CuI/TMEDA-Catalyzed Annulation of 2-Bromo Alkynylbenzenes with Na₂S: Synthesis of Benzo[*b*]thiophenes

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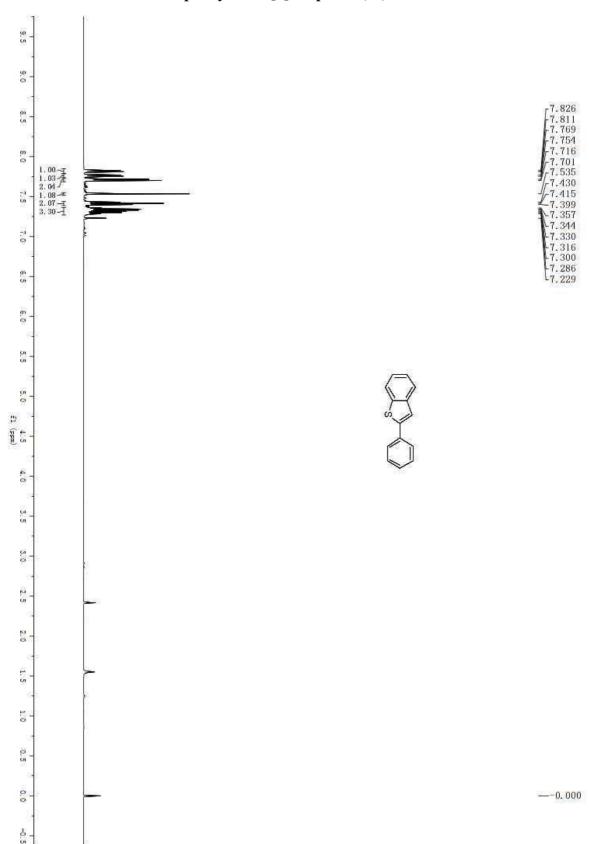
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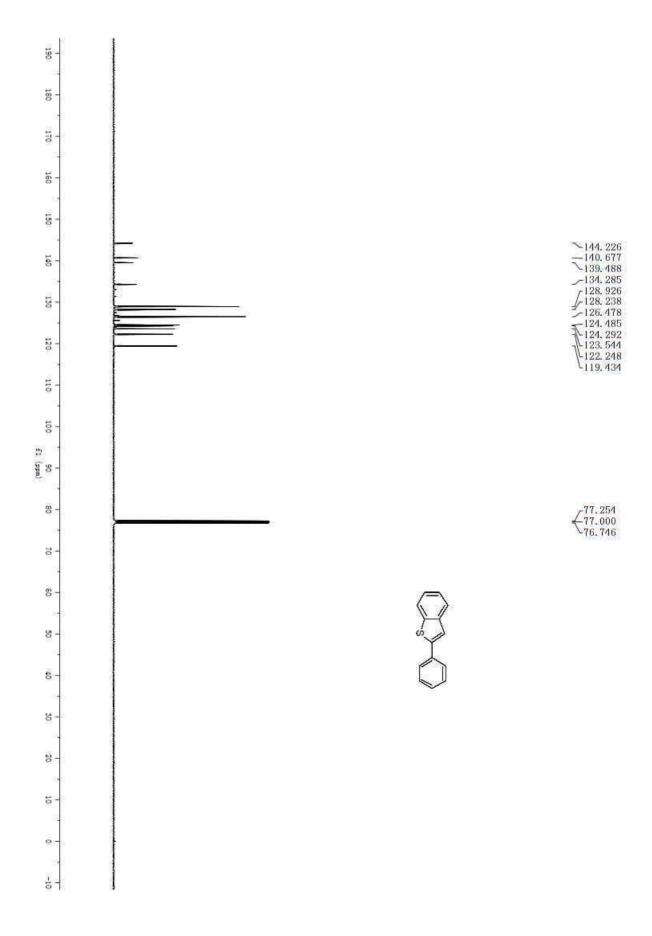
Supporting Information

Contents:

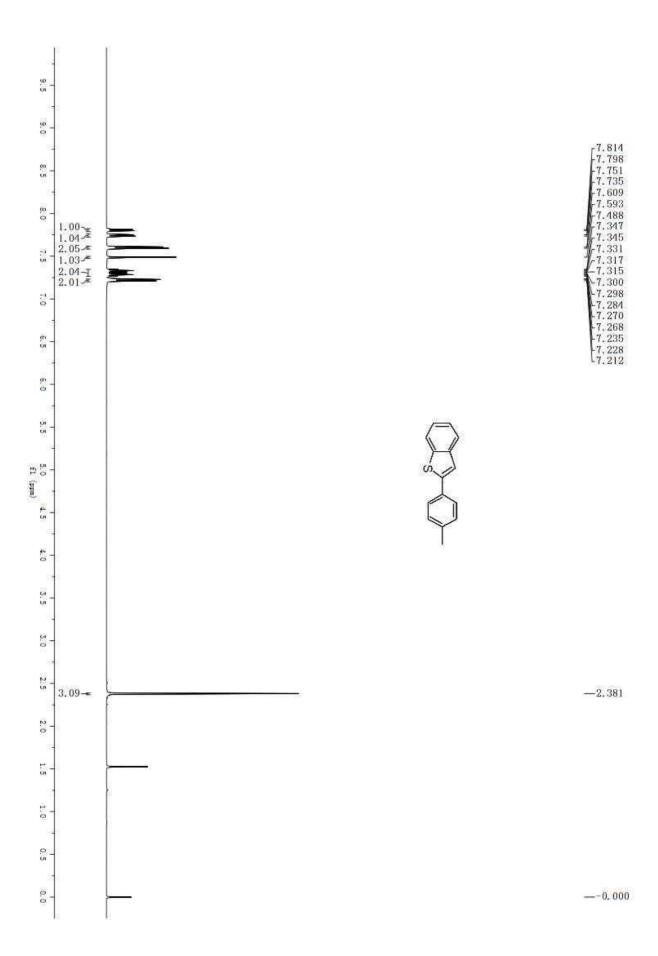
¹H and ¹³C NMR Spectra of compounds **2a-2v**

