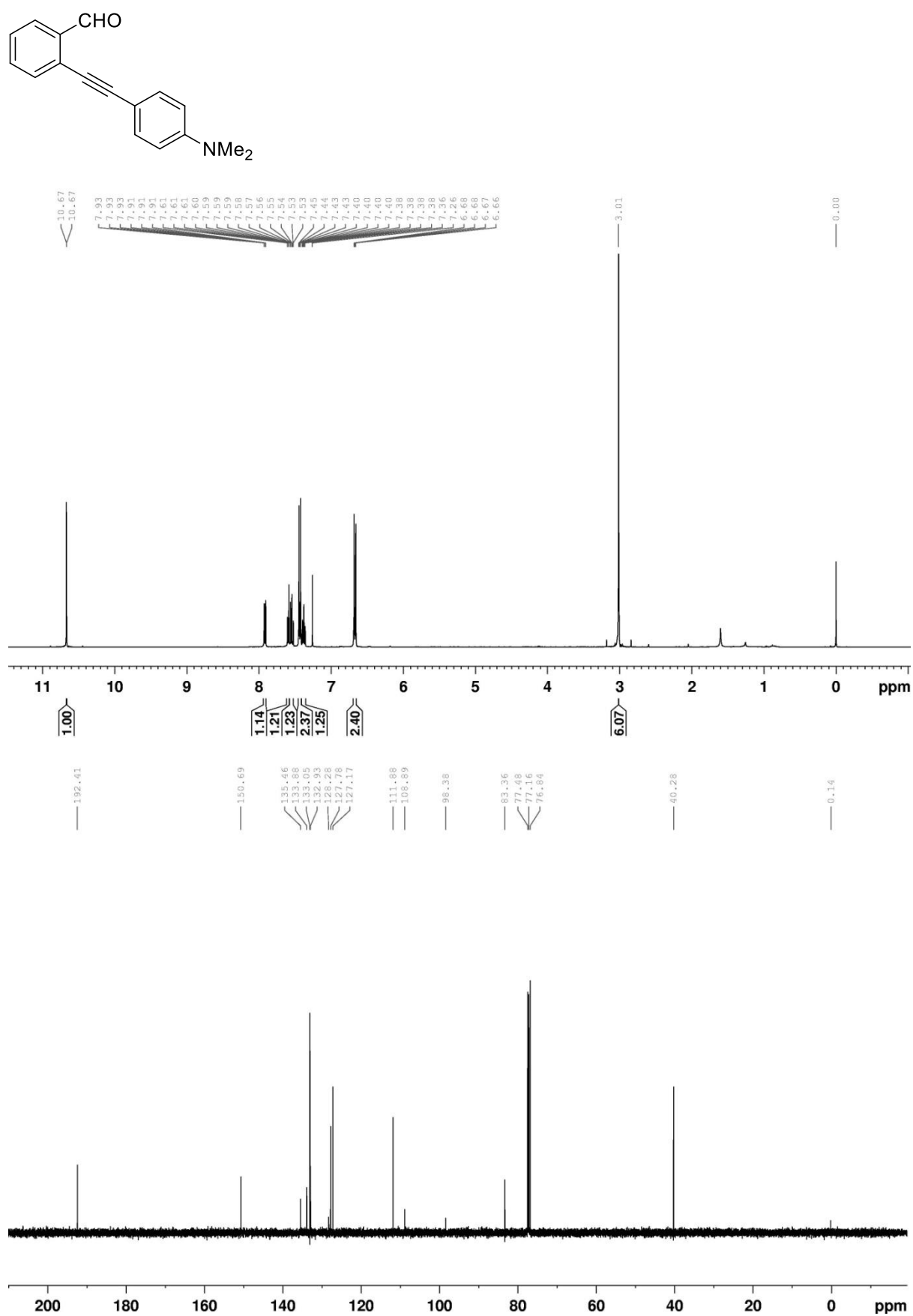
Peak list (ppm): 191.98, 144.55, 135.86, 135.90, 133.27, 131.73, 128.78, 128.83, 127.33, 127.30, 119.55, 96.83, 84.42, 77.48, 77.16, 76.84, 36.05, 31.55, 31.03, 22.64, 14.15, 0.12.

CC1=CC=C(C=C1)C#CC2=CC=CC=C2C=O

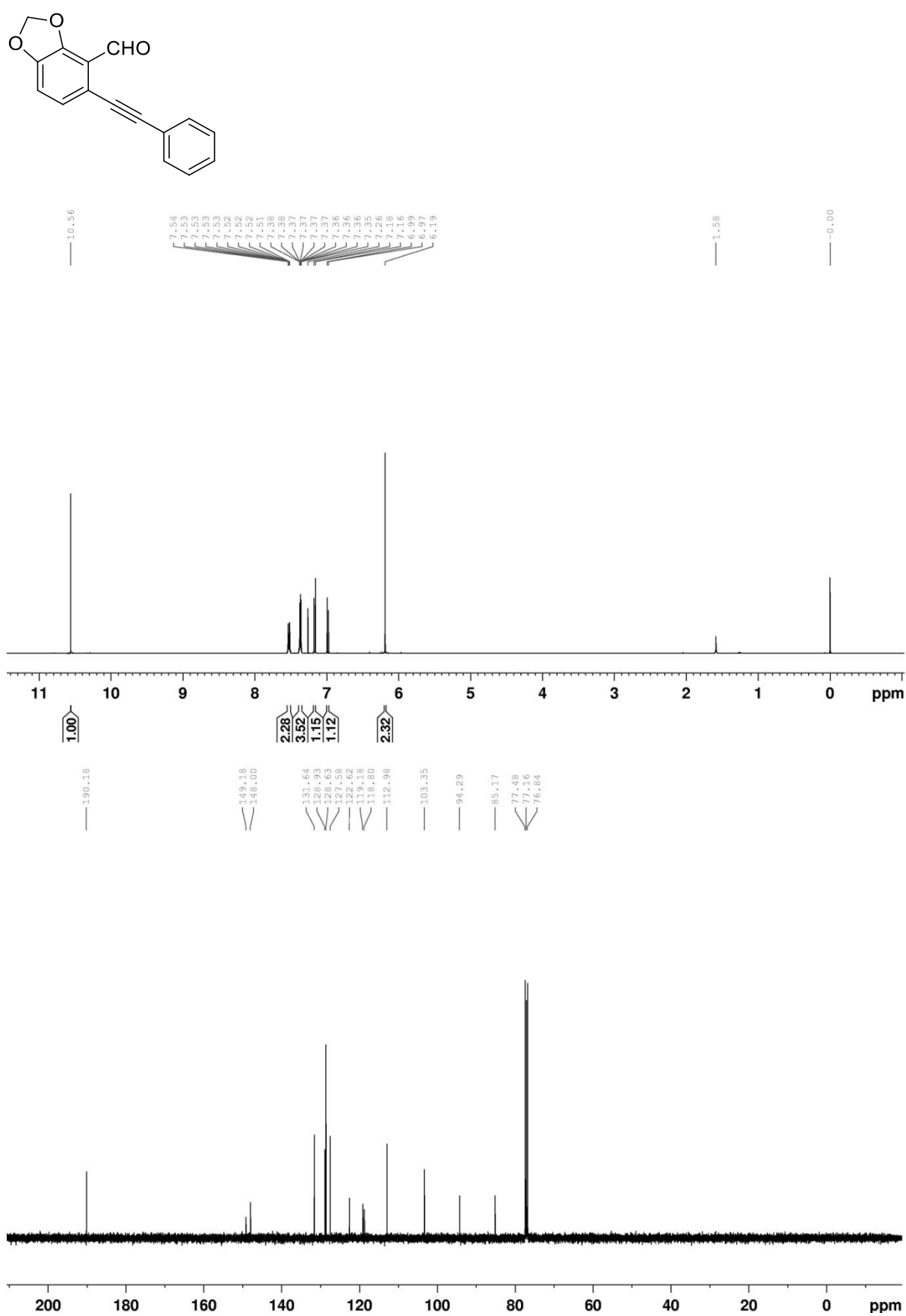
^1H , ^{13}C NMR Spectra of **5e**



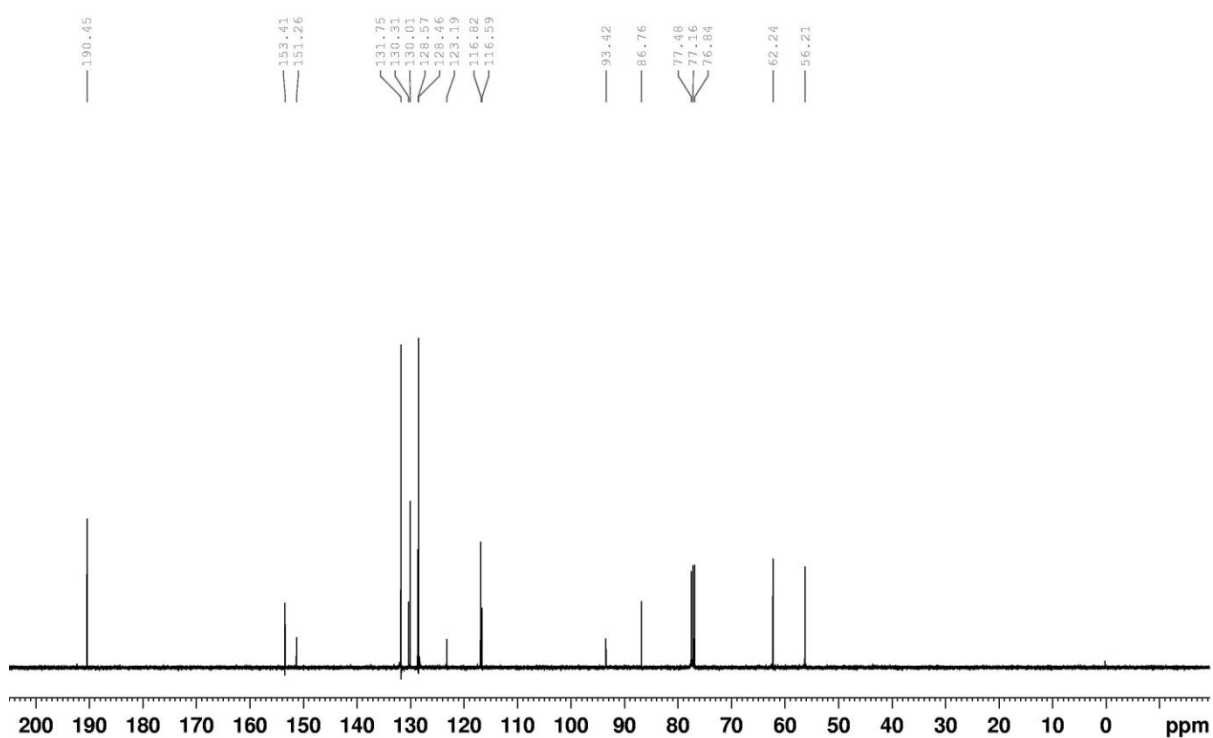
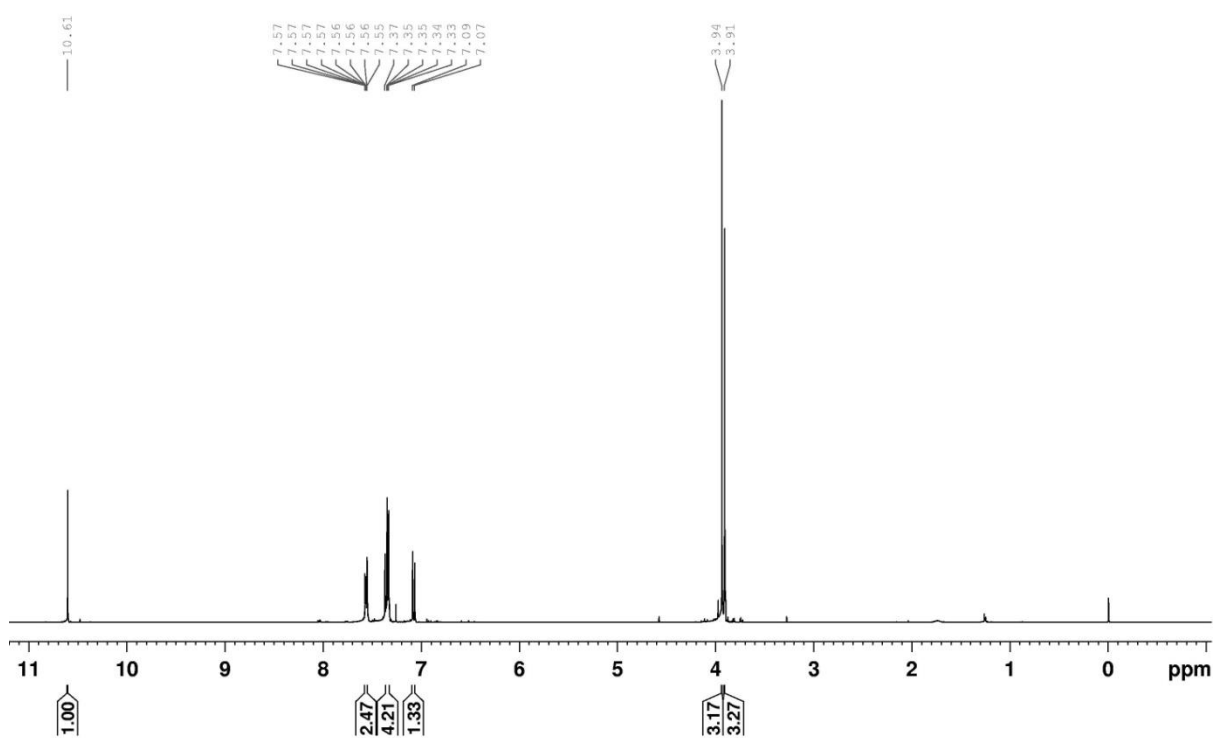
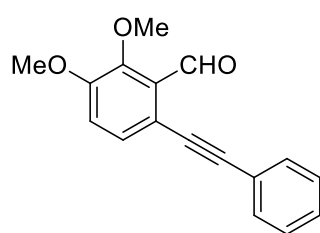
^1H , ^{13}C NMR Spectra of **5g**



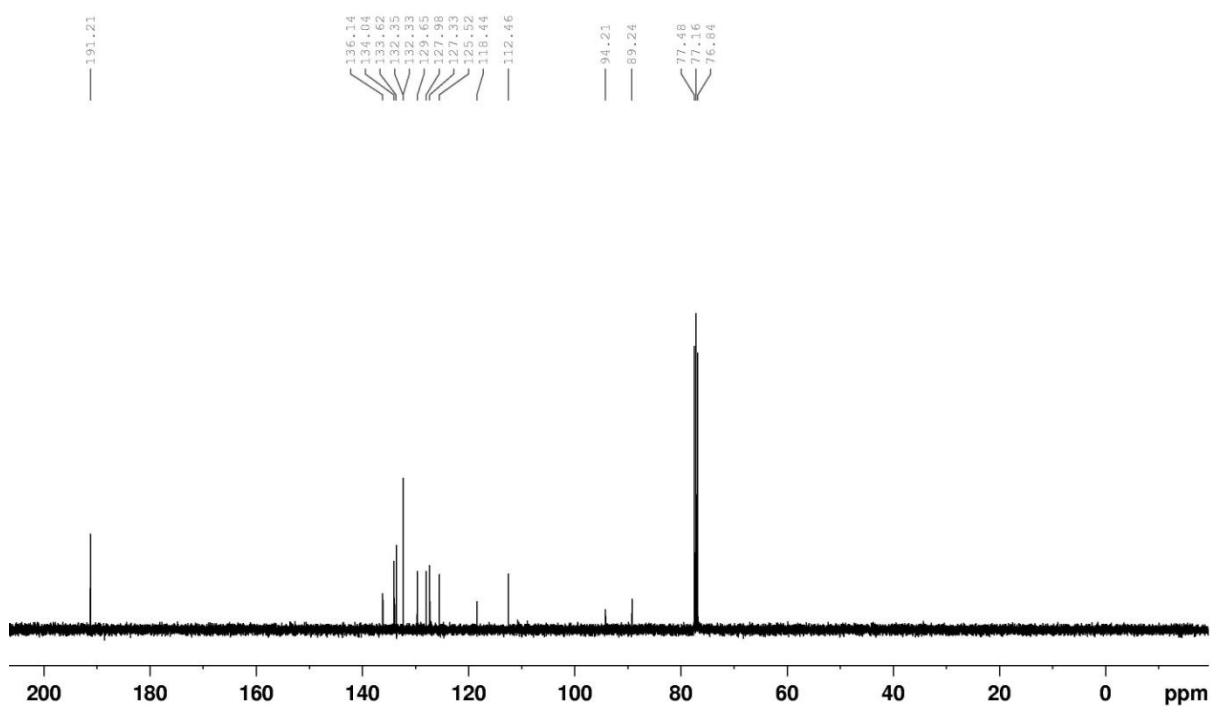
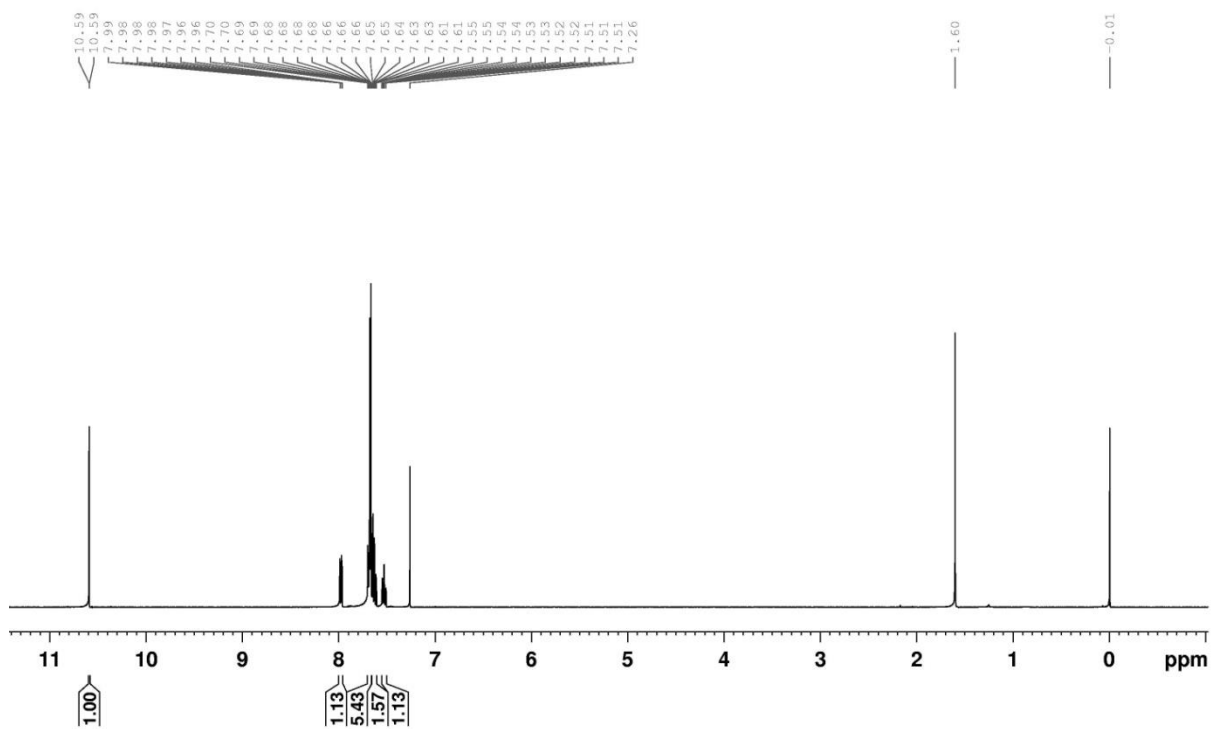
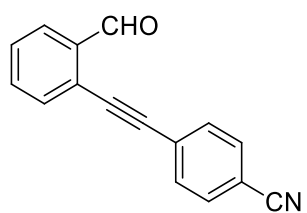
^1H , ^{13}C NMR Spectra of **5i**



