Supporting Information

Benzofuran and Indole Synthesis *via* Cu(I)-catalyzed Coupling of *N*-Tosylhydrazone and *o*-Hydroxy or *o*-Amino Phenylacetylene

Tiebo Xiao,[a] Xichang Dong[a] and Lei Zhou*[,a,b]

[a:]School of Chemistry and Chemical Engineering, Sun Yat-Sen University, 135 Xingang West Road, Guangzhou 510275, China. E-mail: zhoul39@mail.sysu.edu.cn,

[b:]Beijing National Laboratory of Molecular Sciences (BNLMS), College of Chemistry, Peking University, Beijing 100871, China

General details

All reactions were performed under a nitrogen atmosphere in a 10 mL Schlenk tube. MeCN was dried over CaH_2 and toluene was dried over Na before use. For chromatography, 200-300 mesh silica gel (Qingdao, China) was employed. ^{1}H NMR and ^{13}CNMR spectra were recorded on Varian 300 spectrometer in $CDCl_3$ solution. Mass spectra were obtained on Micromass ZAB-HS Magnetic mass spectrometer or ZAB-HS Double Focusing Mass Spectrometer, and HRMS were performed at analytical center of Sun Yat-Sen University on Thermo MAT95XP mass spectrometer or Peking University on Bruck APEX IV mass spectrometer. The IR spectra were measured on a Nicolet/Nexus 670 FT-IR spectrometer. Unless otherwise noted, materials obtained from commercial suppliers were used without further purification. **2a**,[1] **2b**[2] and **2c**[3] were prepared by literature procedures.

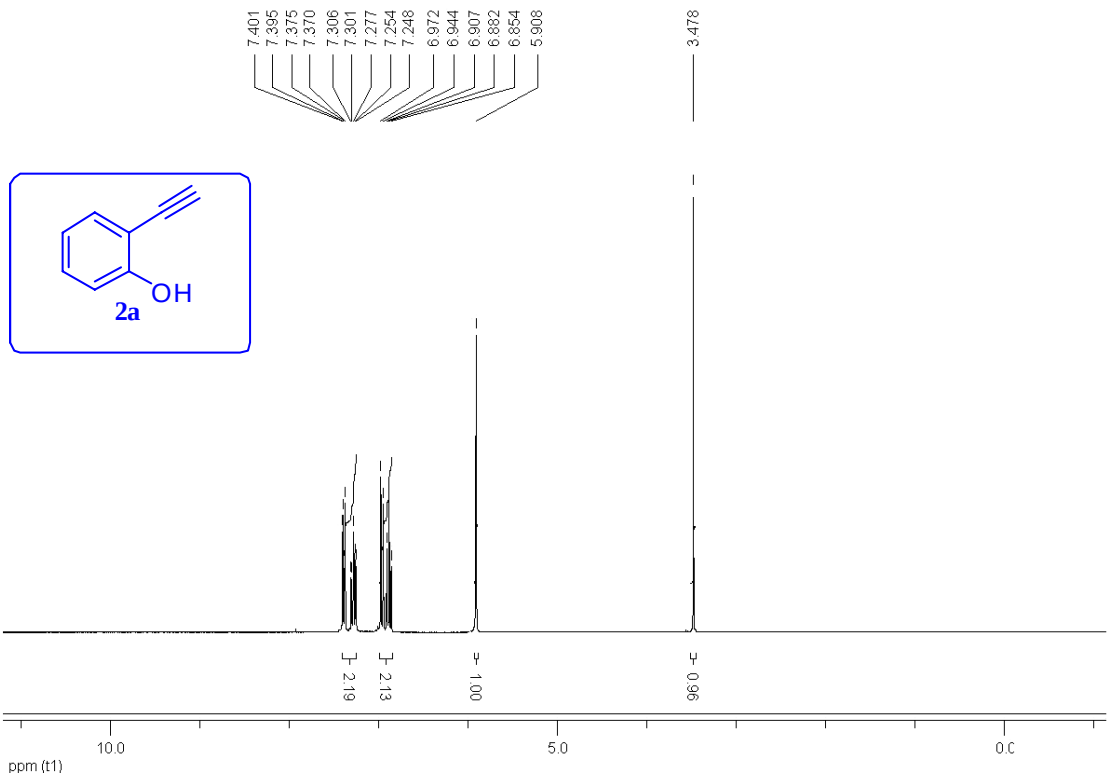
Reference

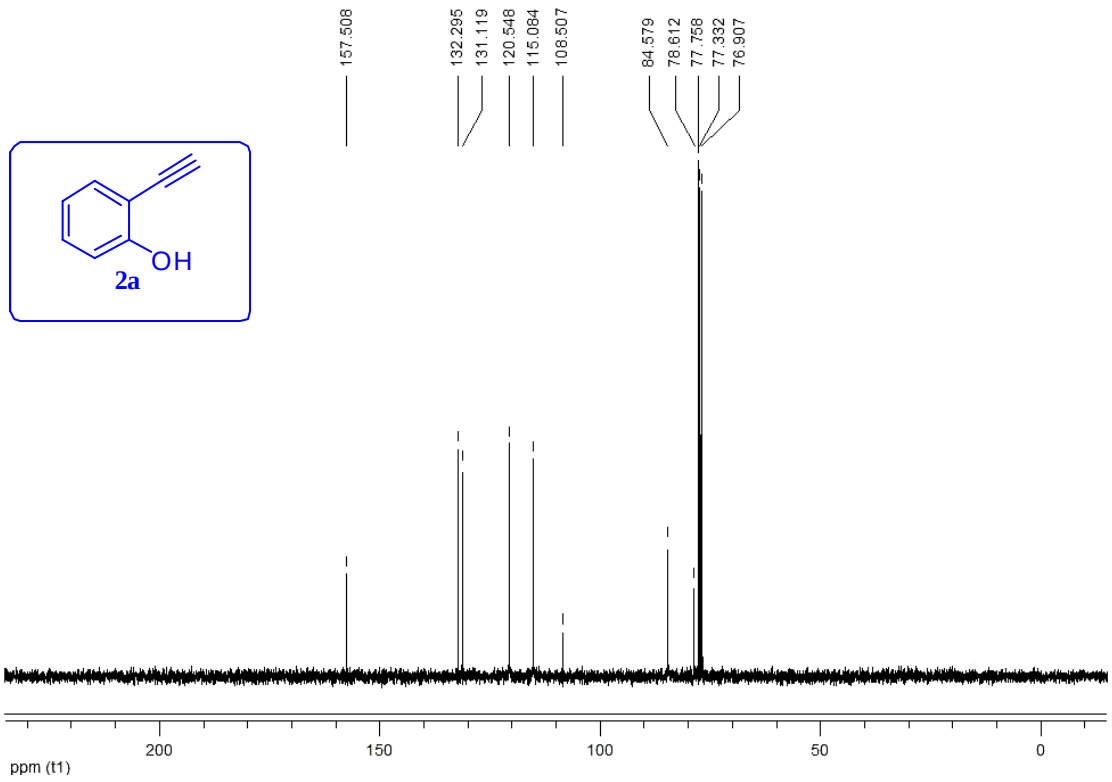
1 G. W. Kabalka, L.-L. Zhou, L. Wang andR. M. Pagni, *Tetrahedron* **2006**, *62*, 857.

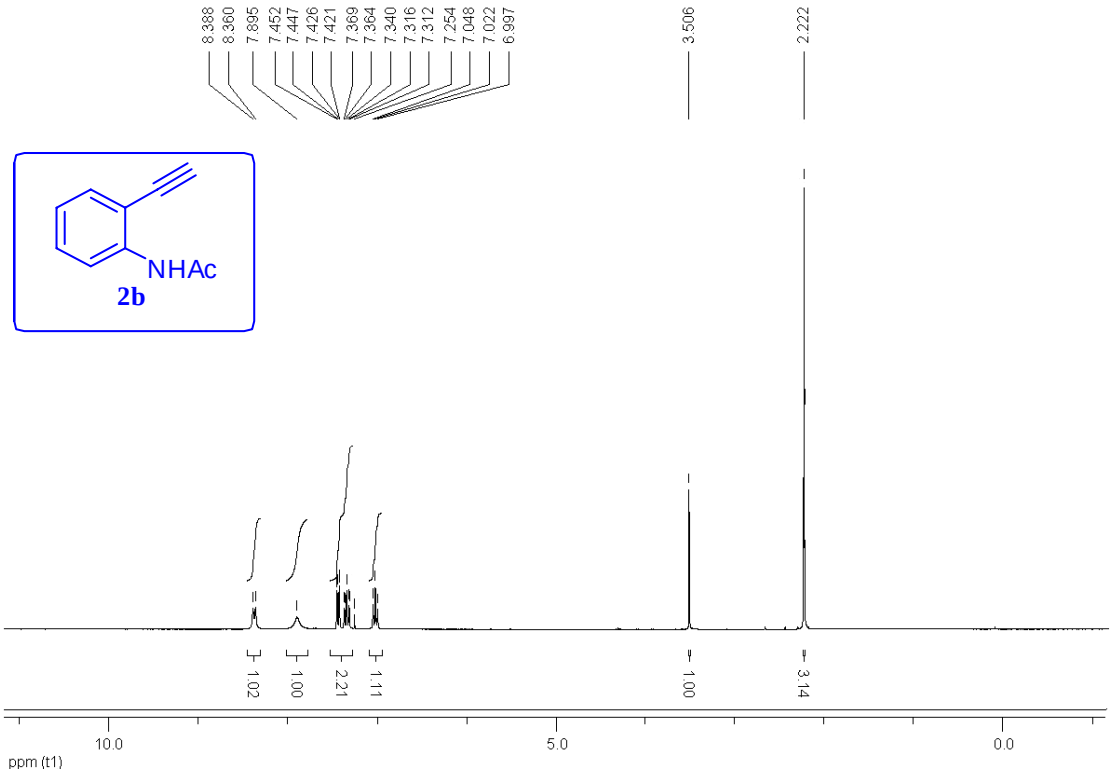
2 Z. Chen, D. Zheng and J. Wu, *Org. Lett*. **2011**, *13*, 848.