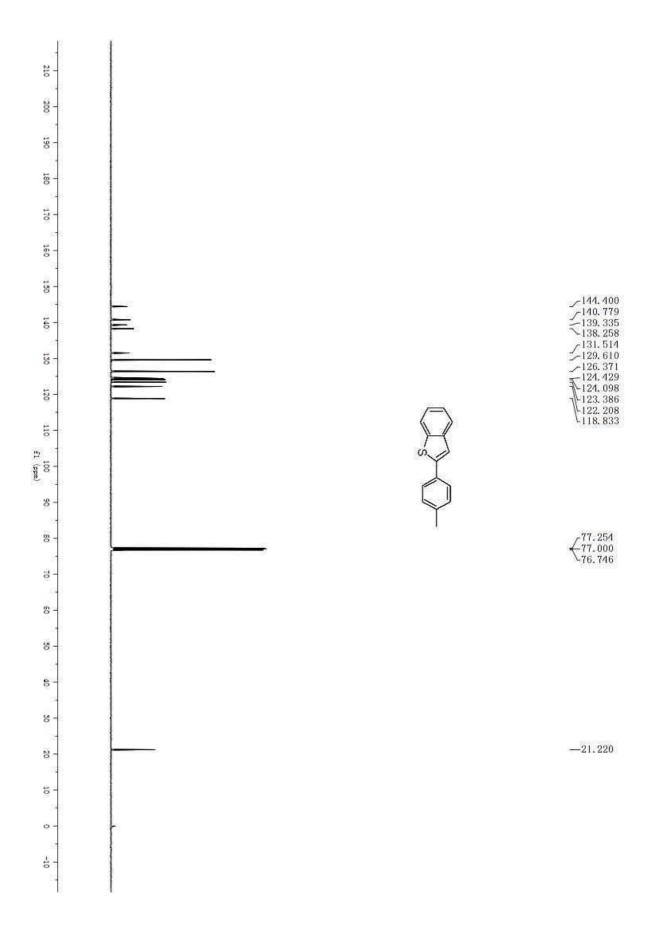
S2-S42



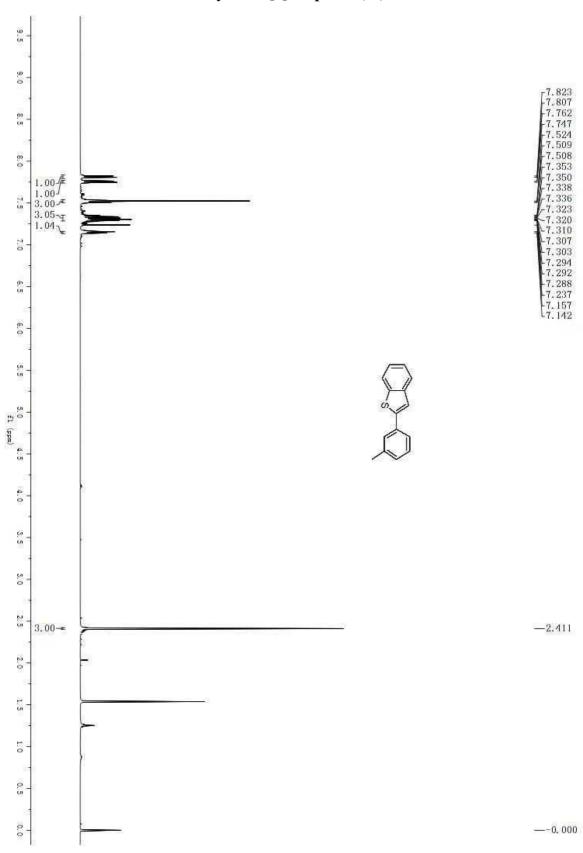


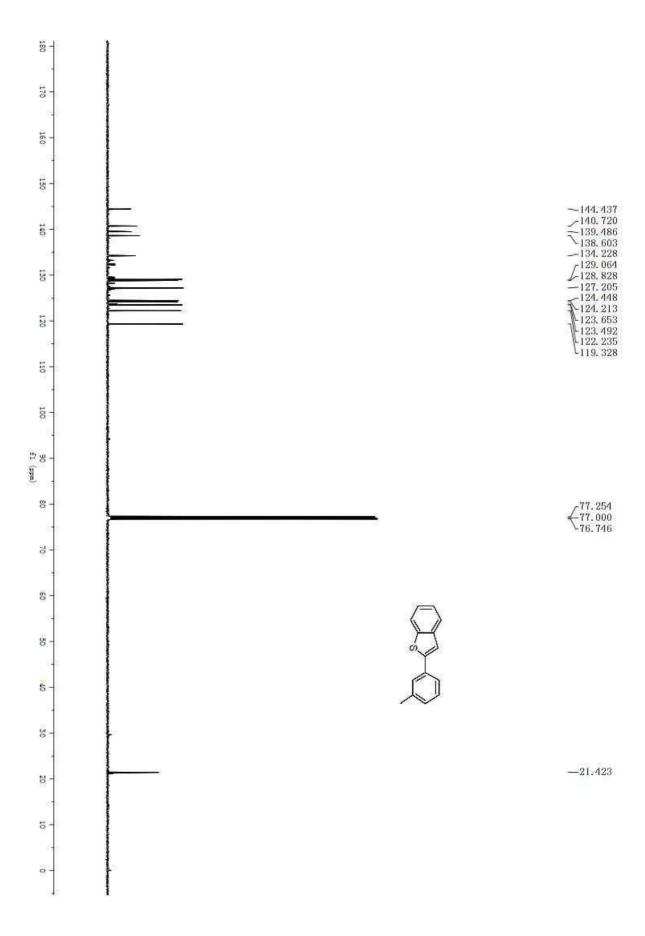
2-p-tolylbenzo[b]thiophene (2b)