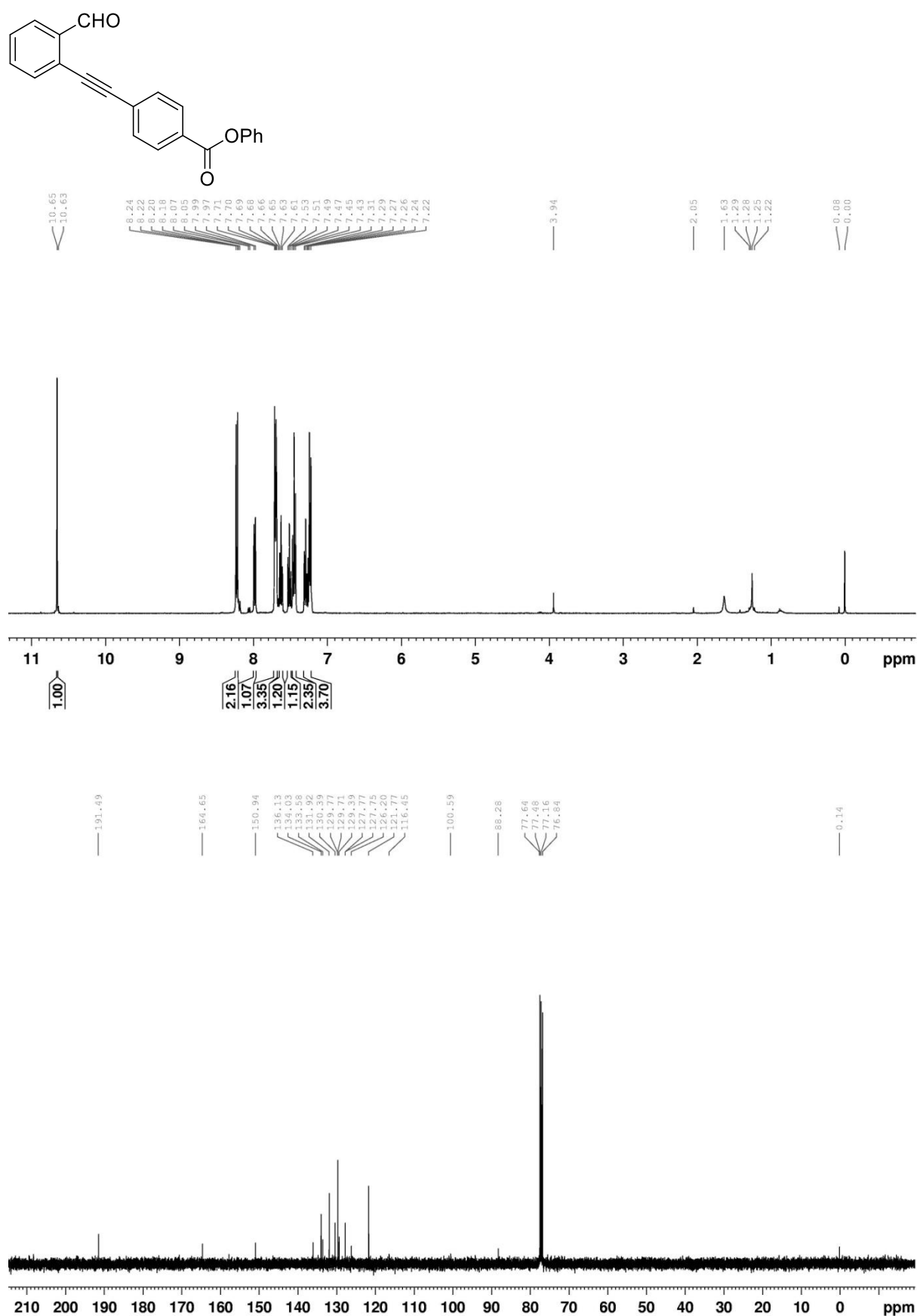
^1H , ^{13}C NMR Spectra **5m**



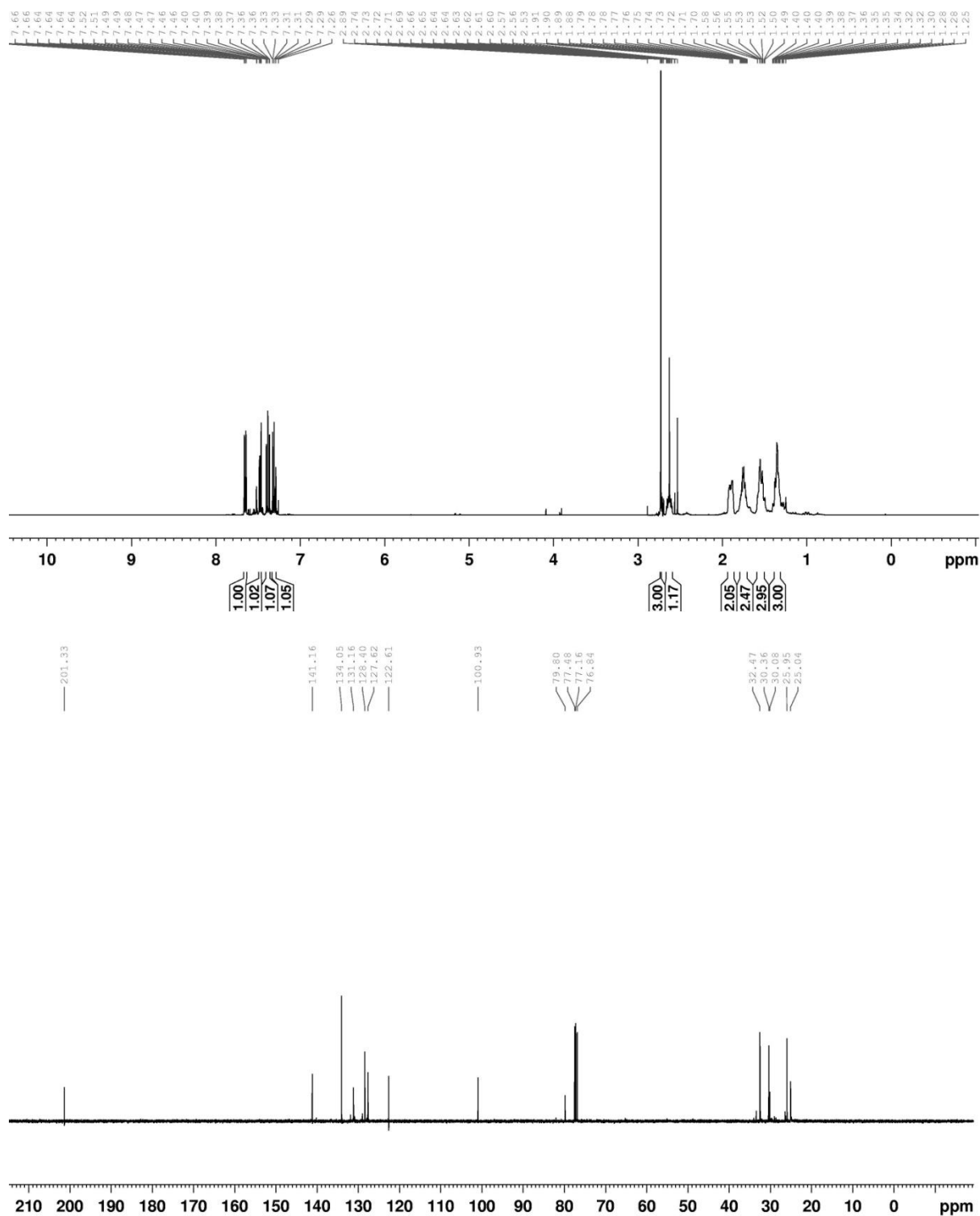
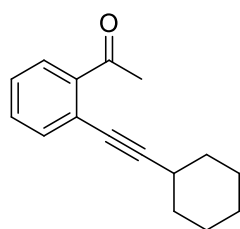
^1H , ^{13}C NMR Spectra of **5q**



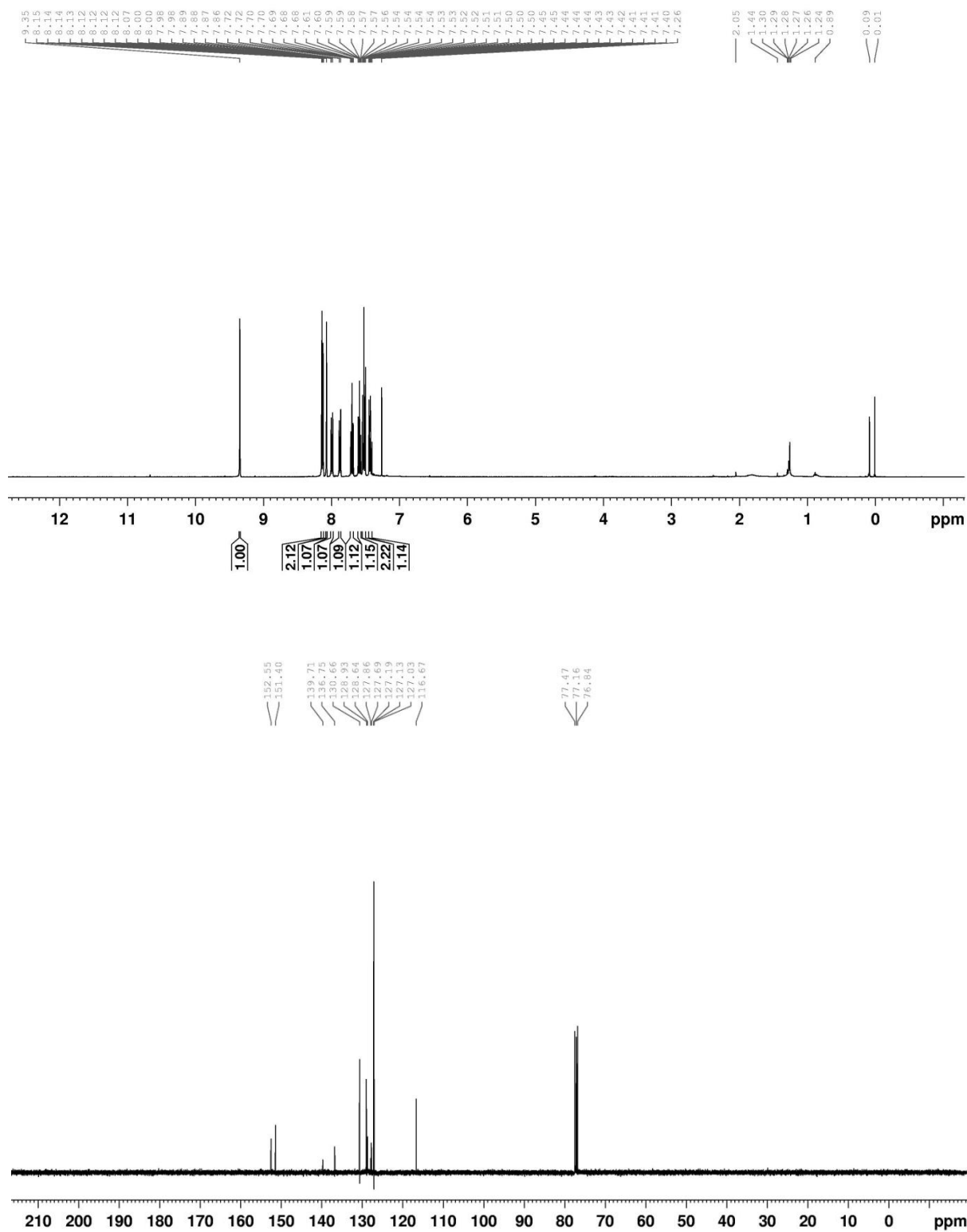
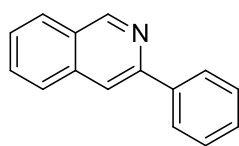
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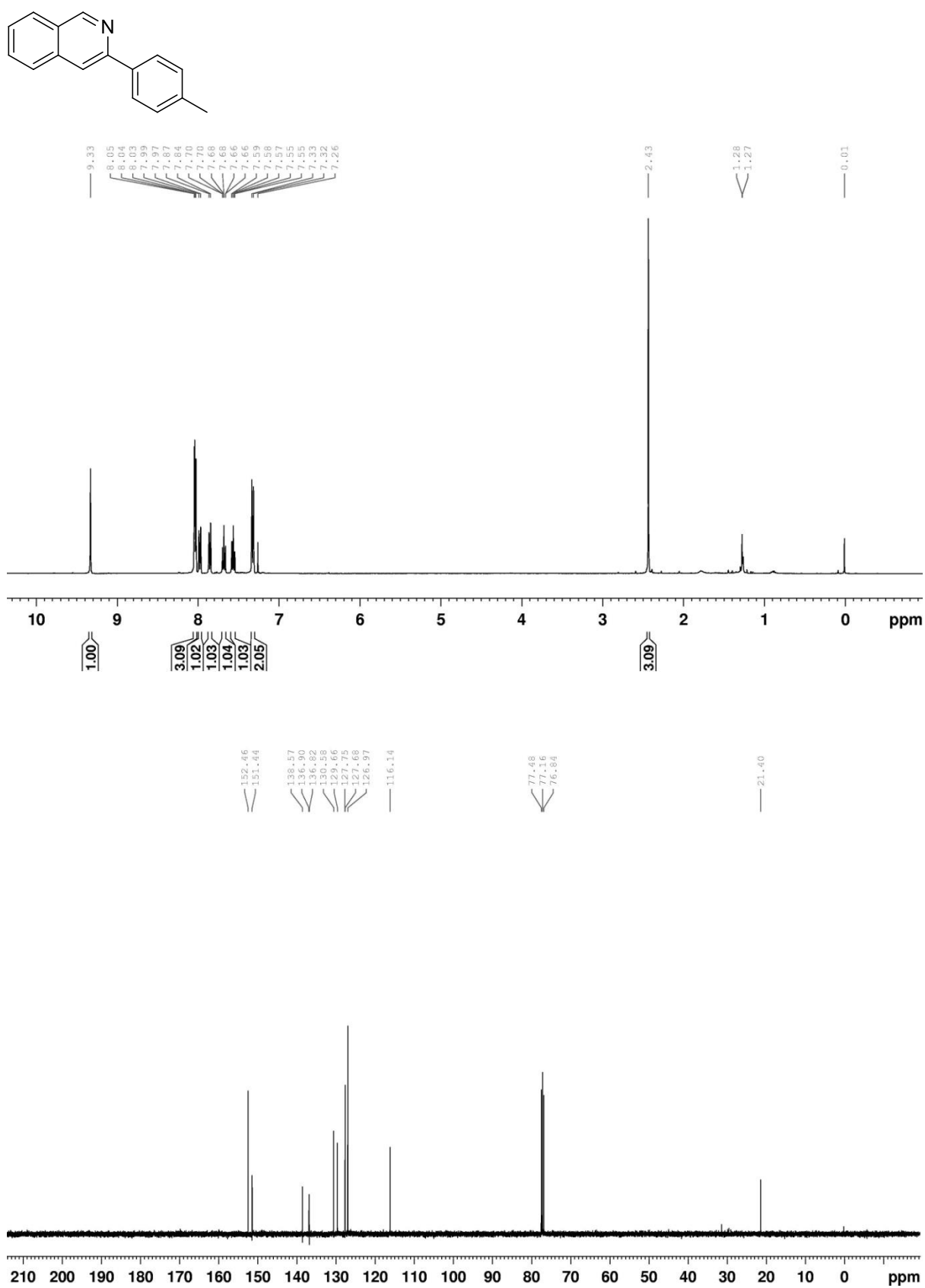
^1H , ^{13}C NMR Spectra of **5u**