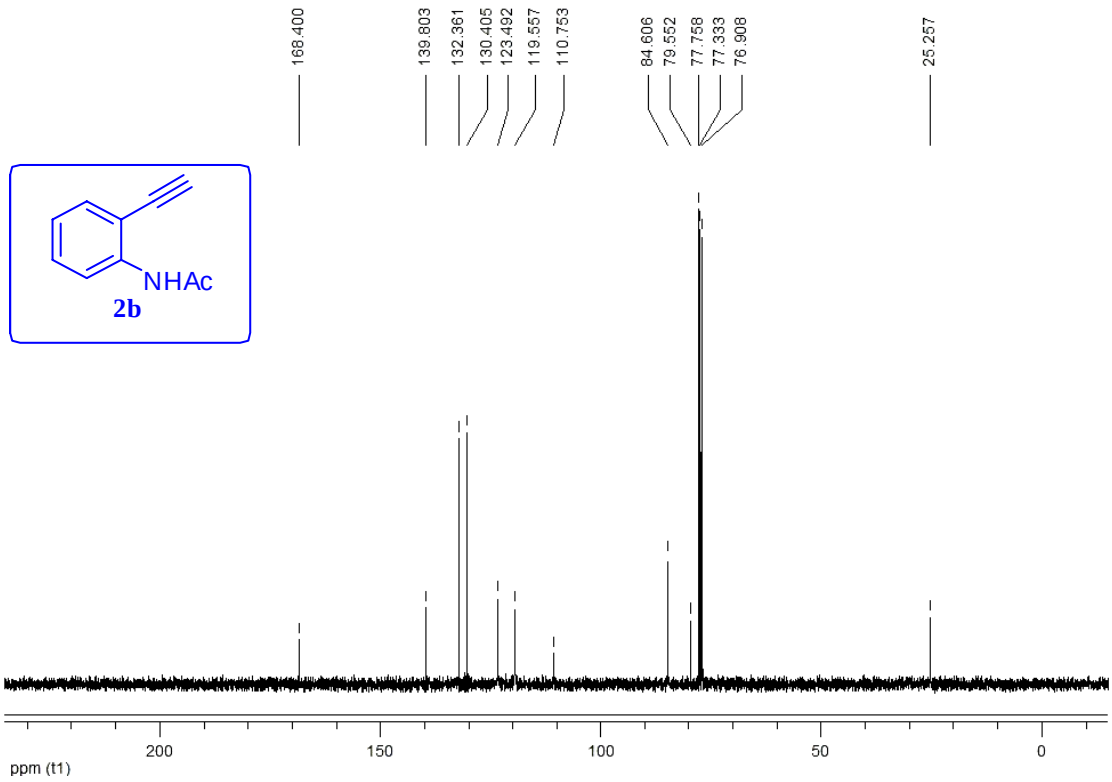
3 Y. Yin, W. Ma, Z. Chai and G. Zhao, *J. Org. Chem.* **2007**, *72*, 5731.