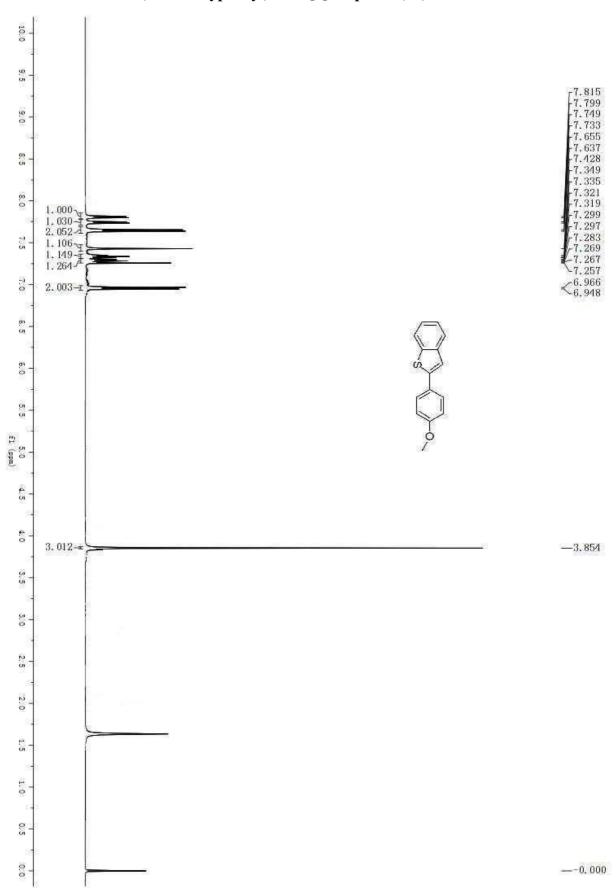


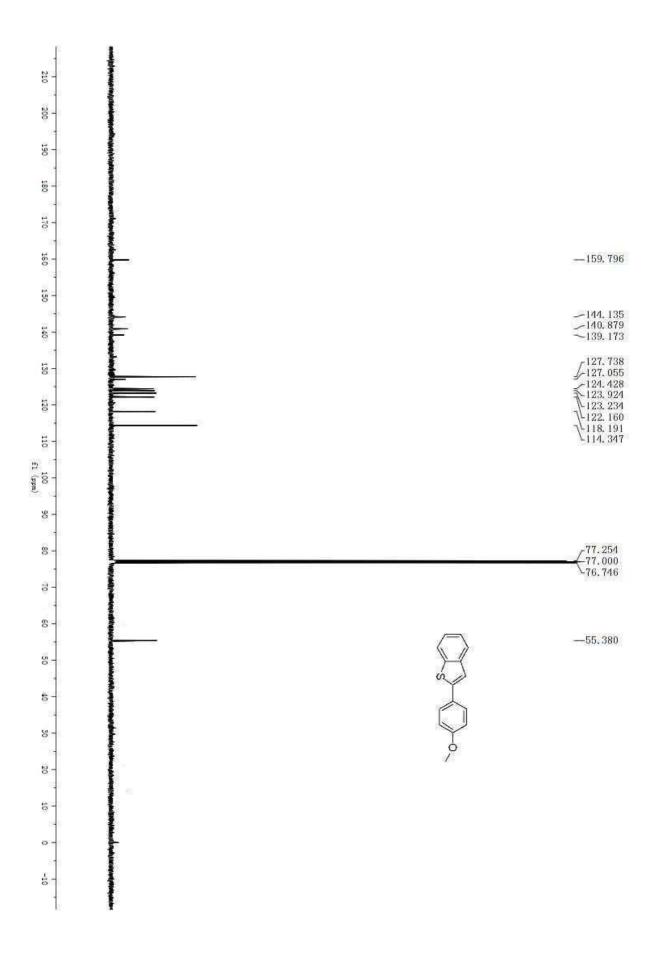
${\bf 2\text{-}m\text{-}tolylbenzo} [b] {\bf thiophene} \ ({\bf 2c})$