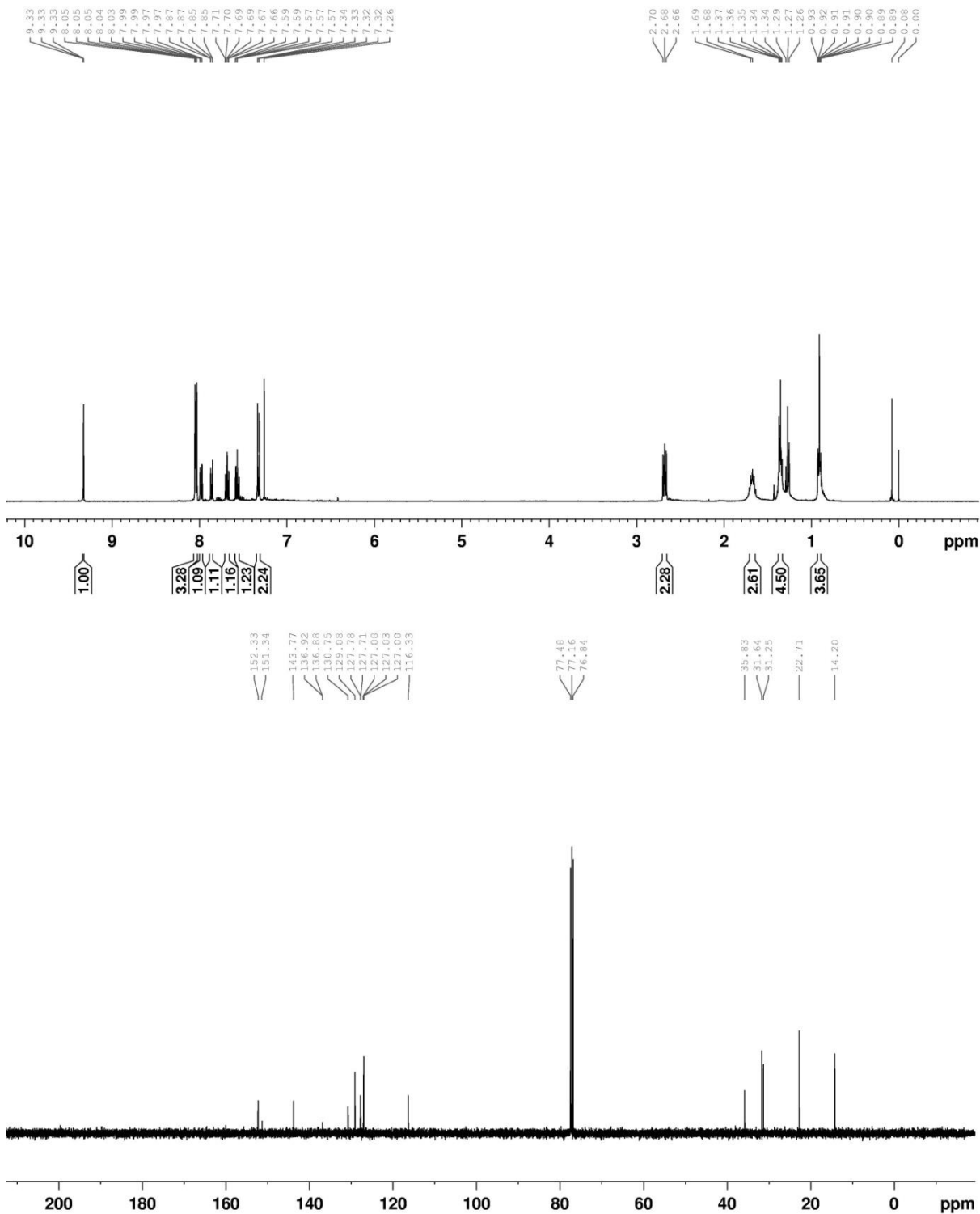
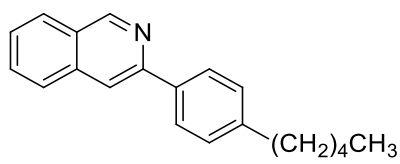


^1H , ^{13}C NMR Spectra of **6**

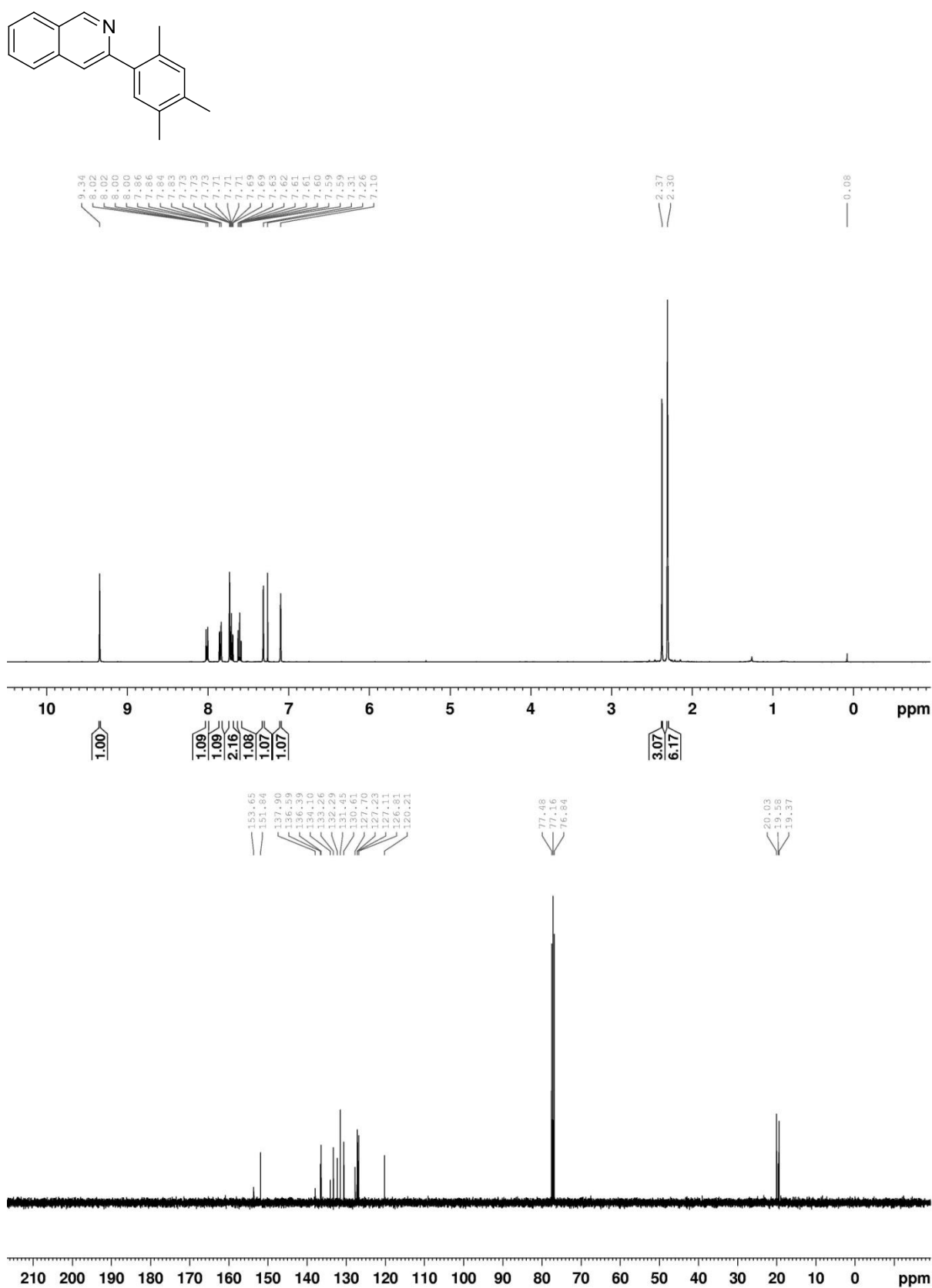


^1H , ^{13}C NMR Spectra of **6a**

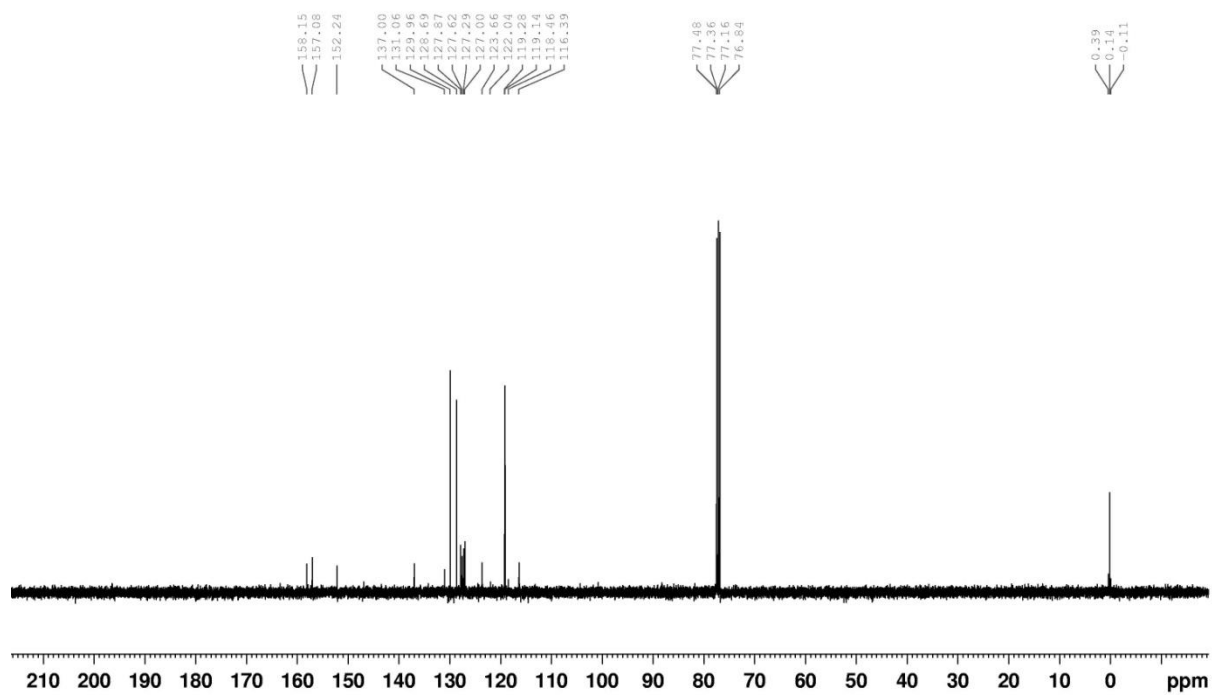
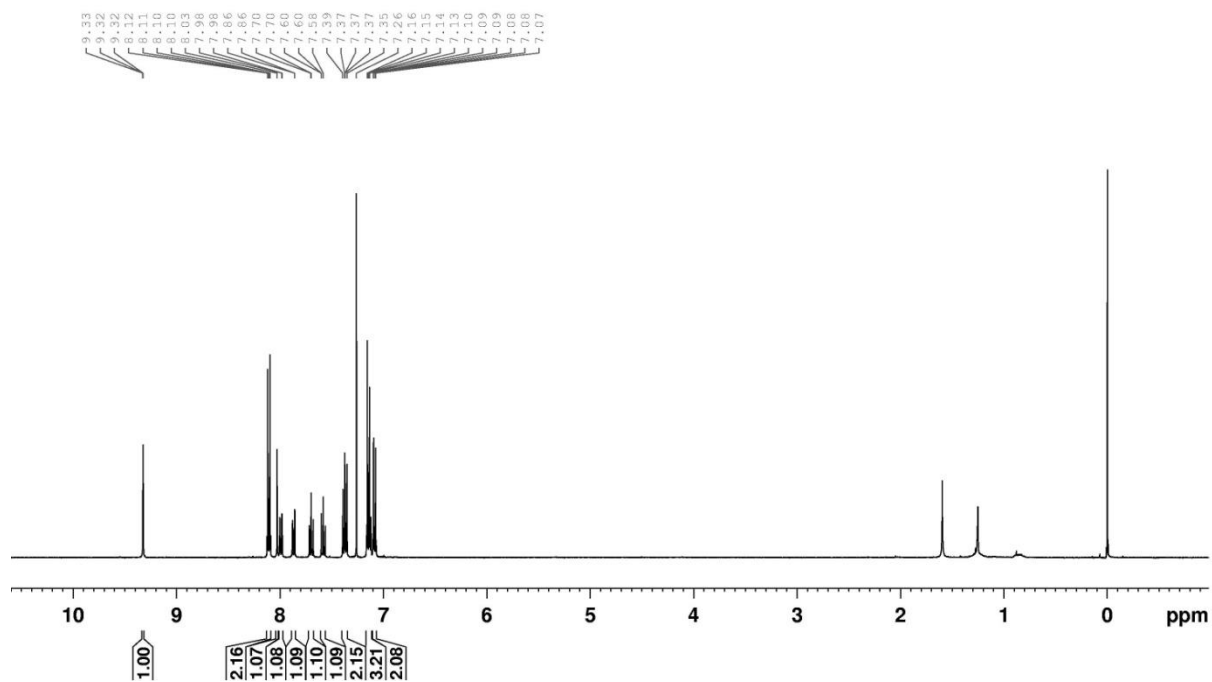
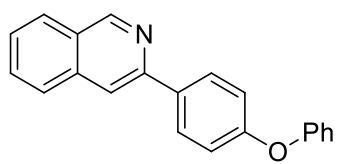


