

Electronic Supplementary Information

A Regioselective [4+2] Annulation Approach to 5-Acylindolizine-7-carbonitriles: Generation of Poly-substituted Pyridines

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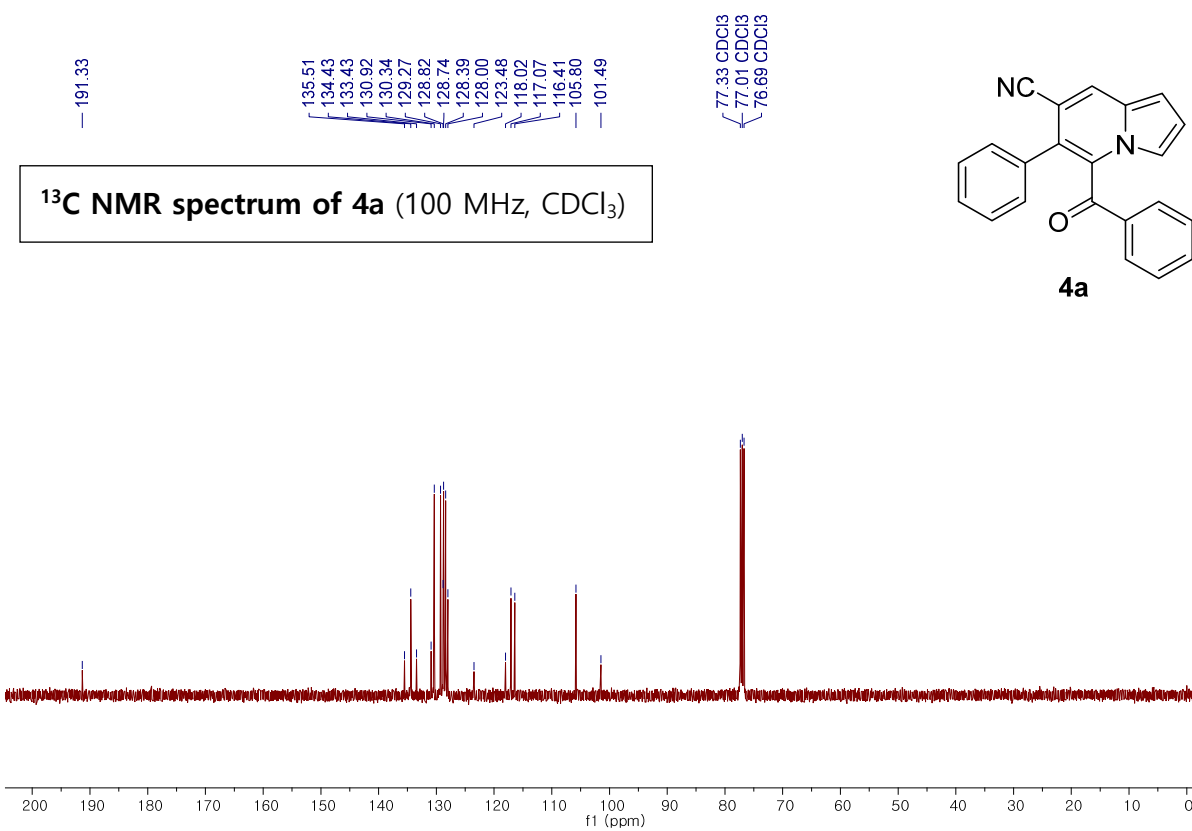
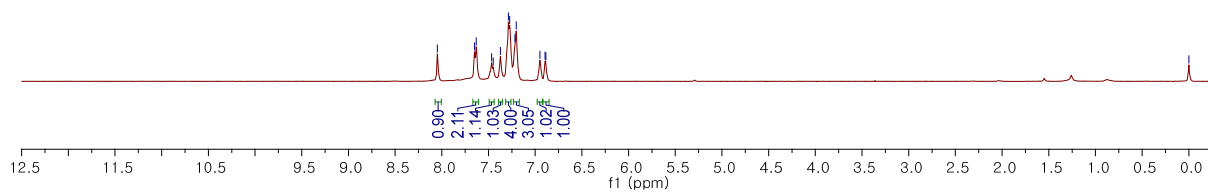
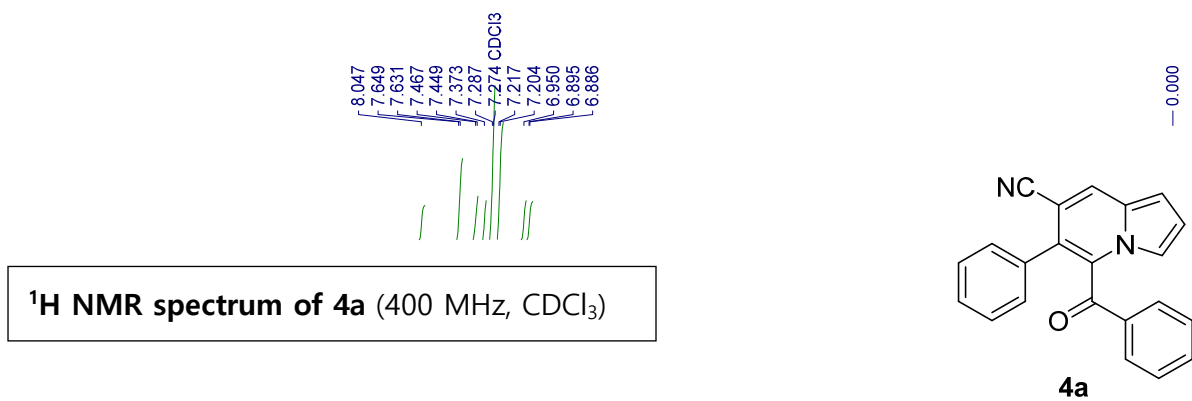
[‡]These authors contributed equally.

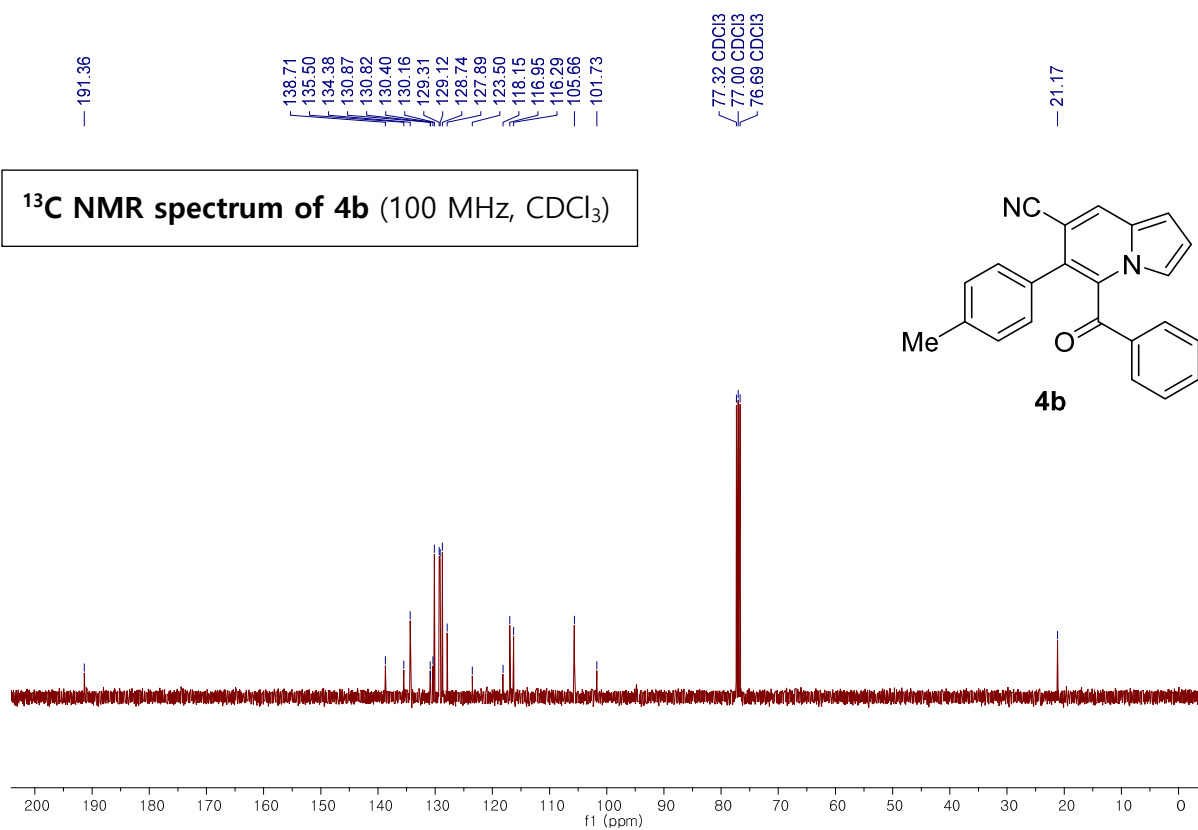
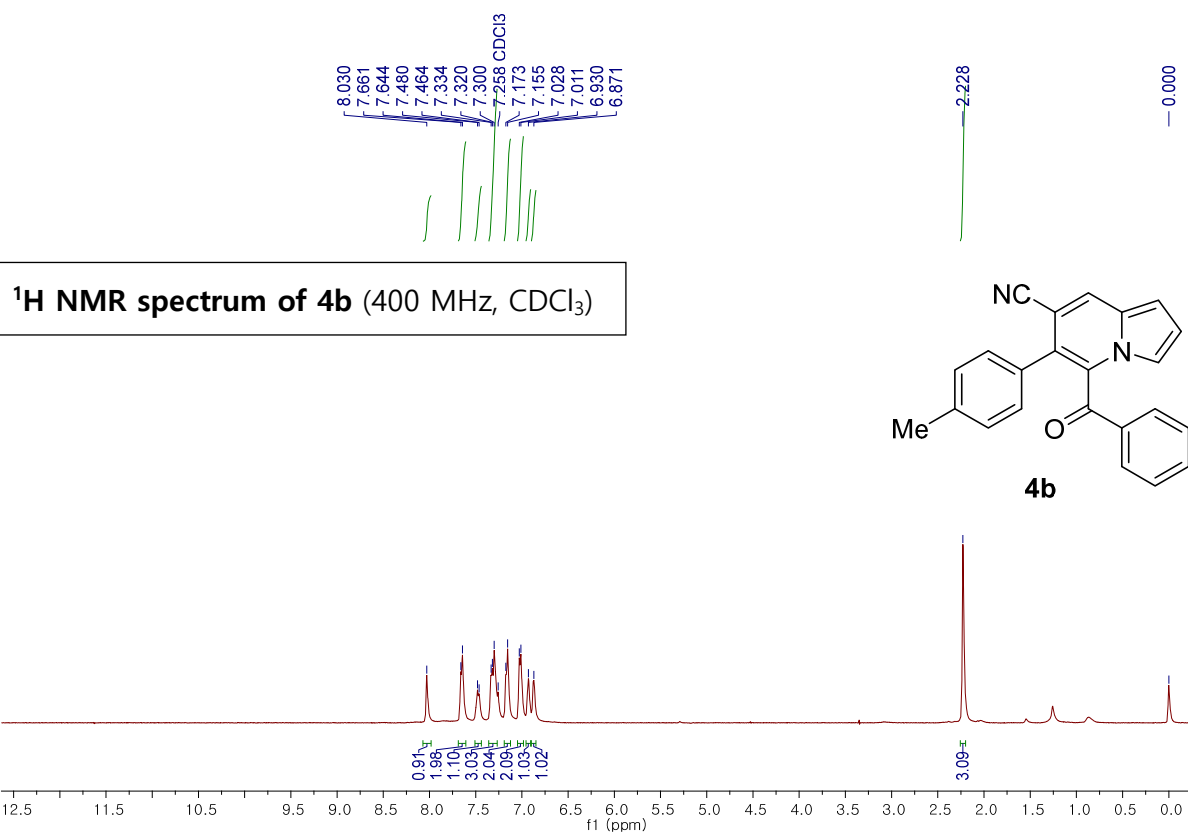
* Corresponding author. Tel.: +82 32 749 4515; fax: +82 32 749 4105; e-mail:

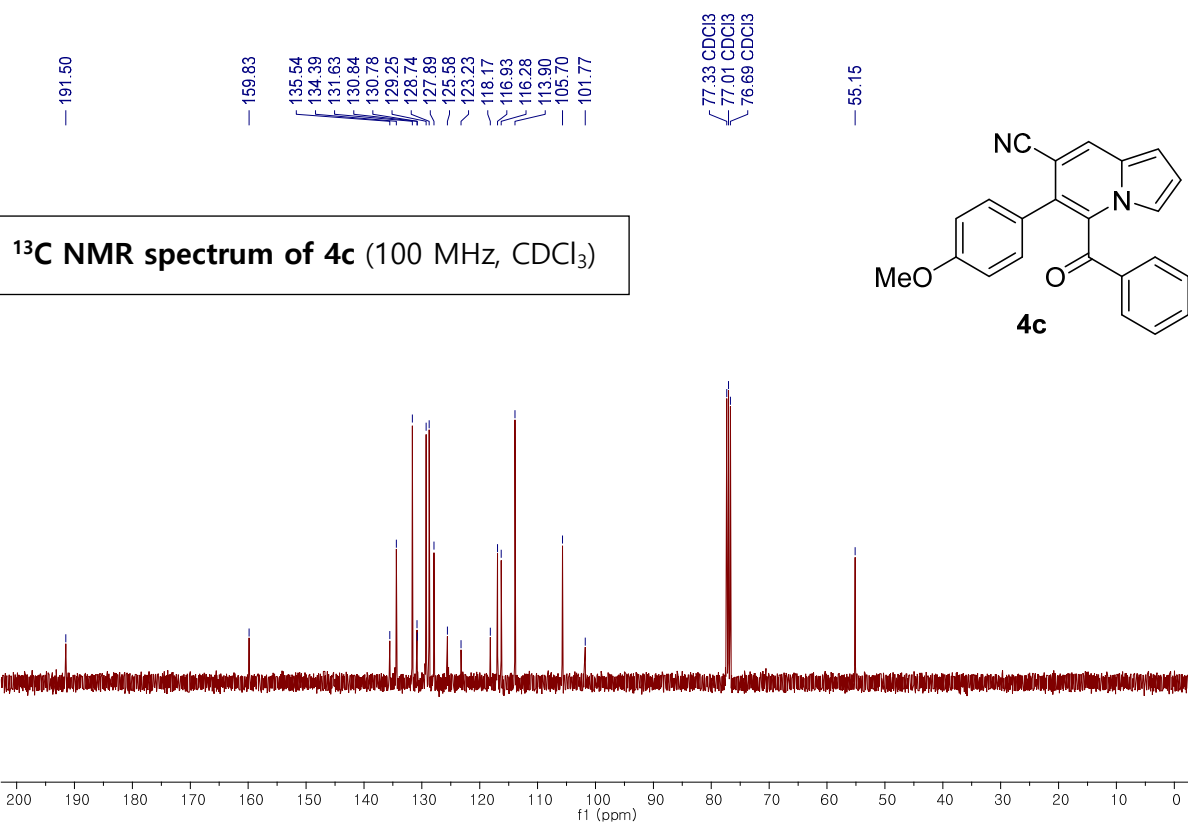
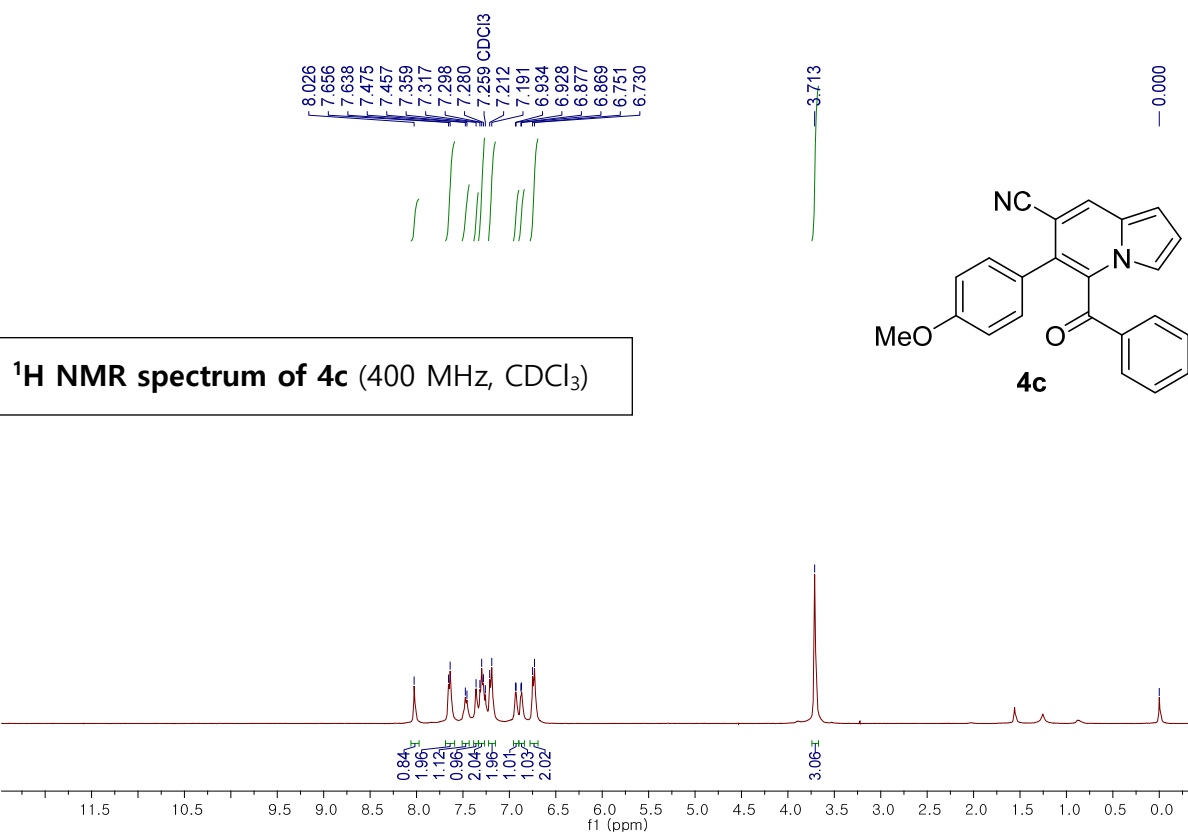
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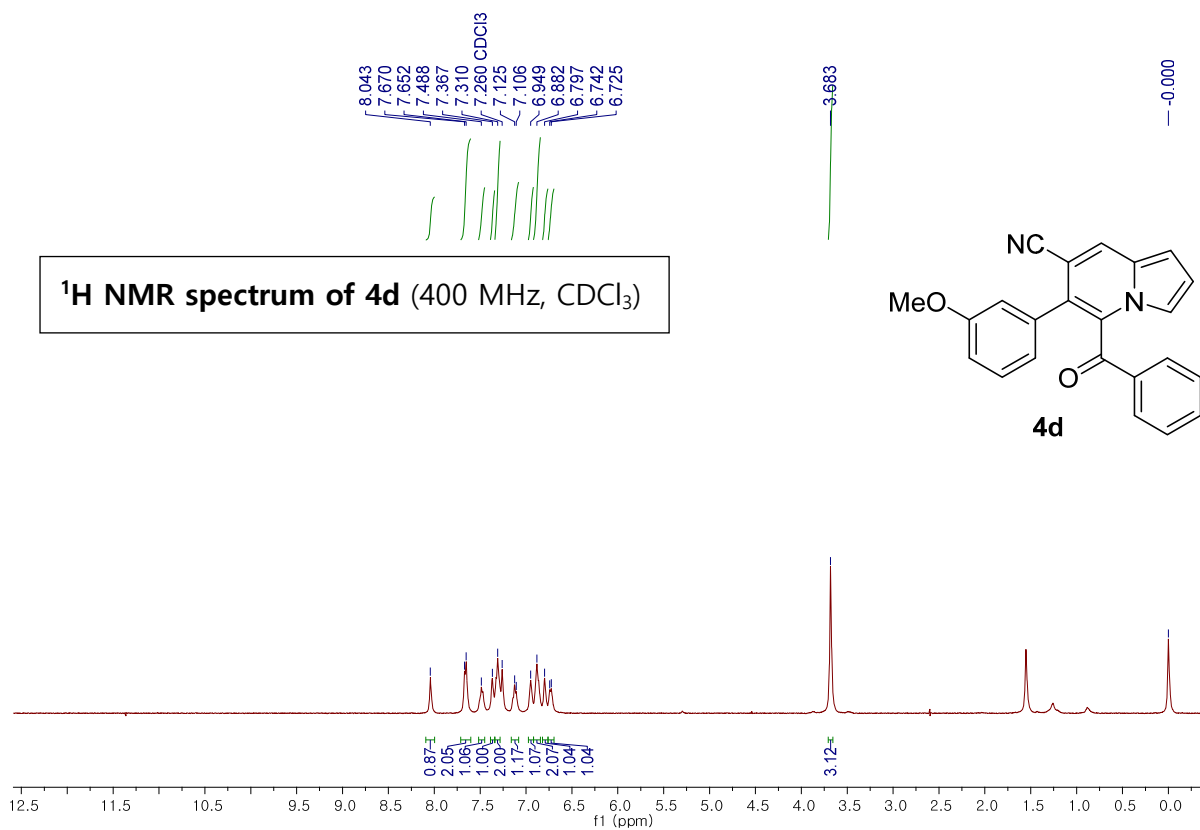
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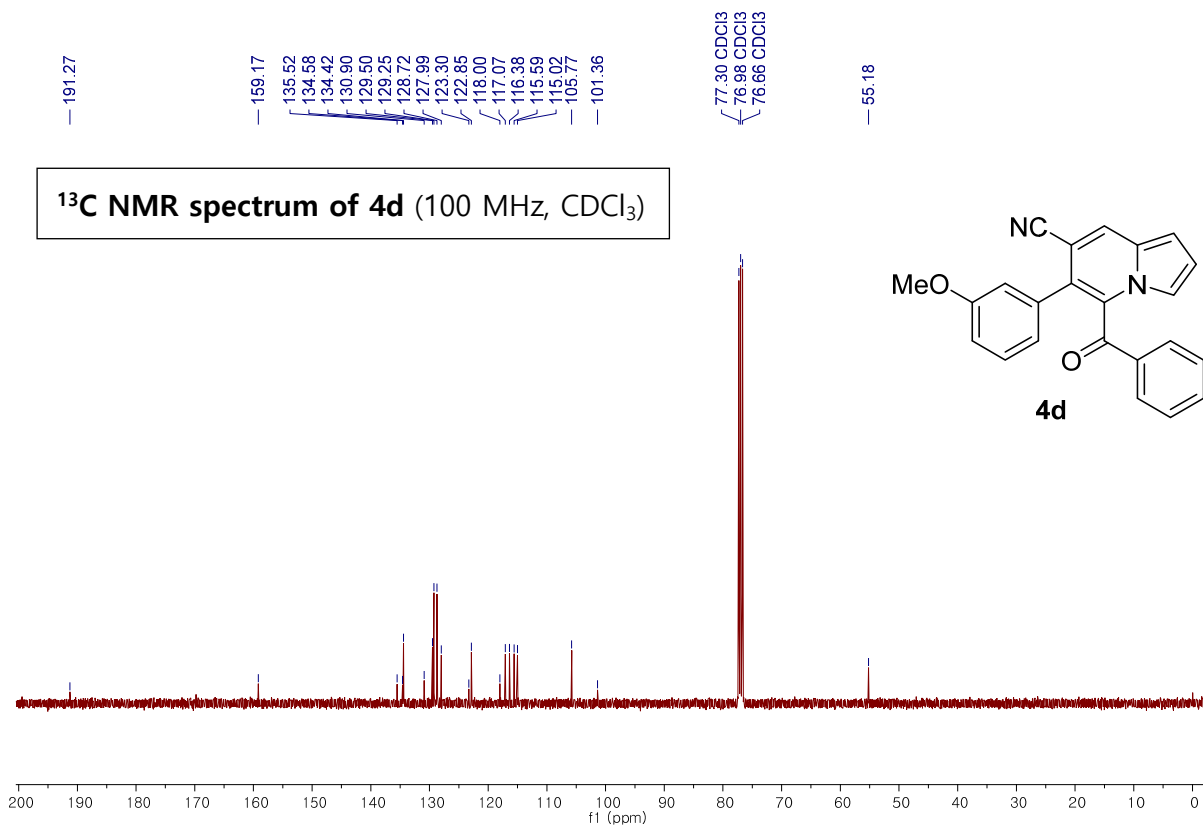