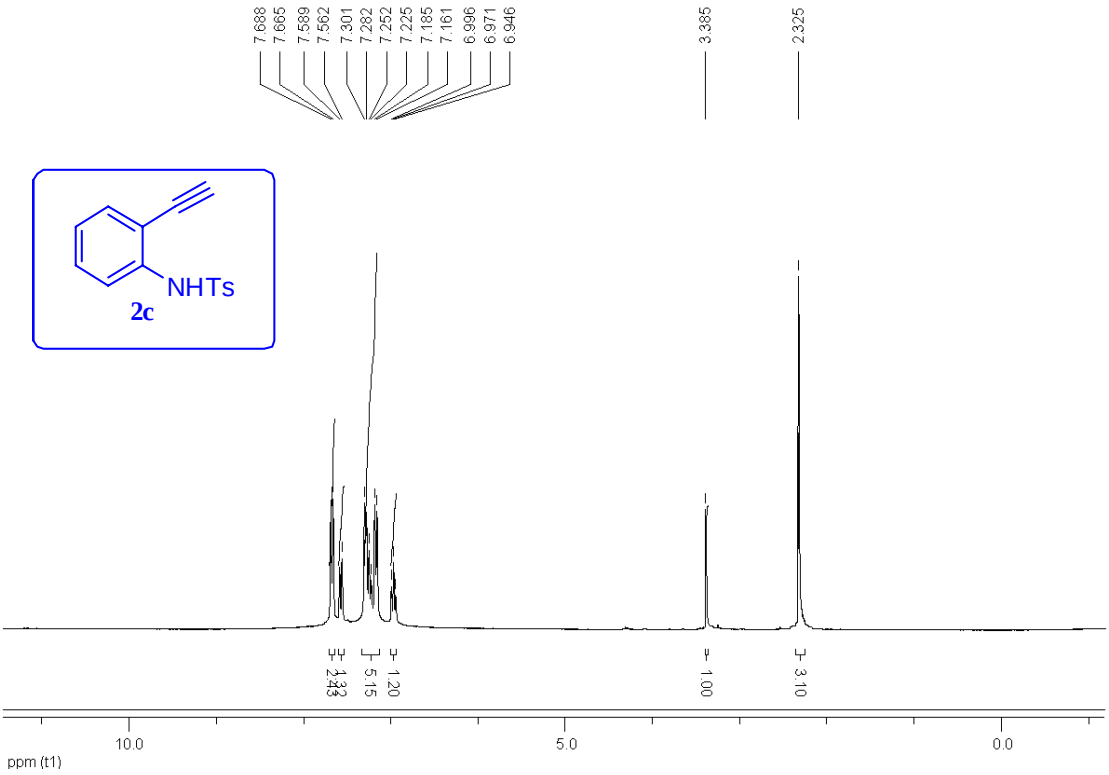
^{1}H and ^{13}C NMR Spectra







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6.946
3.385
2.325
NHTs
2c
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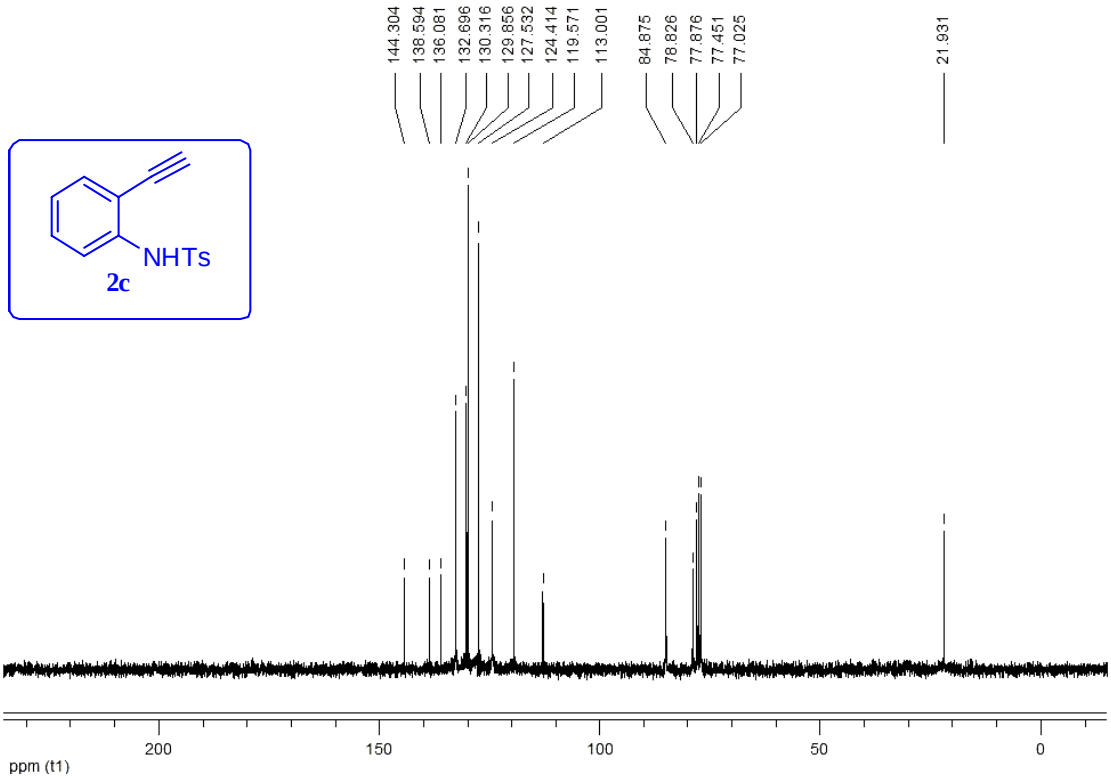
1.20
1.00
3.10
10.0
5.0
0.0
ppm (t1)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NHTs
2c
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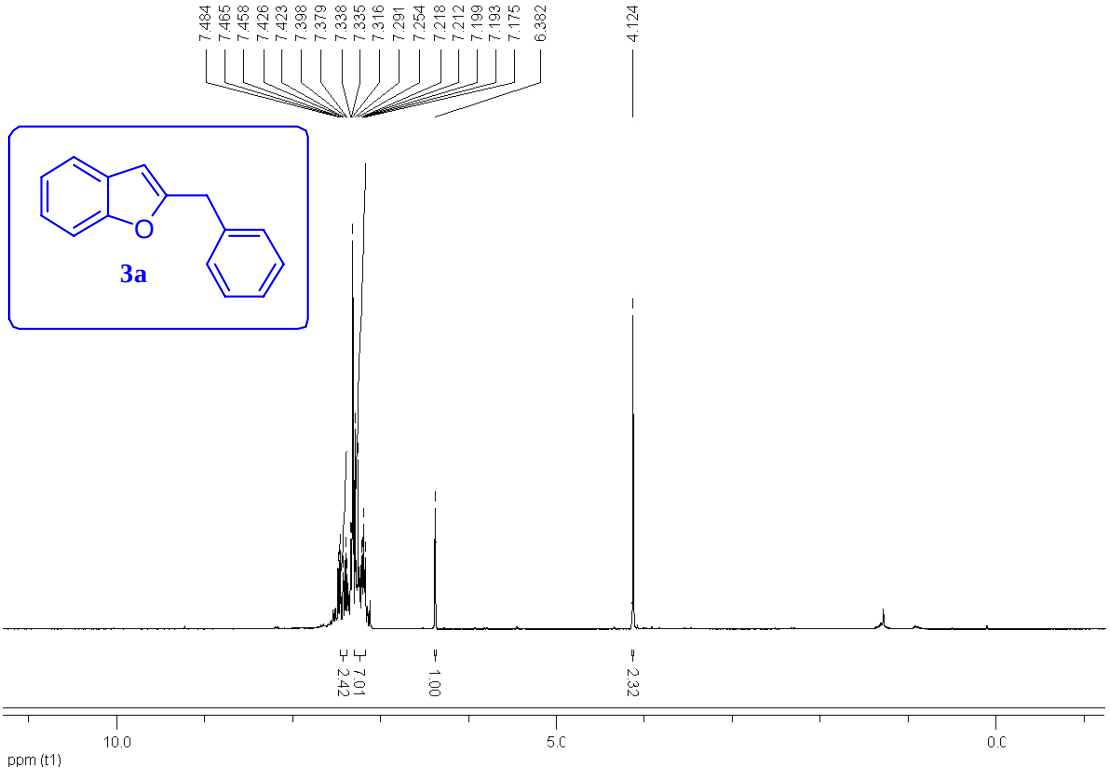
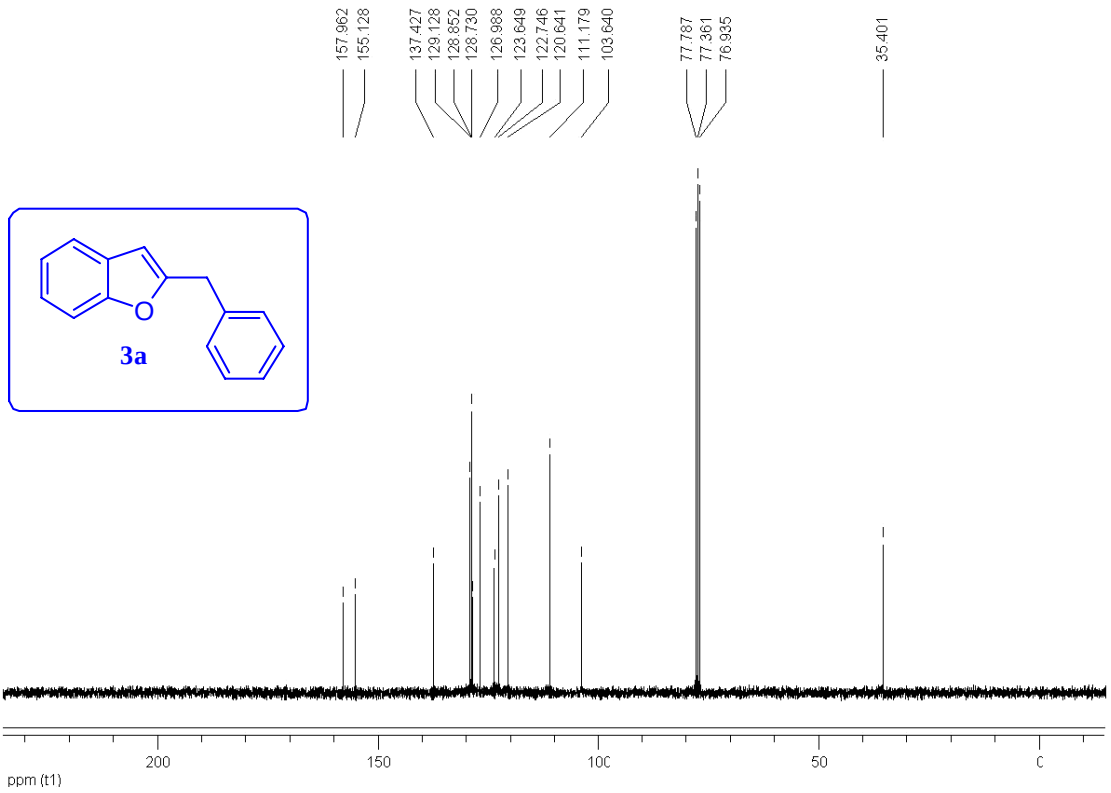
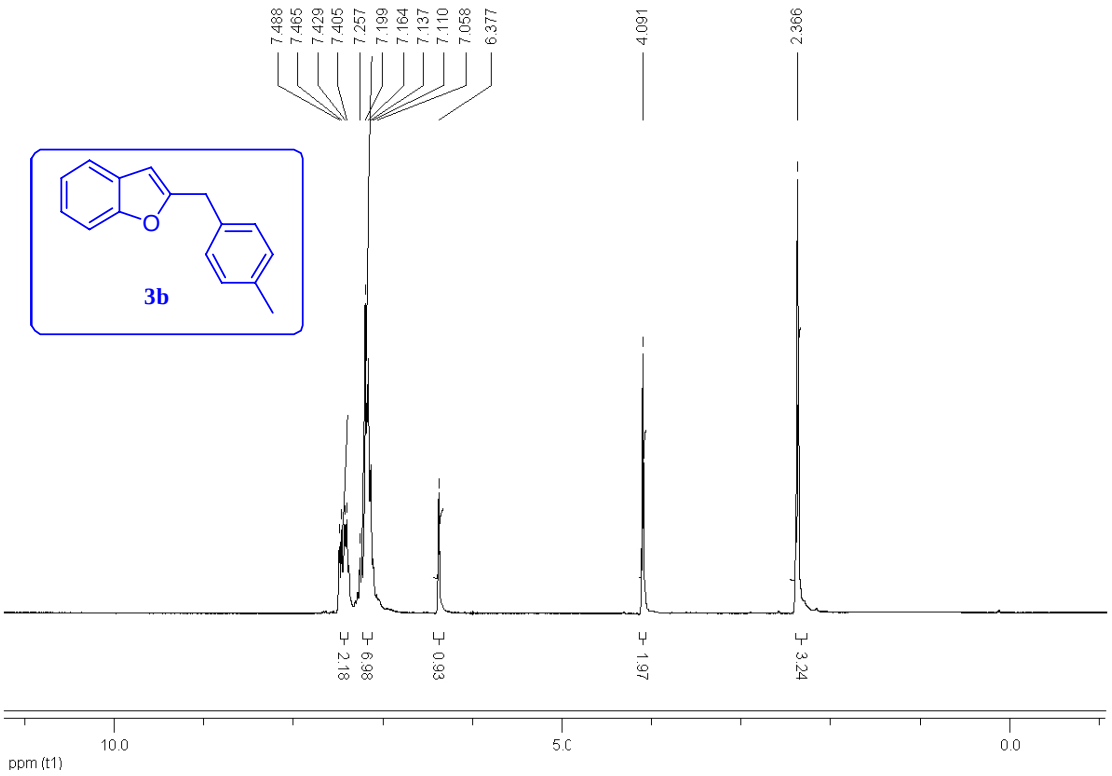
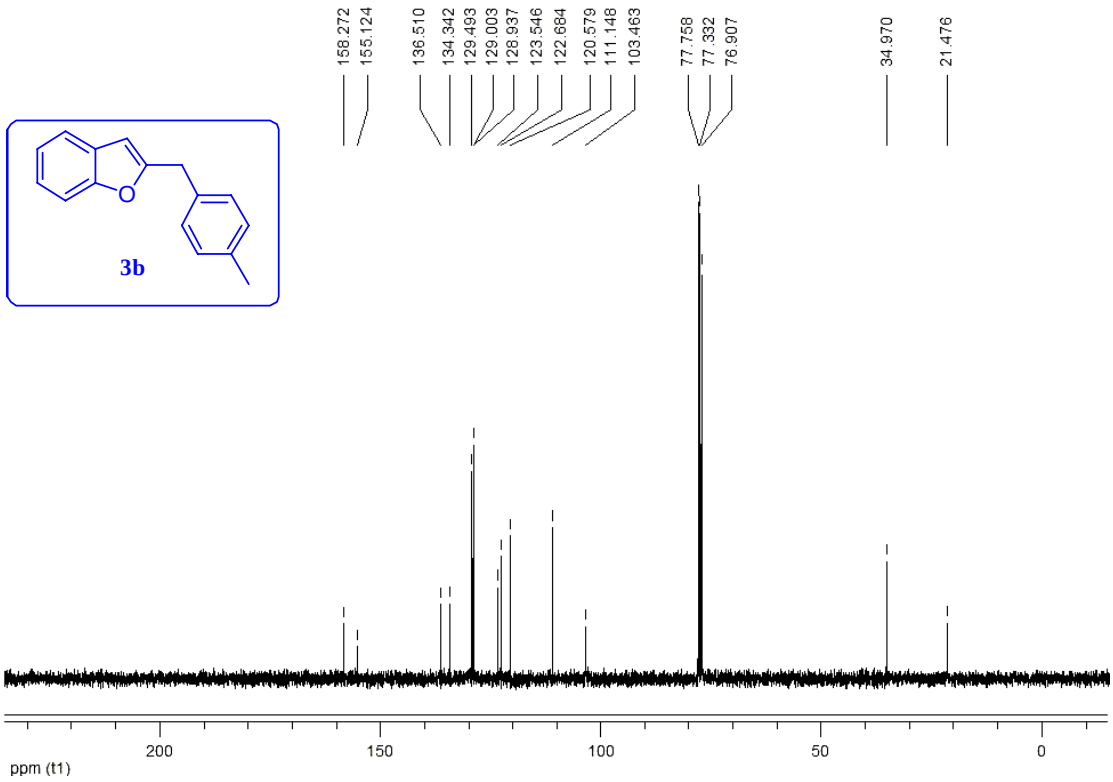
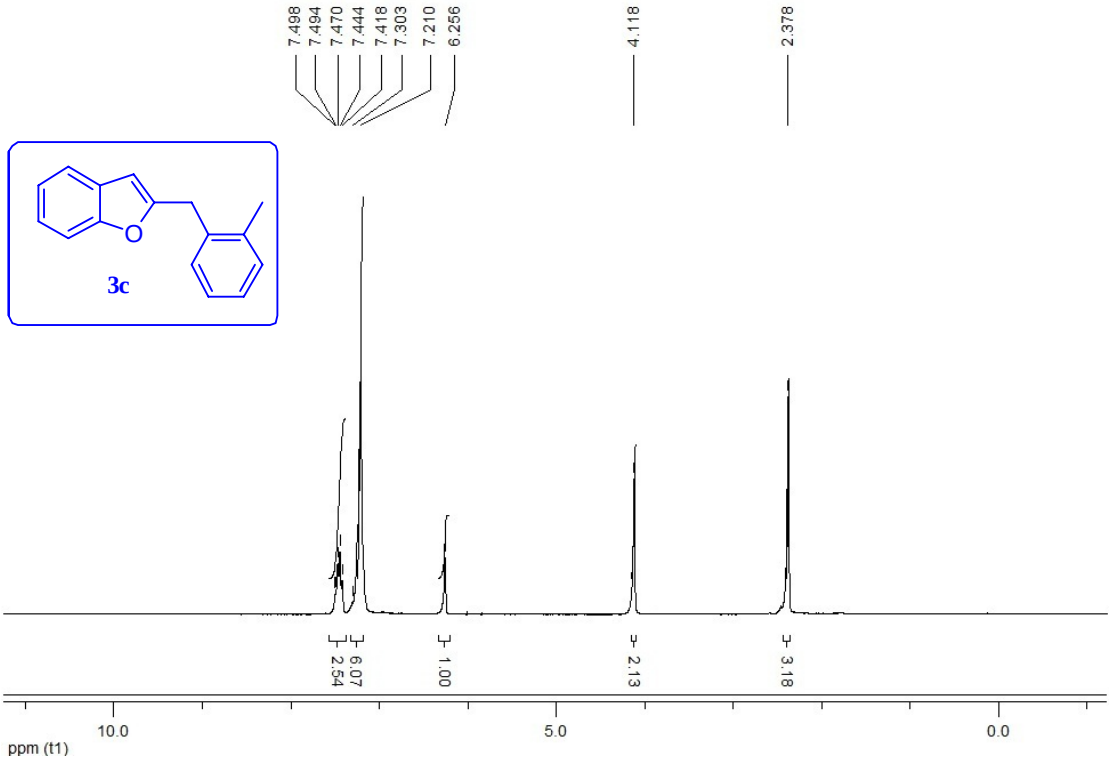
150
100
50
0
ppm (t1)