^1H , ^{13}C NMR Spectra of **6b**

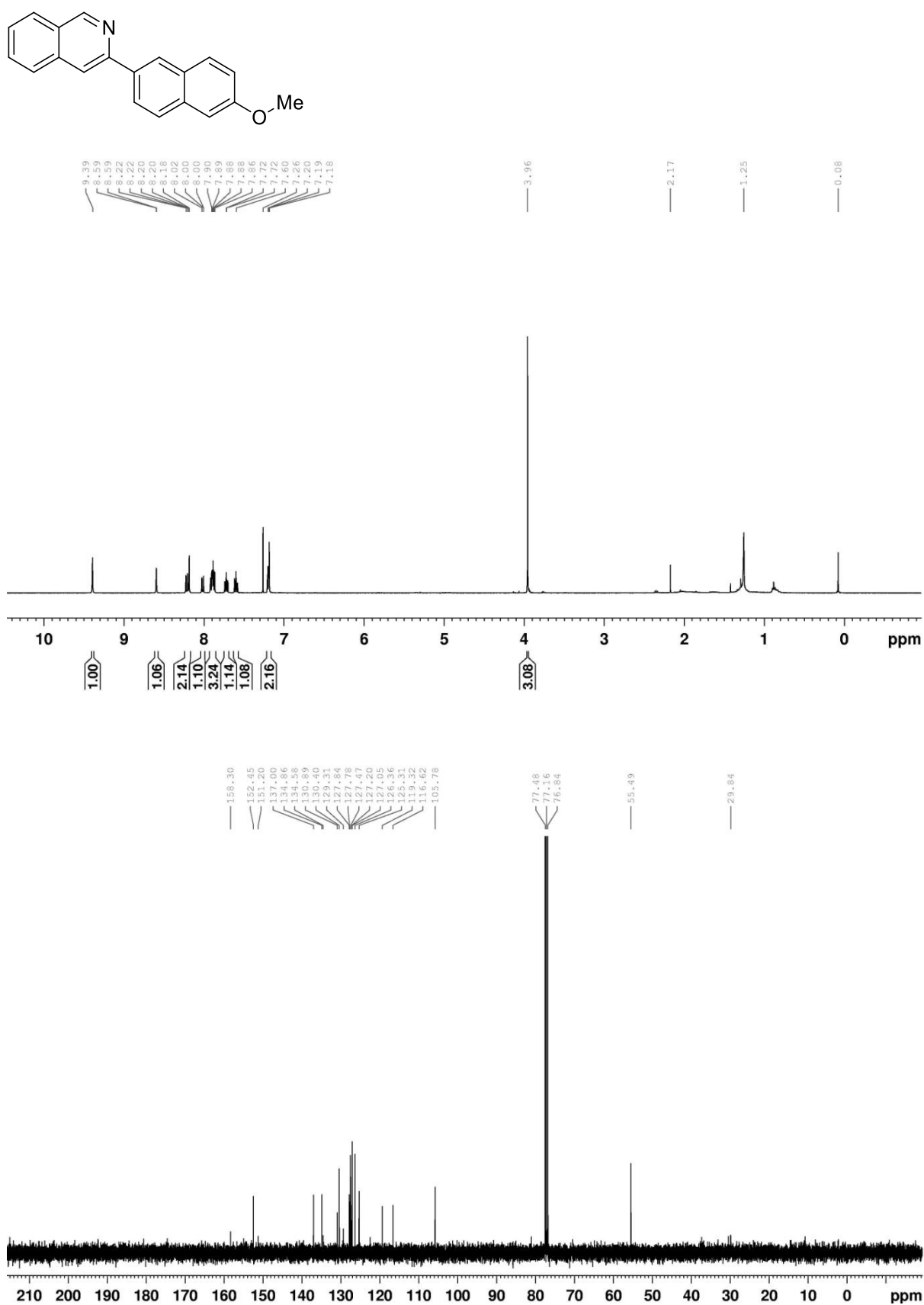
^1H , ^{13}C NMR Spectra **6c**



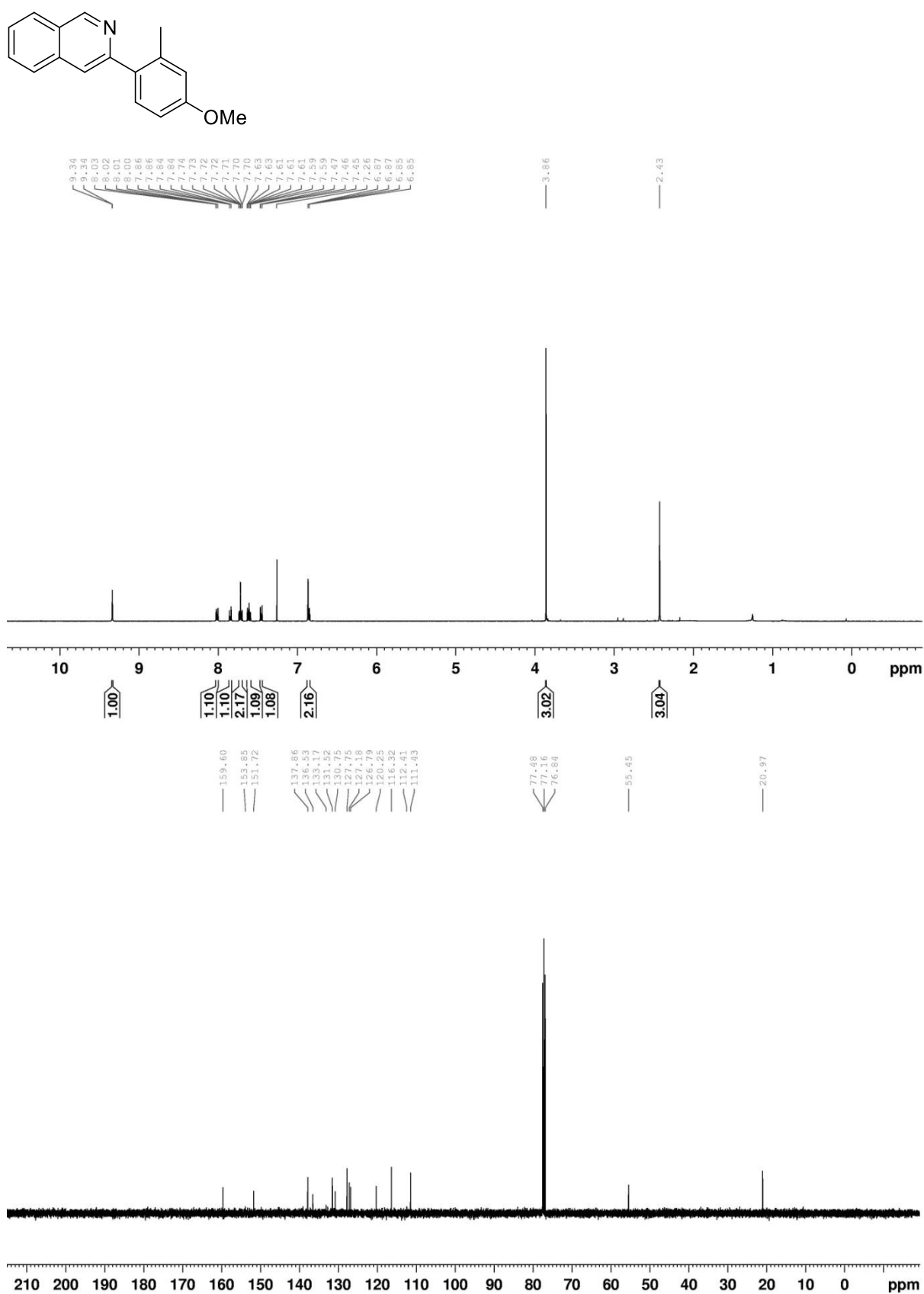
^1H , ^{13}C NMR Spectra of **6d**



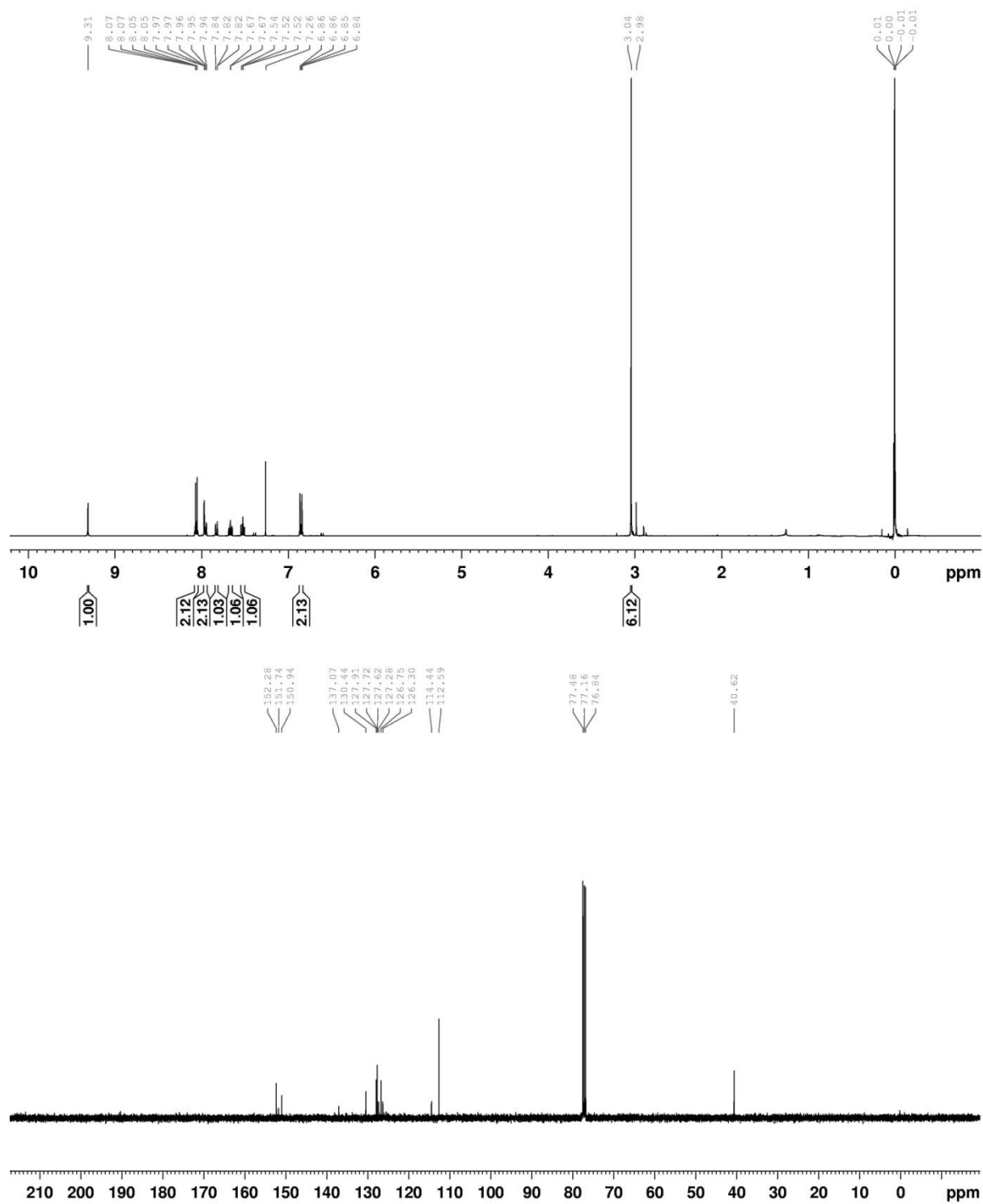
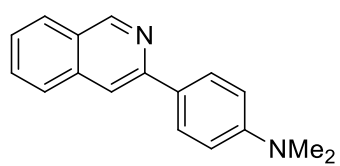
^1H , ^{13}C NMR of Spectra of **6e**



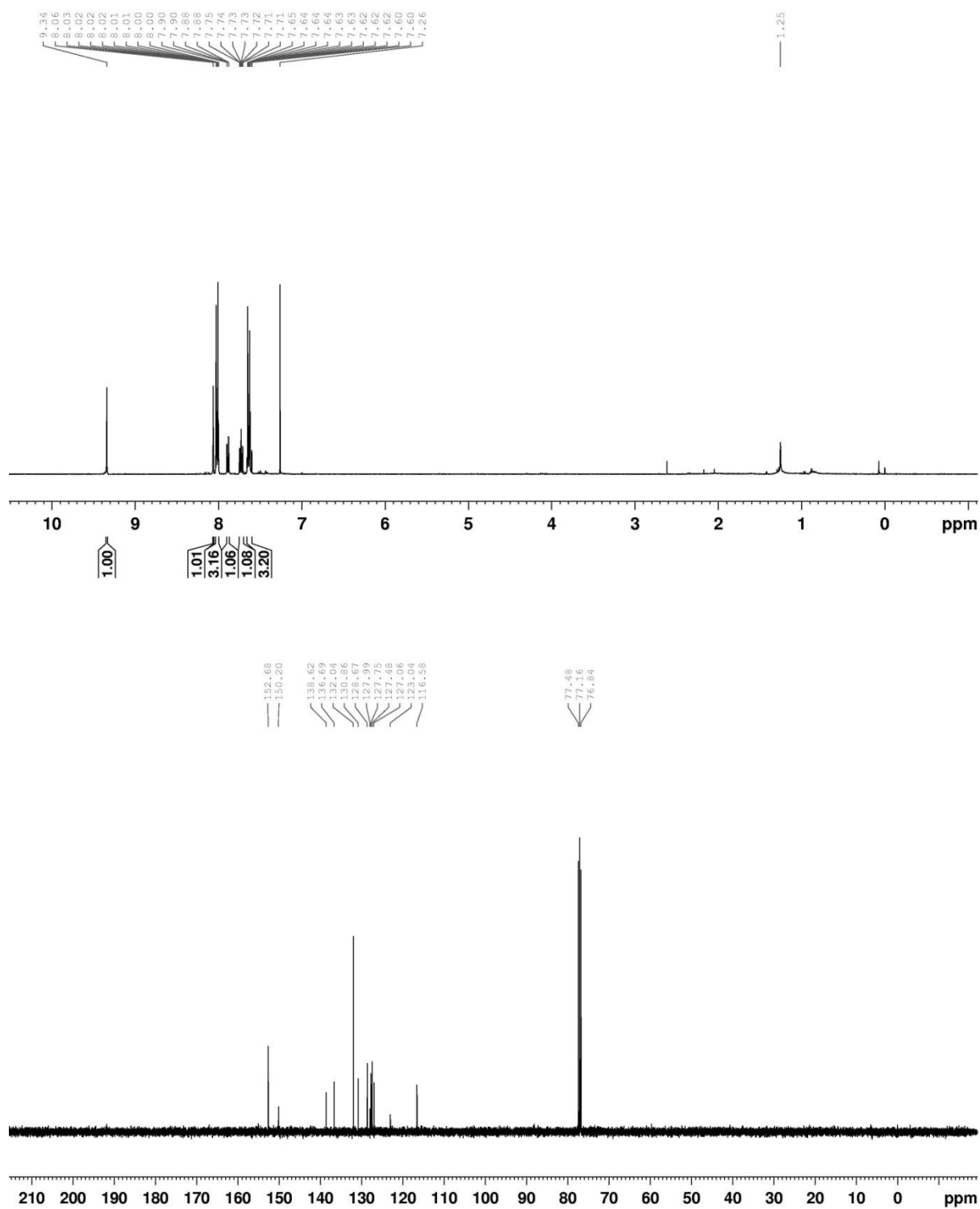
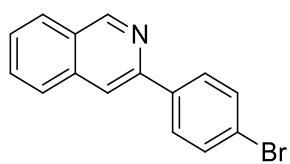
^1H , ^{13}C NMR Spectra of **6f**



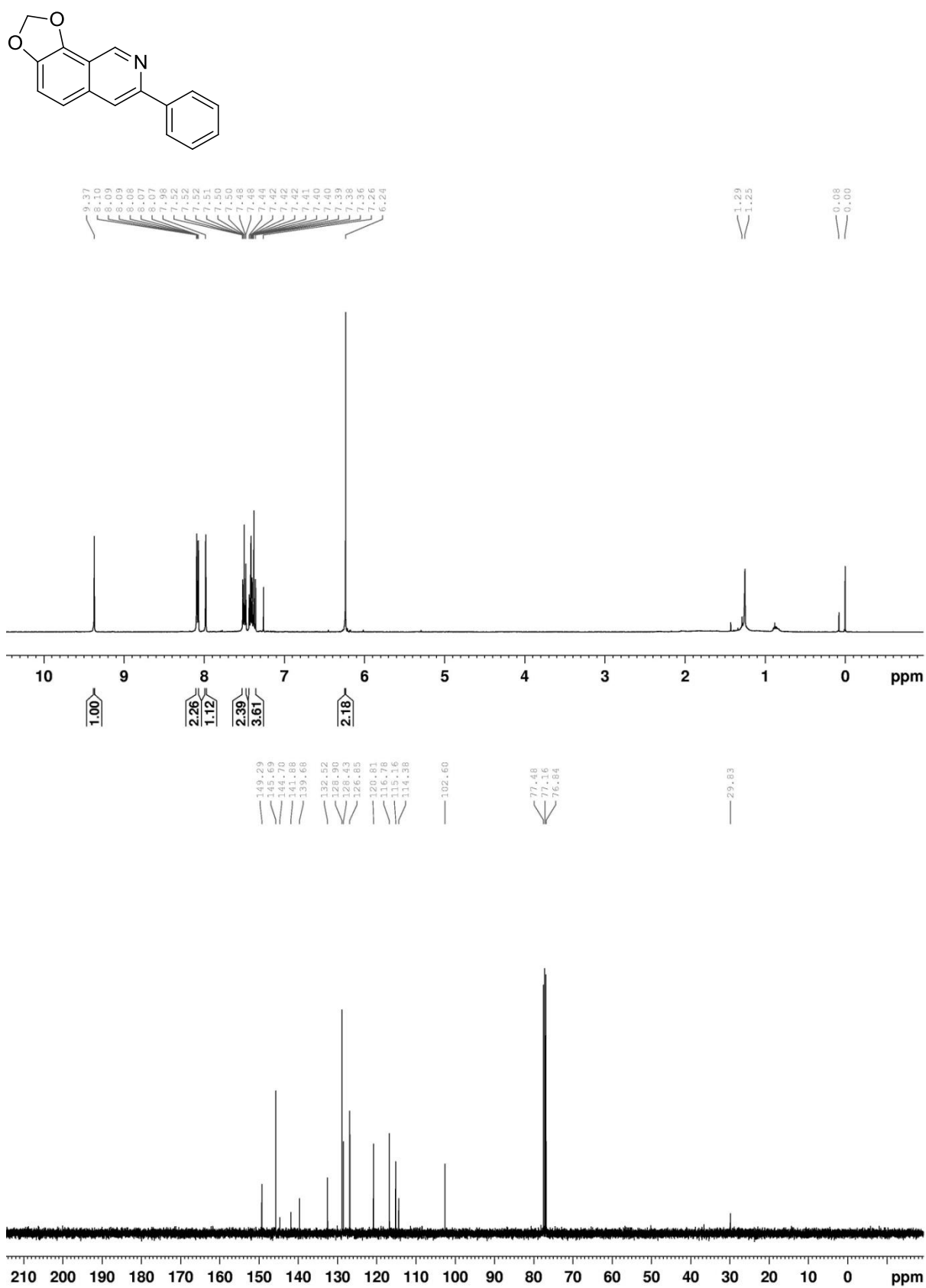
^1H , ^{13}C NMR Spectra of **6g**



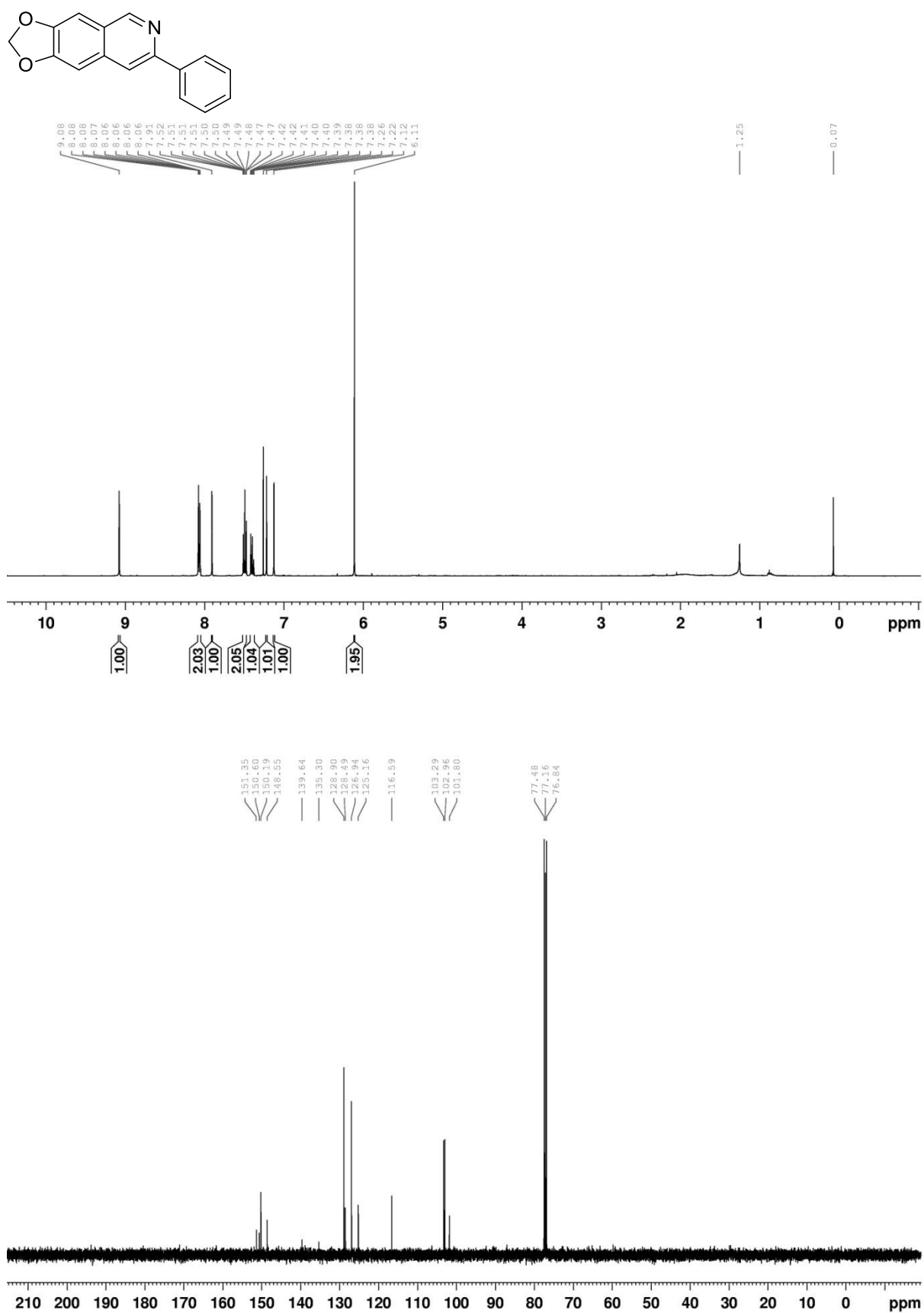
^1H , ^{13}C NMR Spectra of **6h**



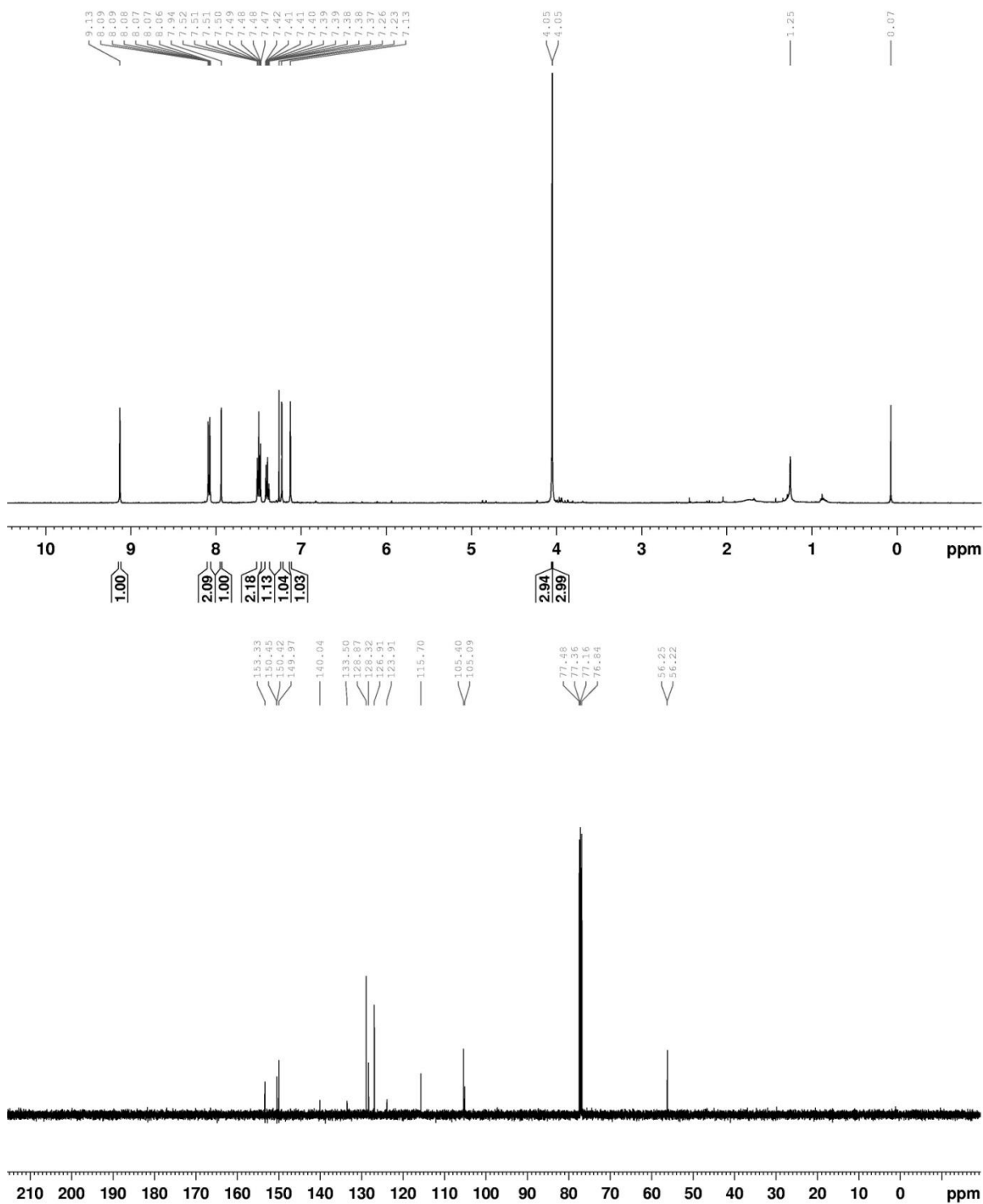
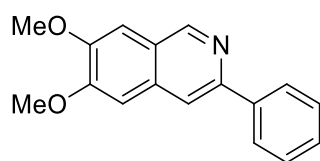
^1H , ^{13}C NMR Spectra of **6i**