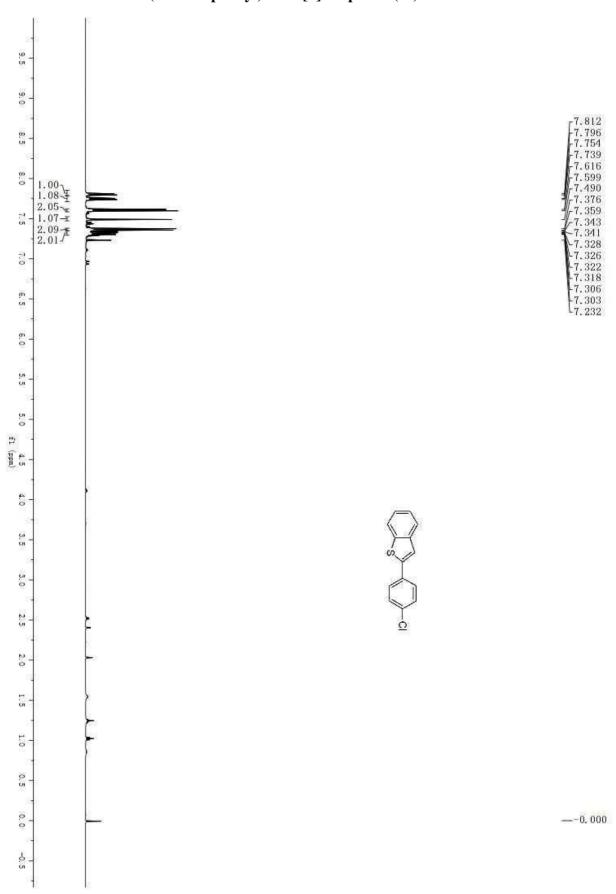


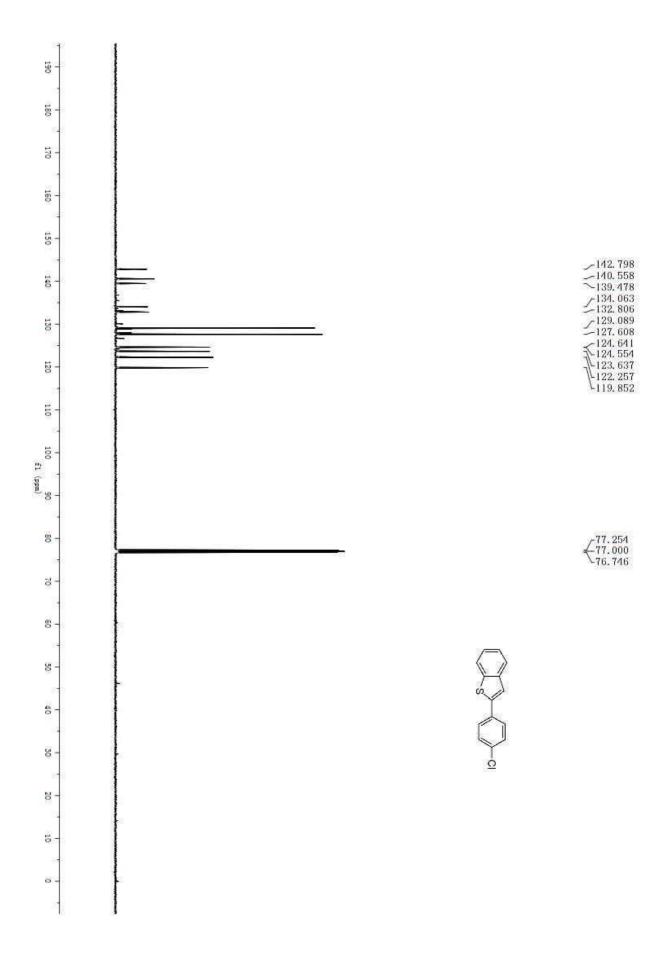
2-(4-methoxyphenyl)benzo[b]thiophene (2d)