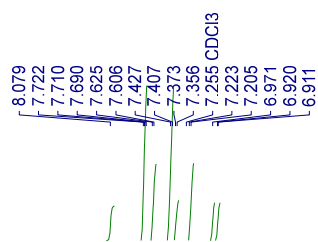


¹H NMR spectrum of 4d (400 MHz, CDCl₃)

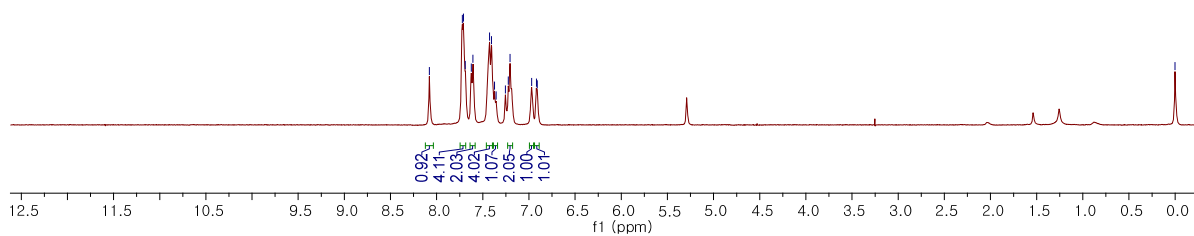
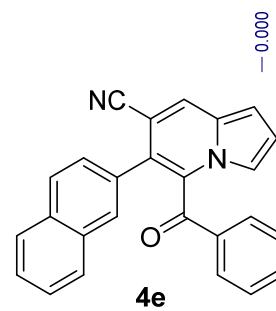


¹³C NMR spectrum of 4d (100 MHz, CDCl₃)

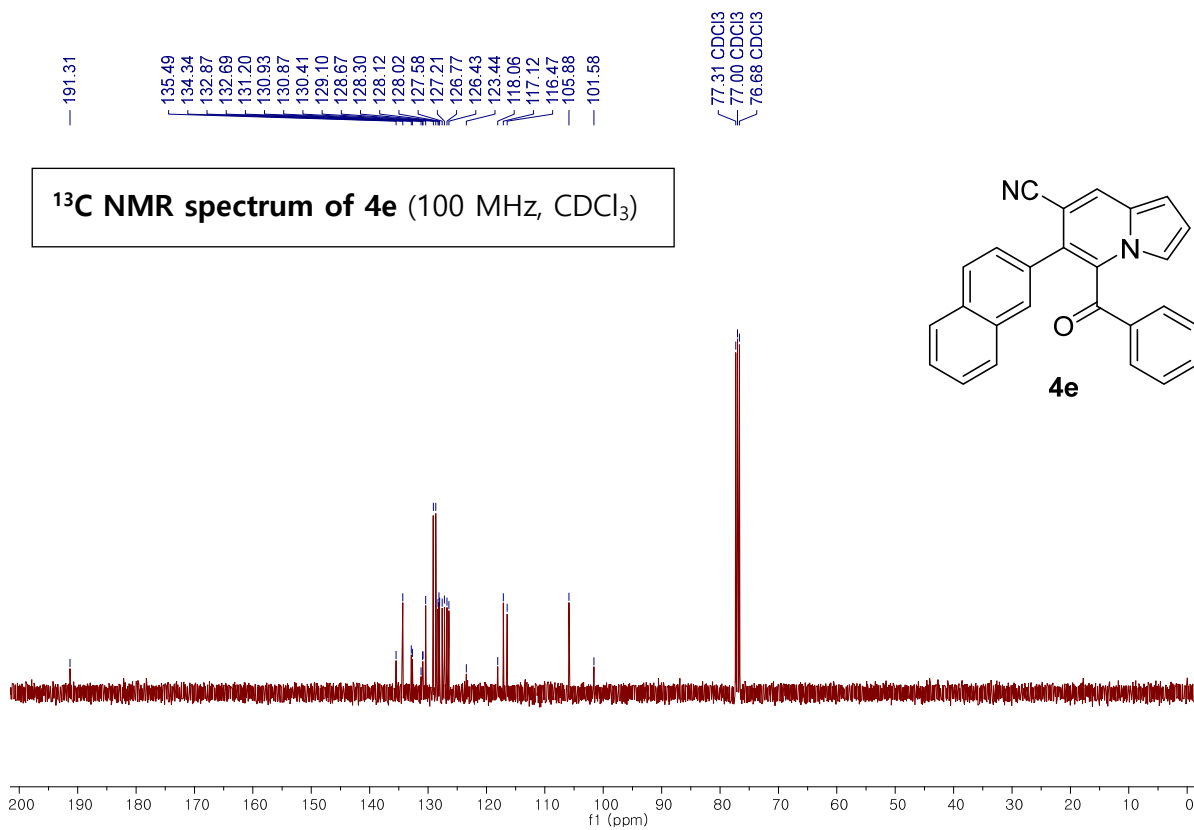
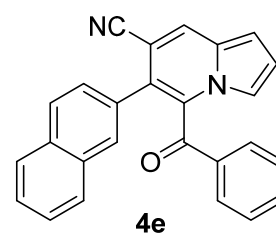


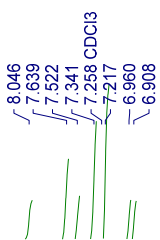


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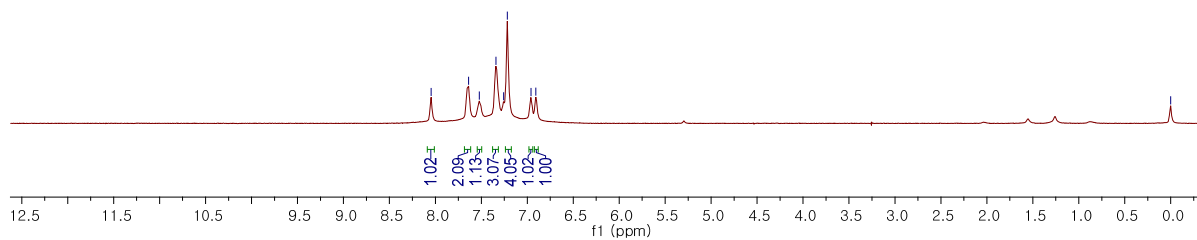
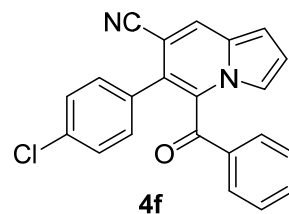


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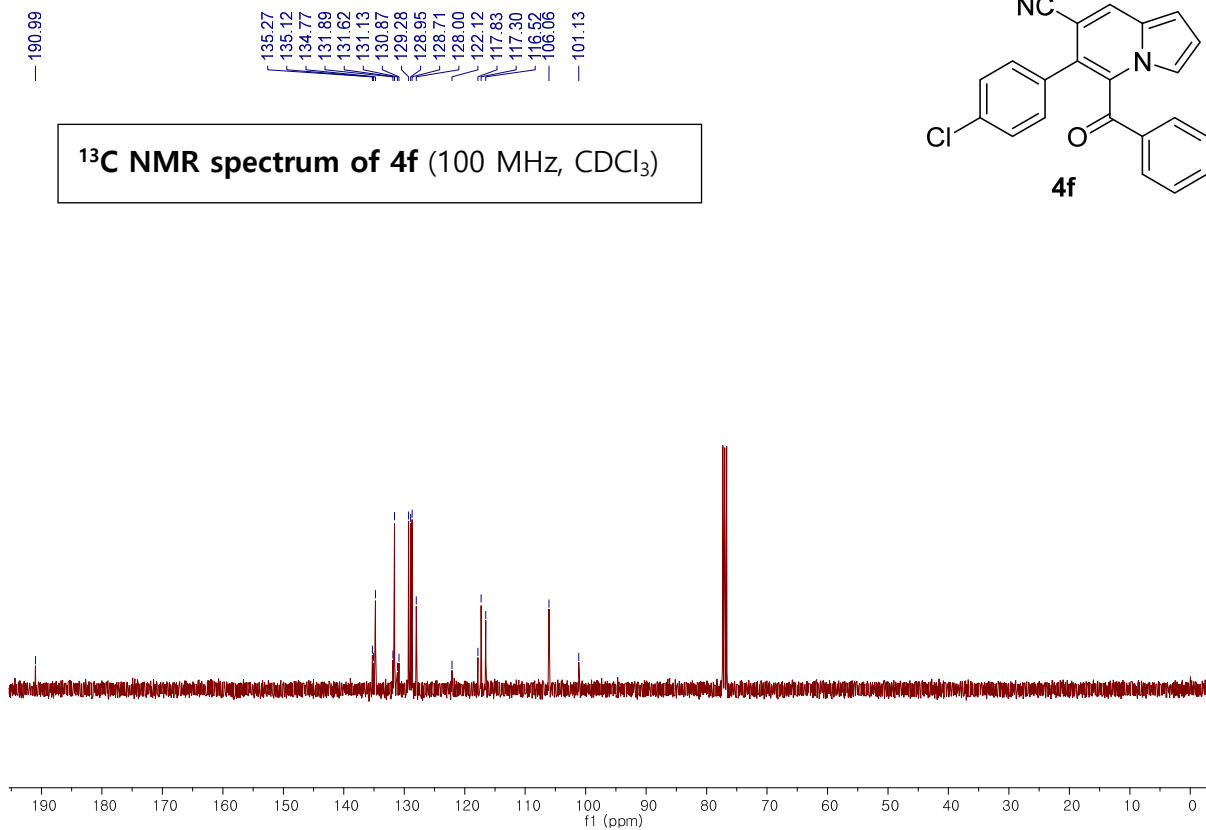
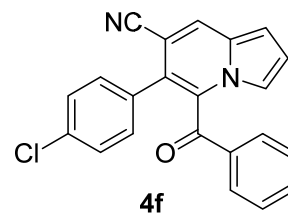




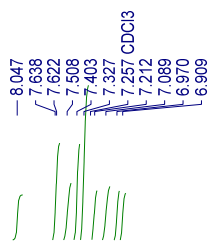
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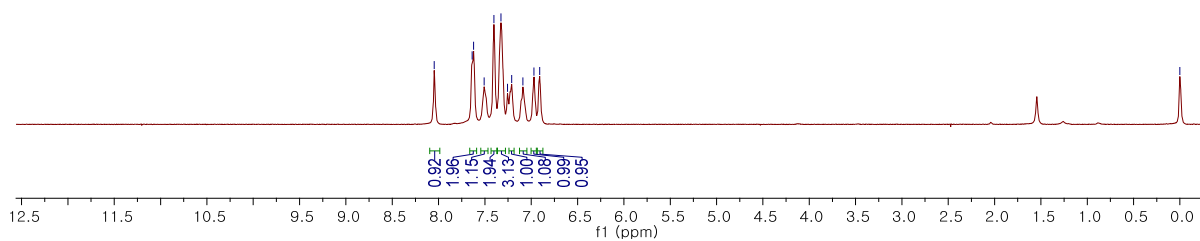
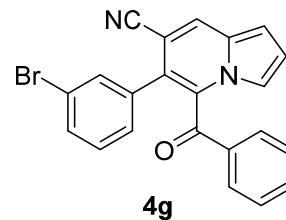
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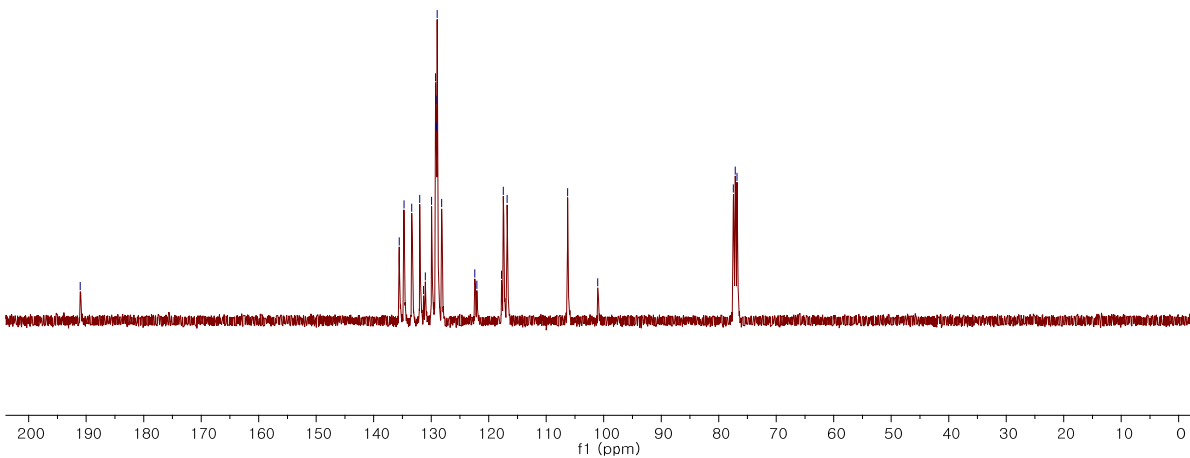
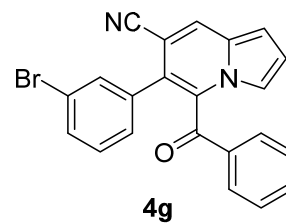
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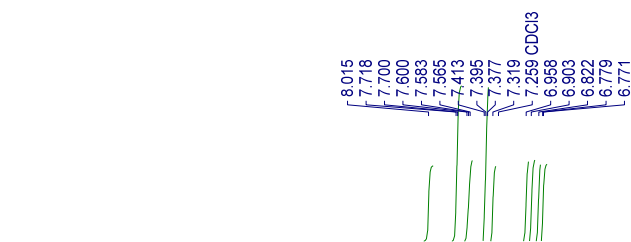


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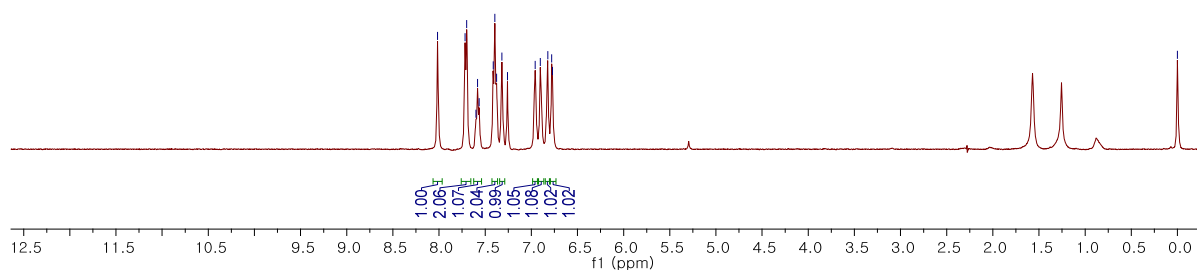
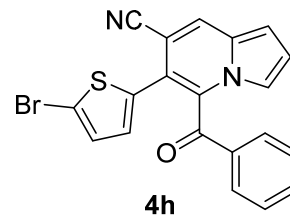


¹³C NMR spectrum of 4g (100 MHz, CDCl₃)