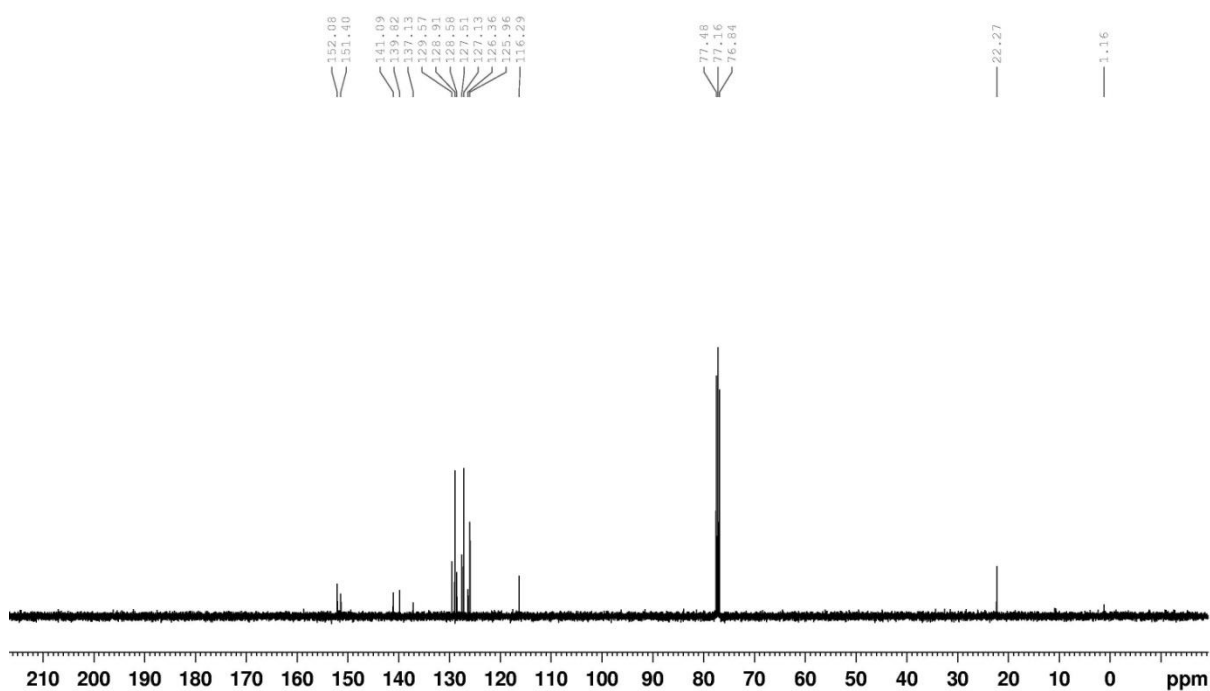
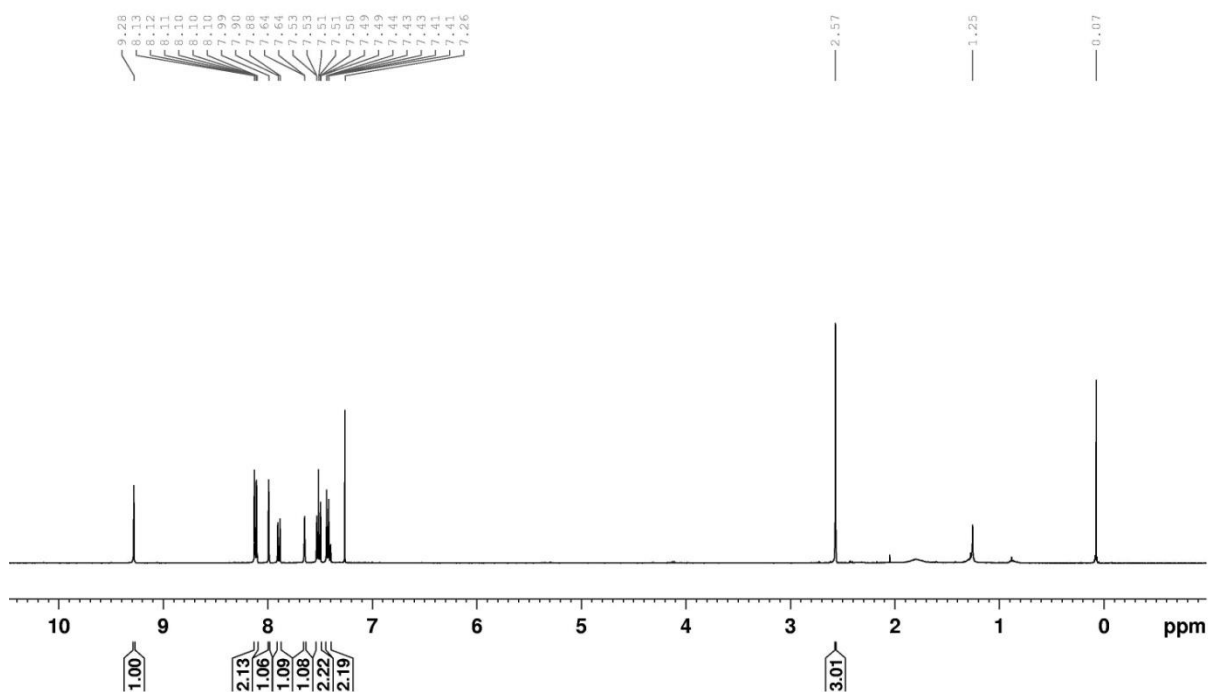
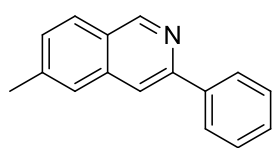
^1H , ^{13}C NMR Spectra of **6j**



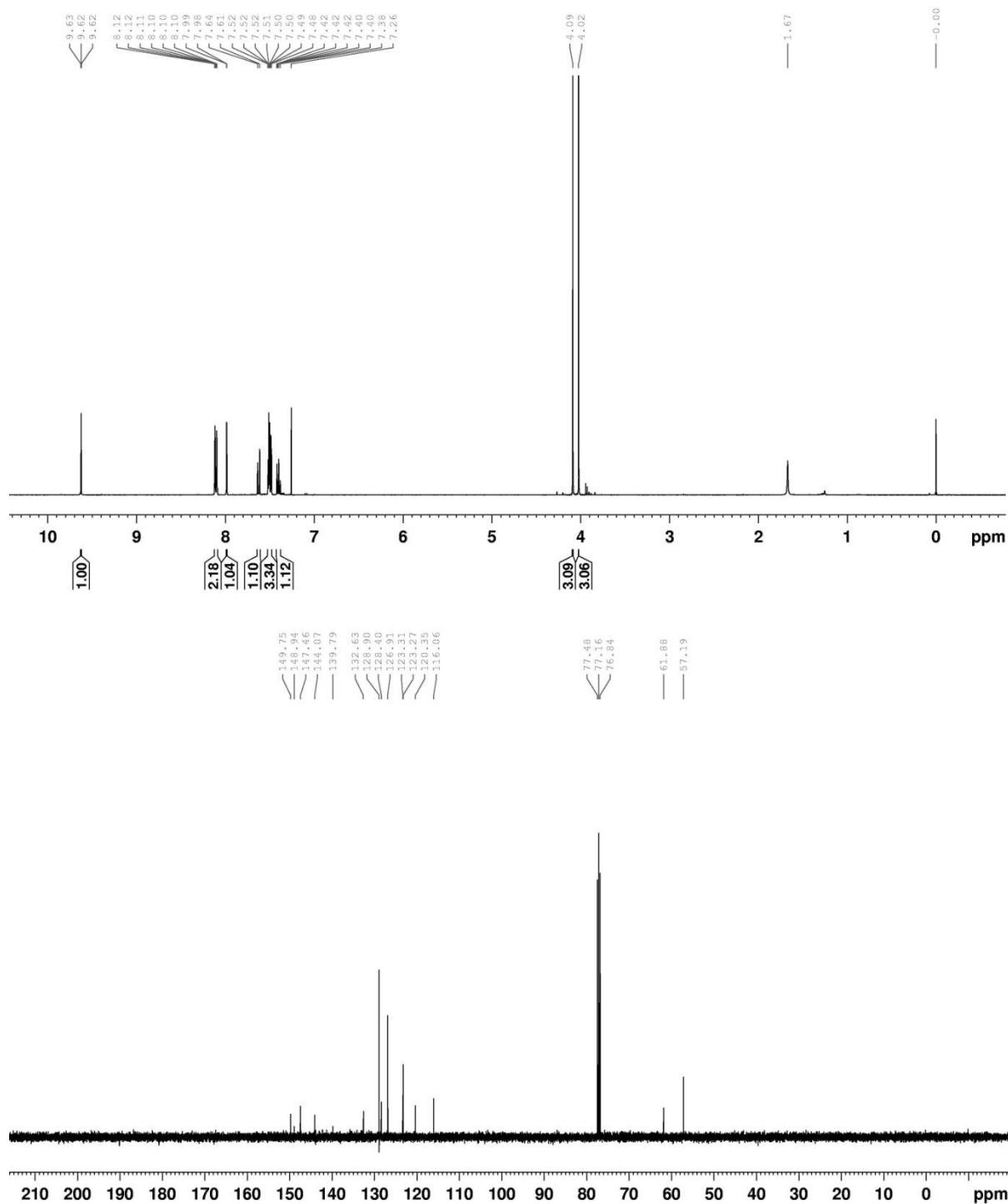
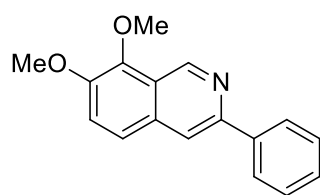
^1H , ^{13}C NMR Spectra of **6k**



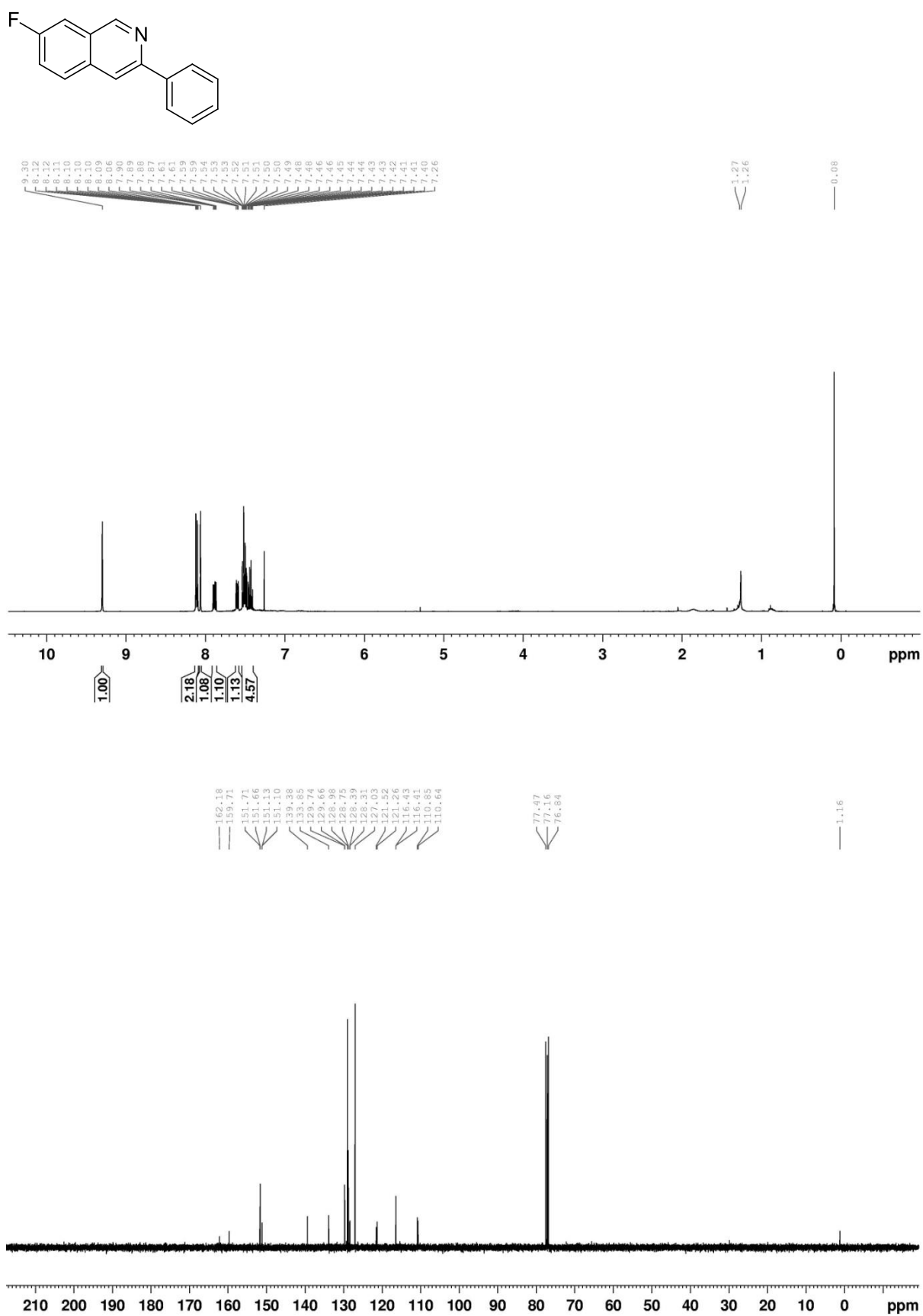
^1H , ^{13}C NMR Spectra of **6I**



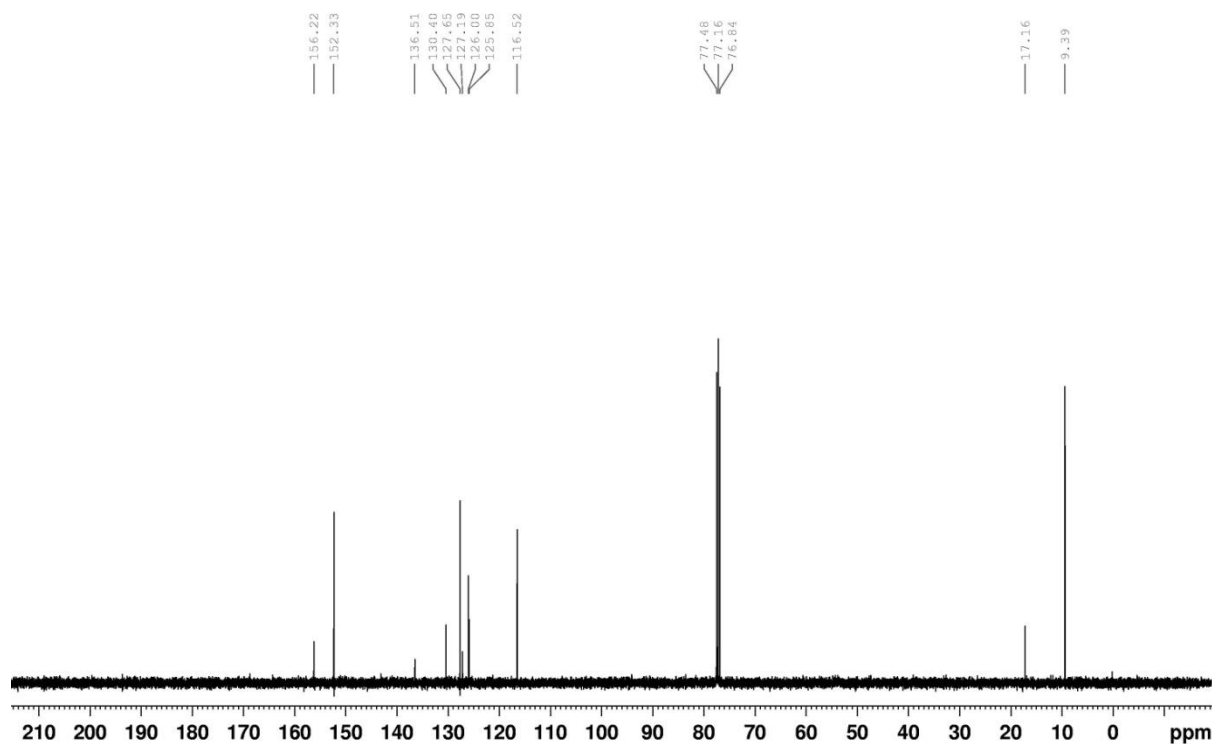
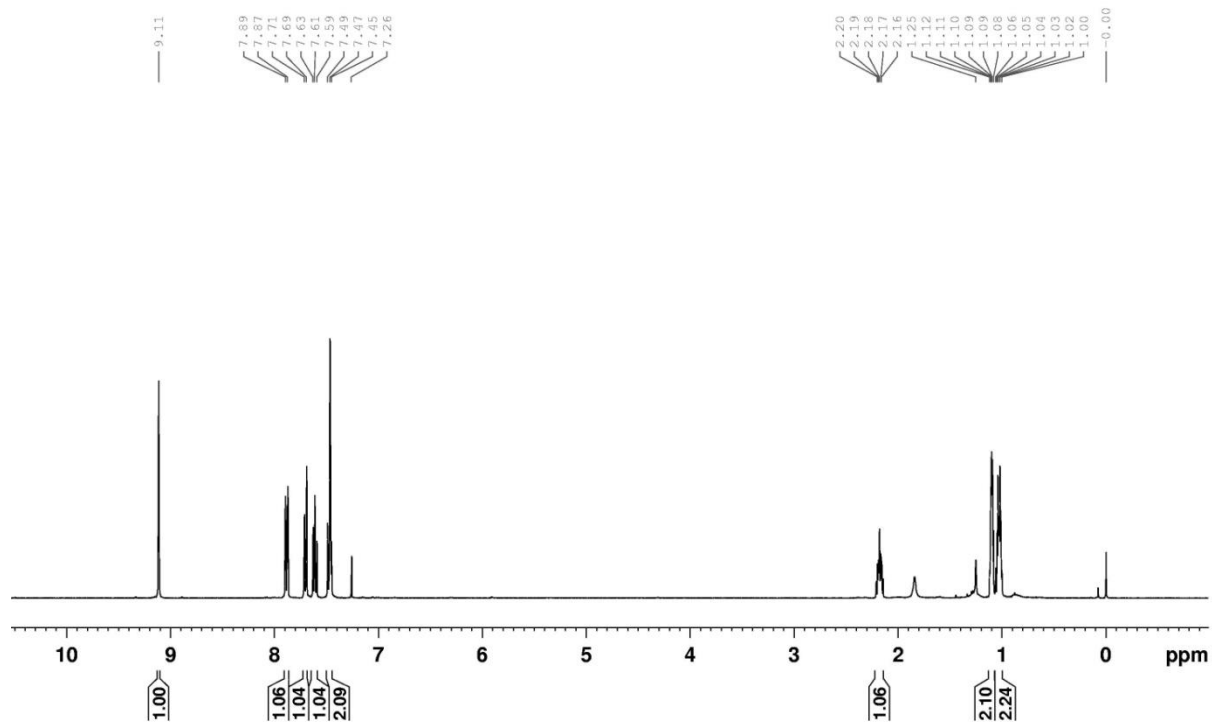
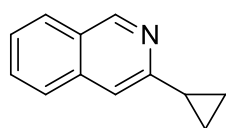
^1H , ^{13}C NMR Spectra of **6m**