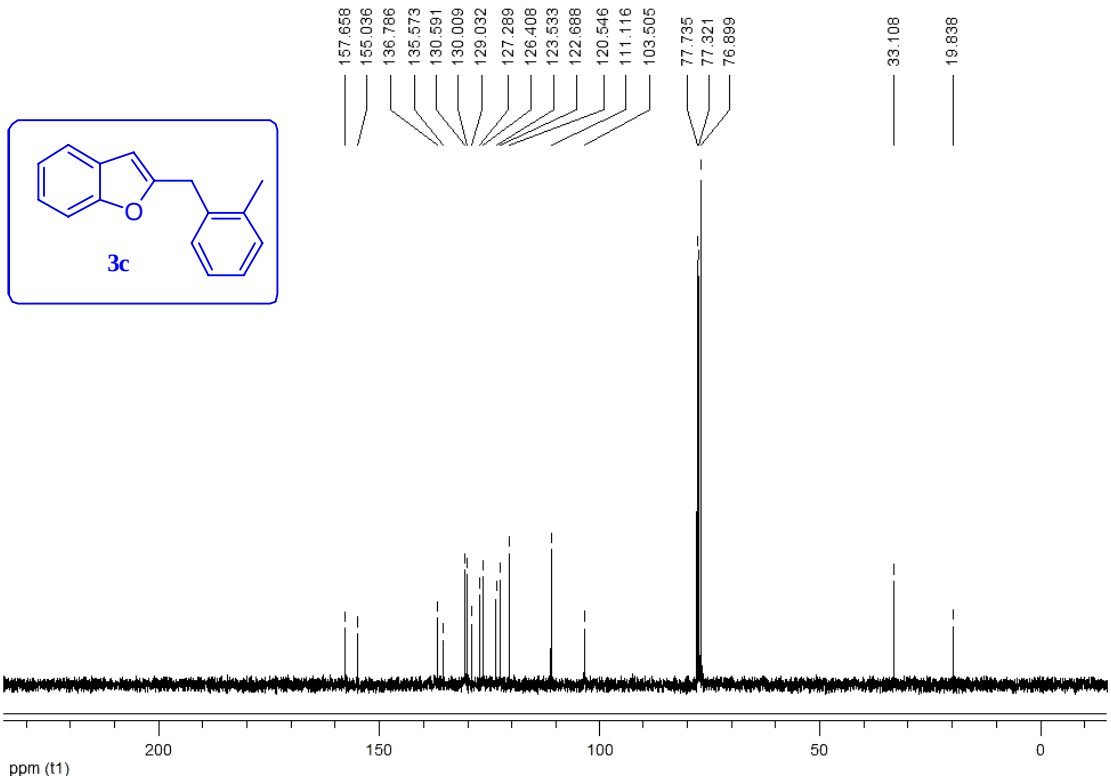


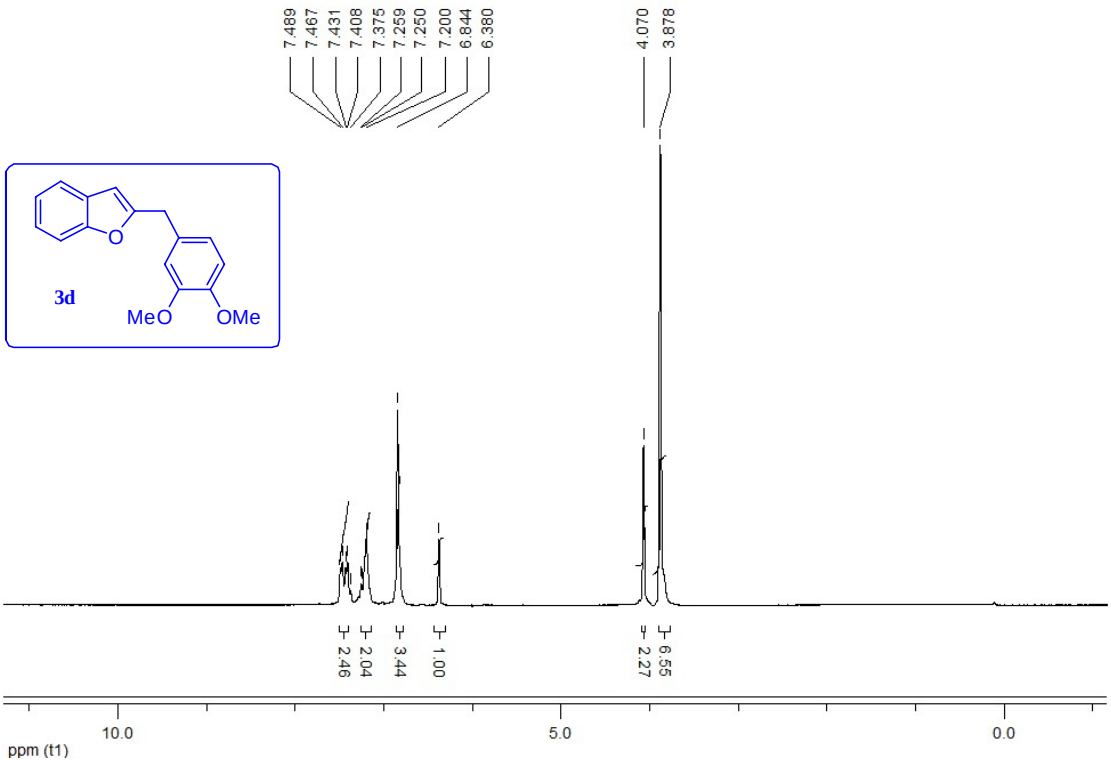


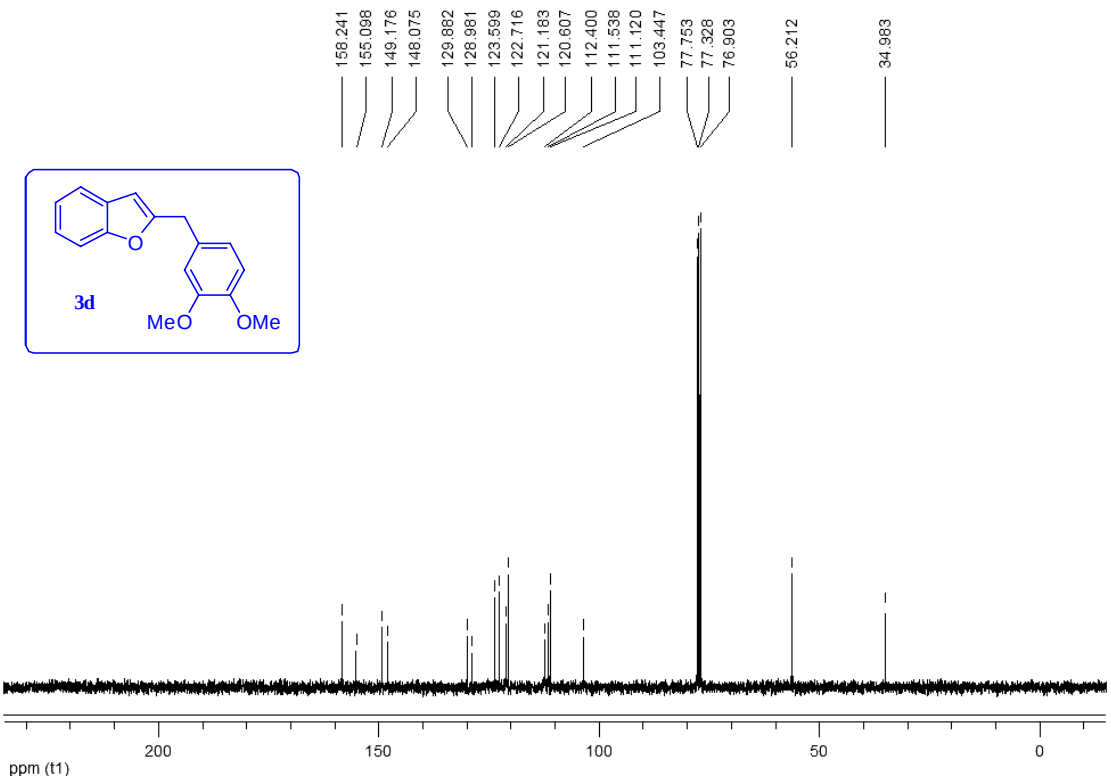


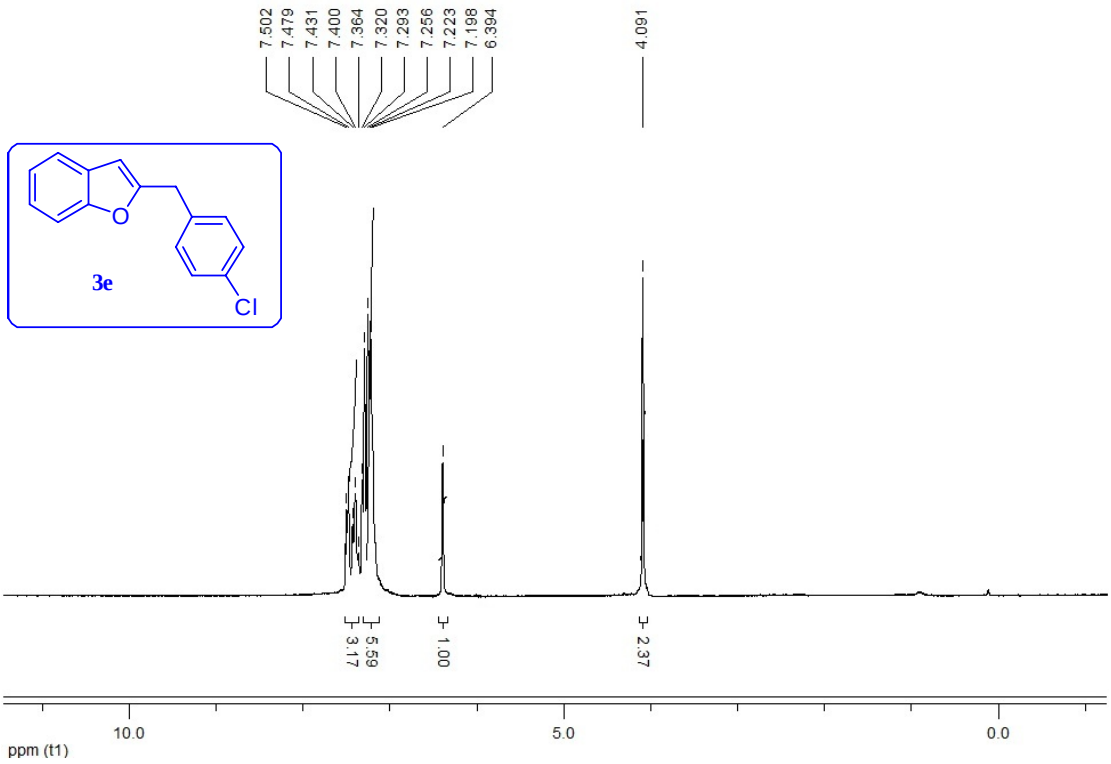