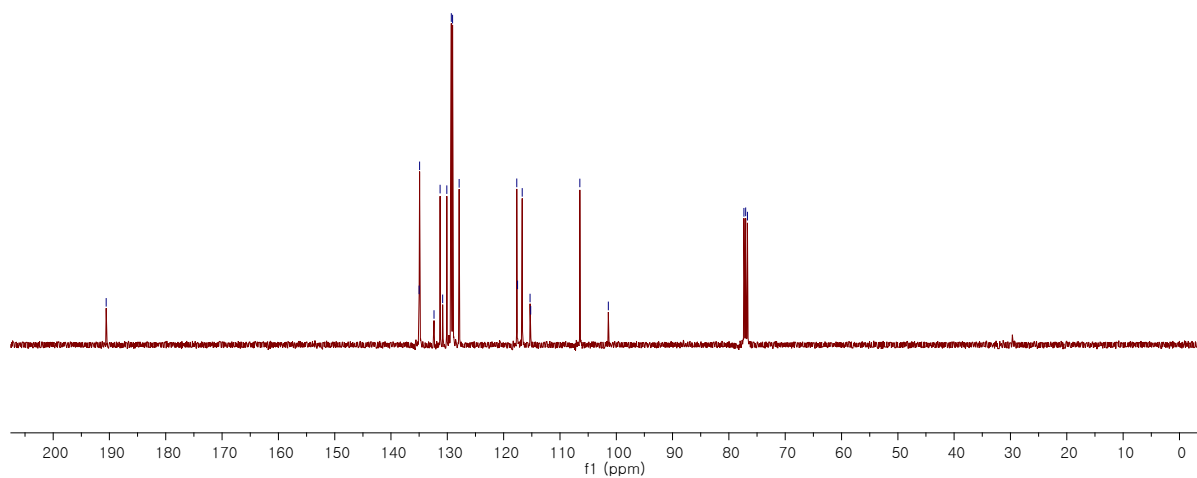
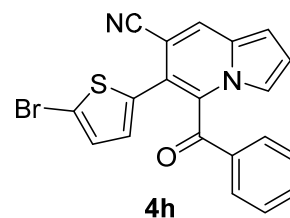




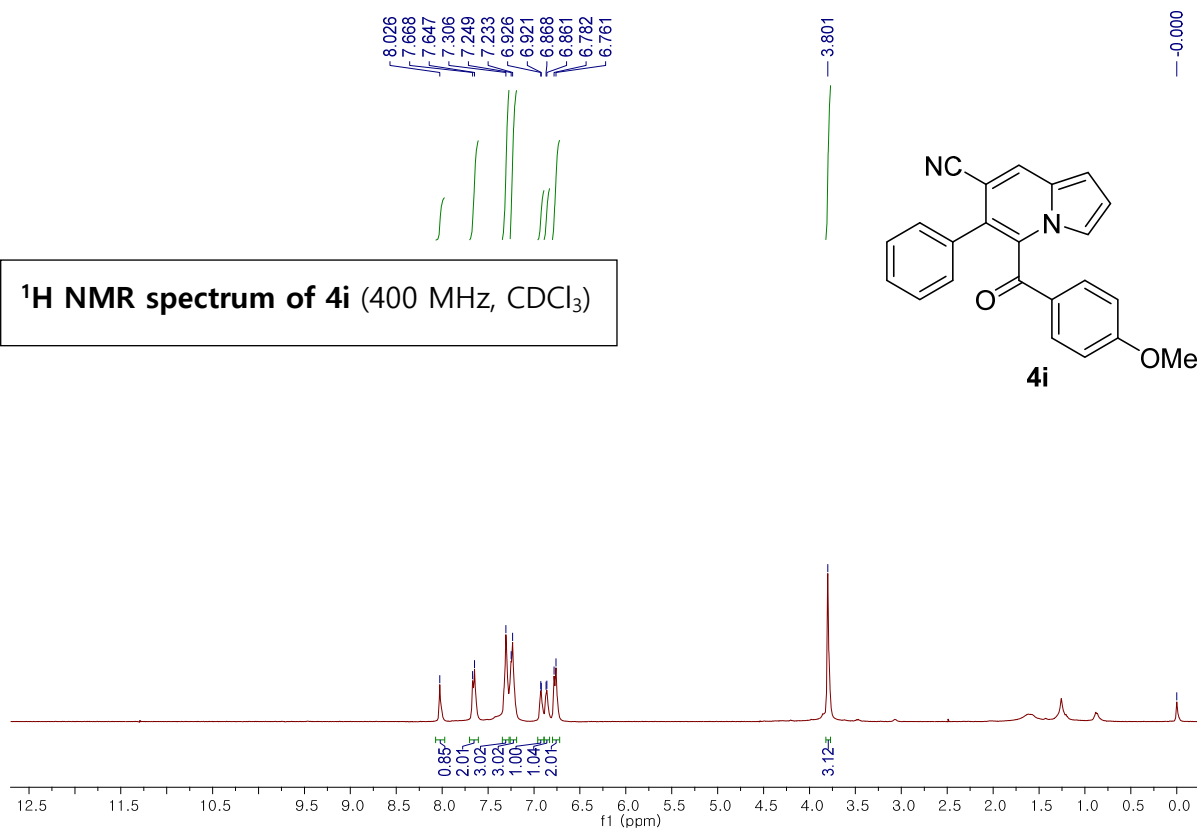
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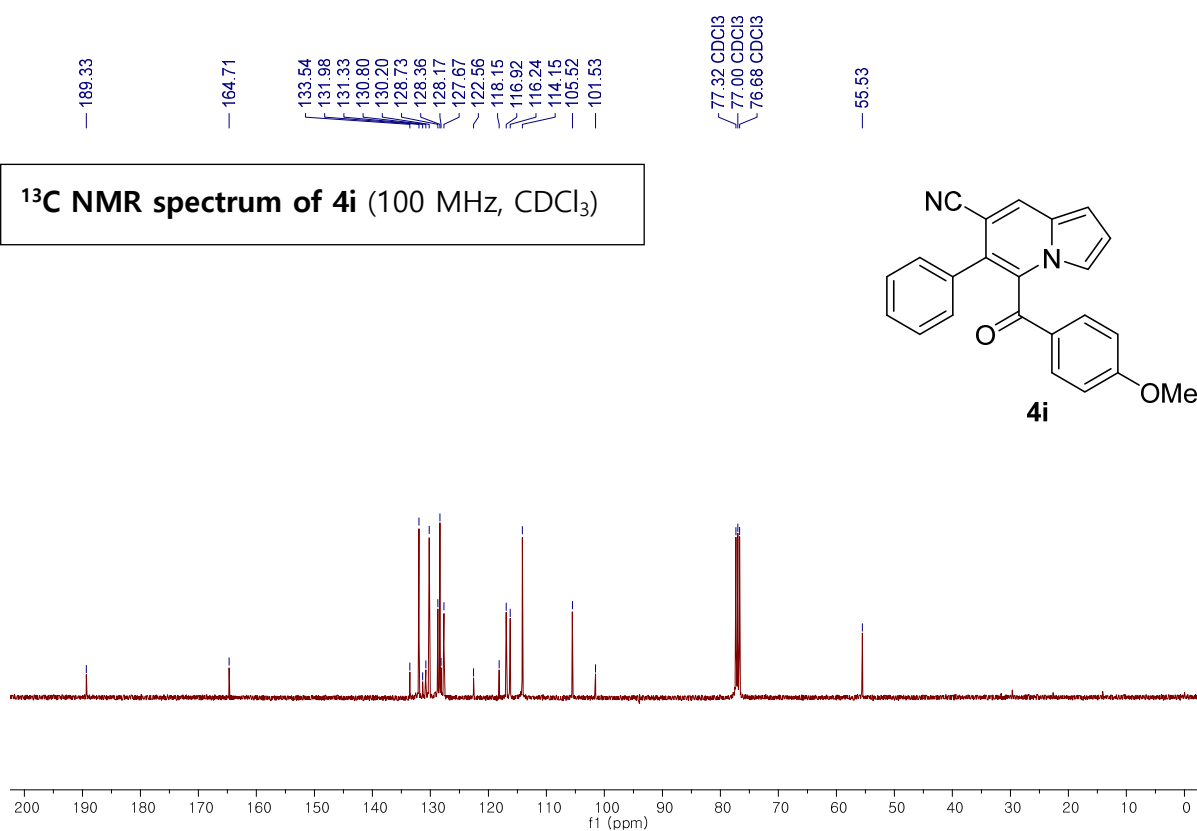
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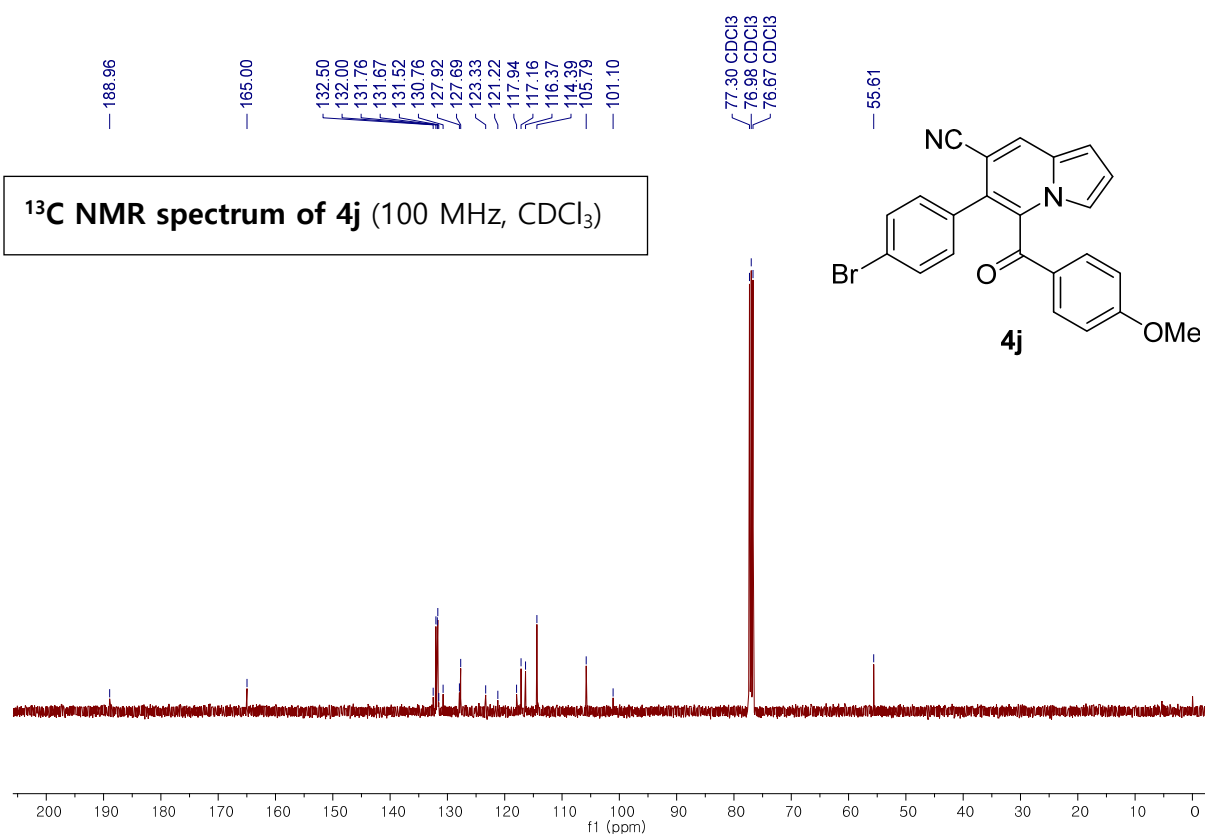
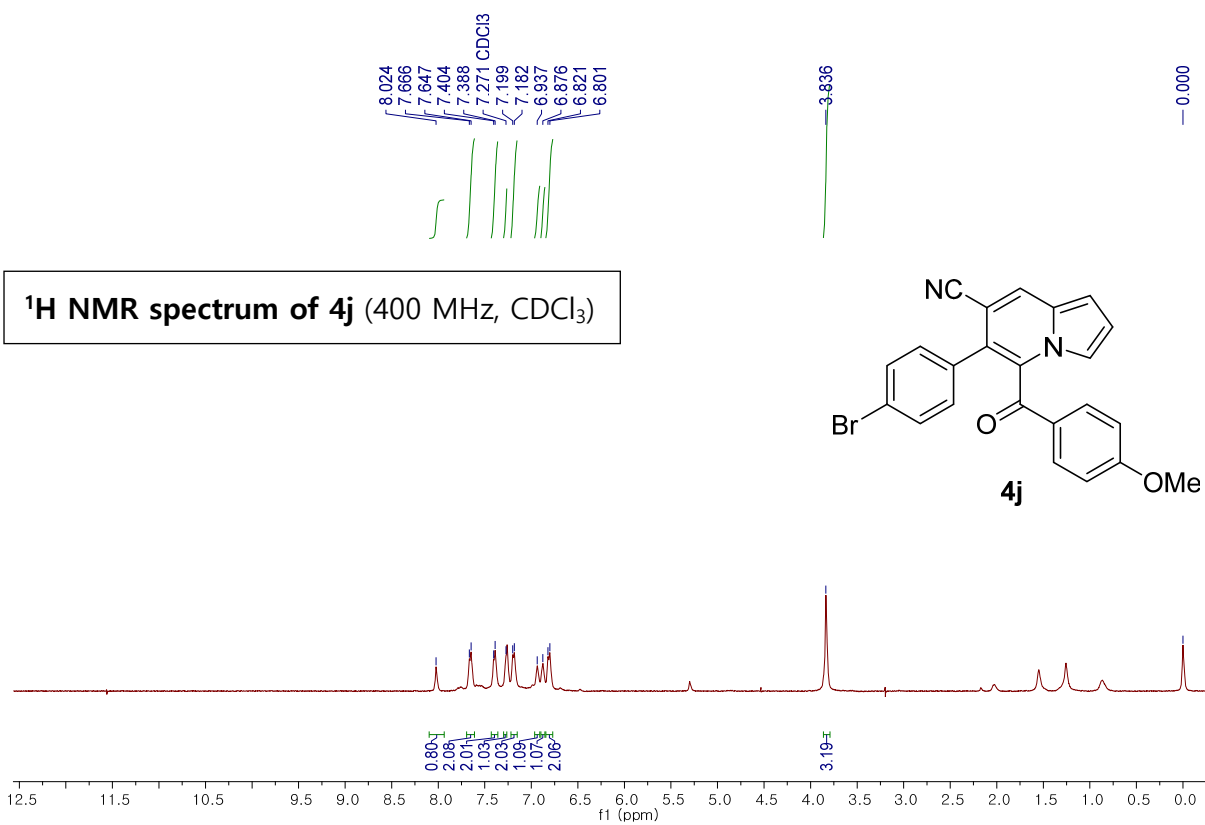


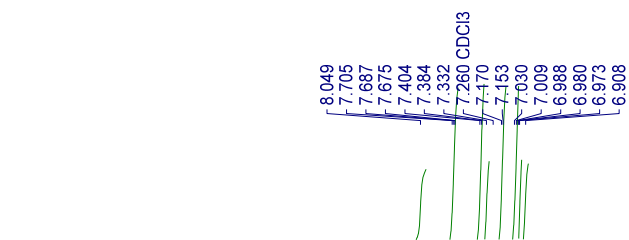
¹H NMR spectrum of 4i (400 MHz, CDCl₃)



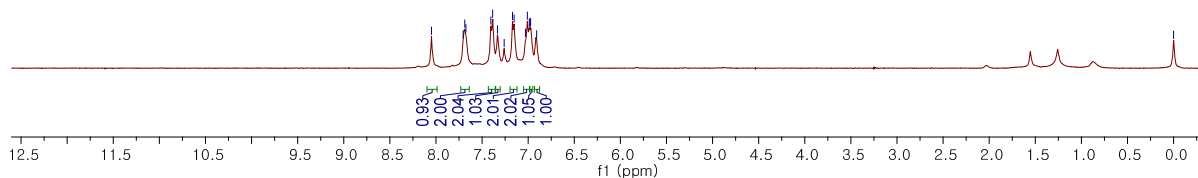
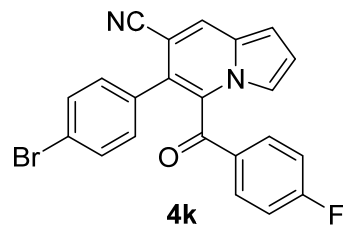
¹³C NMR spectrum of 4i (100 MHz, CDCl₃)



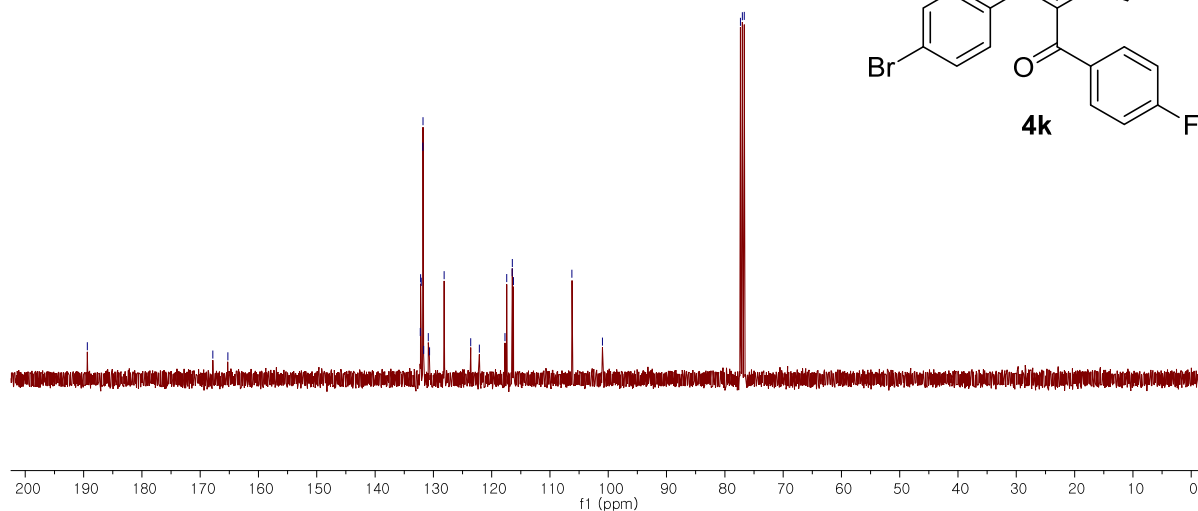
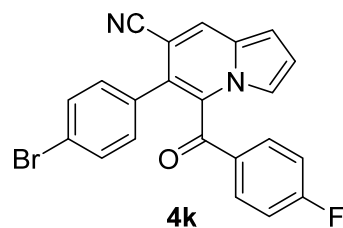




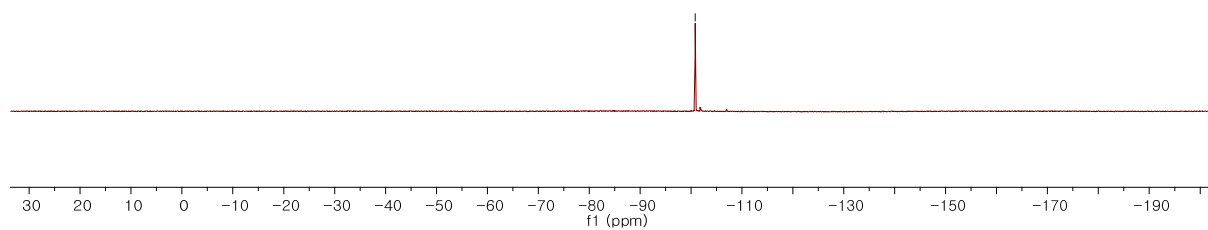
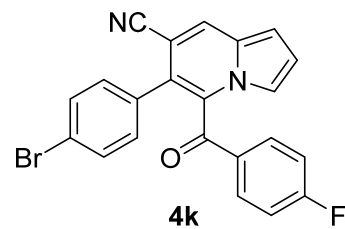
¹H NMR spectrum of 4k (400 MHz, CDCl₃)