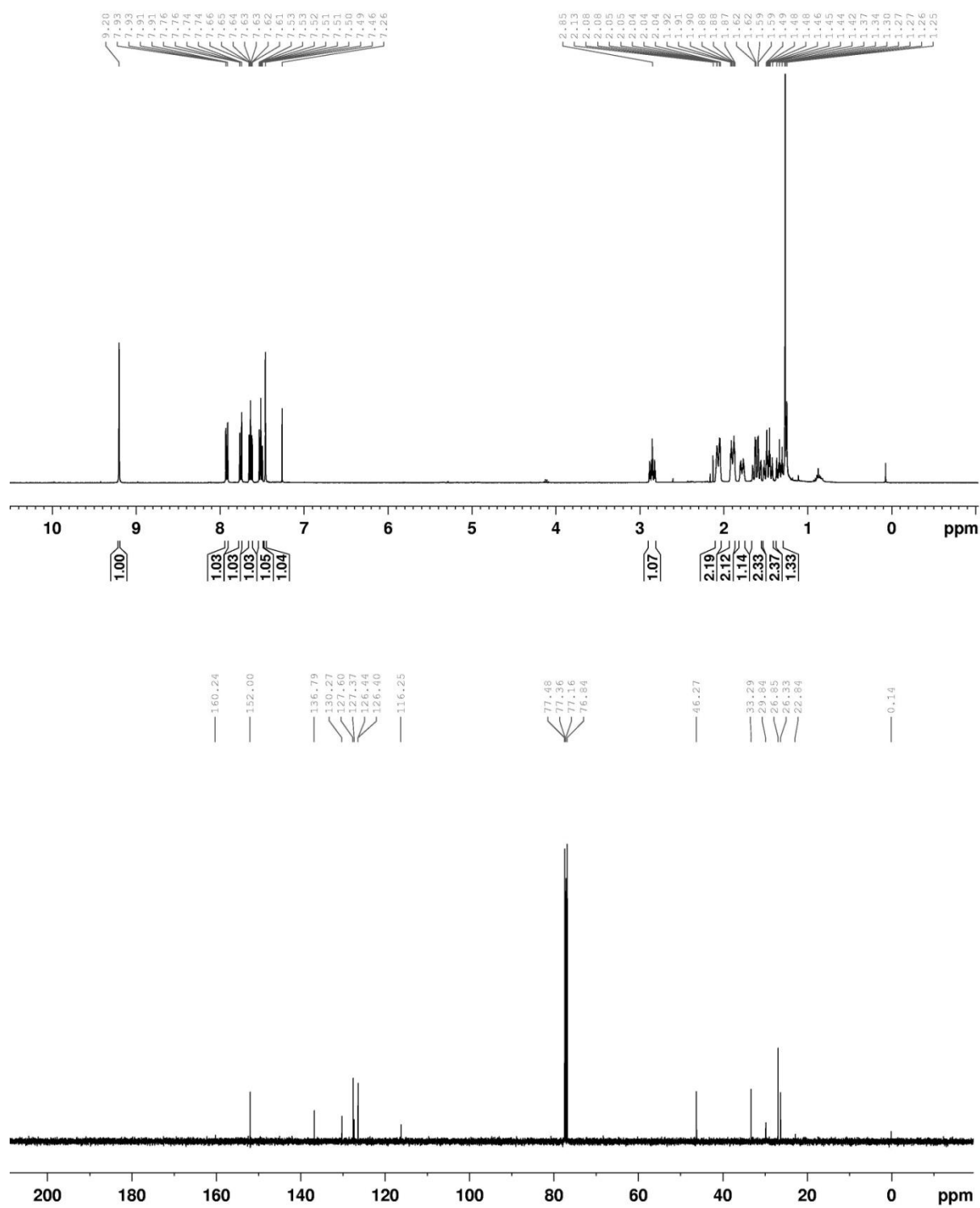
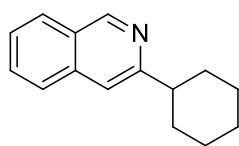
^1H , ^{13}C NMR Spectra of **6n**



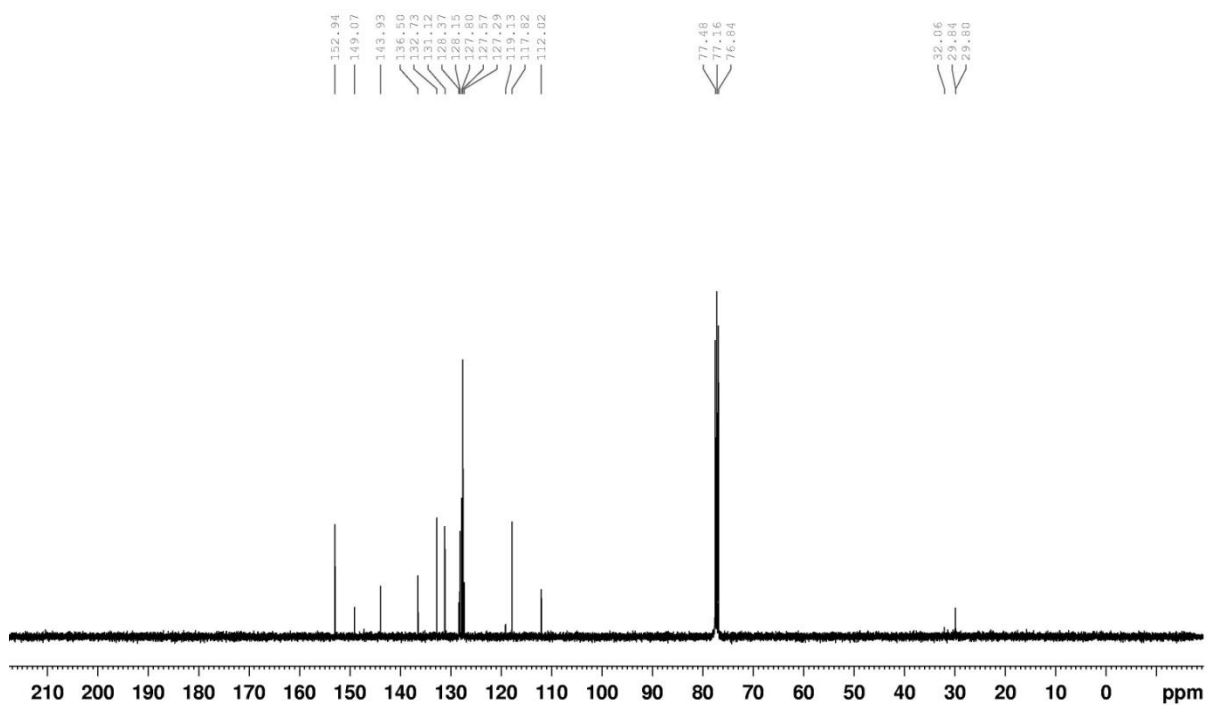
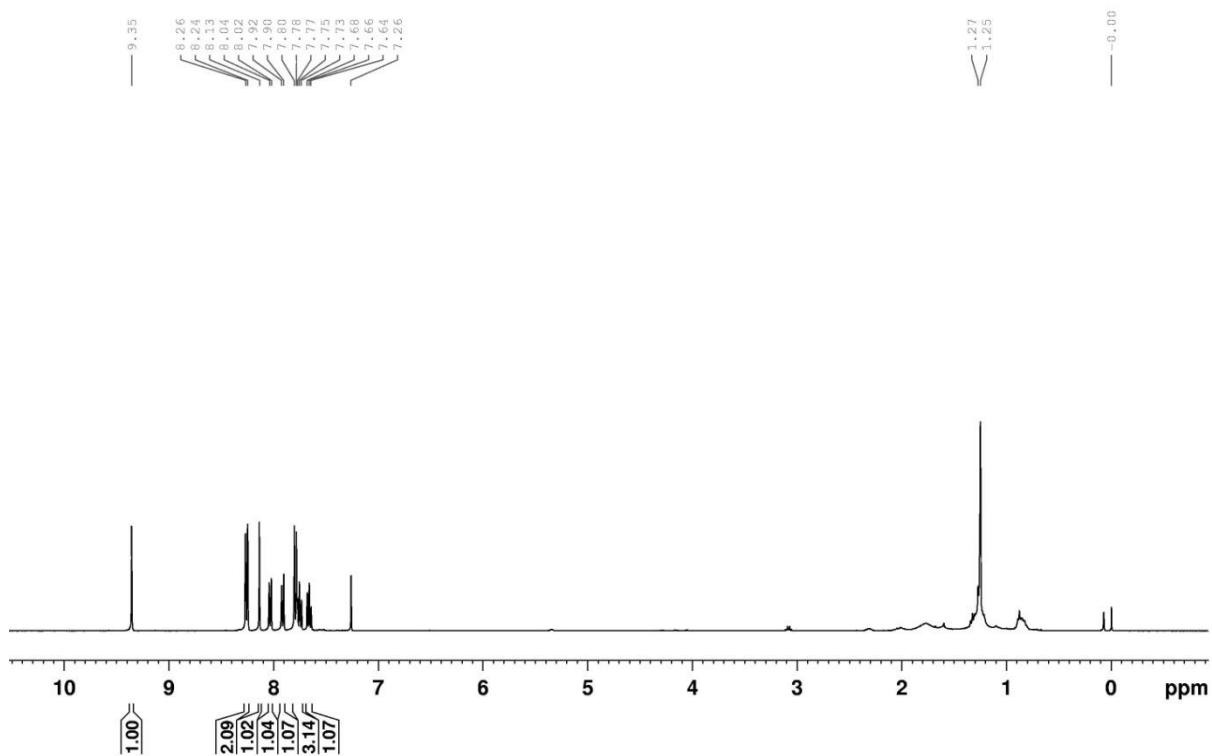
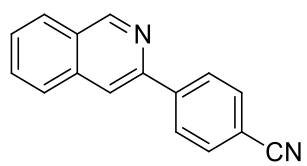
^1H , ^{13}C NMR Spectra of **6o**