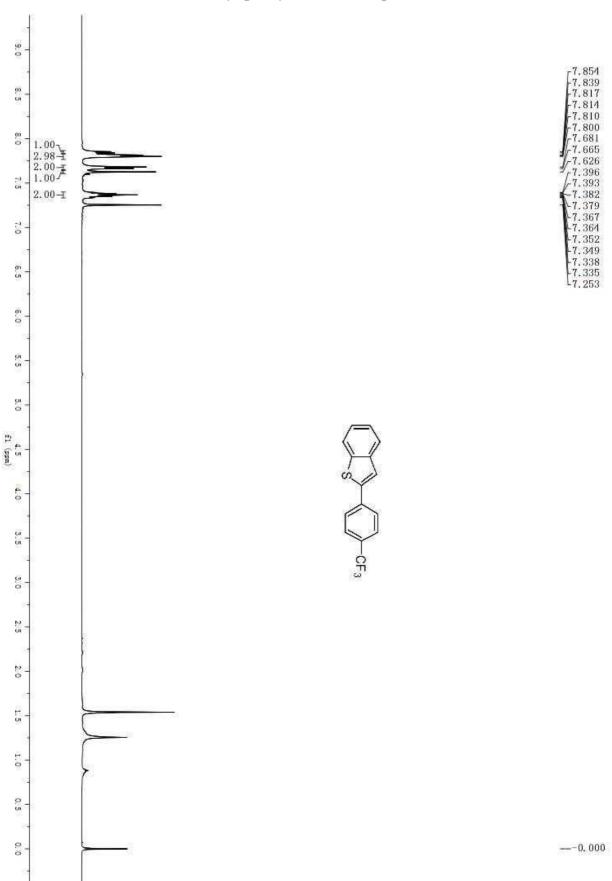


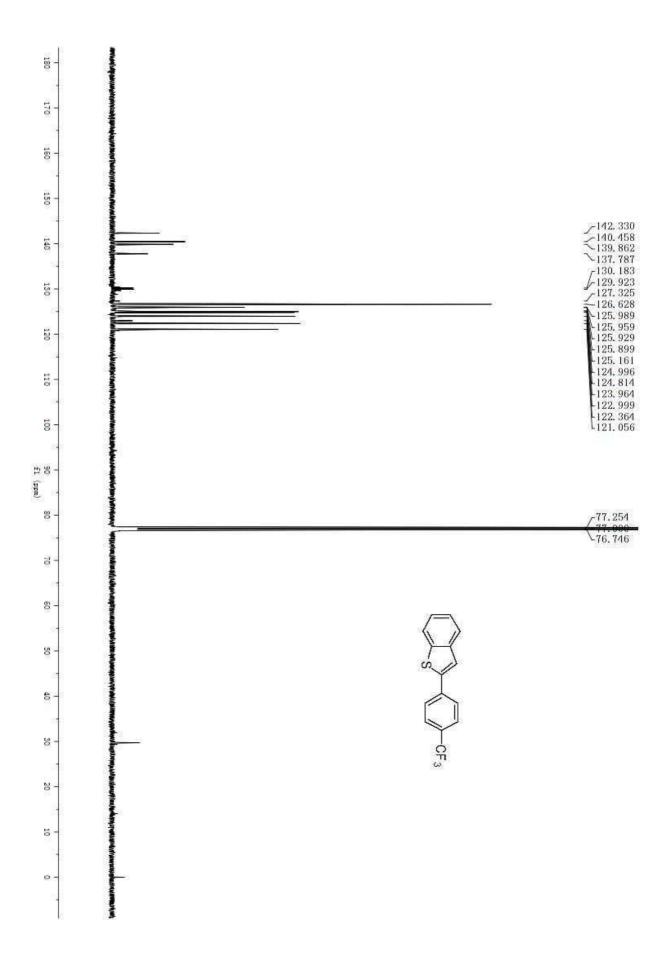
${\bf 2\text{-}(4\text{-}chlorophenyl)benzo} [b] \\ thiophene~(2e)$