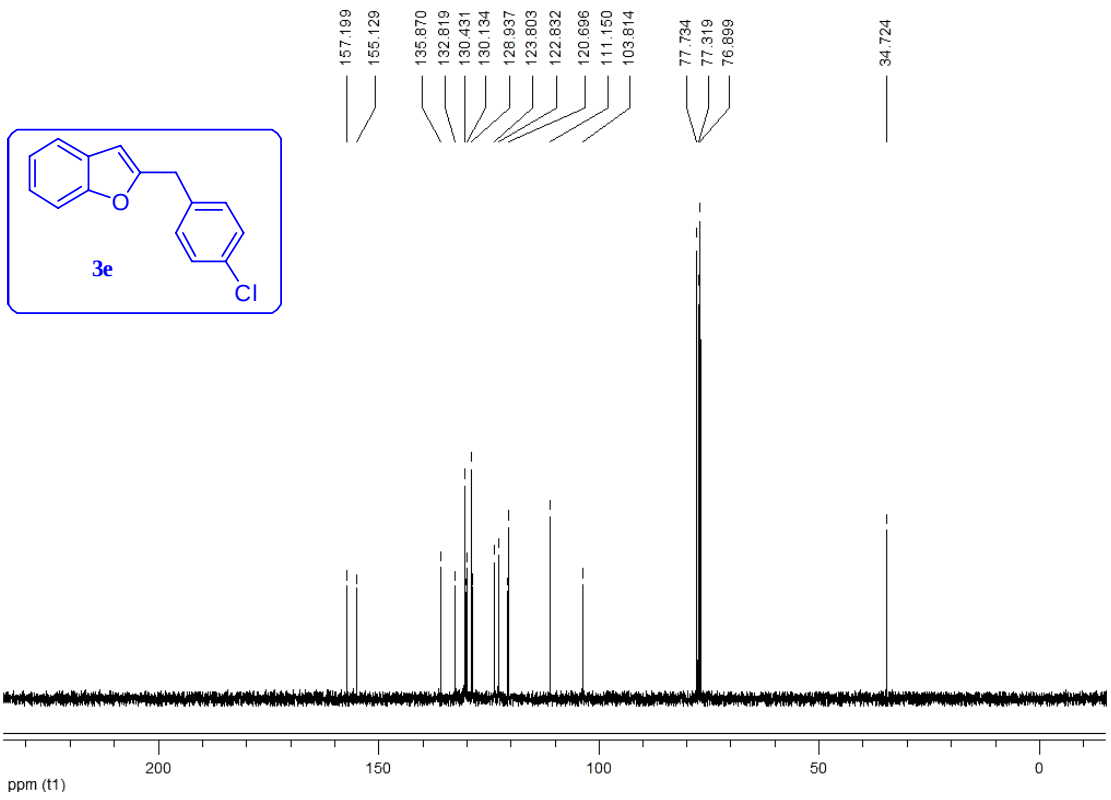


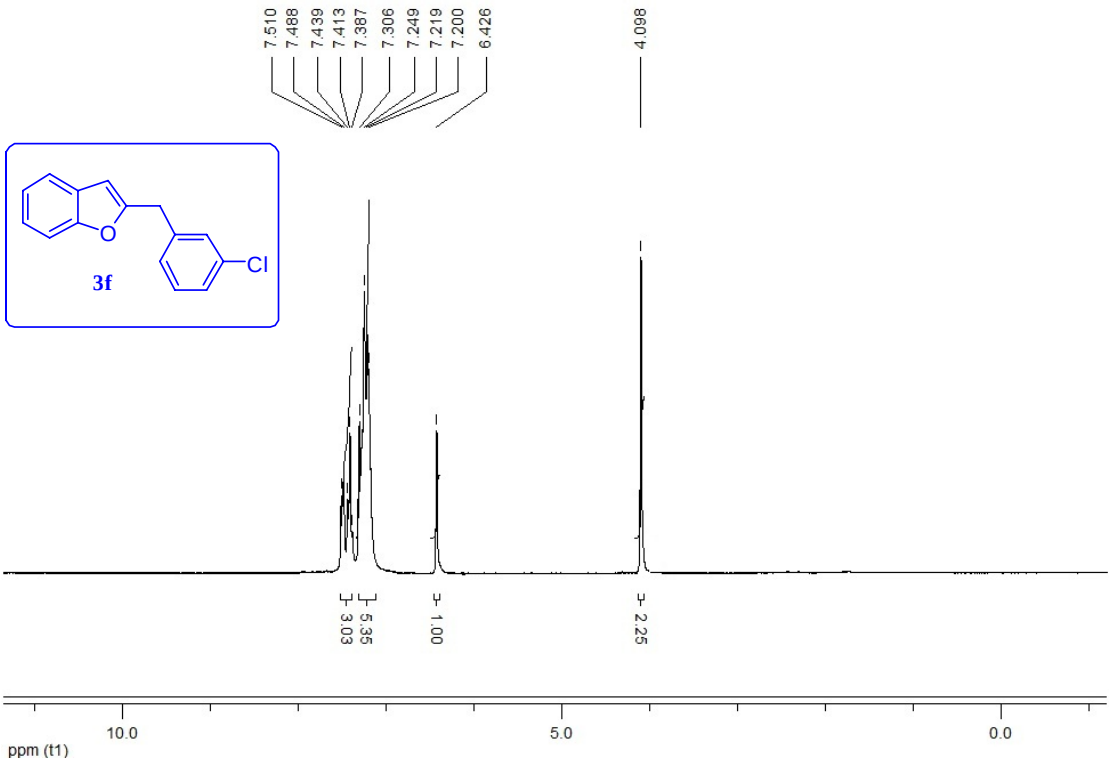


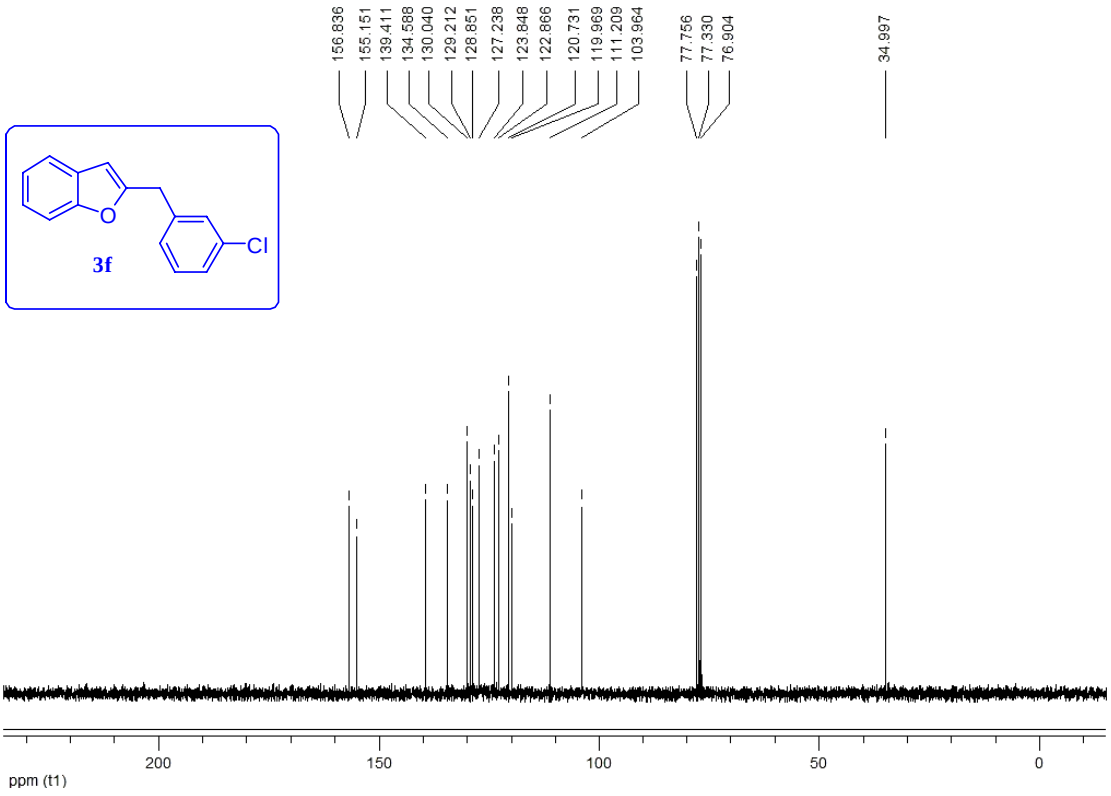


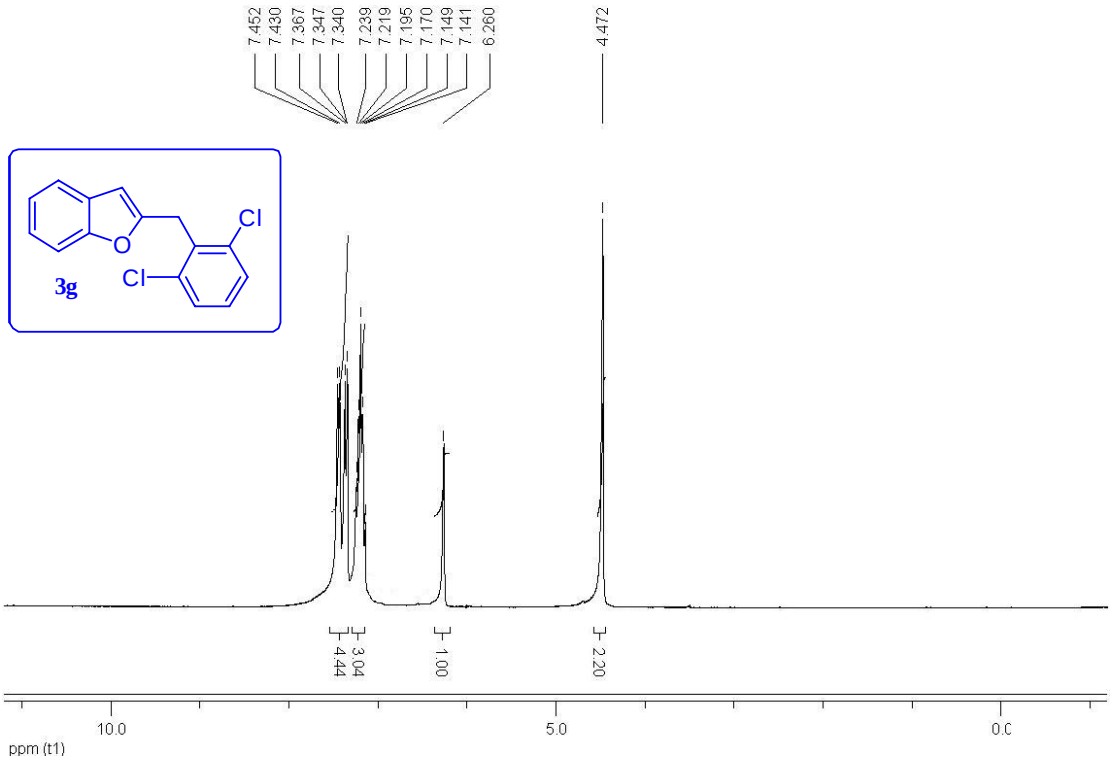


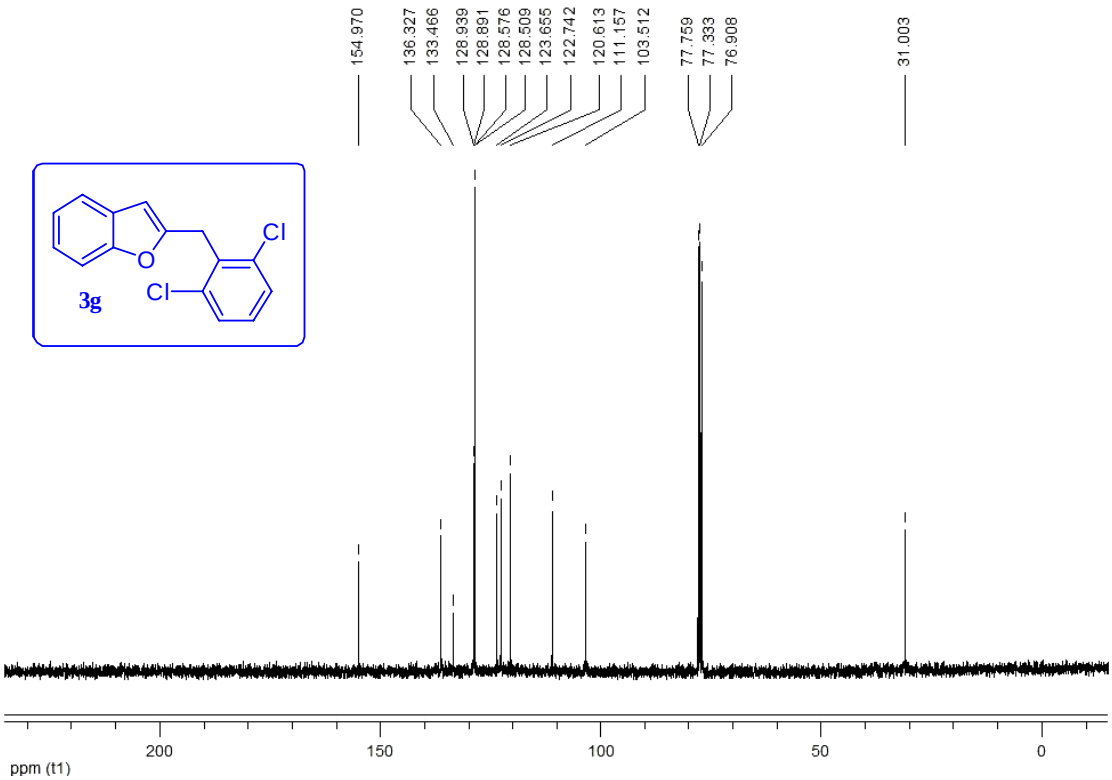