^1H , ^{13}C NMR Spectra of **6p**

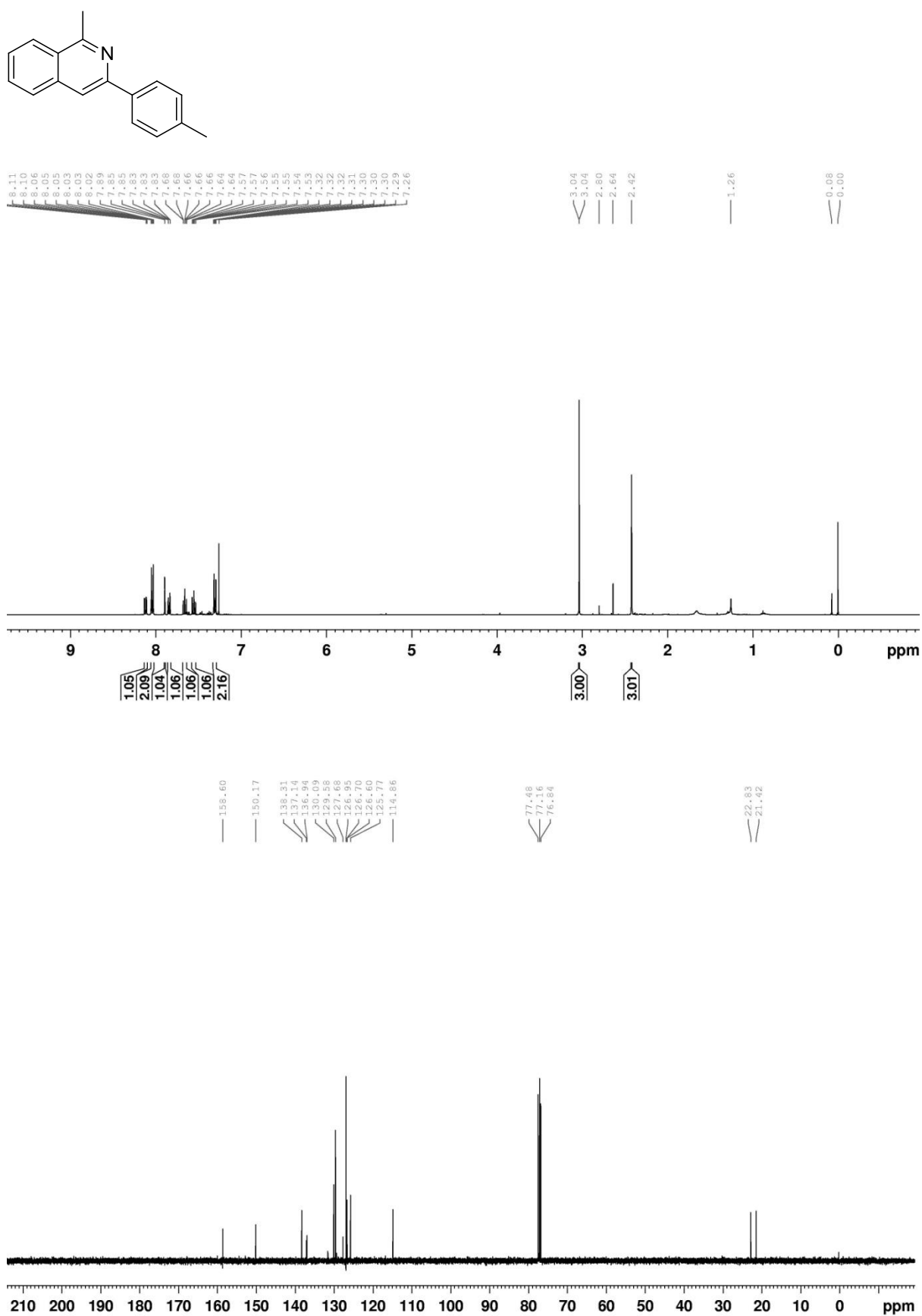


^1H , ^{13}C NMR Spectra of **6q**

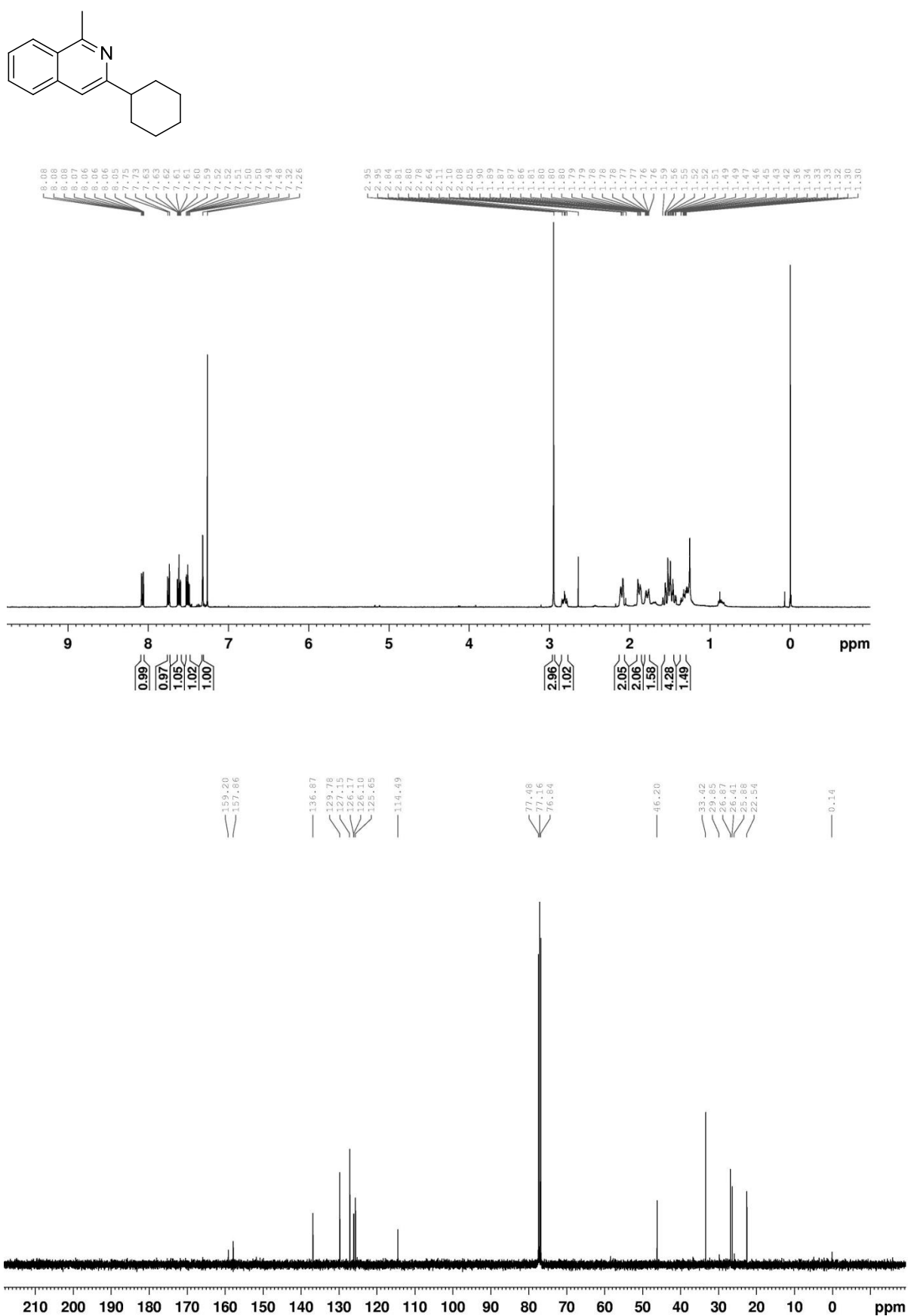


O=C(Oc1ccc(cc1)-c2ccc3c(c2)nc4ccccc43)Oc5ccccc5

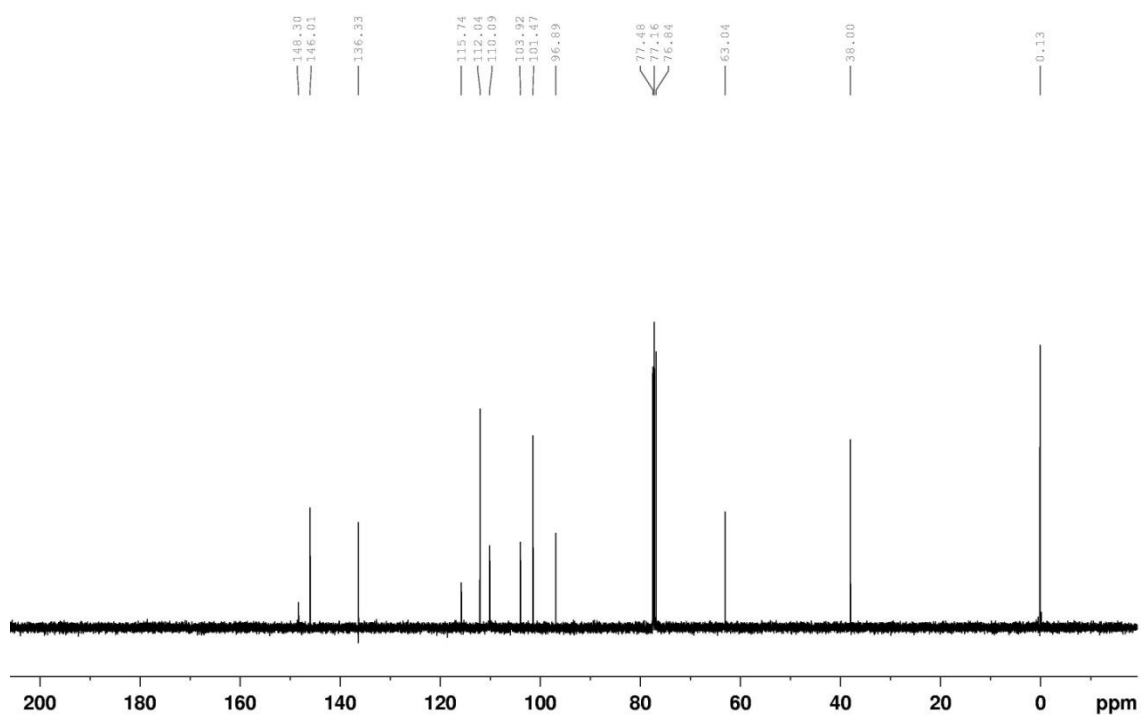
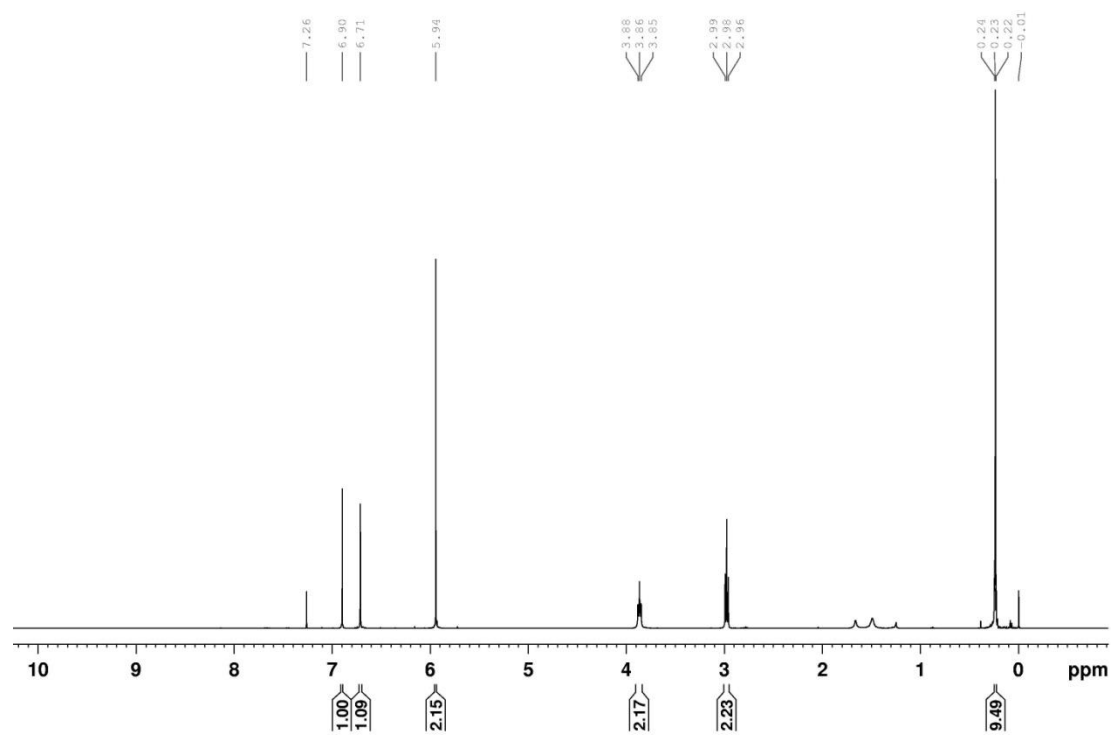
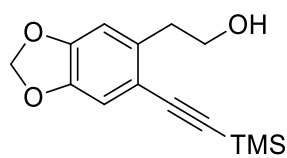
^1H , ^{13}C NMR Spectra of **6t**



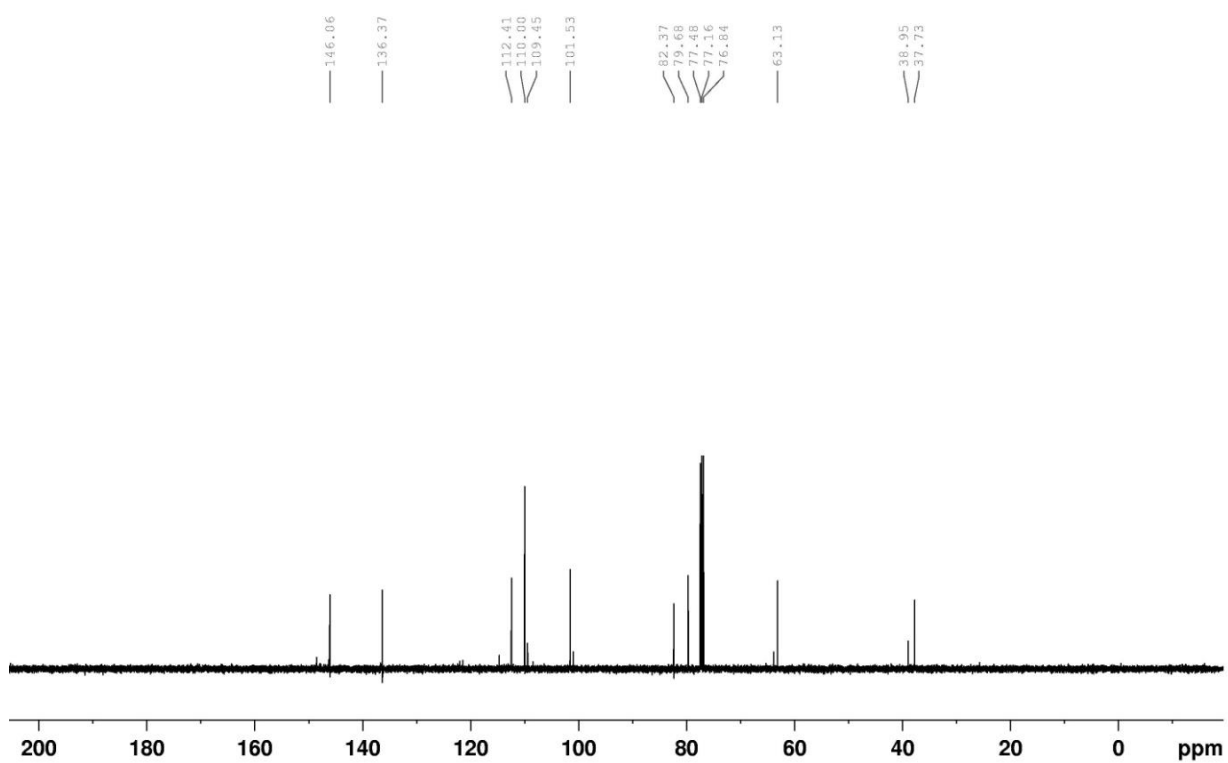
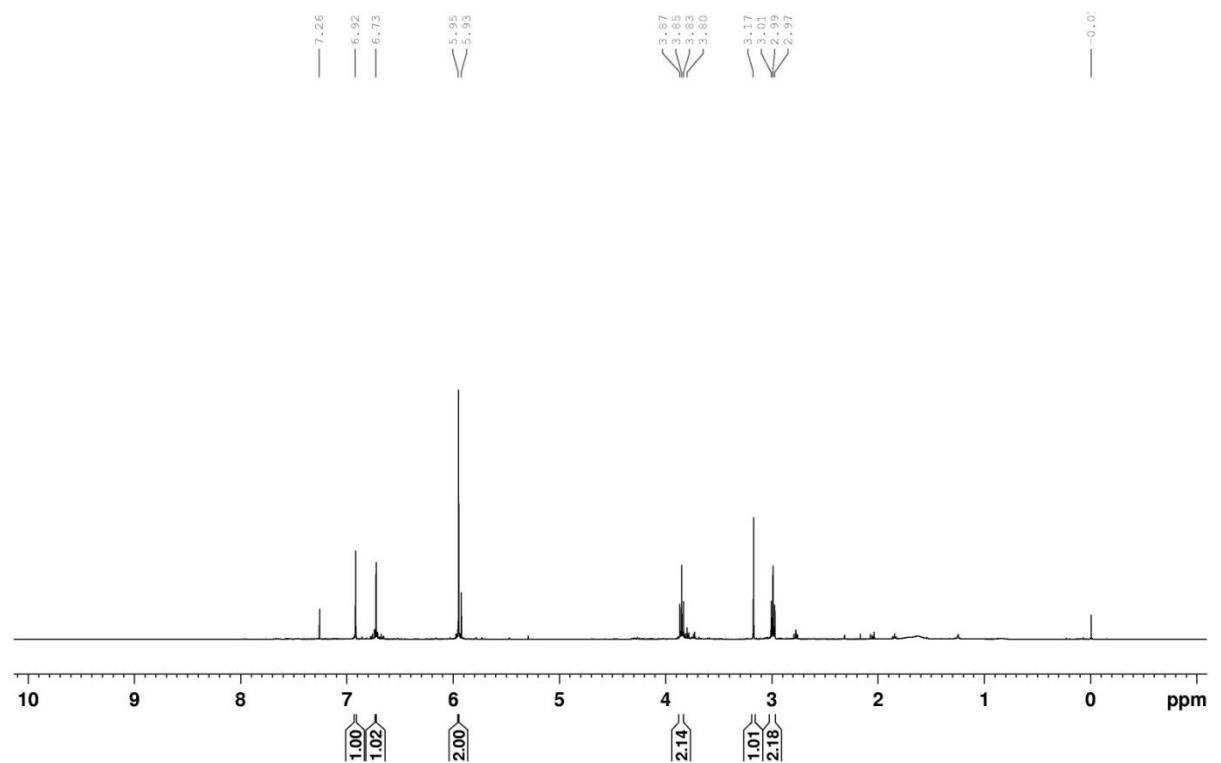
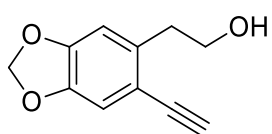
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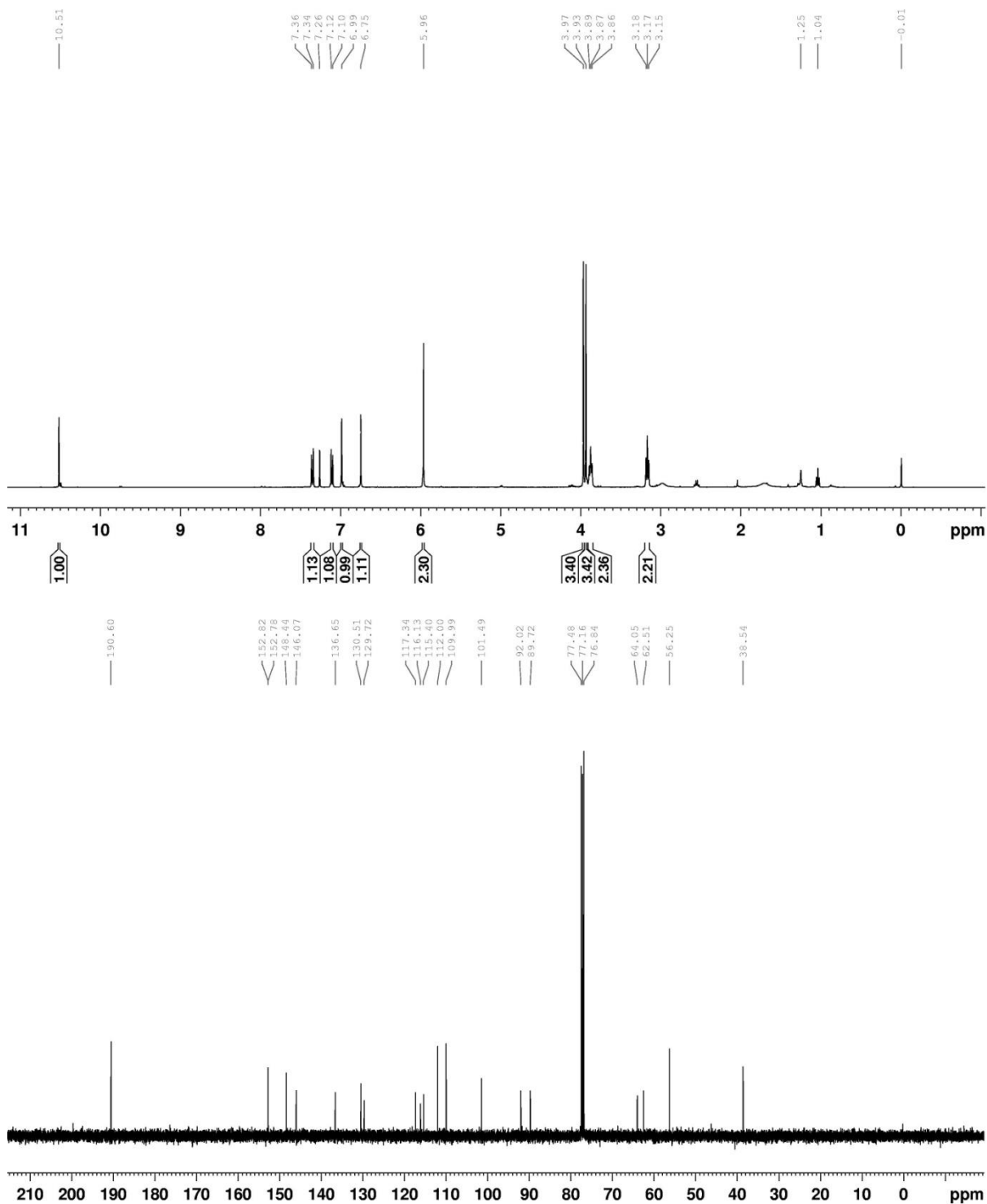
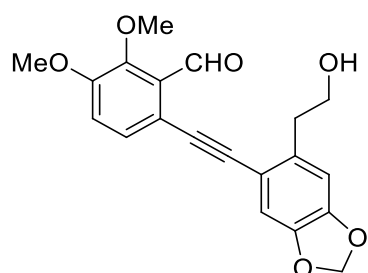
^1H , ^{13}C NMR Spectra of **7**