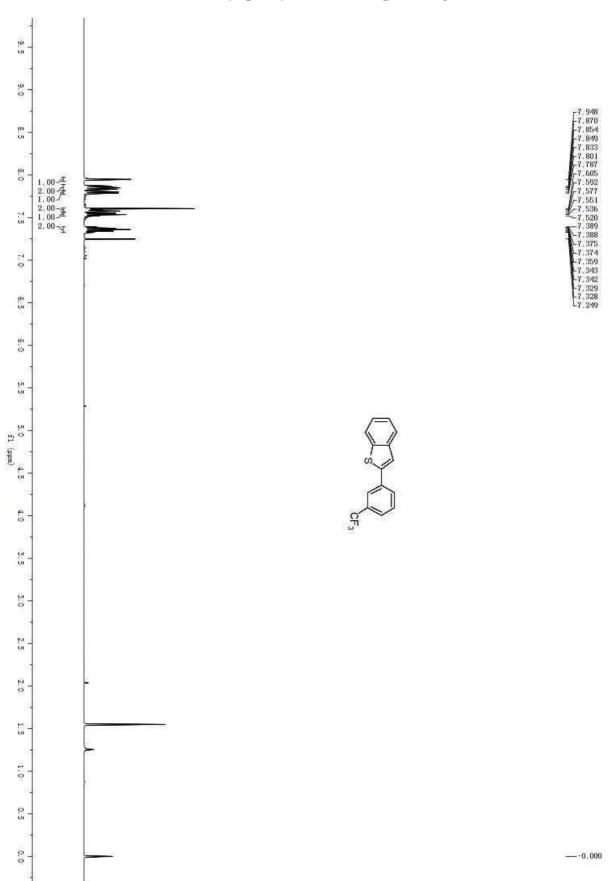


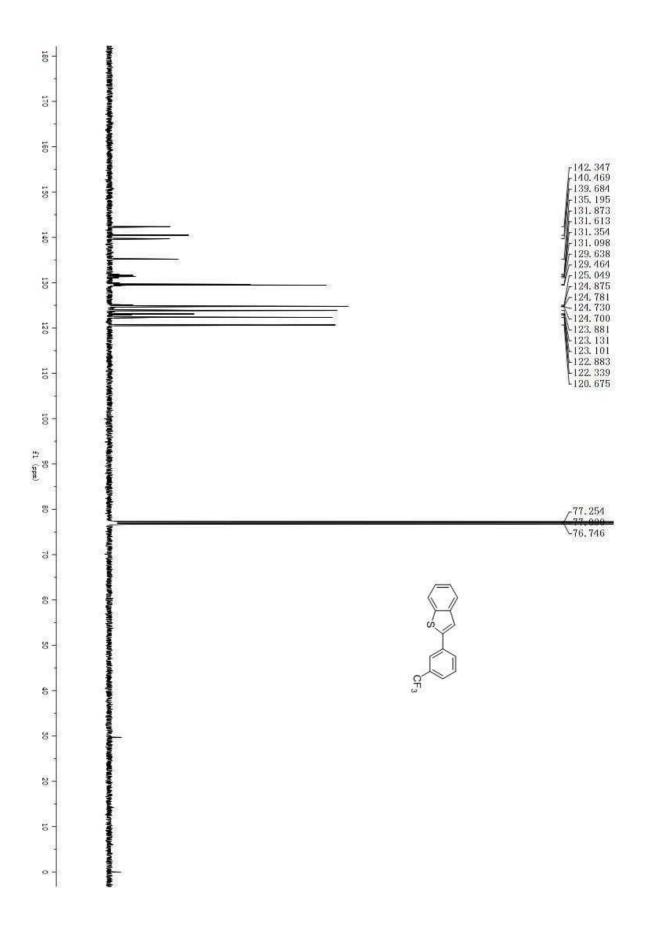
$\hbox{\bf 2-} \hbox{\bf (4-} (trifluoromethyl) phenyl) benzo [\it b\,] thiophene~(2f)$



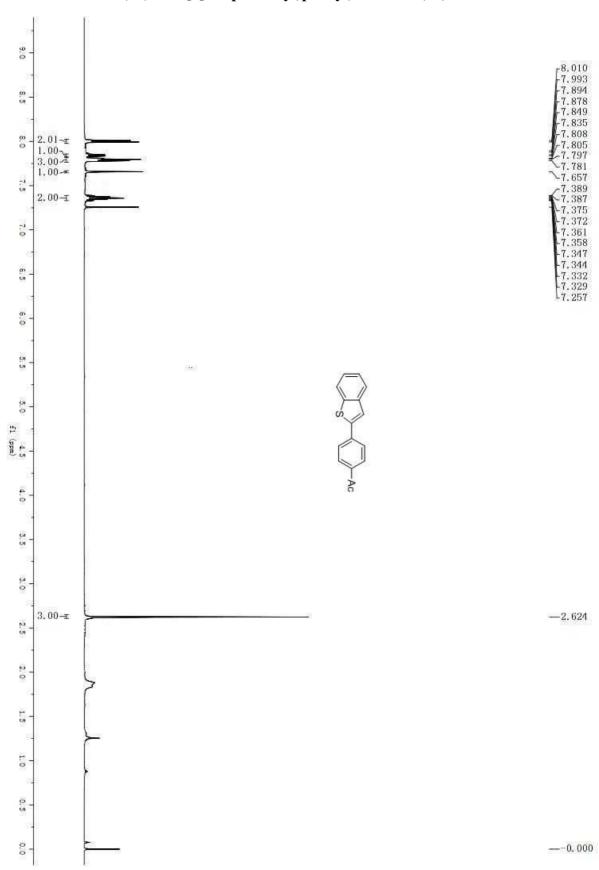


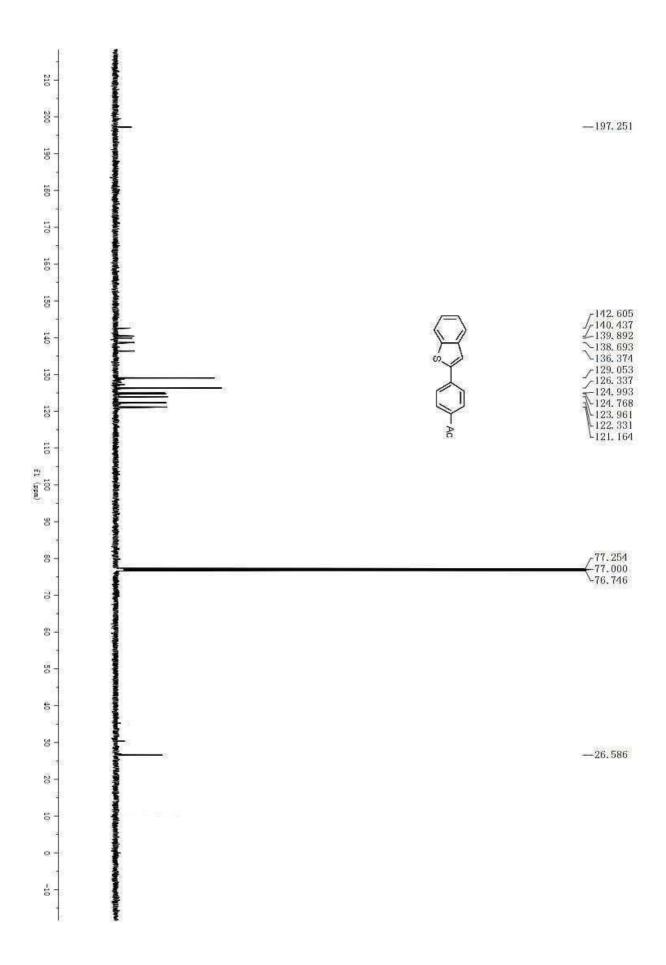
$\hbox{2-}(\hbox{3-}(\hbox{trifluoromethyl})\hbox{phenyl})\hbox{benzo}[b]\hbox{thiophene}\ (\hbox{2g})$