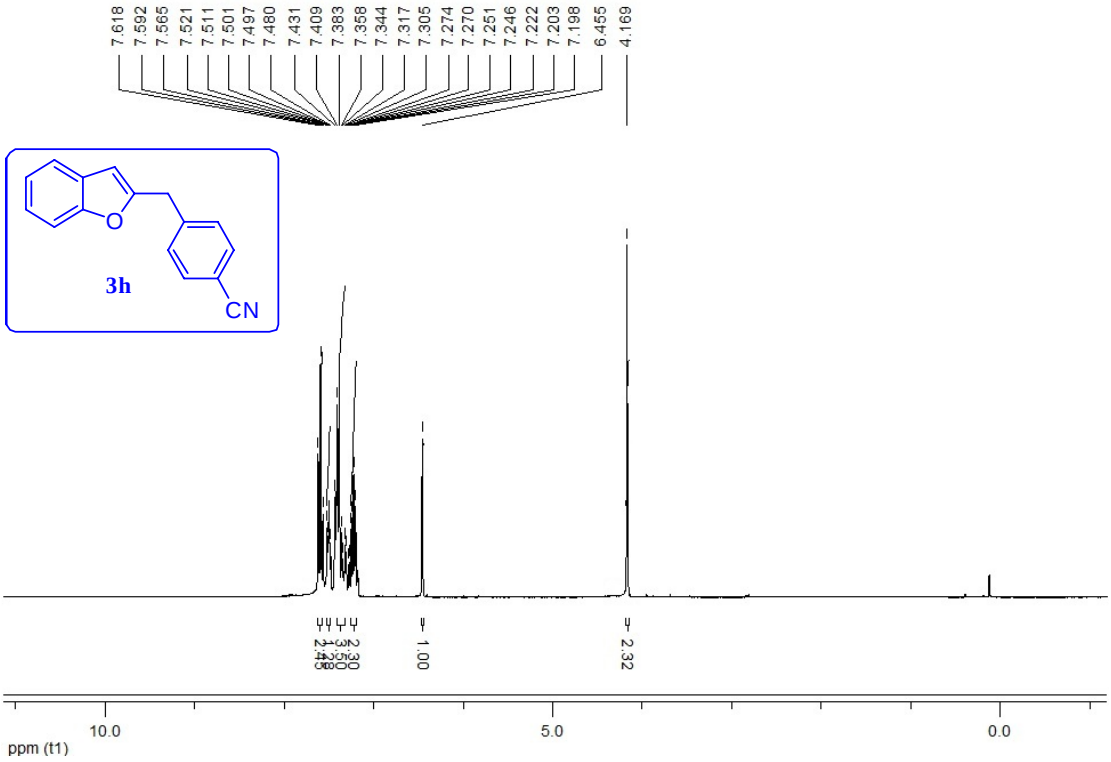


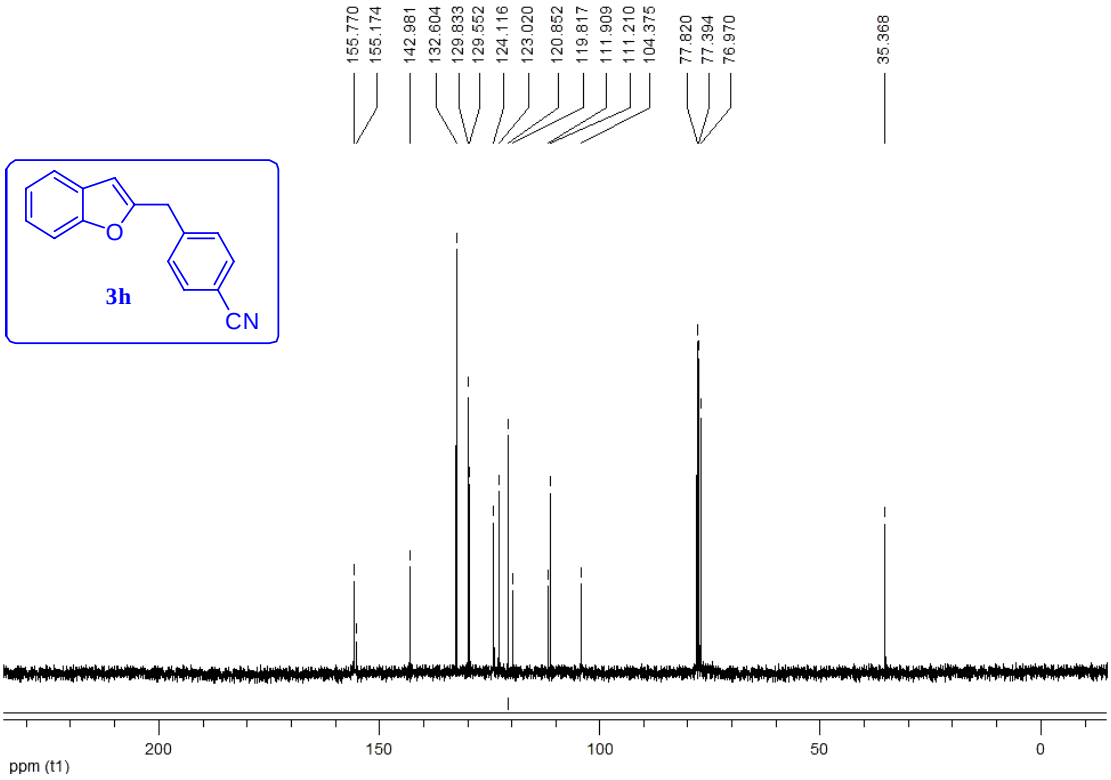


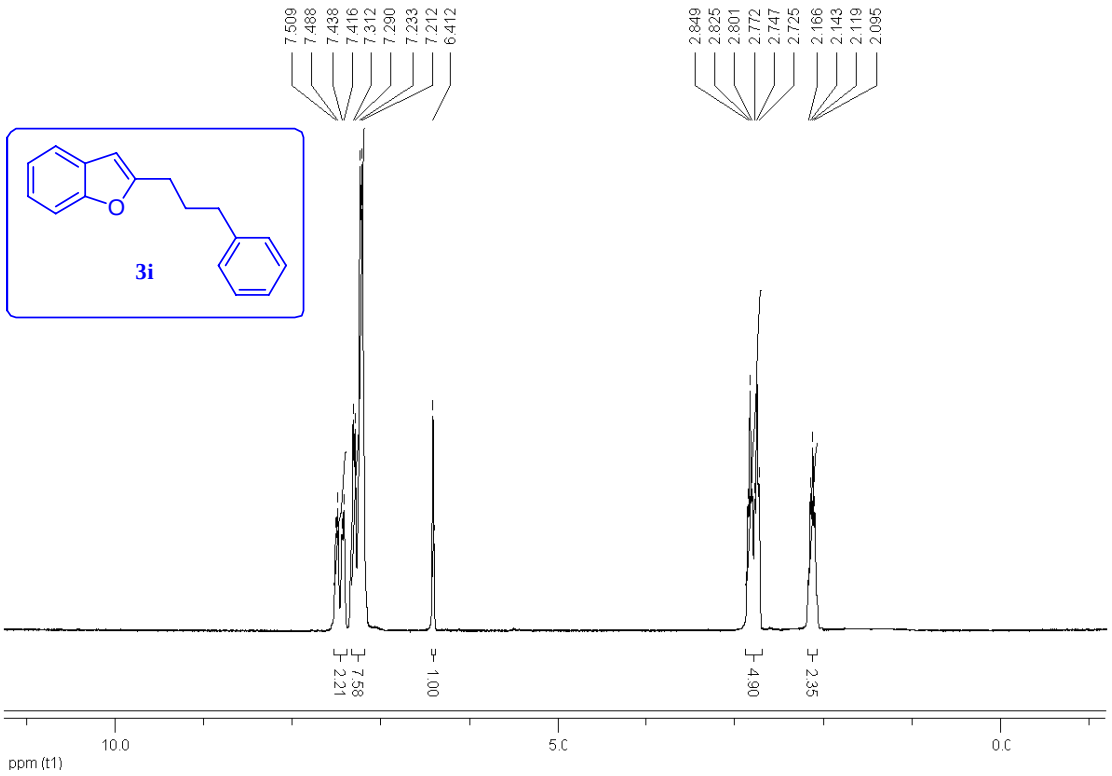


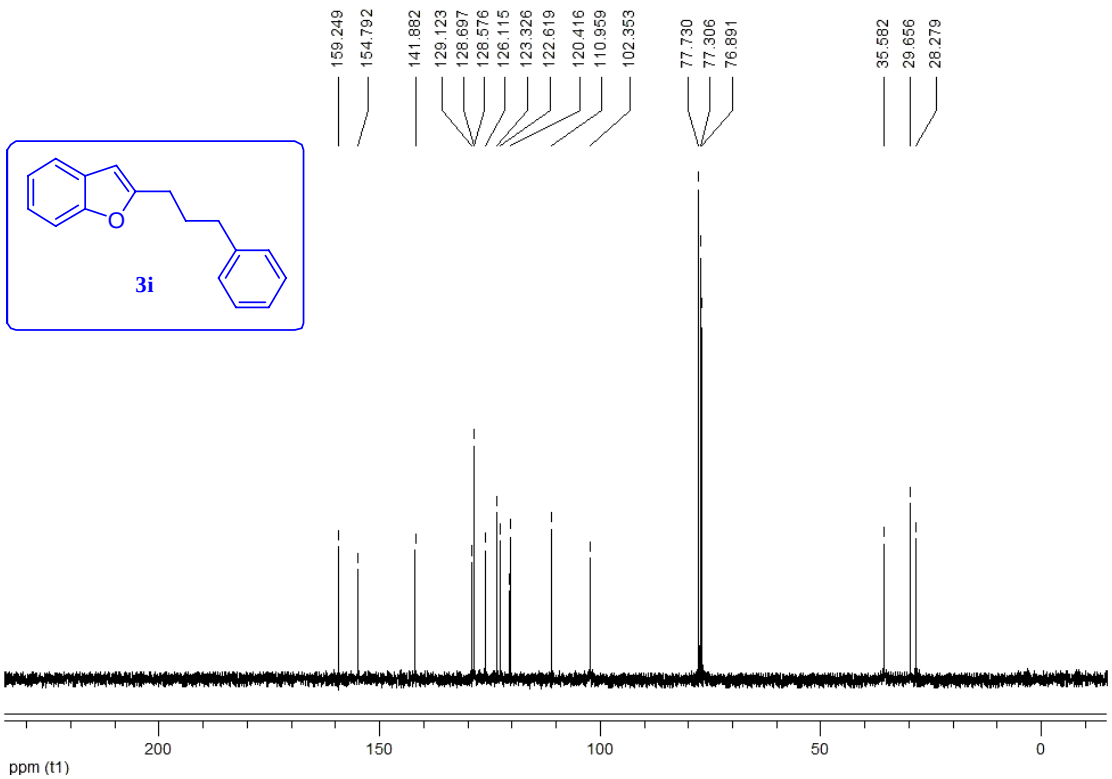