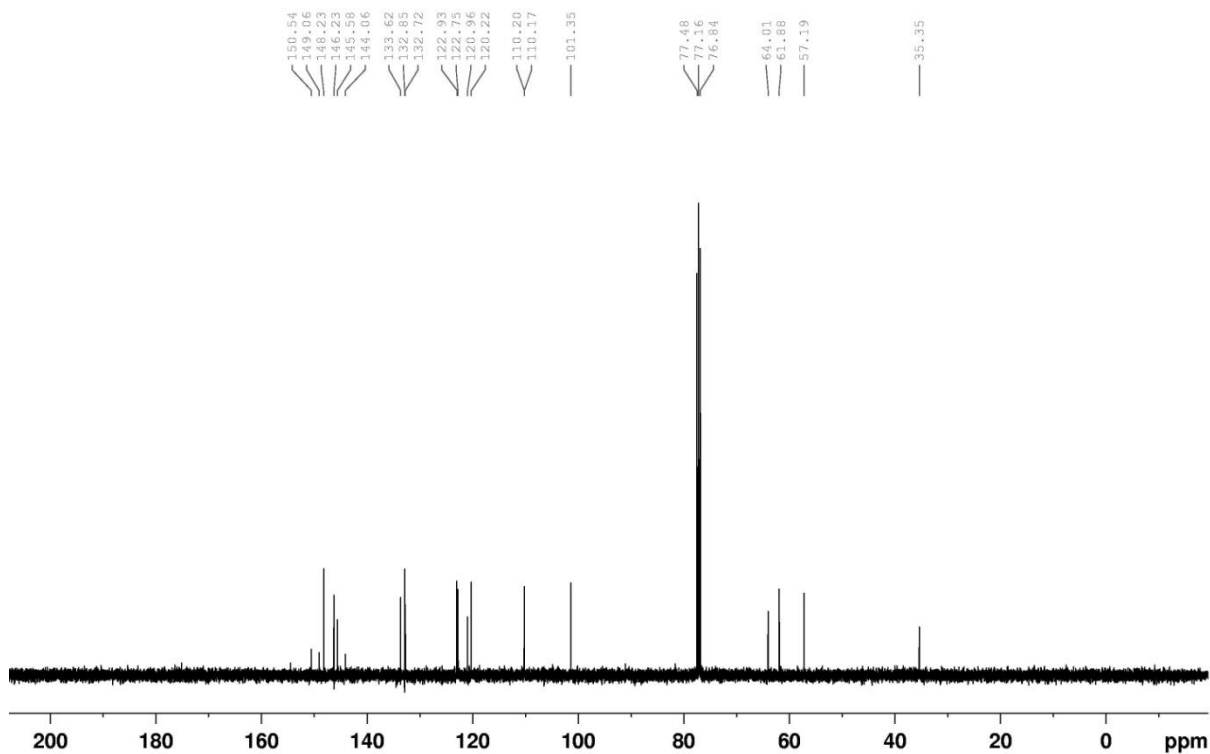
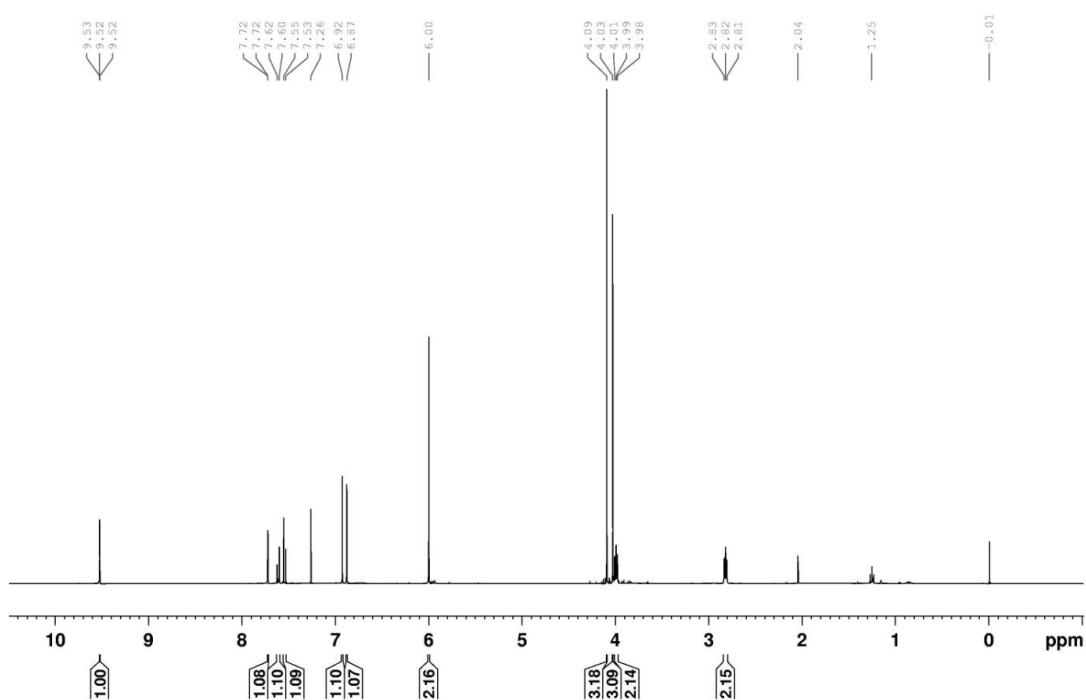
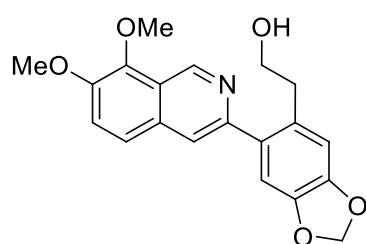
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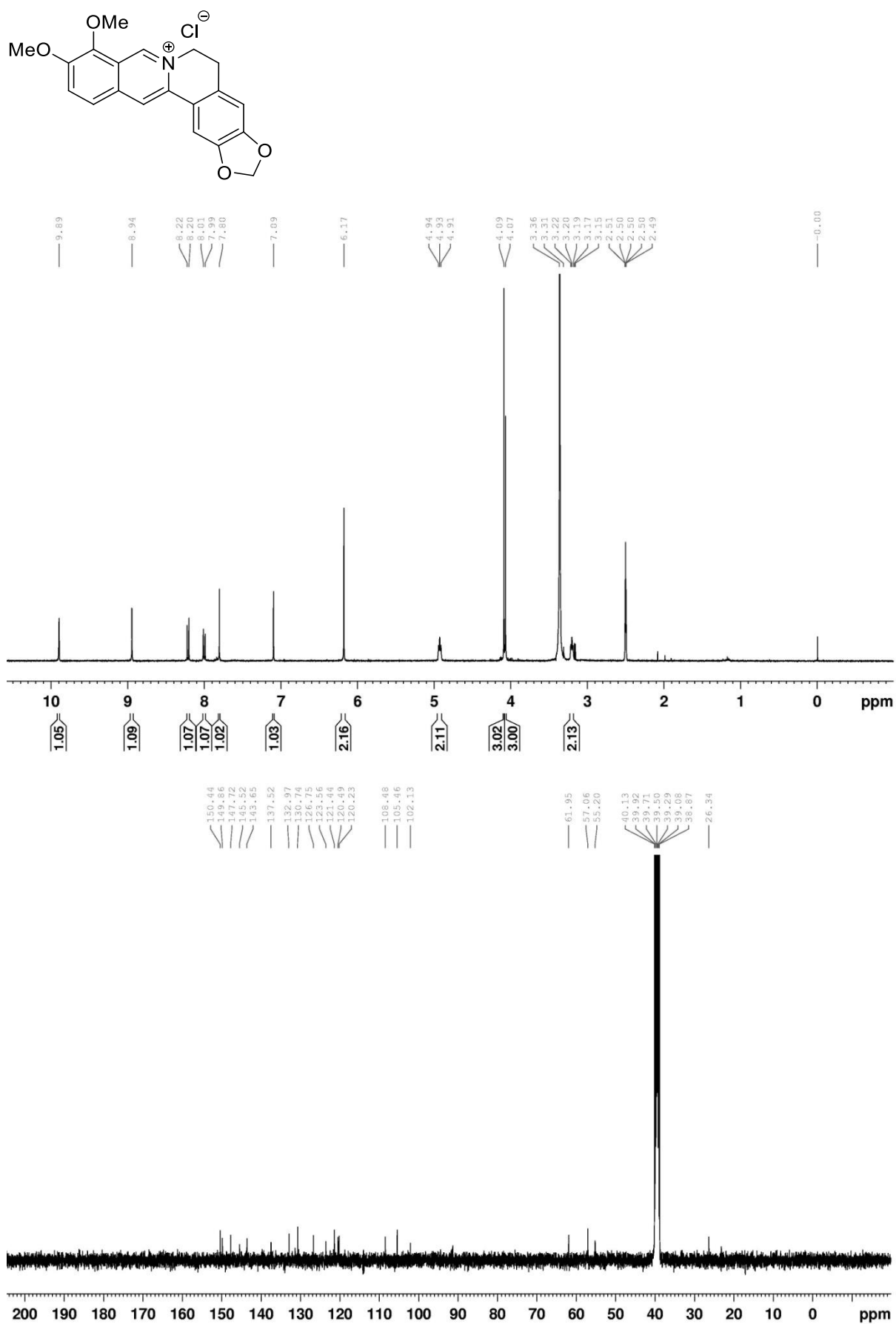
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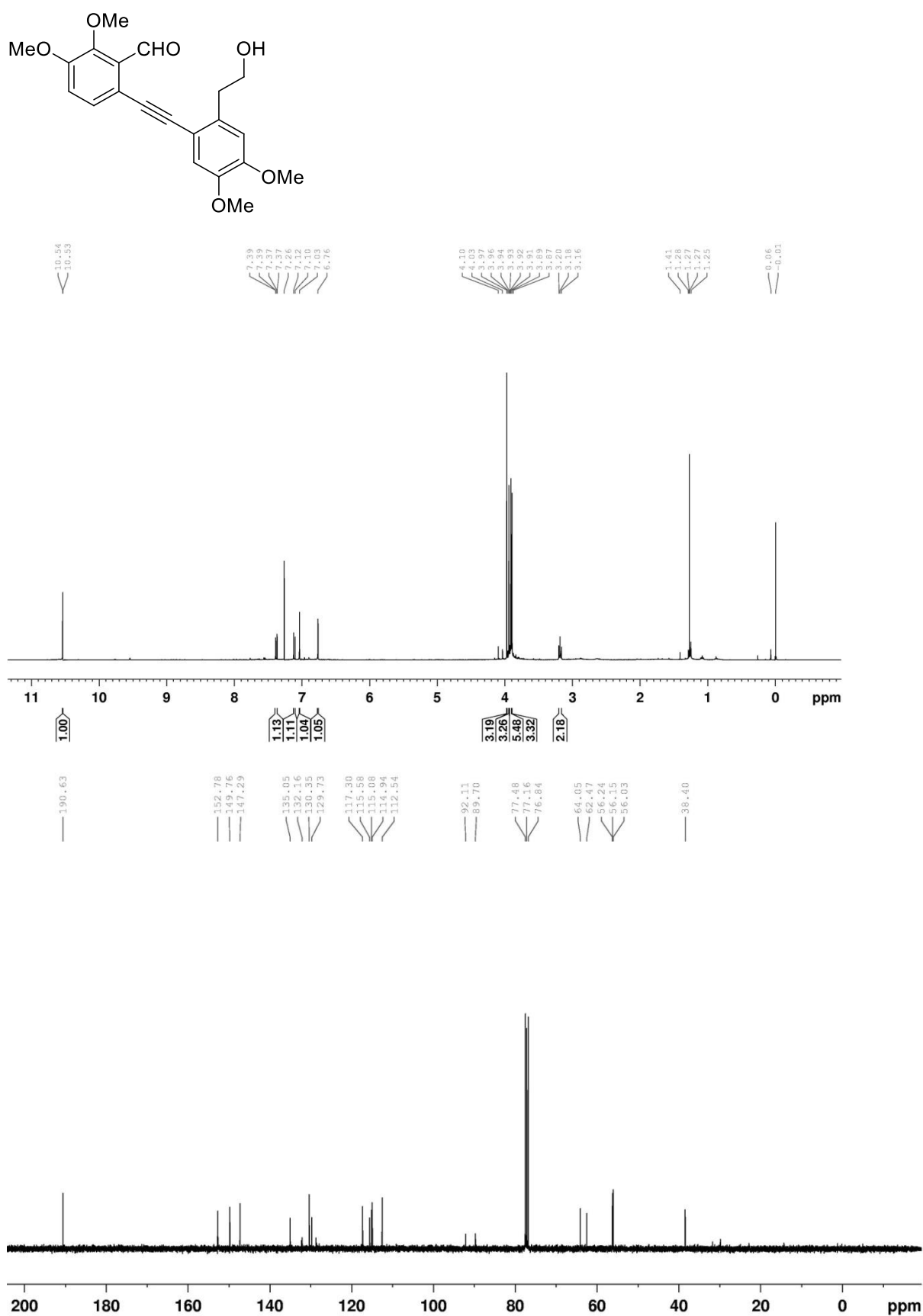
^1H , ^{13}C NMR Spectra of **11**



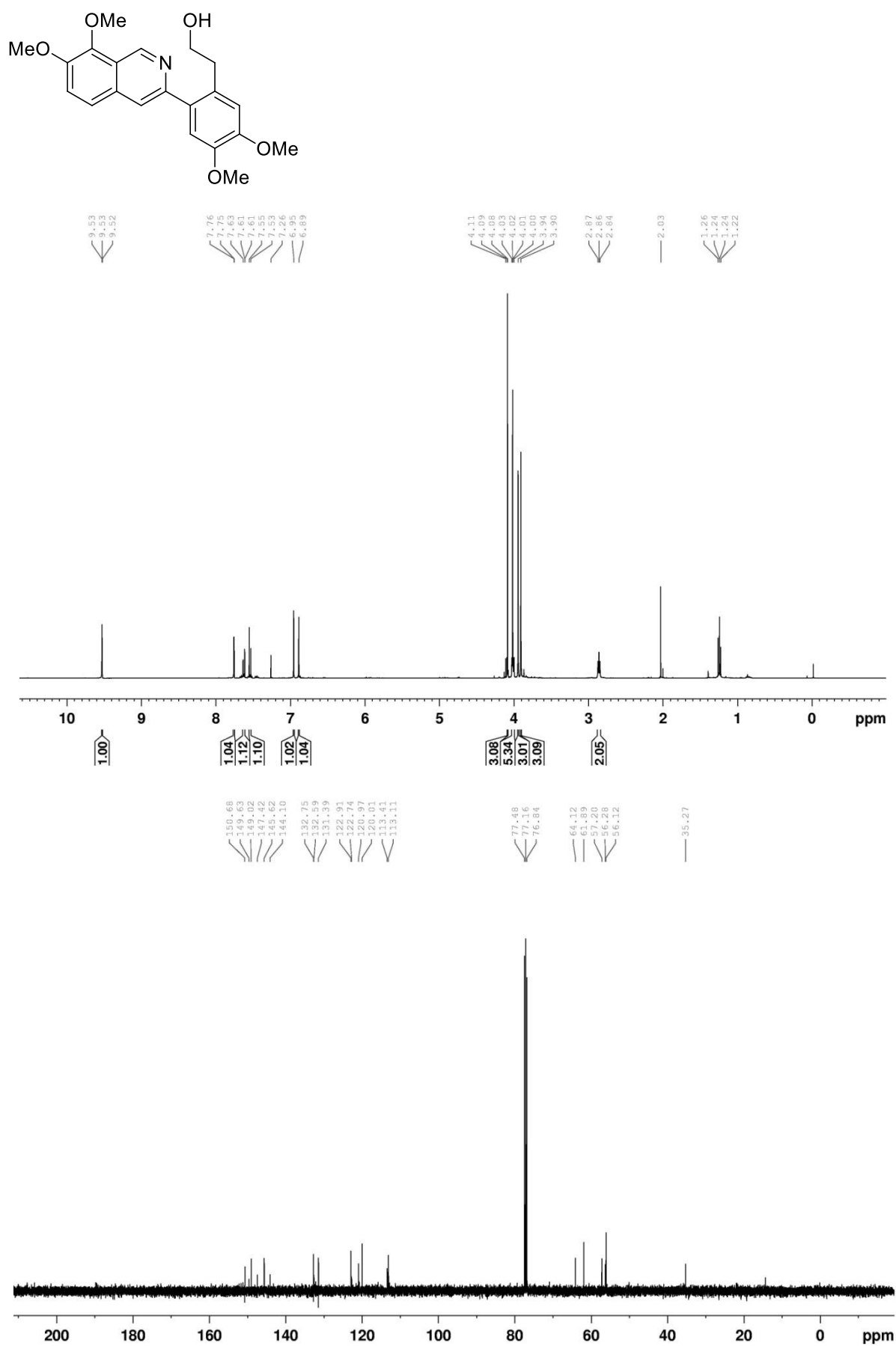
^1H , ^{13}C NMR Spectra of **3**



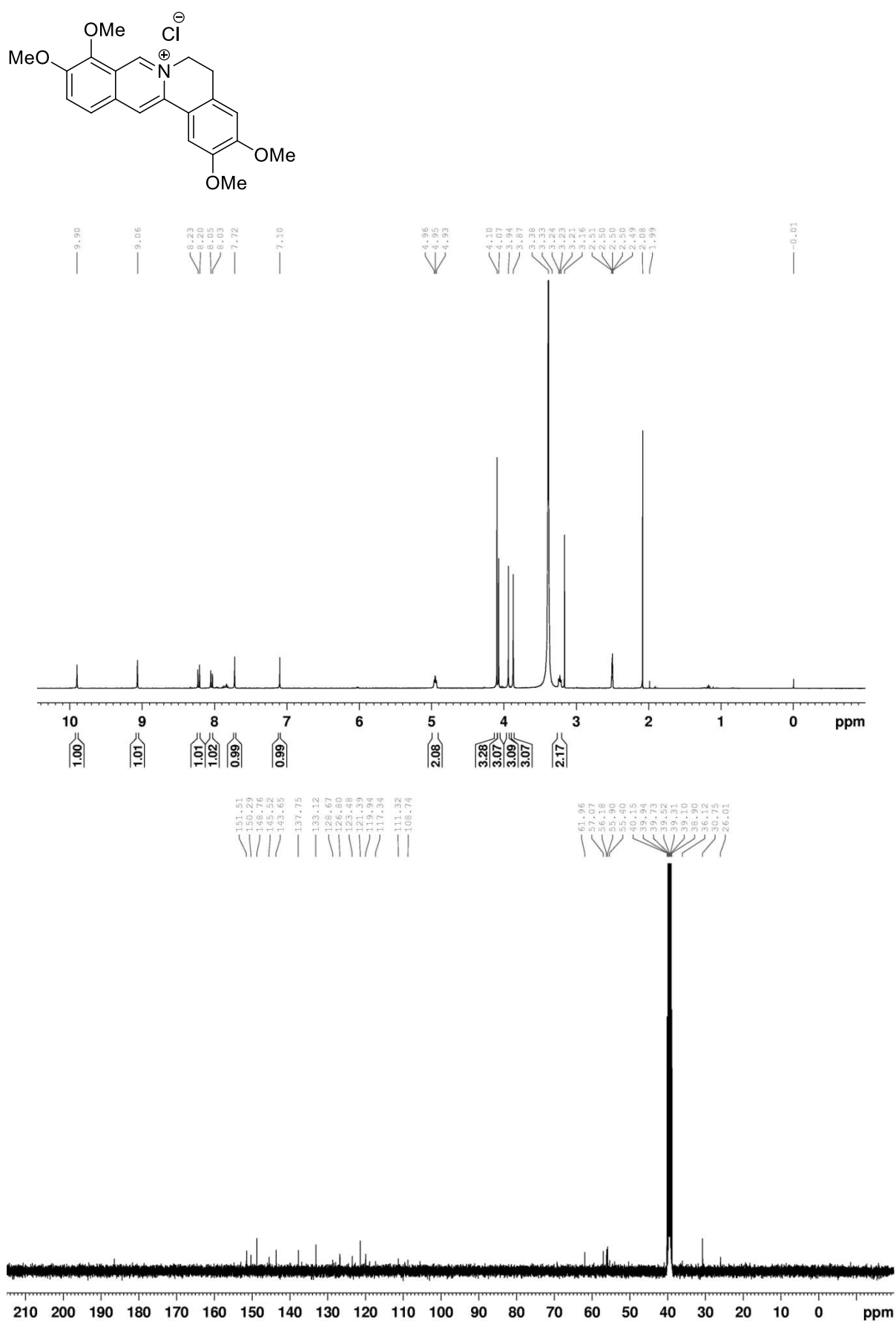
^1H , ^{13}C NMR Spectra of **13**



^1H , ^{13}C NMR Spectra of **14**



^1H , ^{13}C NMR Spectra of **4**



Crude Spectra for the reaction of o-alkyne benzaldehyde with 1 equiv. AgNO_3