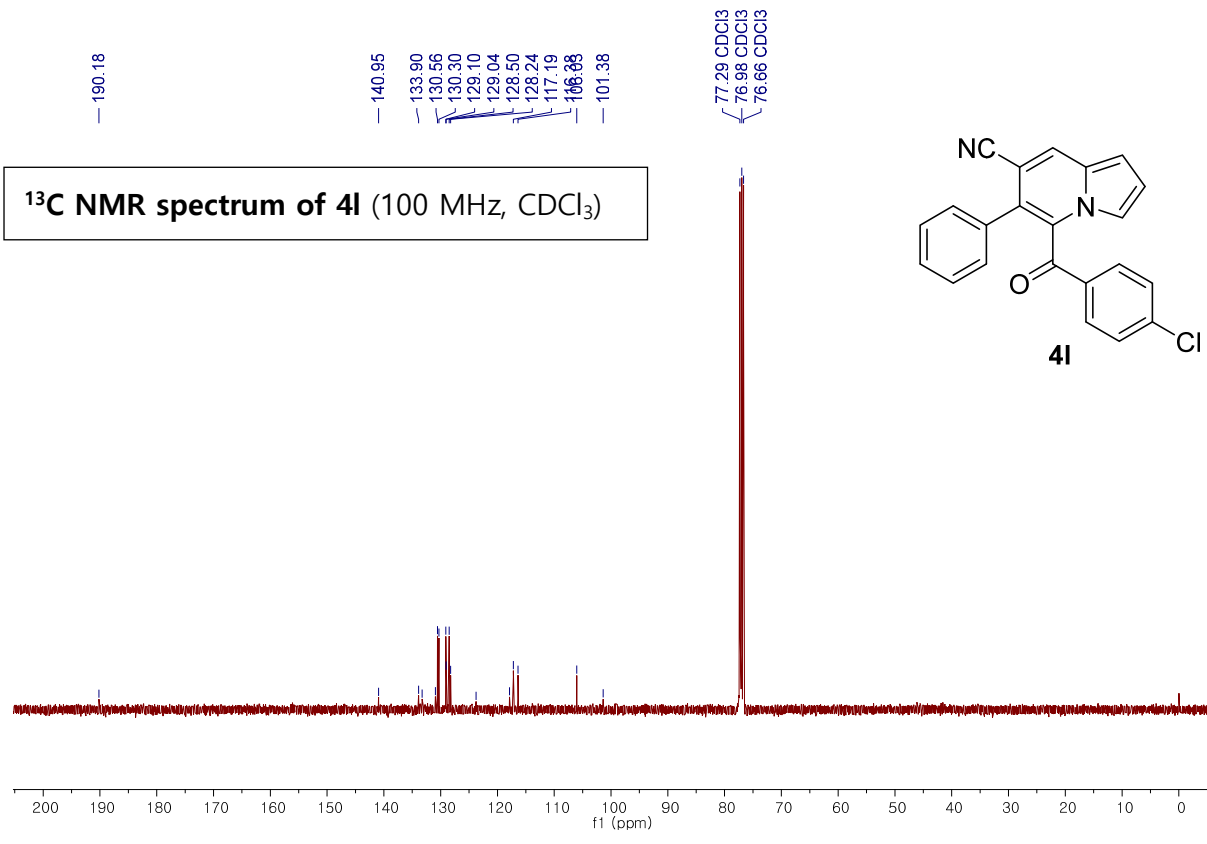
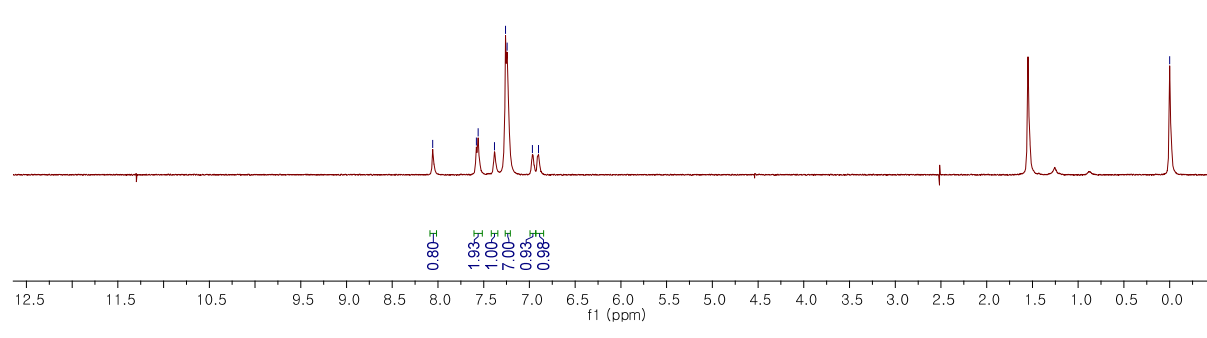
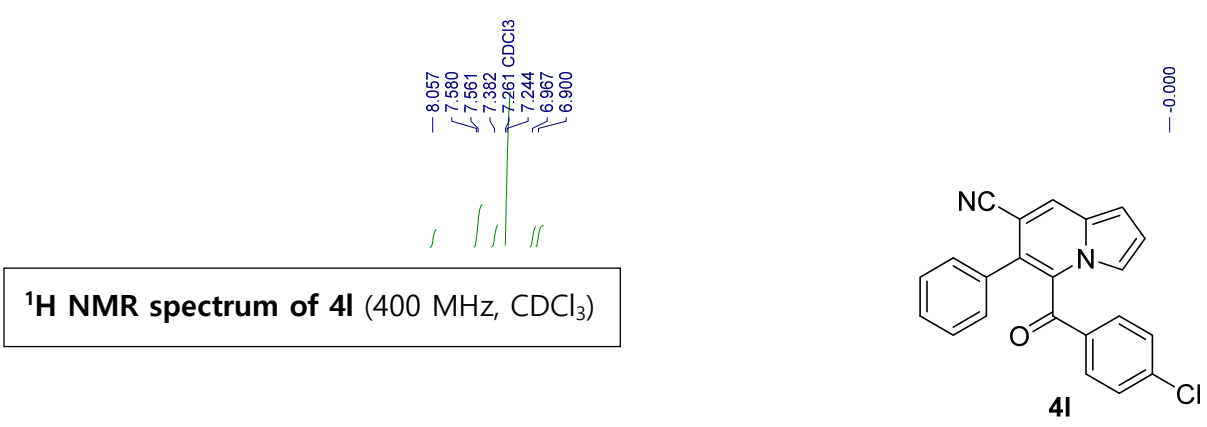


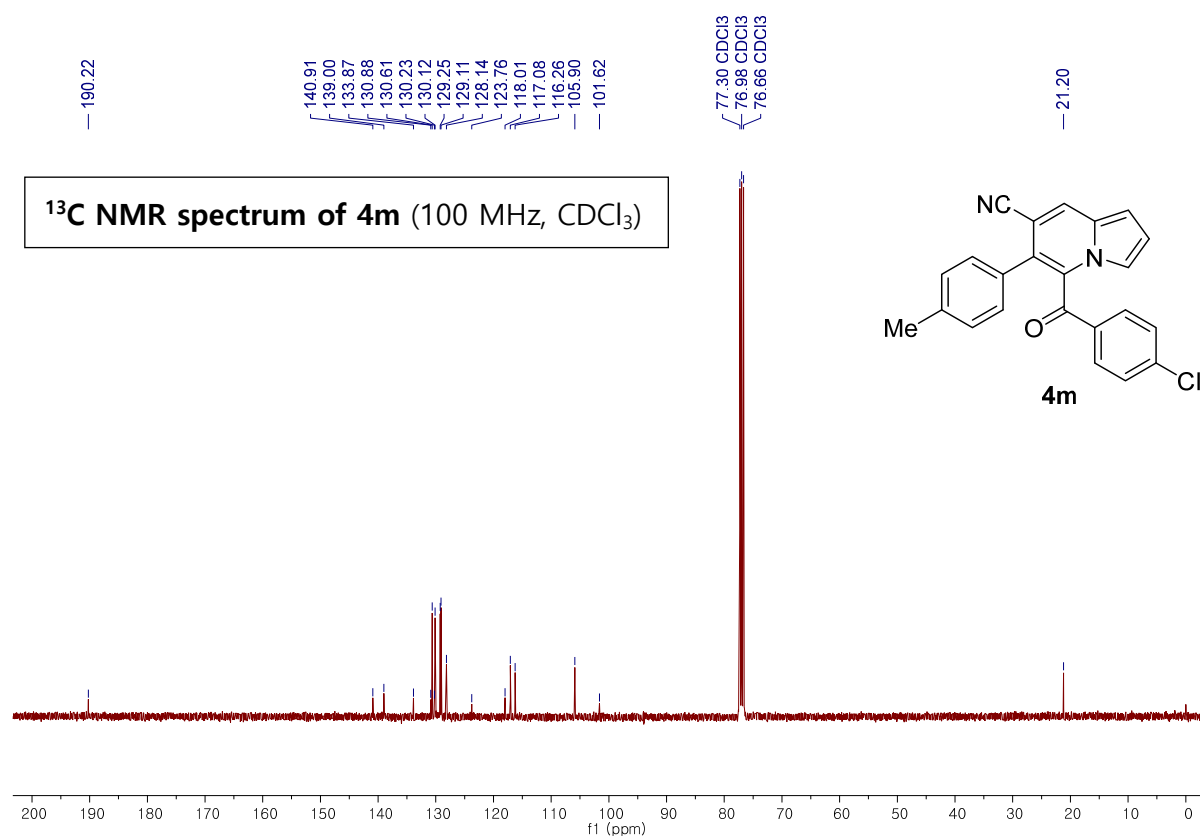
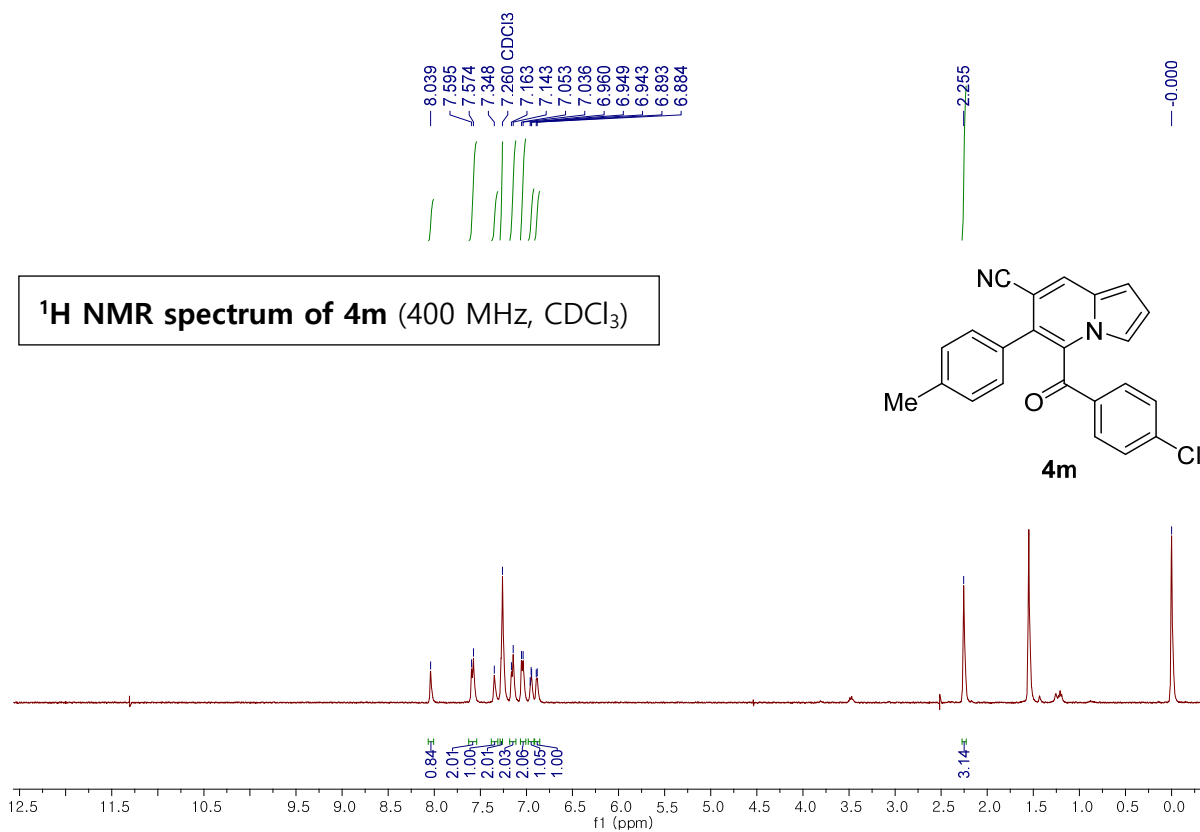
¹³C NMR spectrum of 4k (100 MHz, CDCl₃)



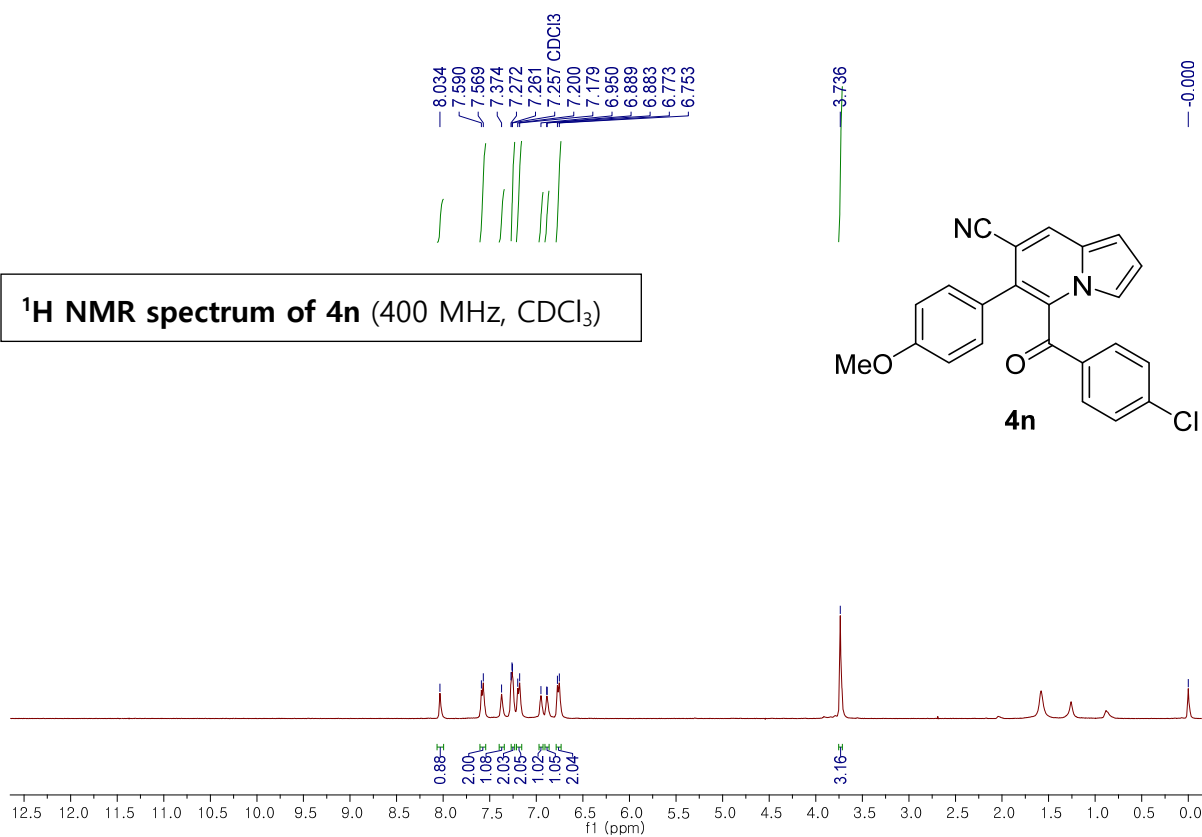
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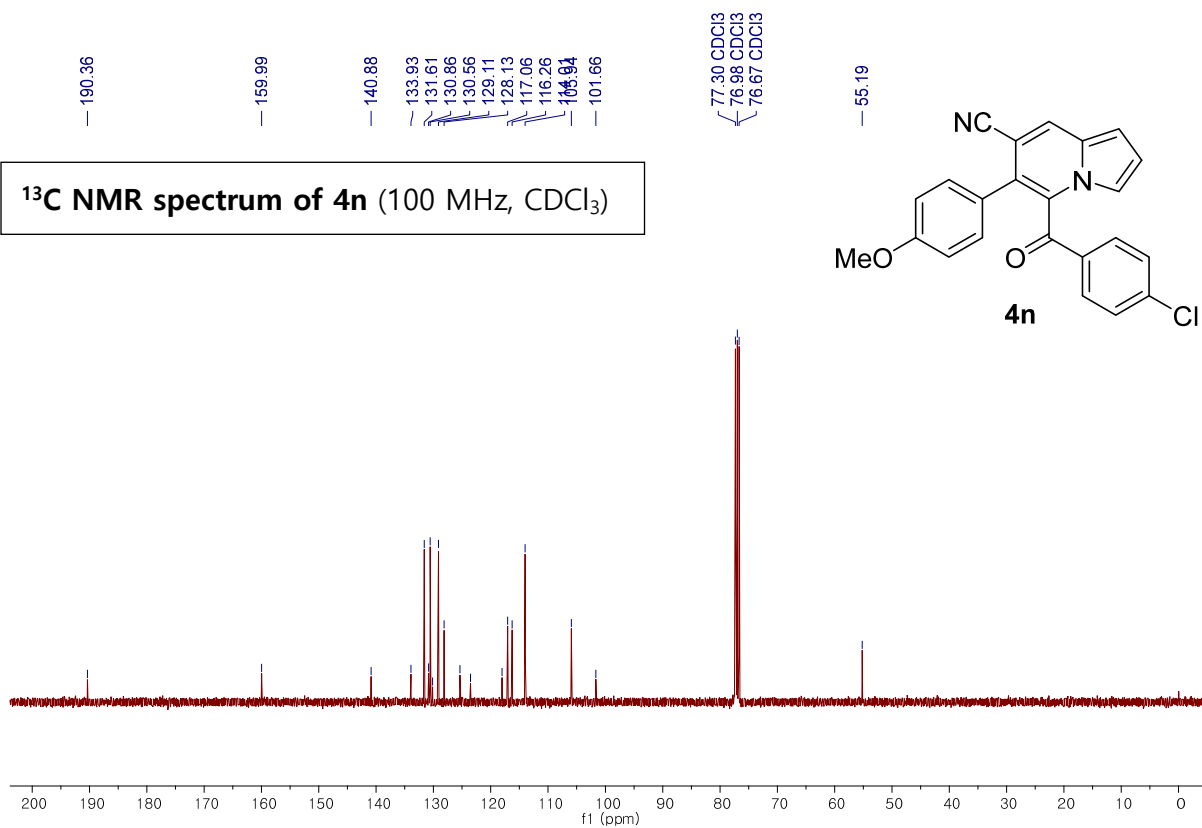


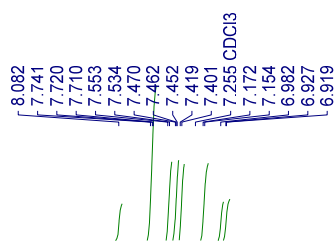


¹H NMR spectrum of 4n (400 MHz, CDCl₃)