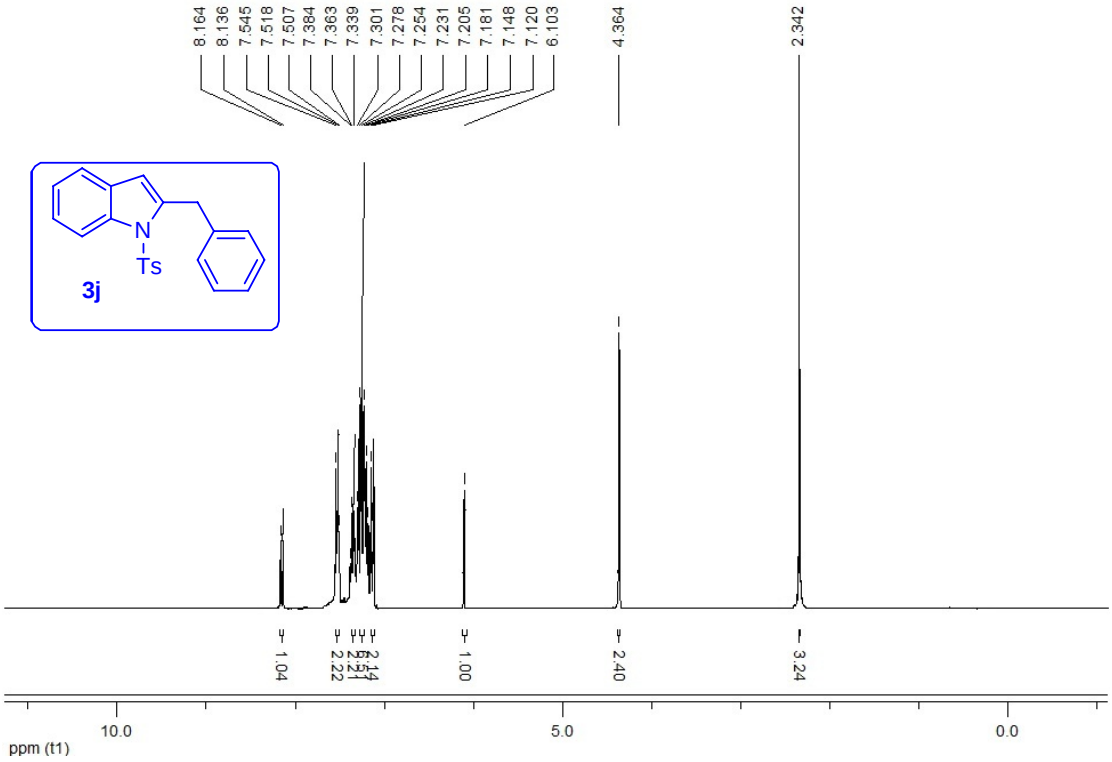


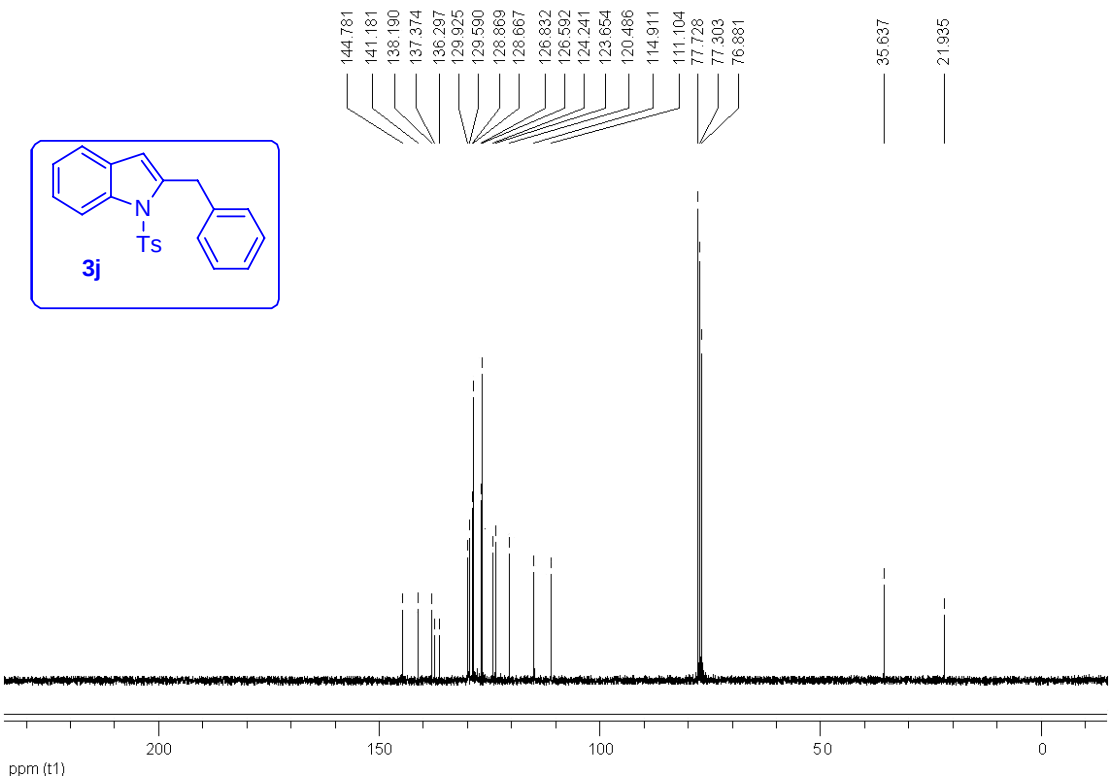


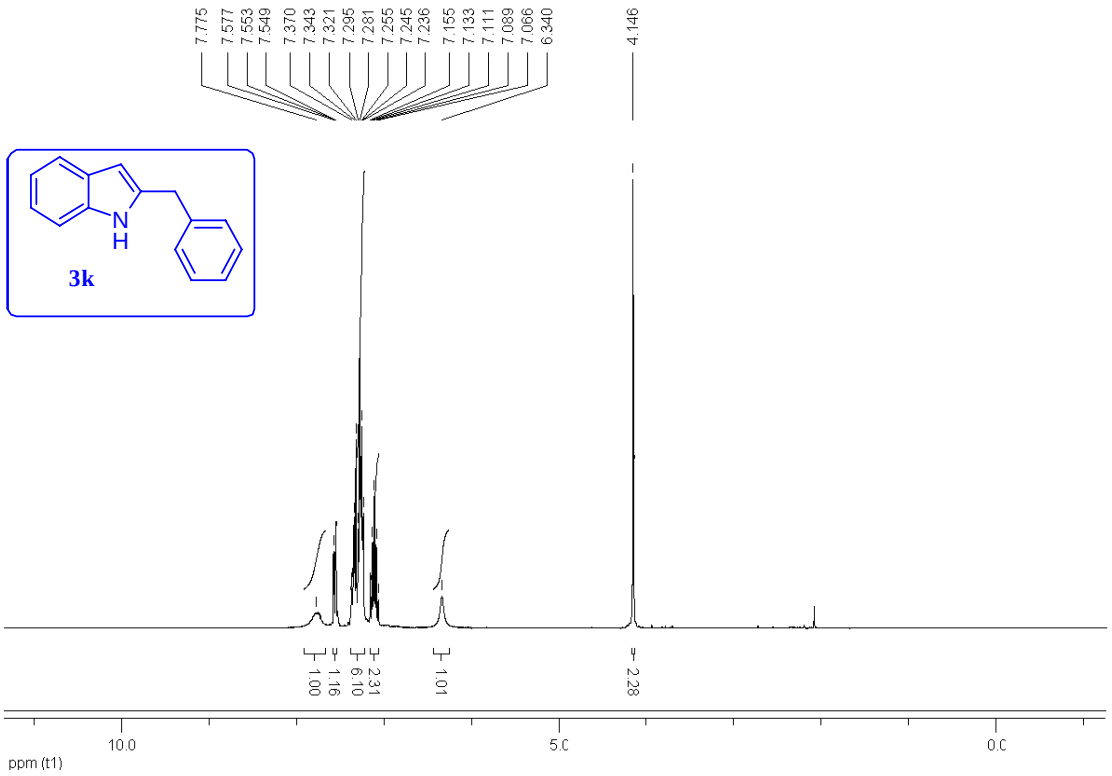


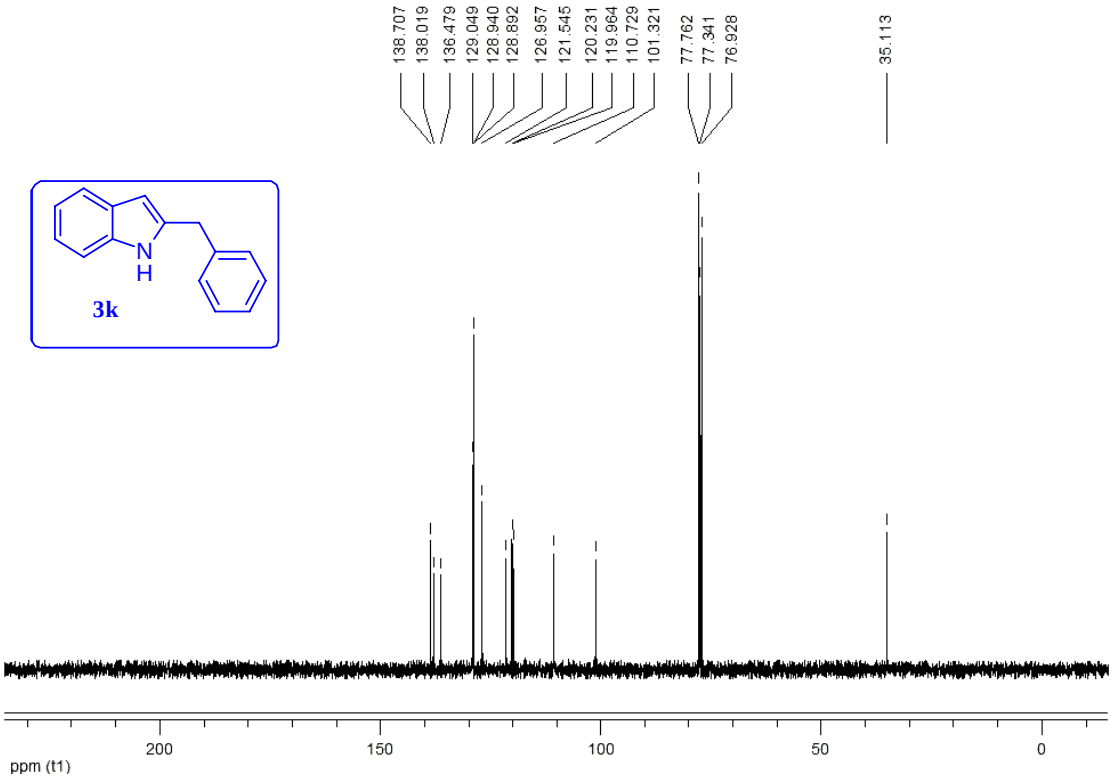