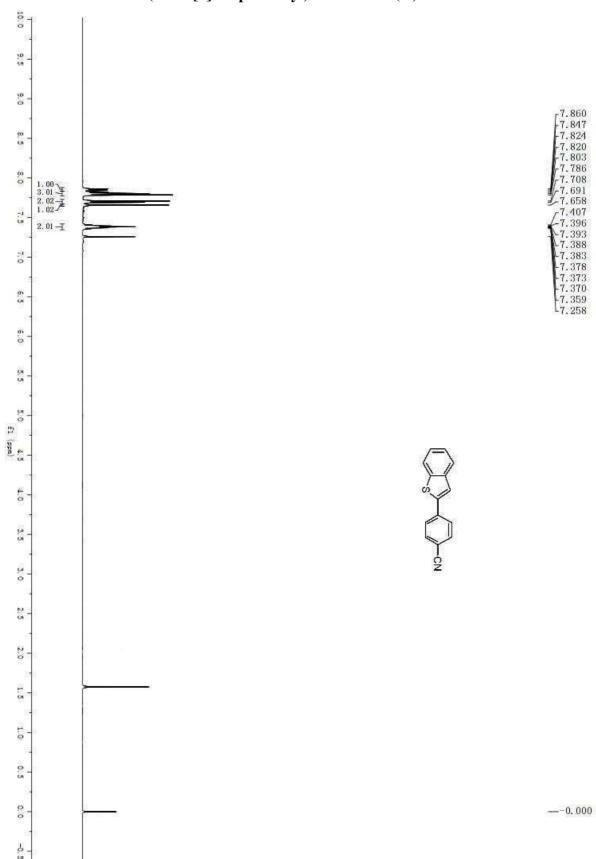


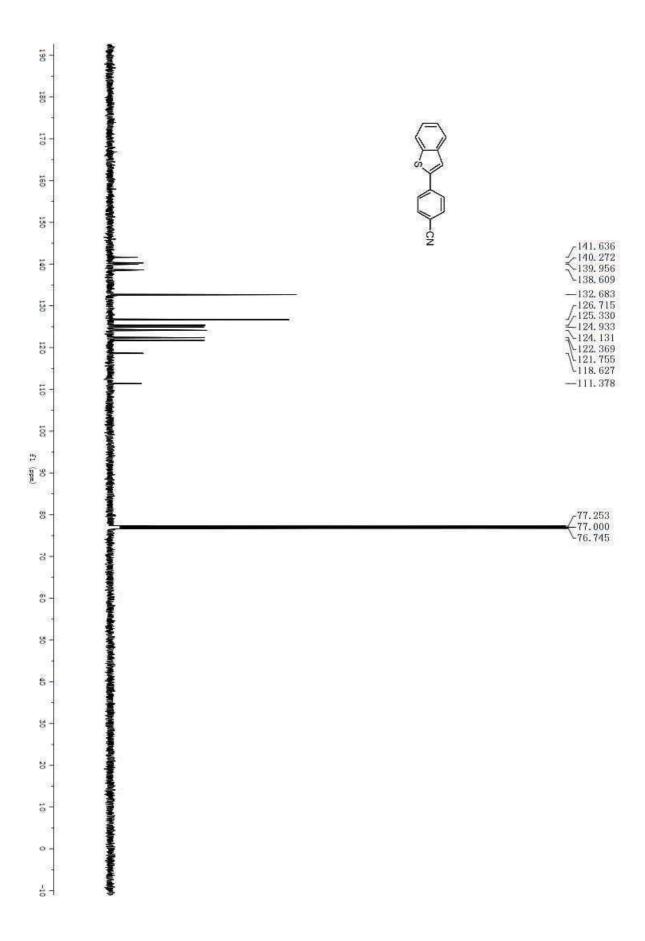
${\bf 1 \hbox{-} (4 \hbox{-} (benzo[\textit{b}] thiophen-2 \hbox{-} yl) phenyl) ethanone~(2h)}$