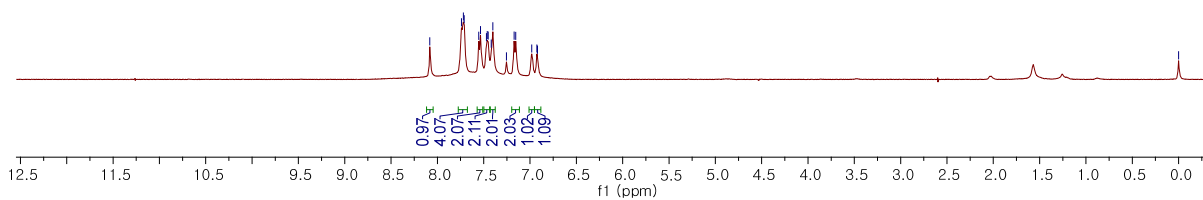
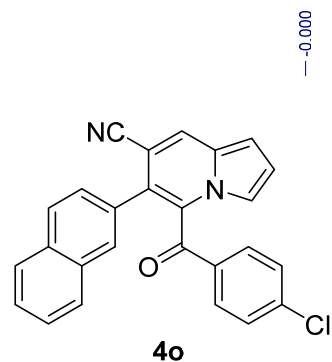


¹³C NMR spectrum of 4n (100 MHz, CDCl₃)

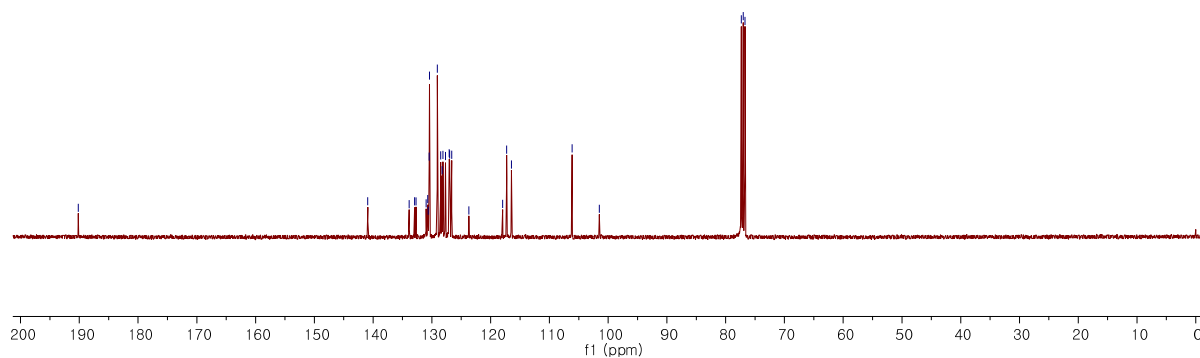
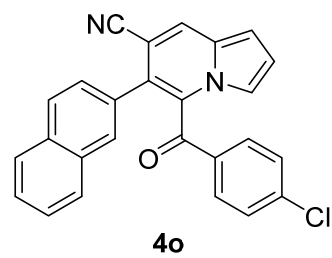


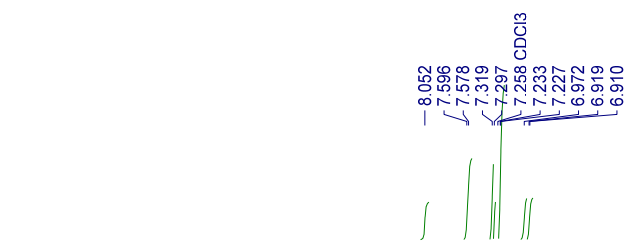


¹H NMR spectrum of 4o (400 MHz, CDCl₃)

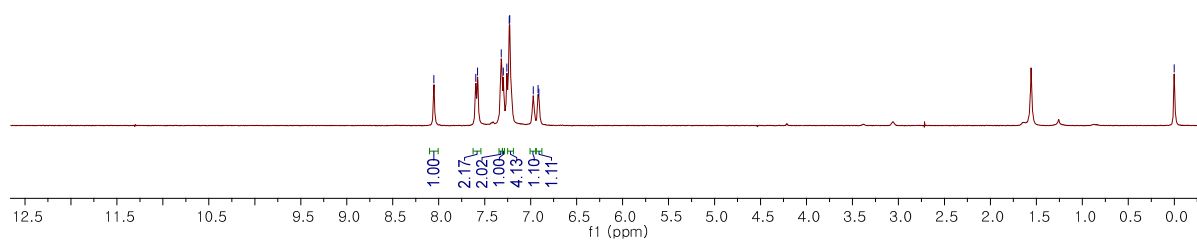
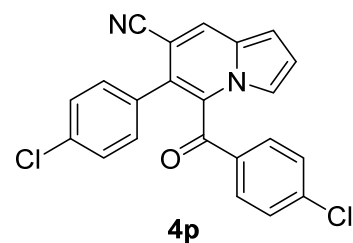


¹³C NMR spectrum of 4o (100 MHz, CDCl₃)

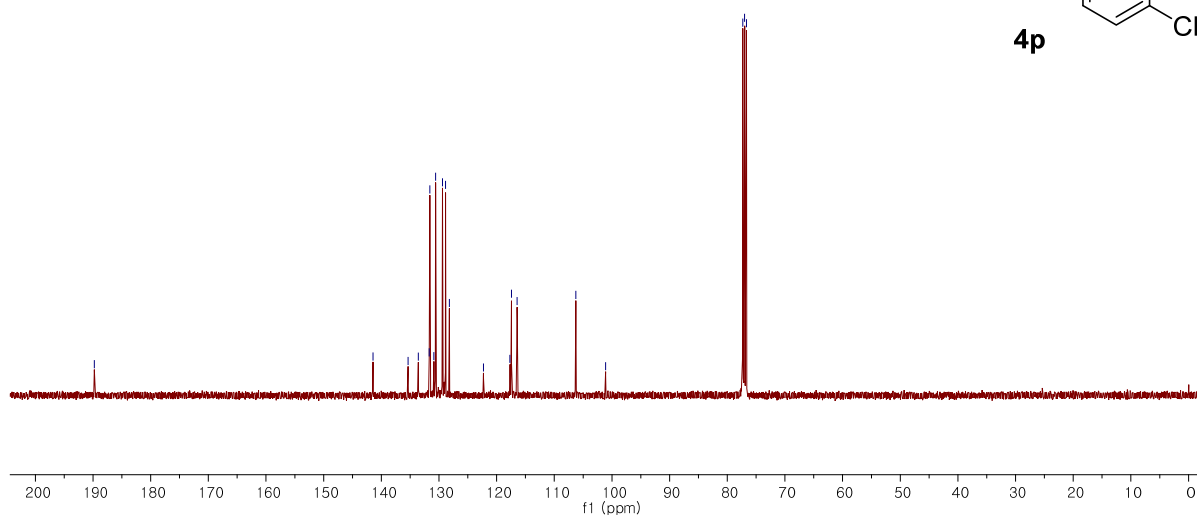
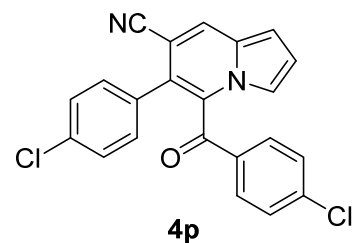


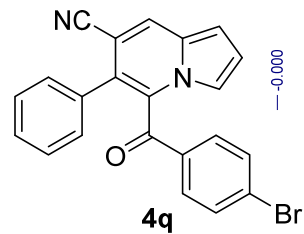
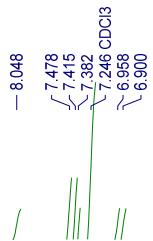


¹H NMR spectrum of 4p (400 MHz, CDCl₃)

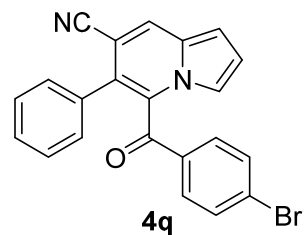
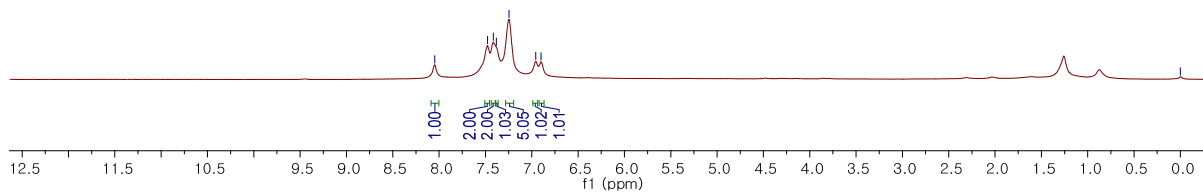


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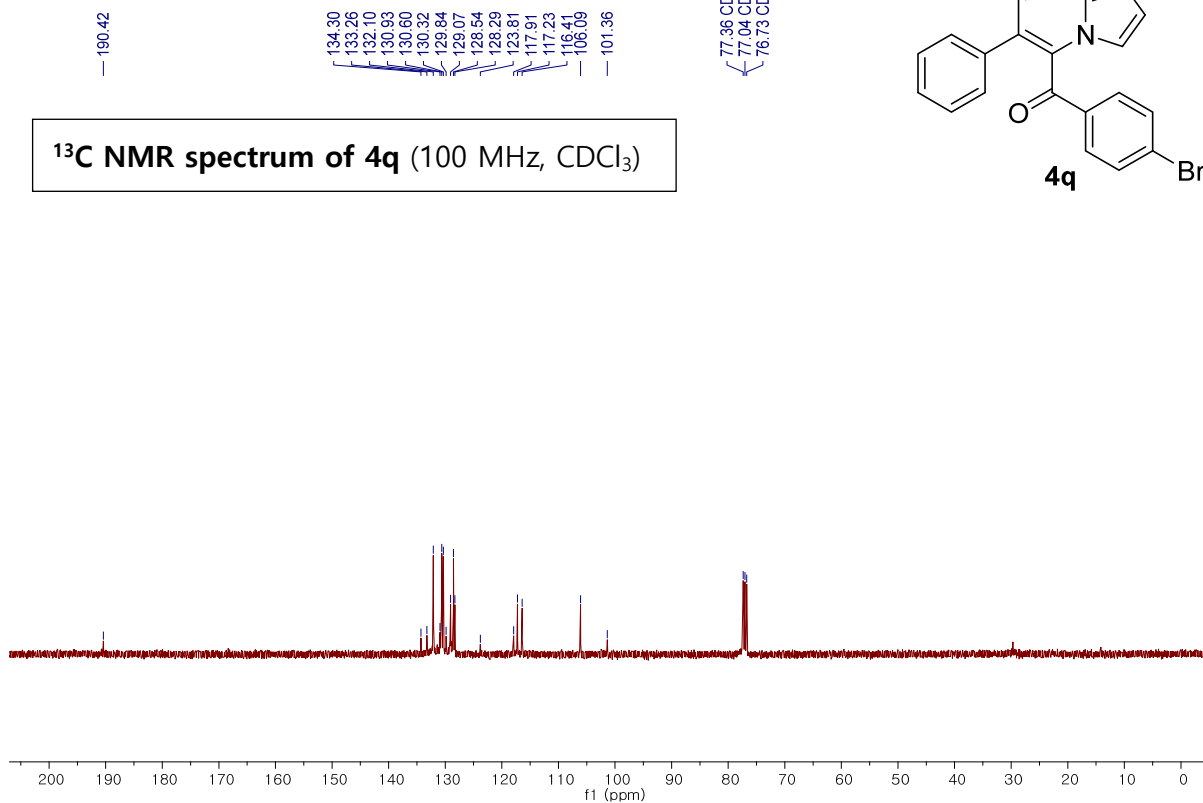




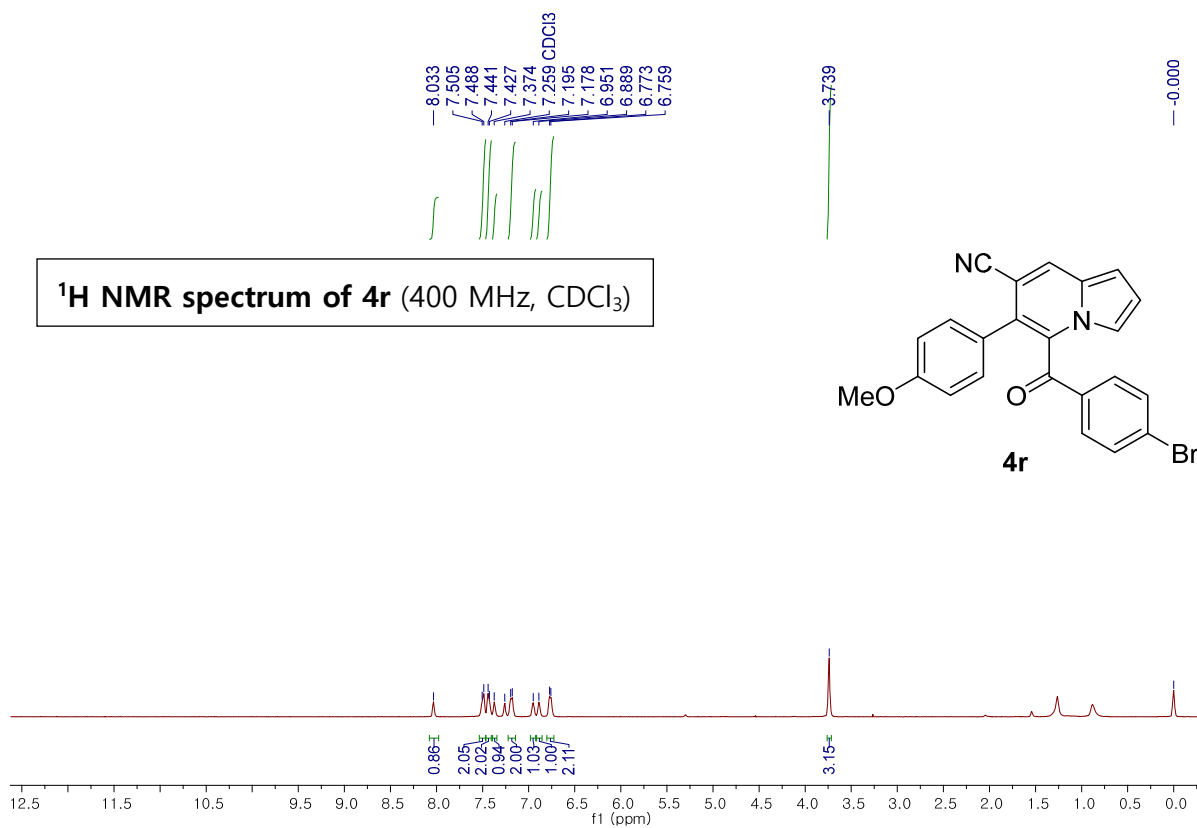
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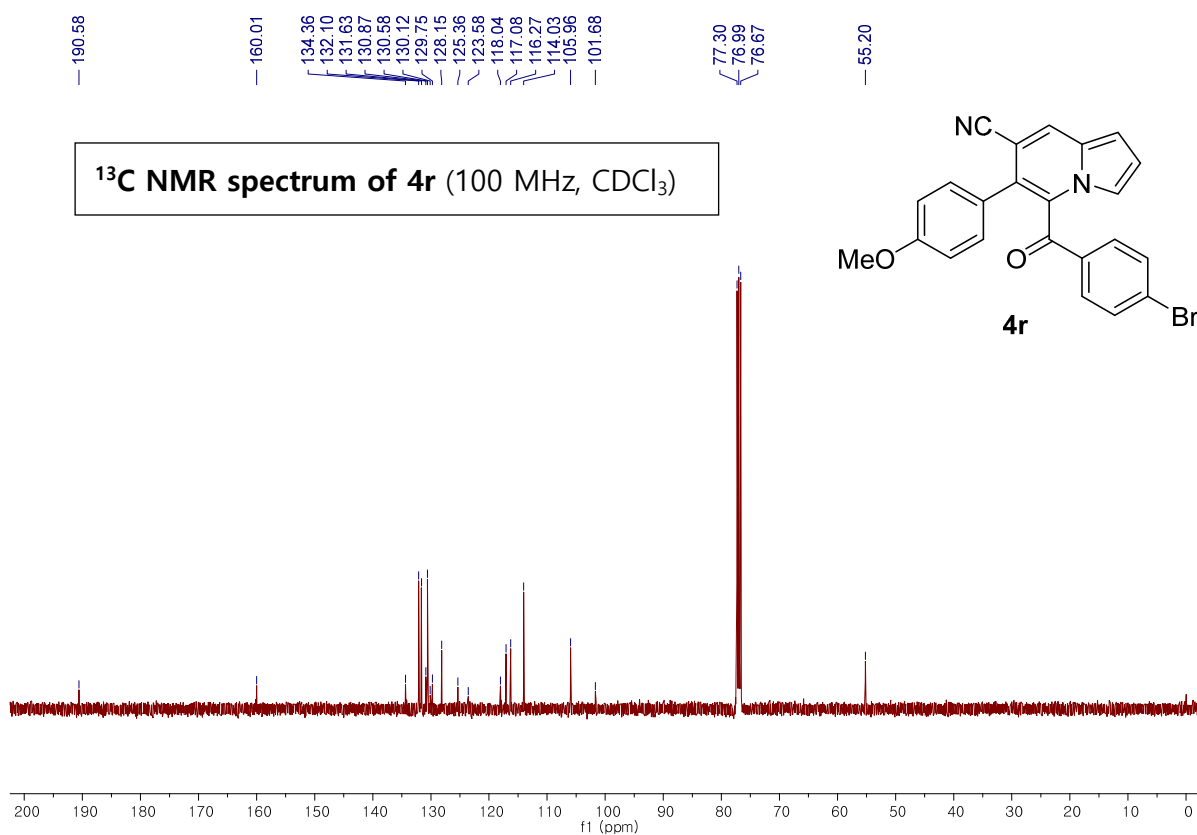
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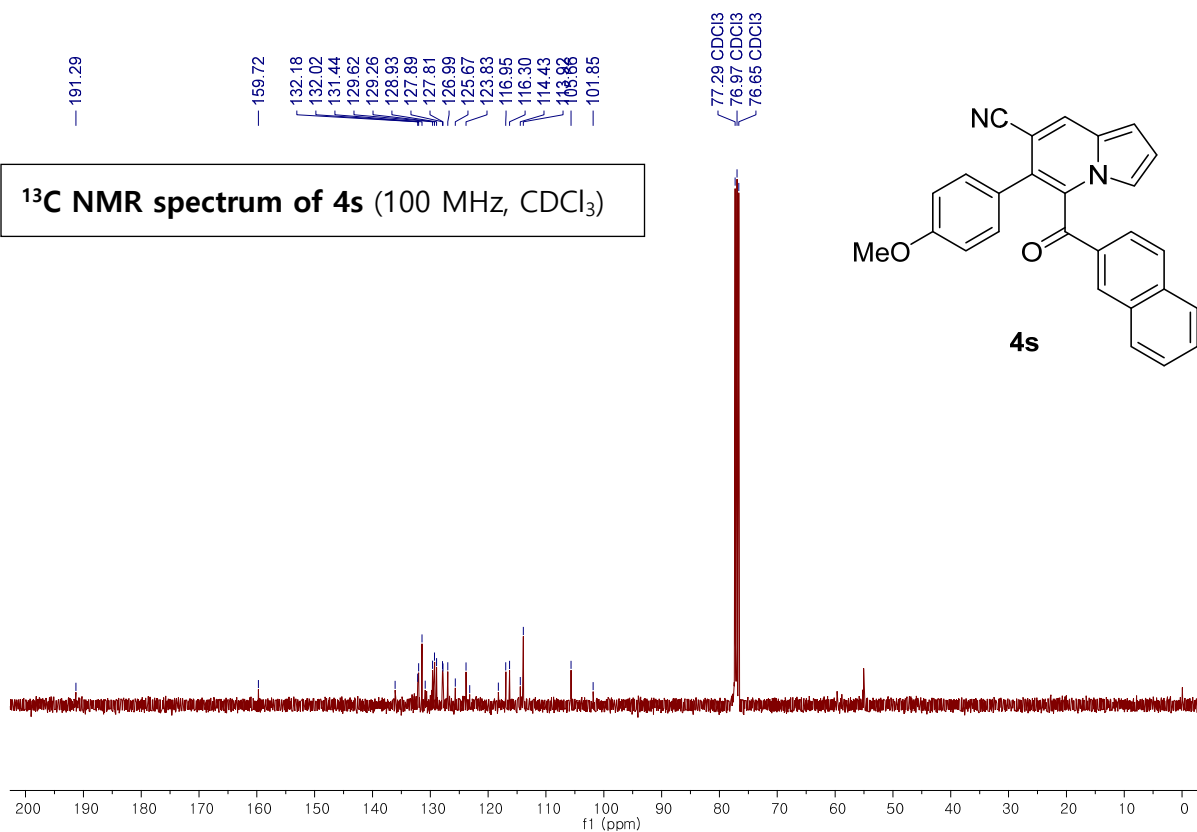
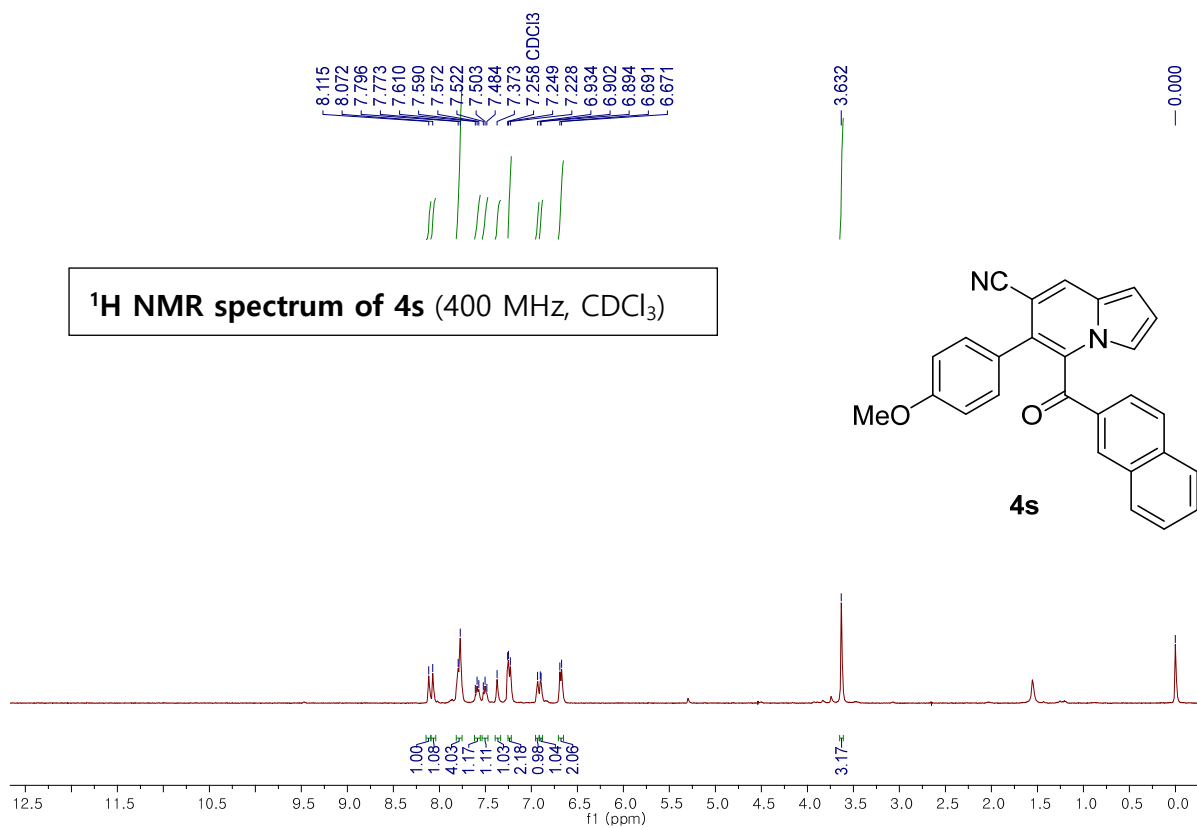