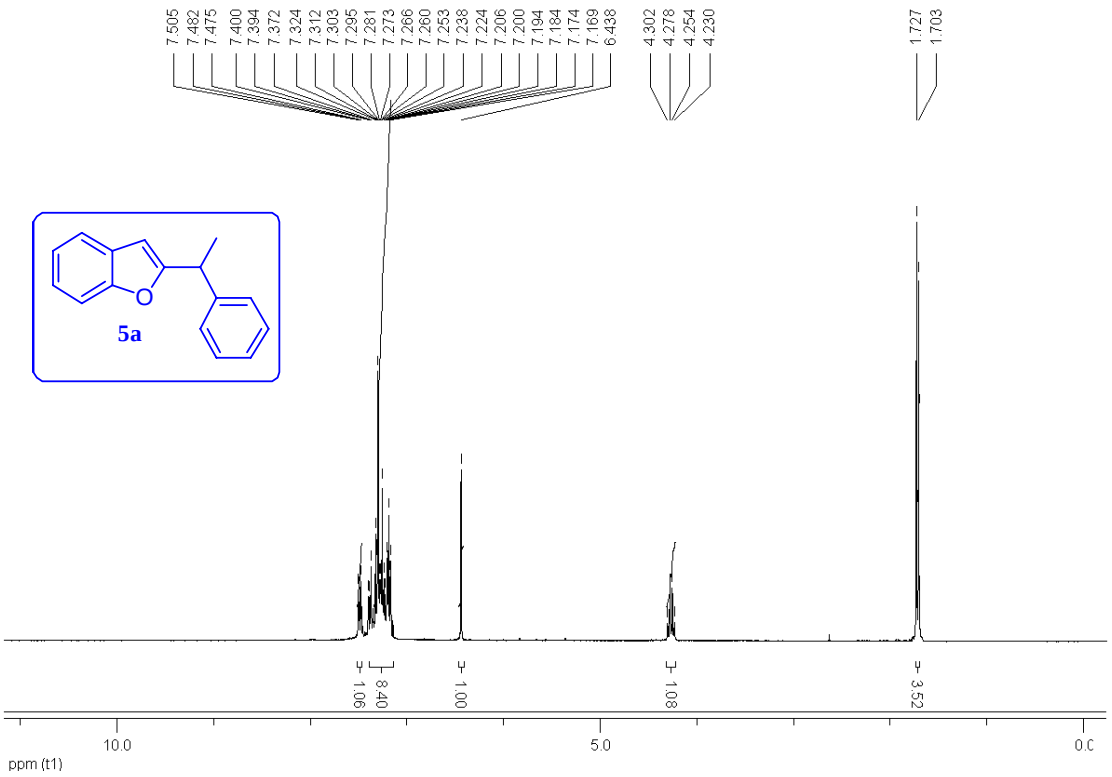








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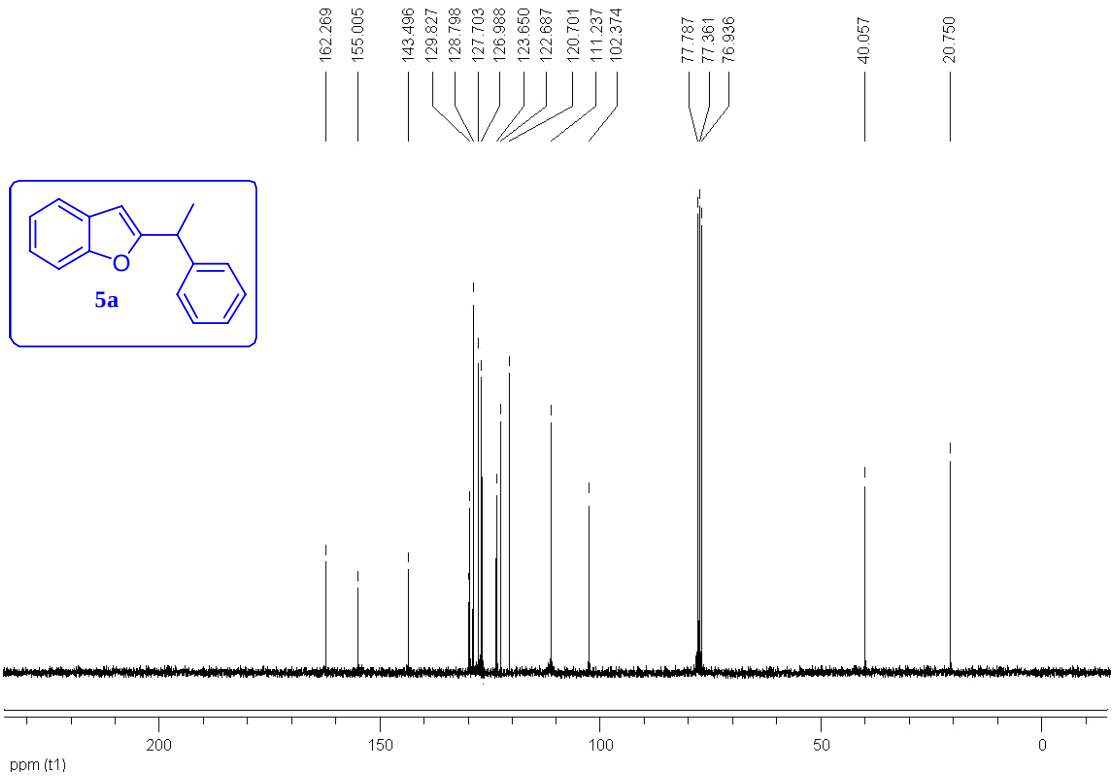
ppm (t1)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ppm (t1)