¹H NMR spectrum of 4r (400 MHz, CDCl₃)

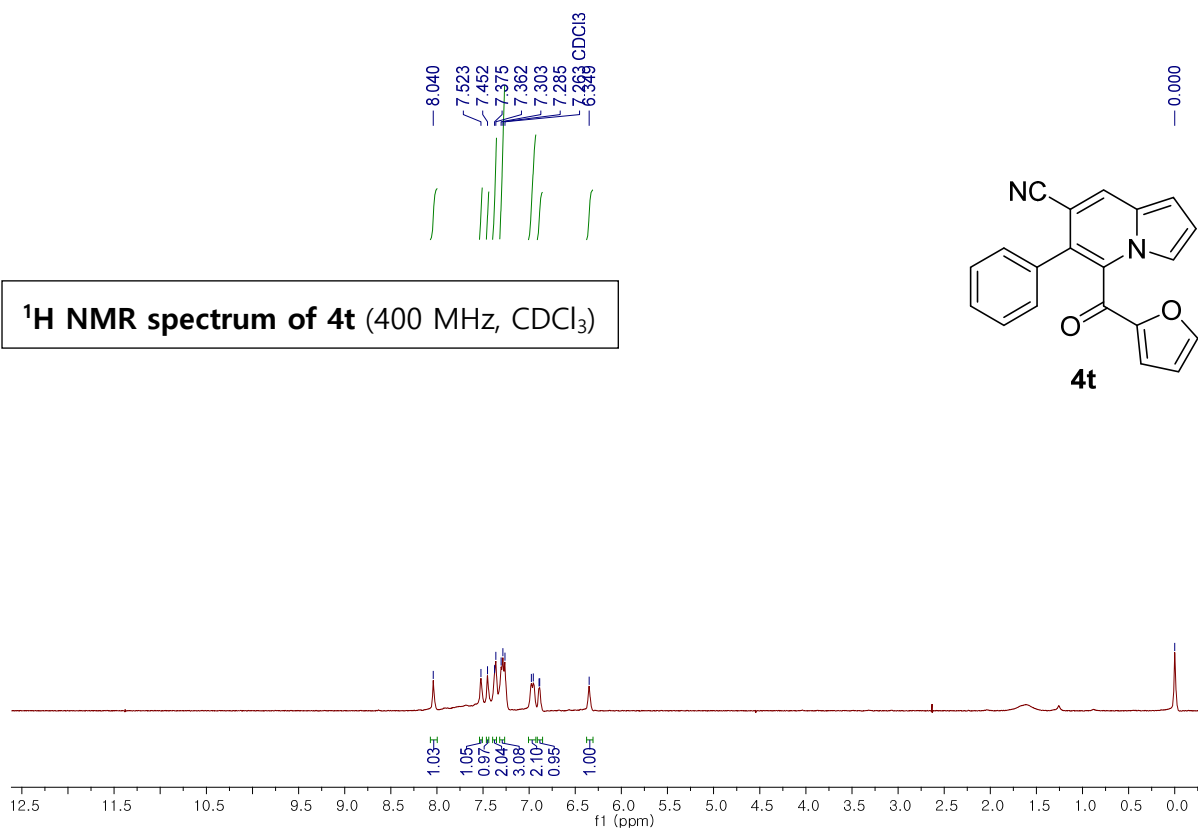


¹³C NMR spectrum of 4r (100 MHz, CDCl₃)

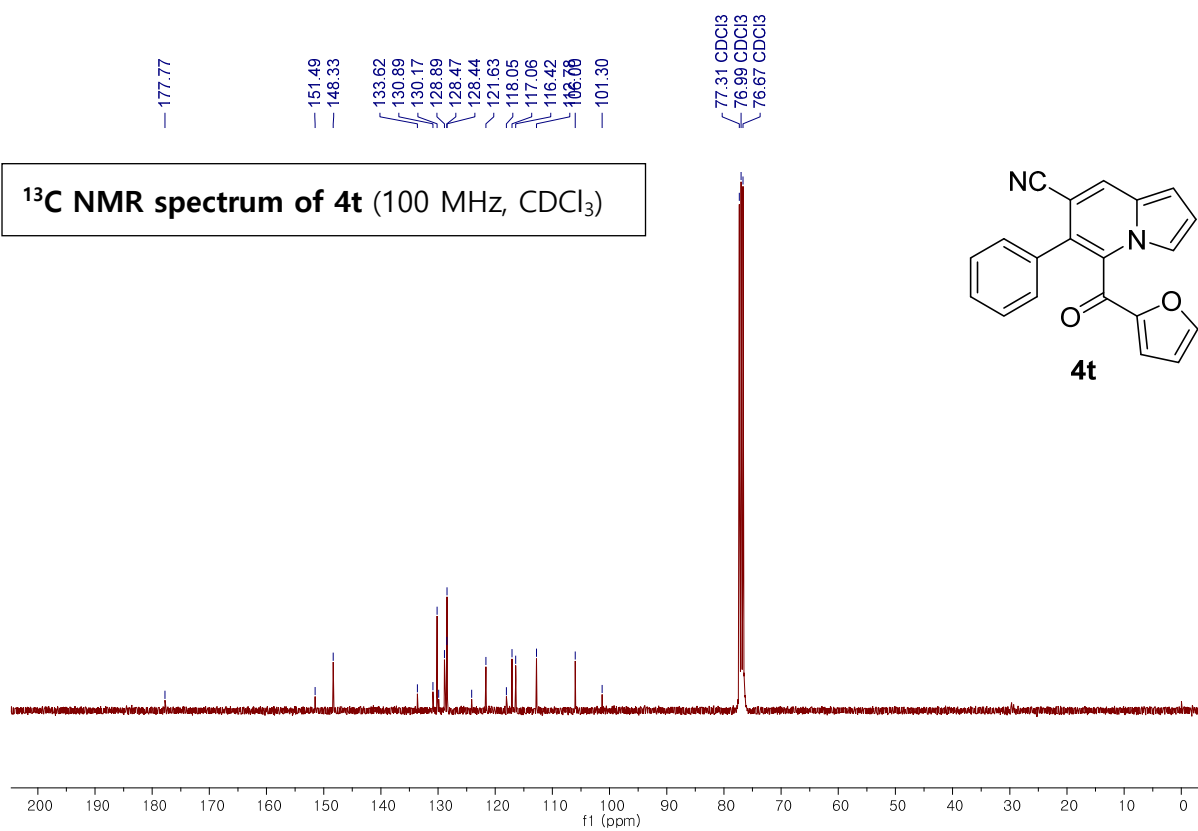




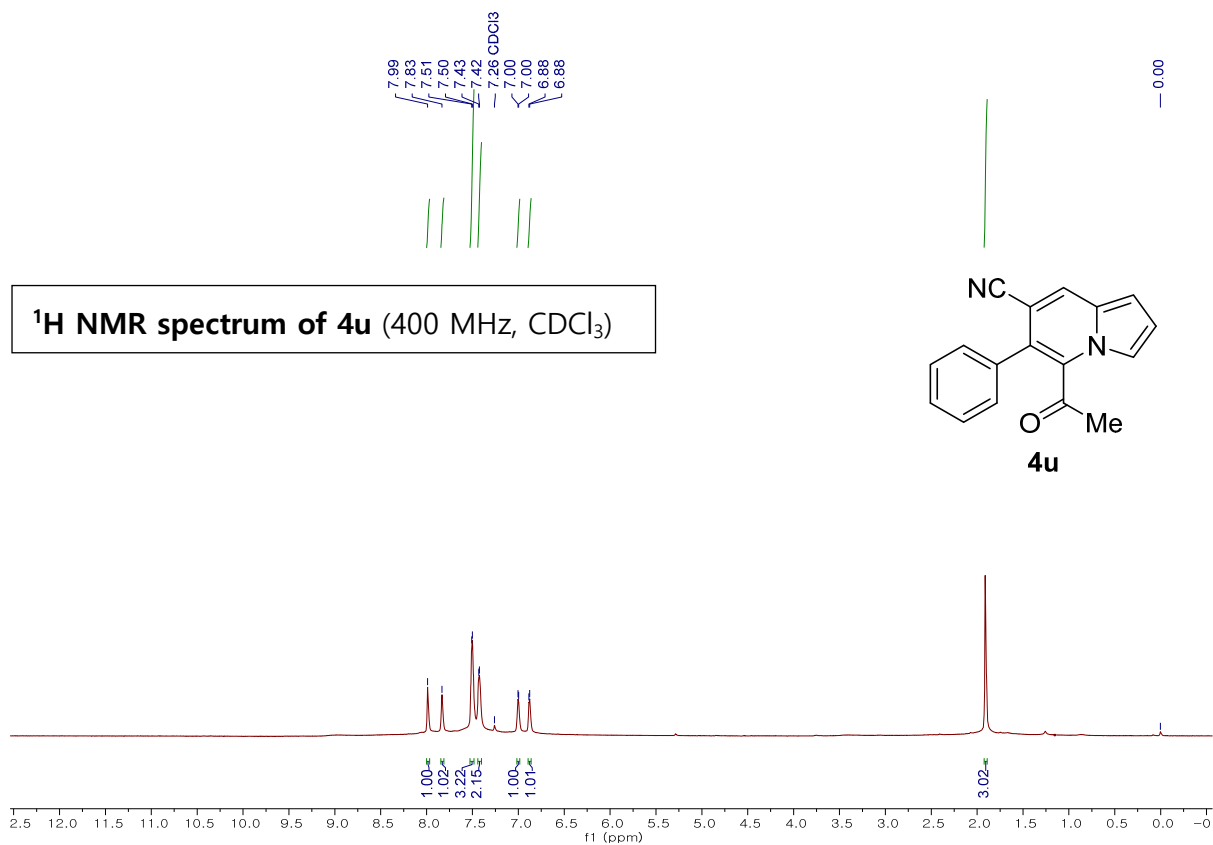
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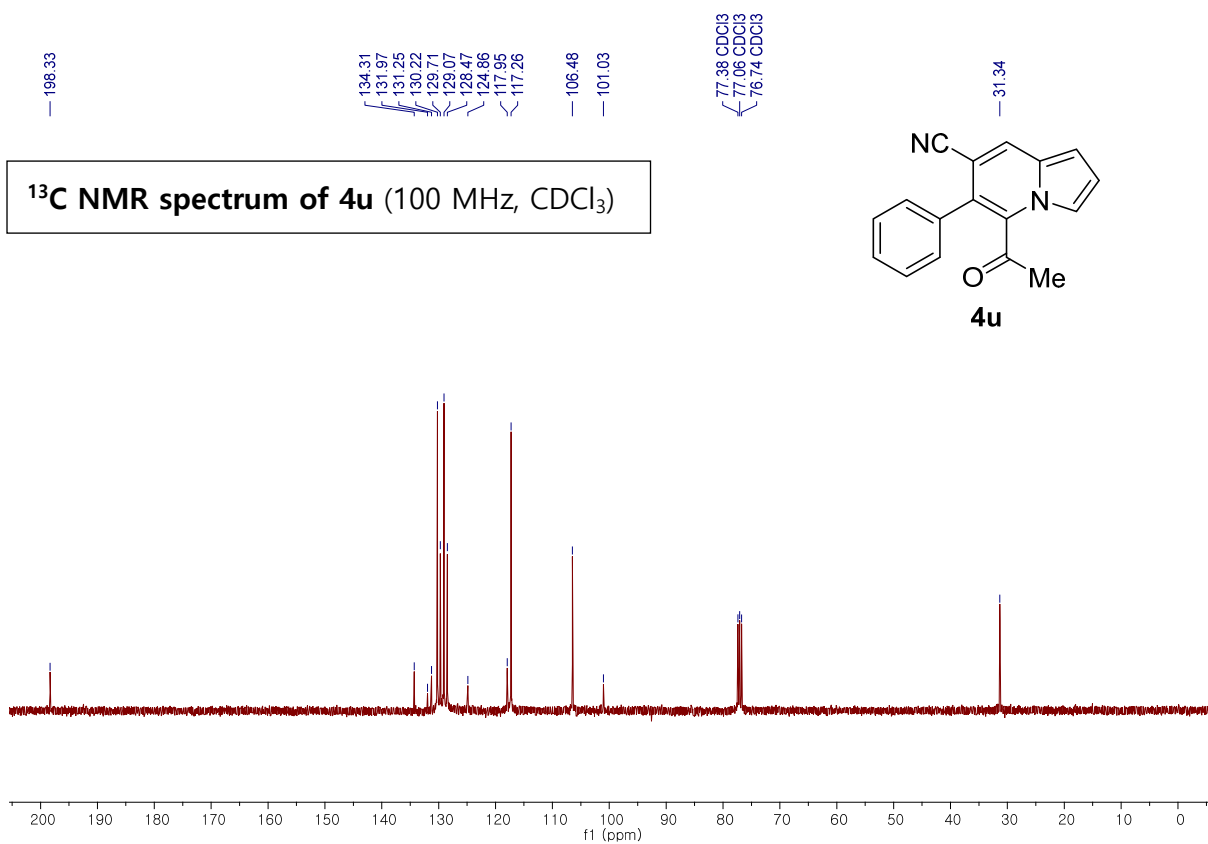
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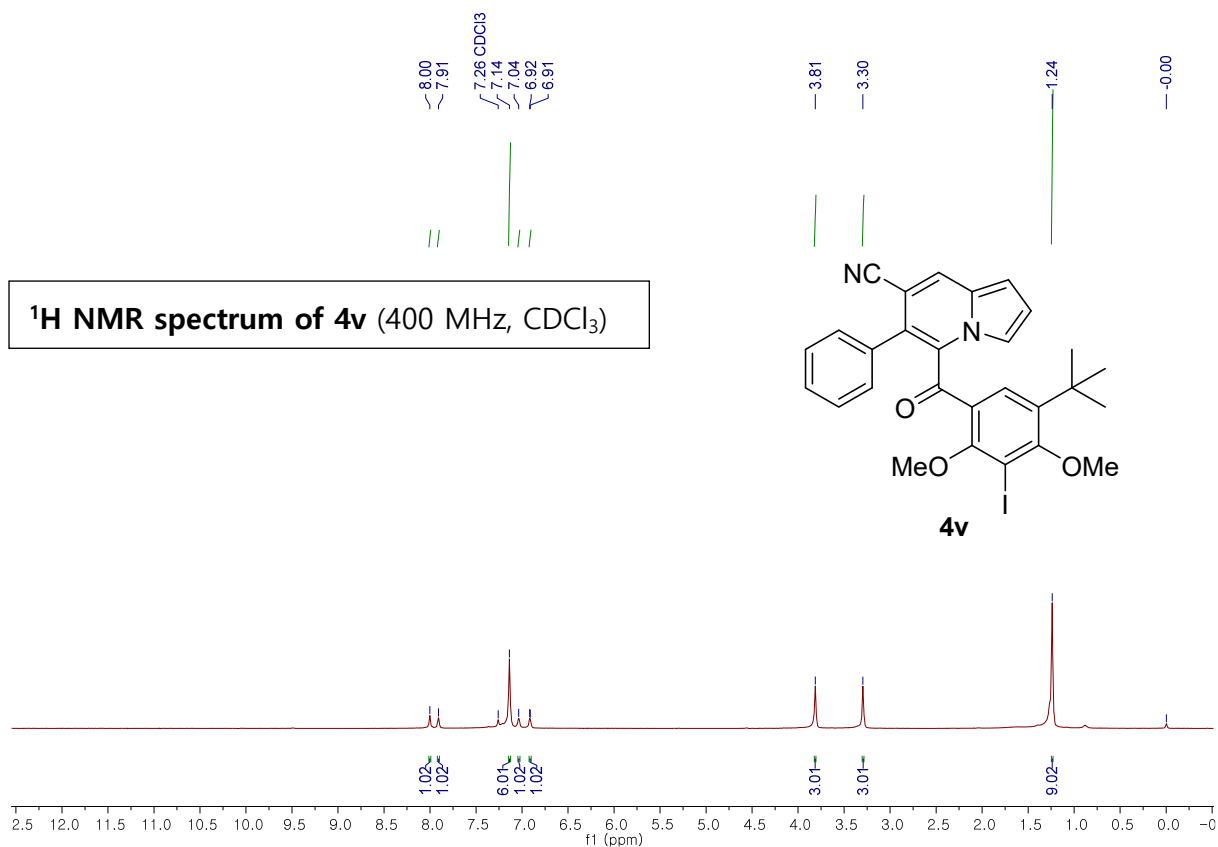
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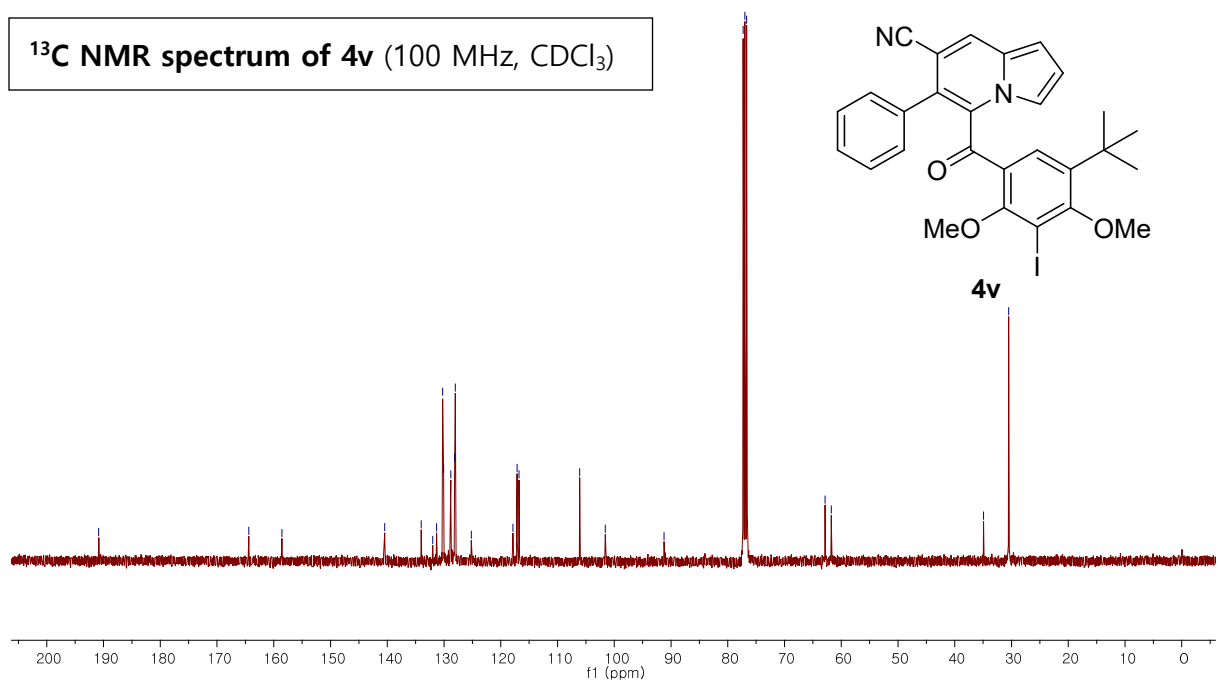
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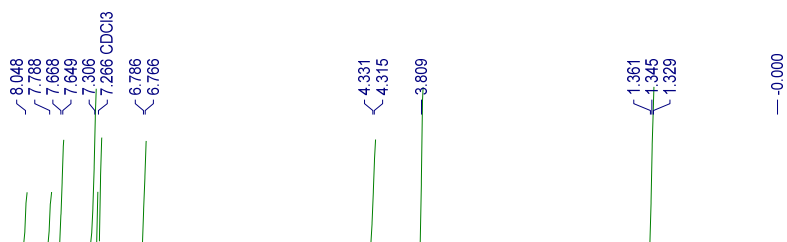
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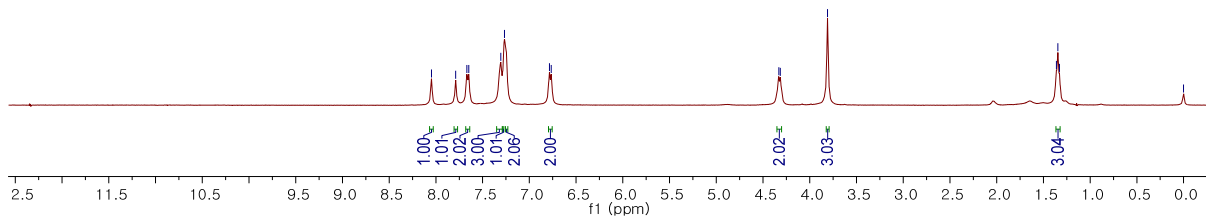
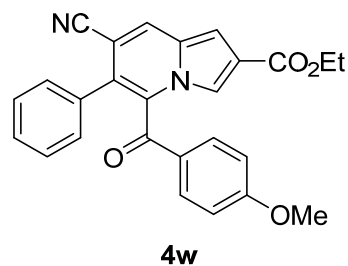
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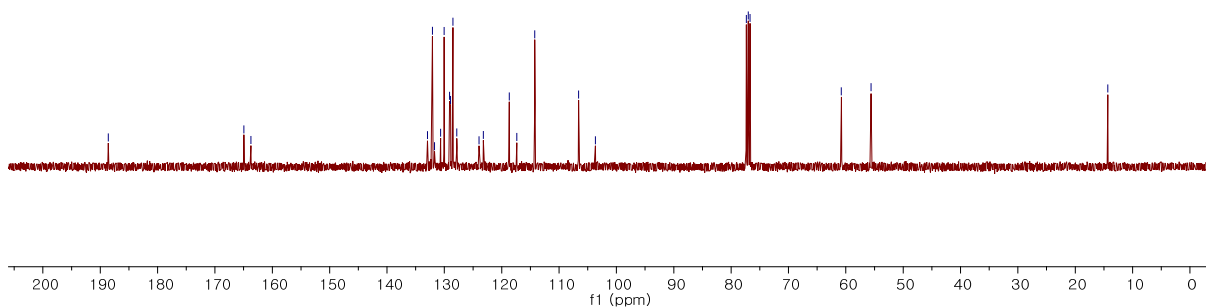
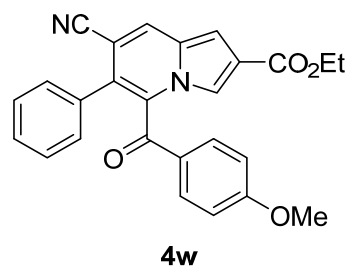
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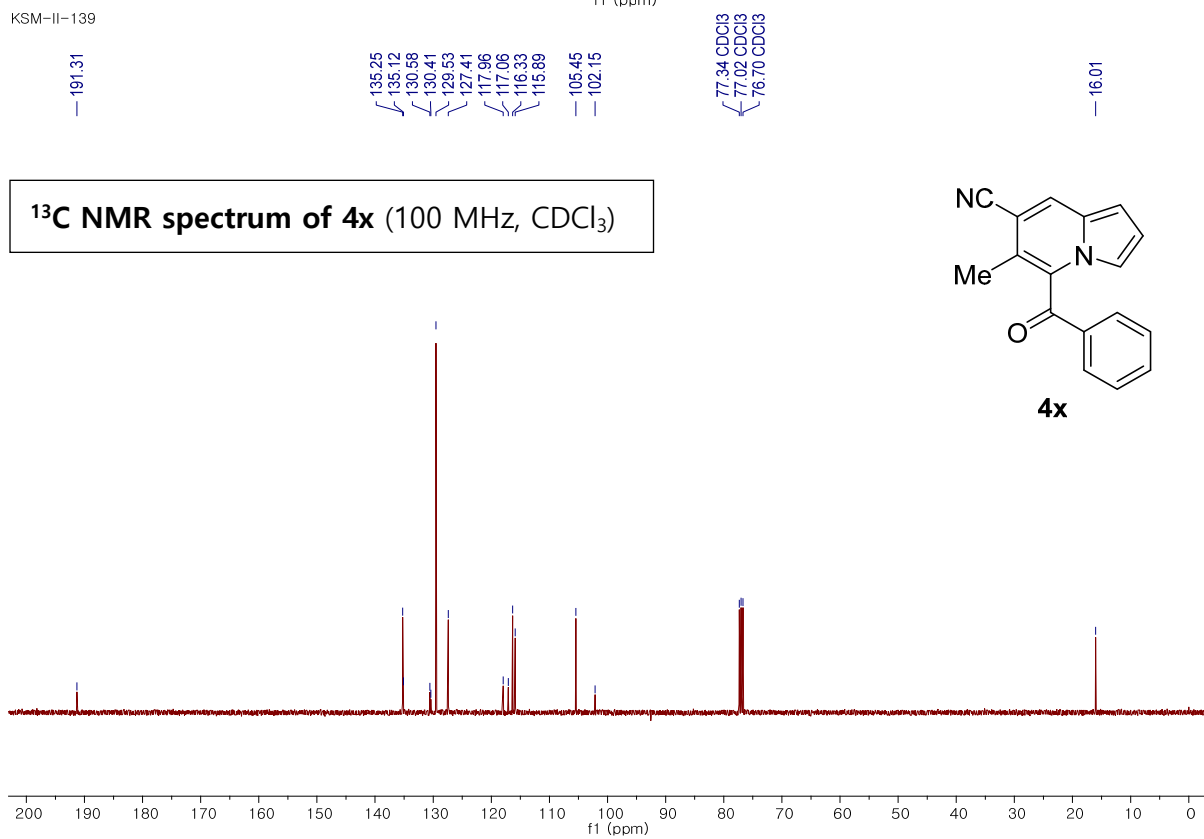
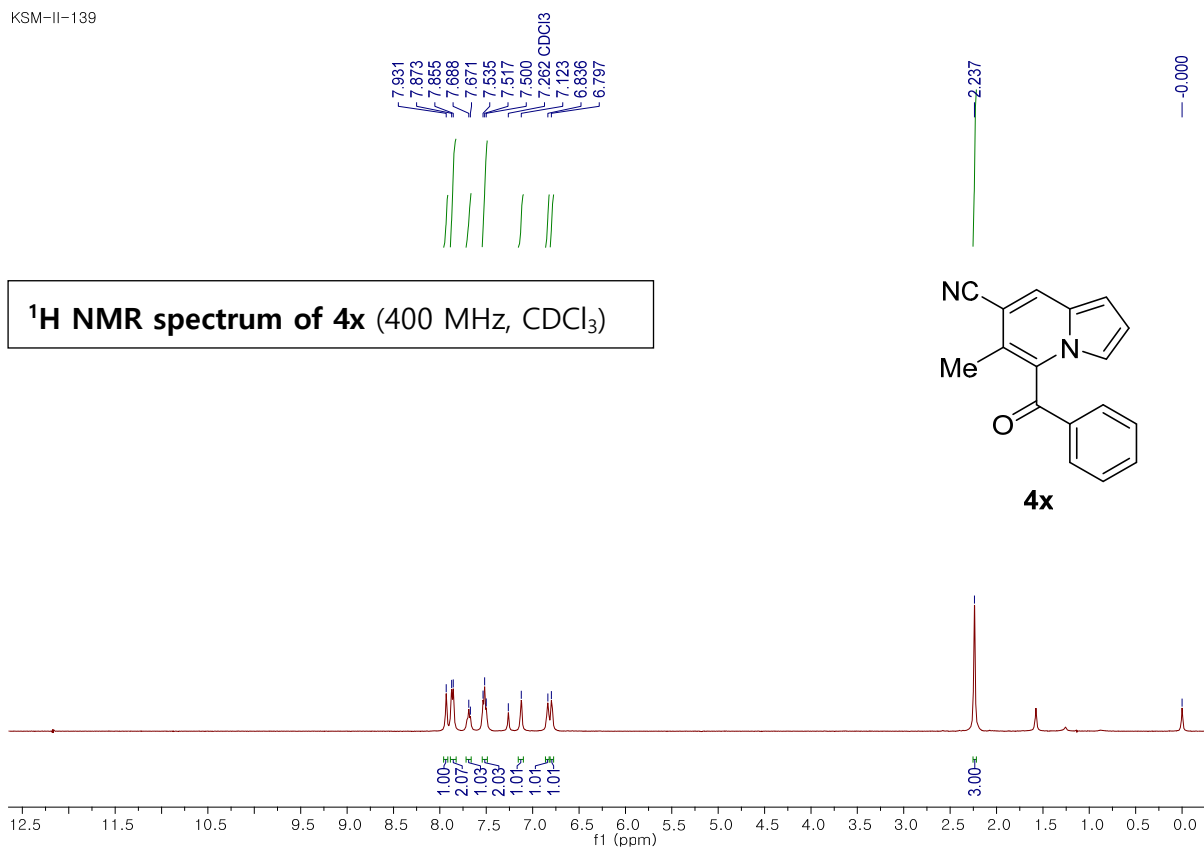


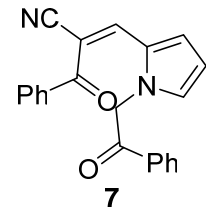
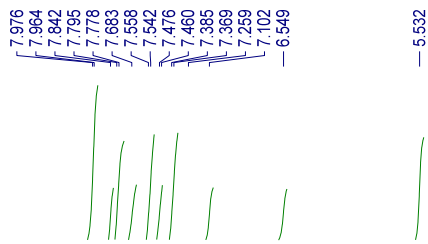
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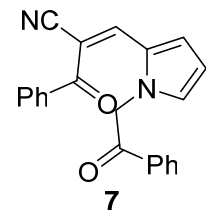
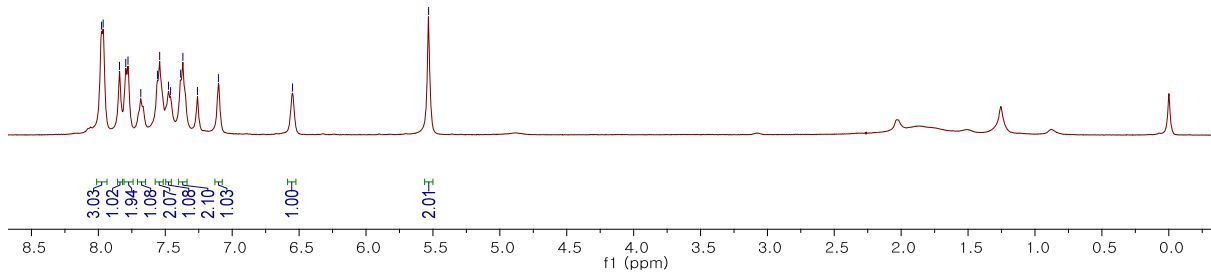
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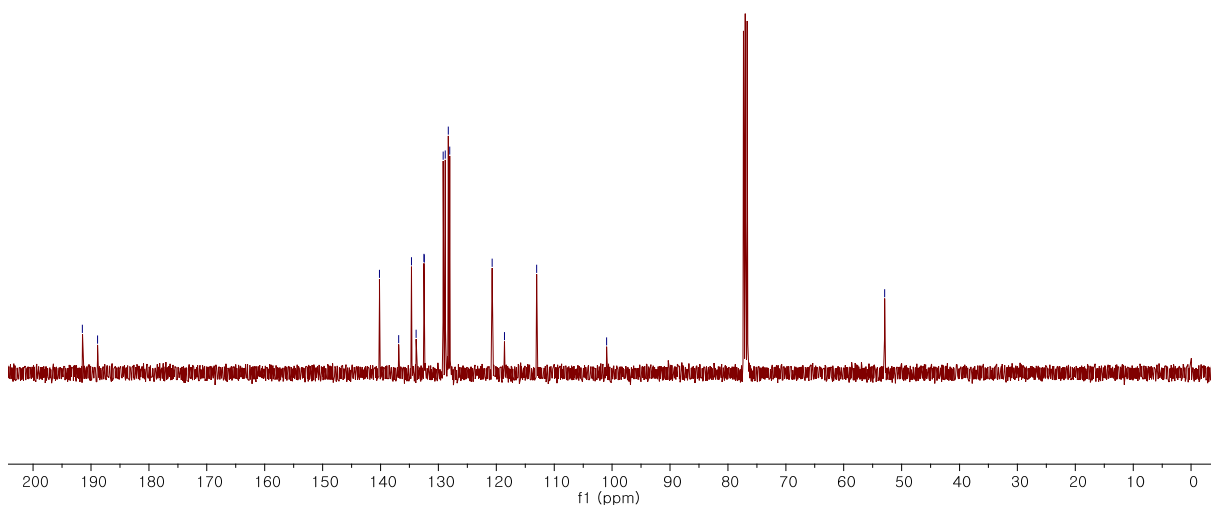




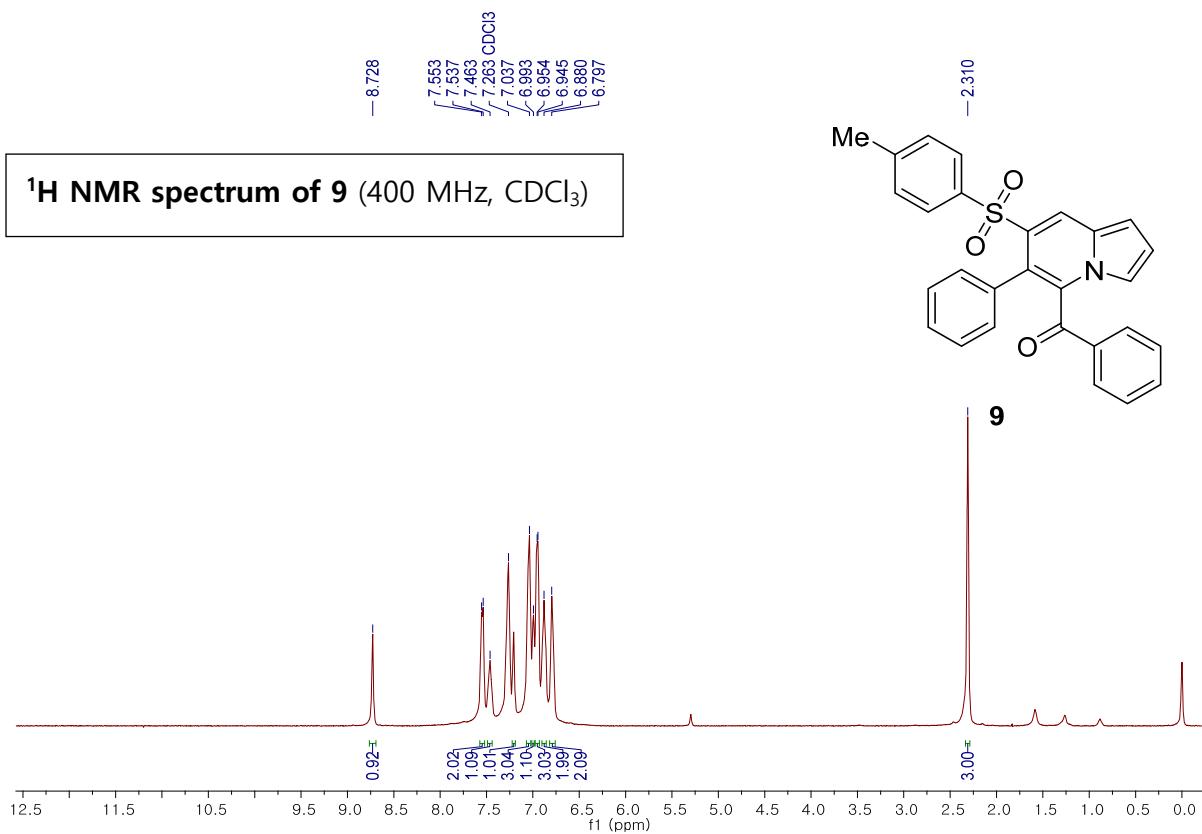
¹H NMR spectrum of 7 (400 MHz, CDCl₃)



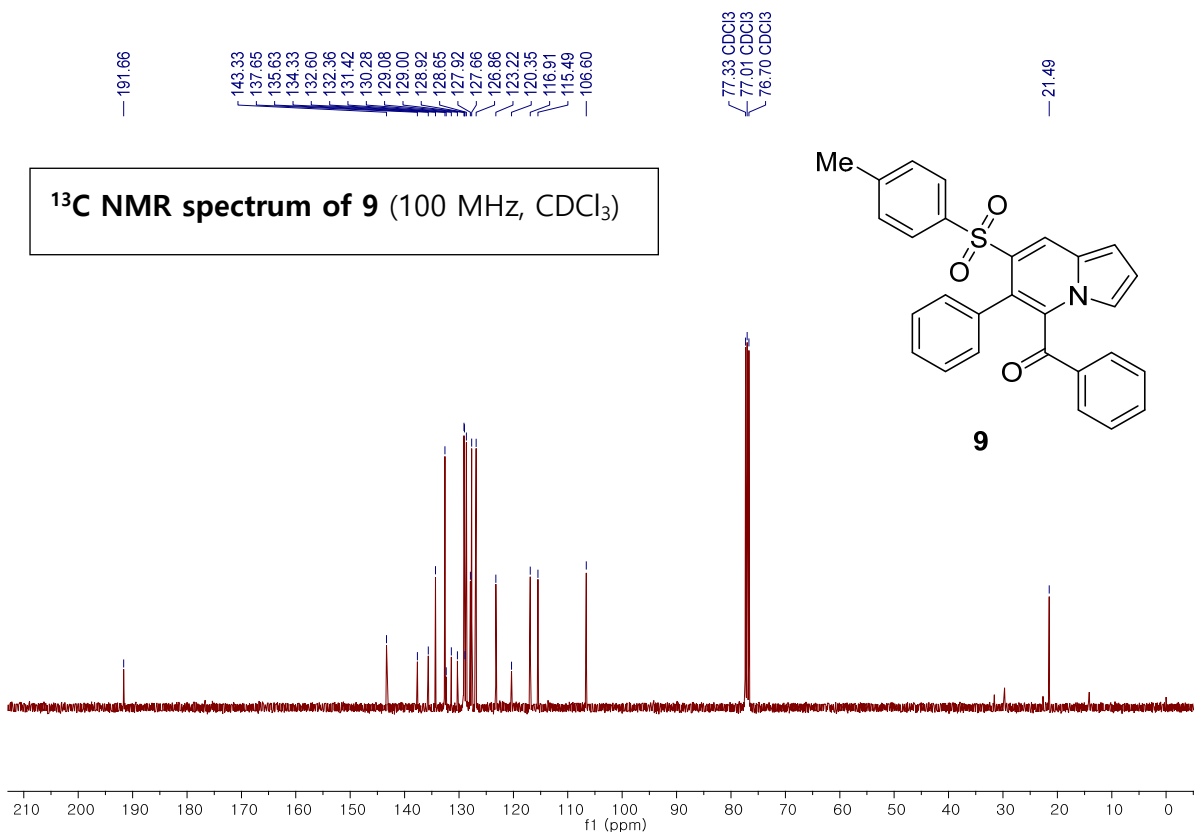
¹³C NMR spectrum of 7 (100 MHz, CDCl₃)

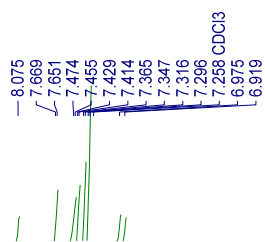


¹H NMR spectrum of 9 (400 MHz, CDCl₃)

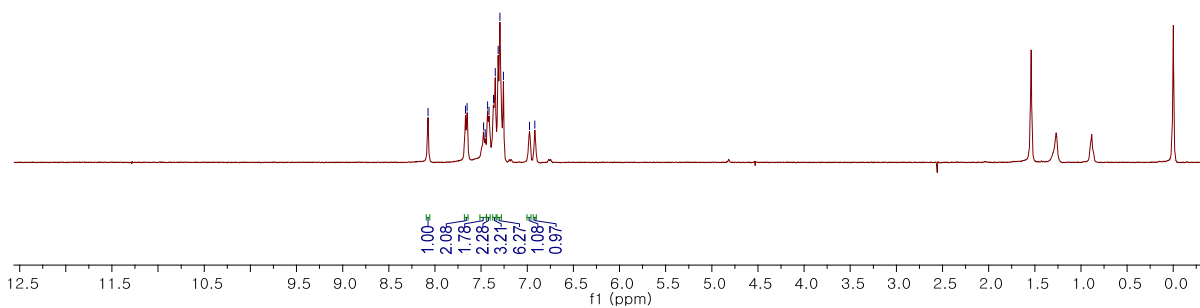
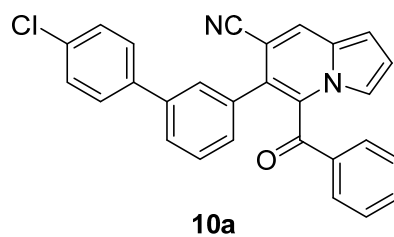


¹³C NMR spectrum of 9 (100 MHz, CDCl₃)

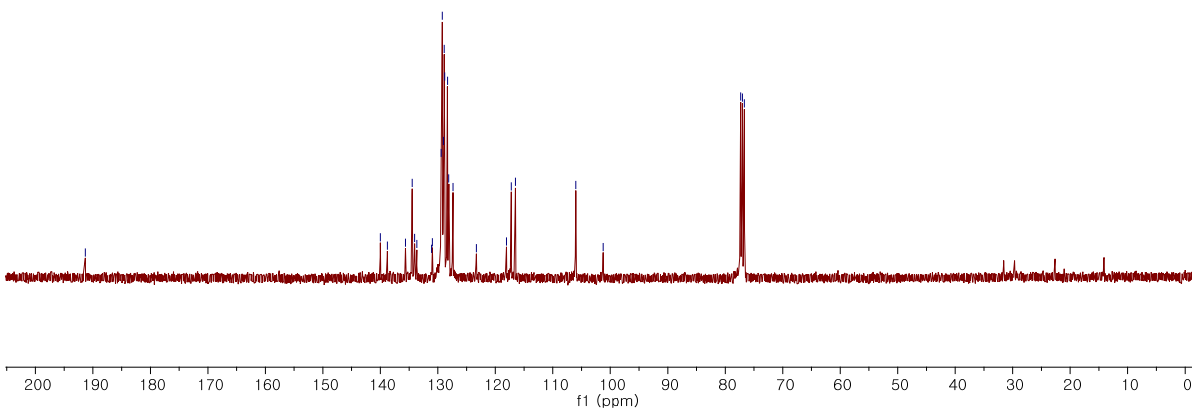
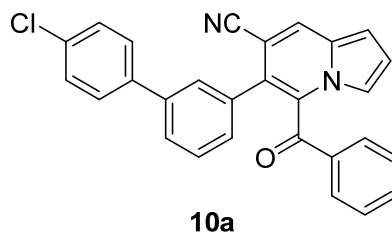


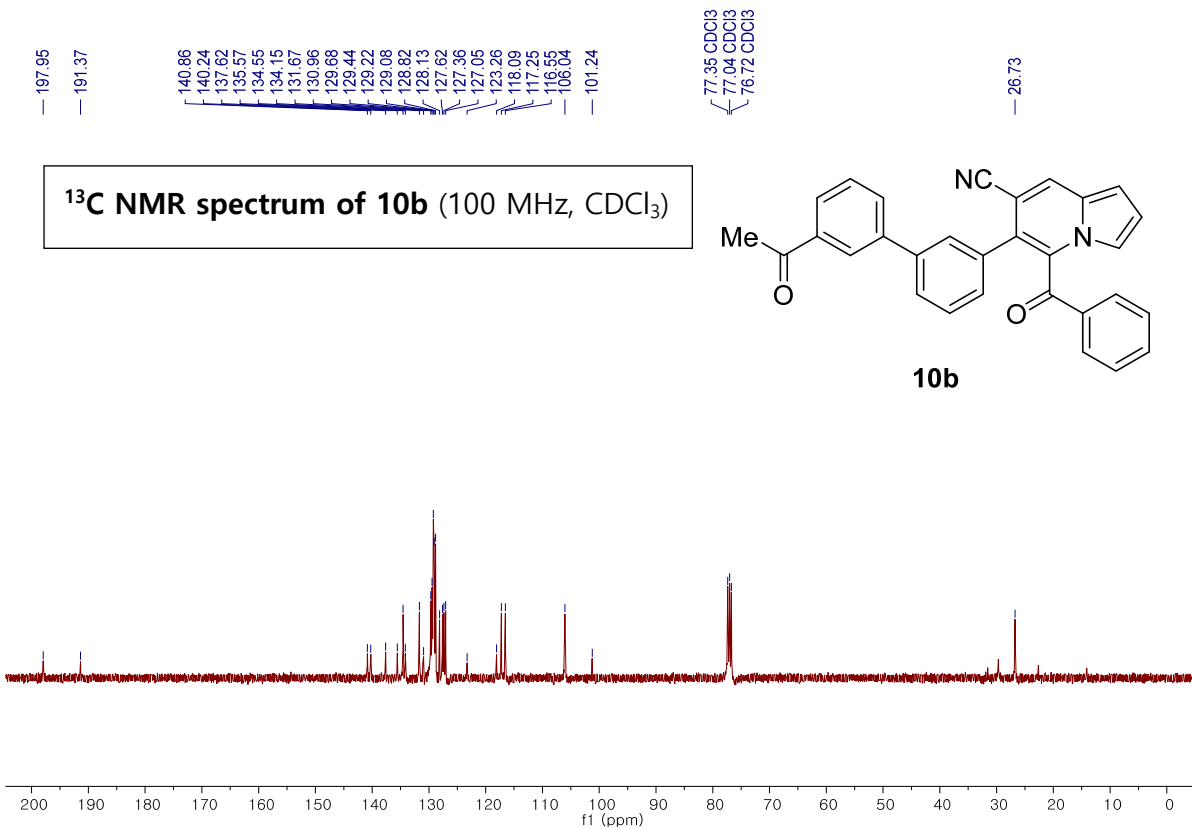
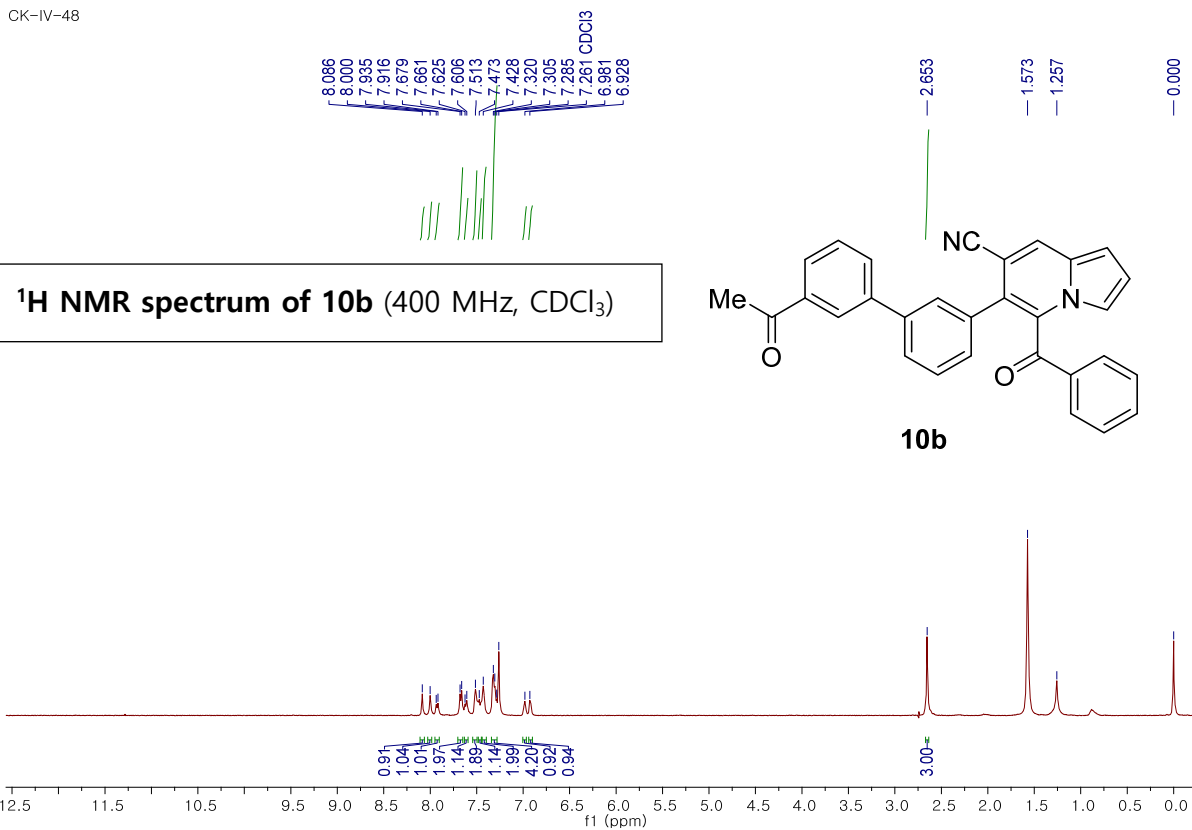


¹H NMR spectrum of 10a (400 MHz, CDCl₃)

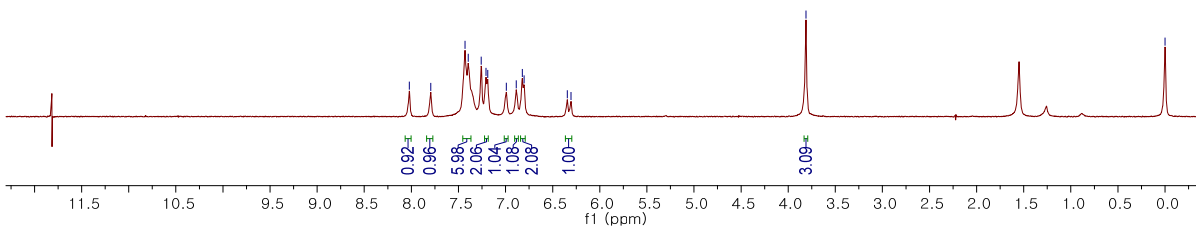
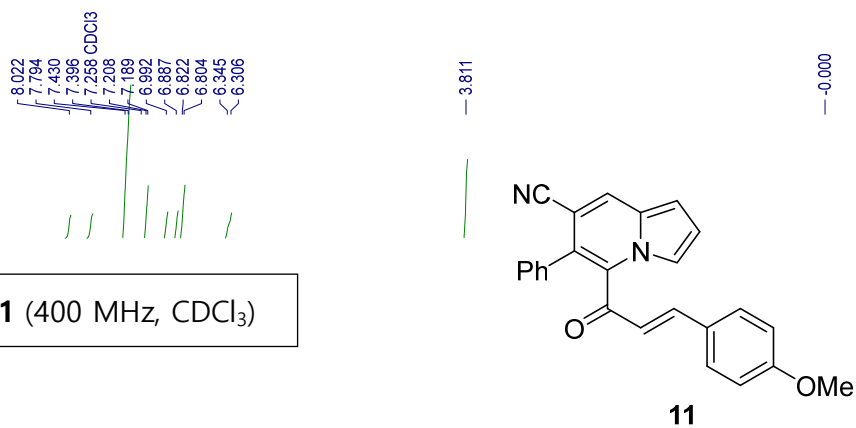


¹³C NMR spectrum of 10a (100 MHz, CDCl₃)

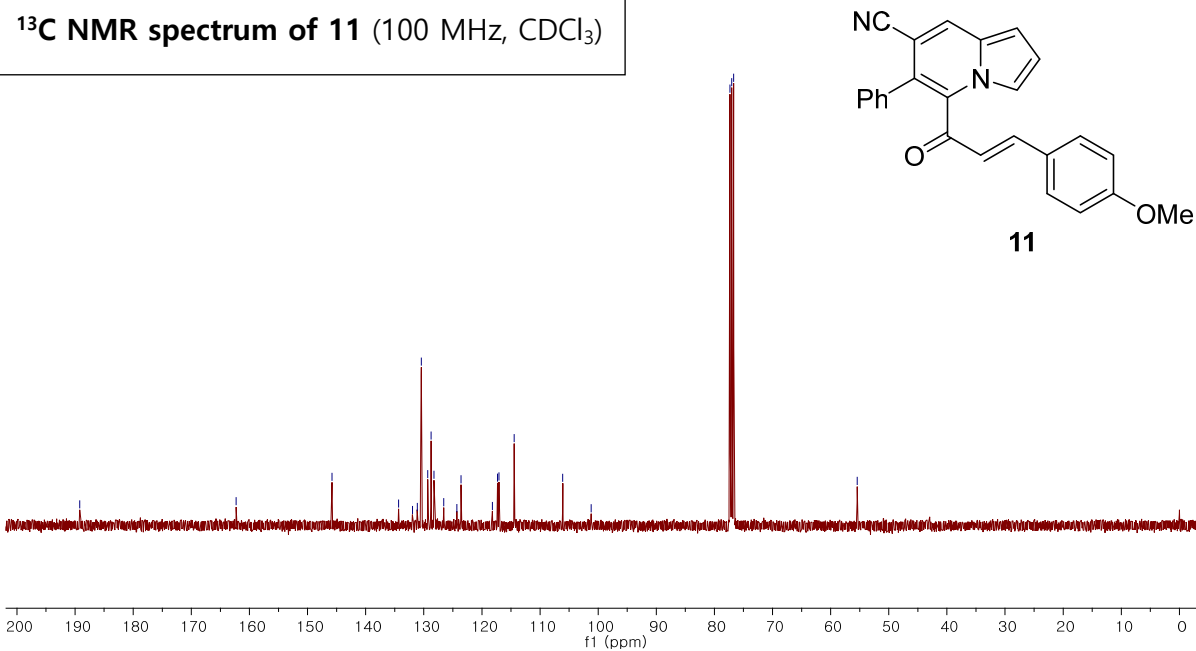


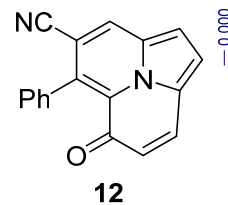
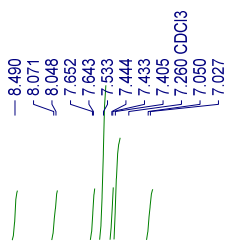


CK-IV-66

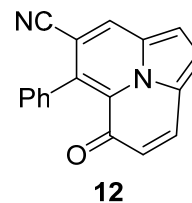
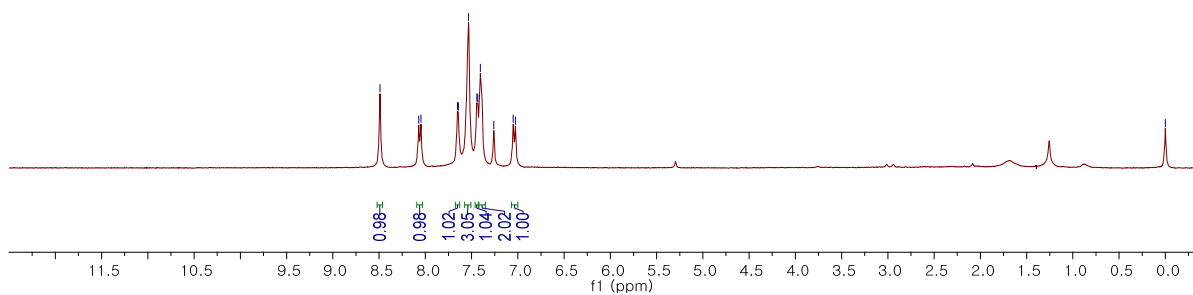


CK-IV-66C





¹H NMR spectrum of 12 (400 MHz, CDCl₃)



¹³C NMR spectrum of 12 (100 MHz, CDCl₃)