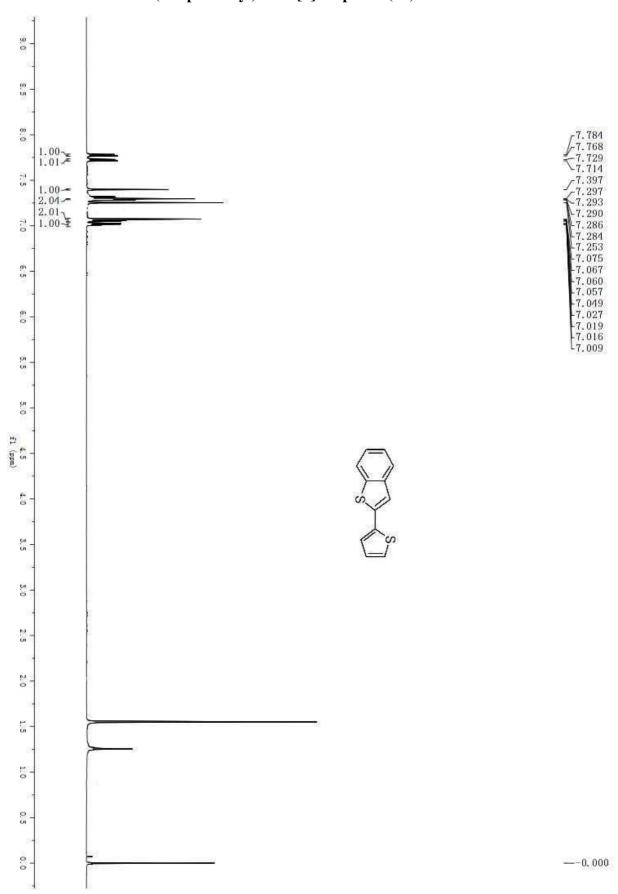


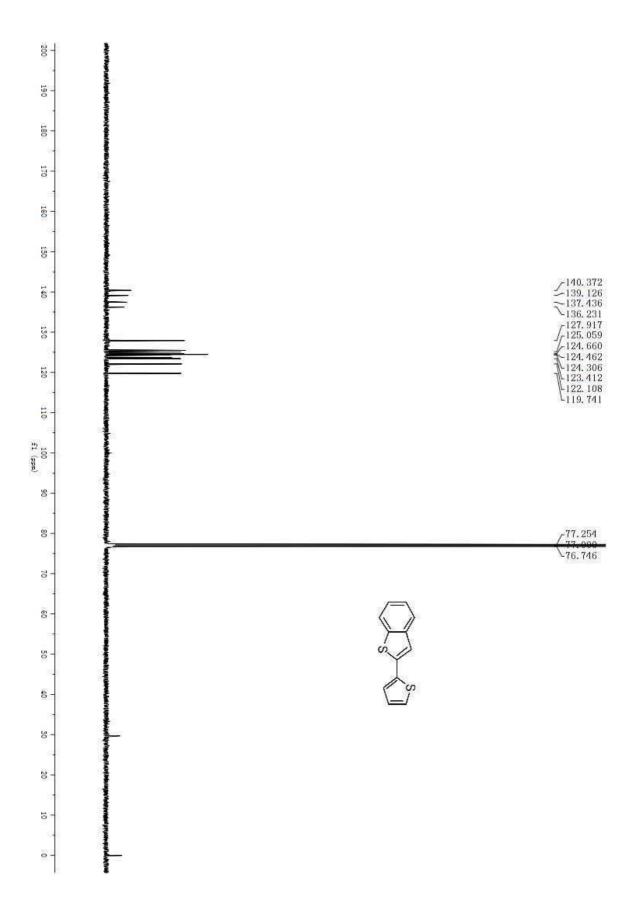
$\hbox{\bf 4-(benzo[}b\hbox{\bf]thiophen-2-yl)} benzonitrile~(2i)$



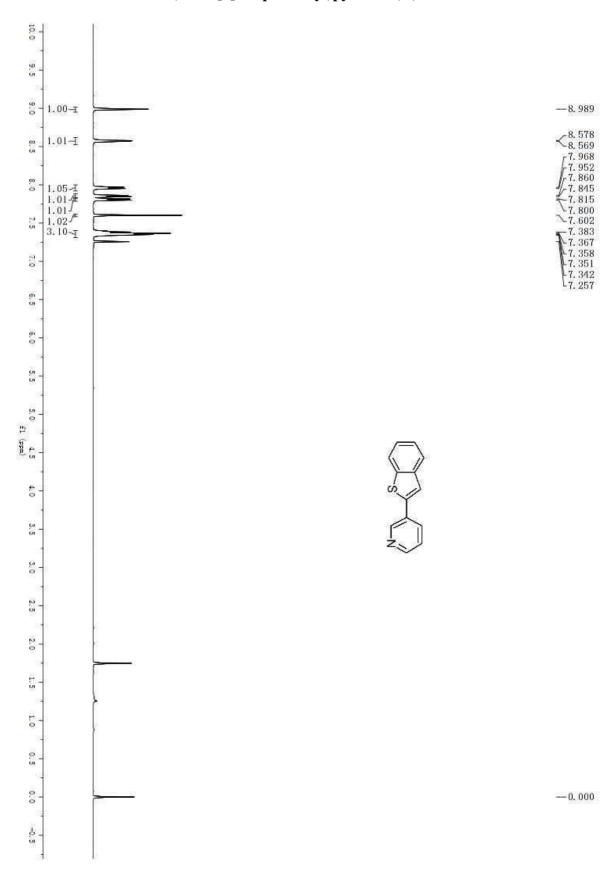


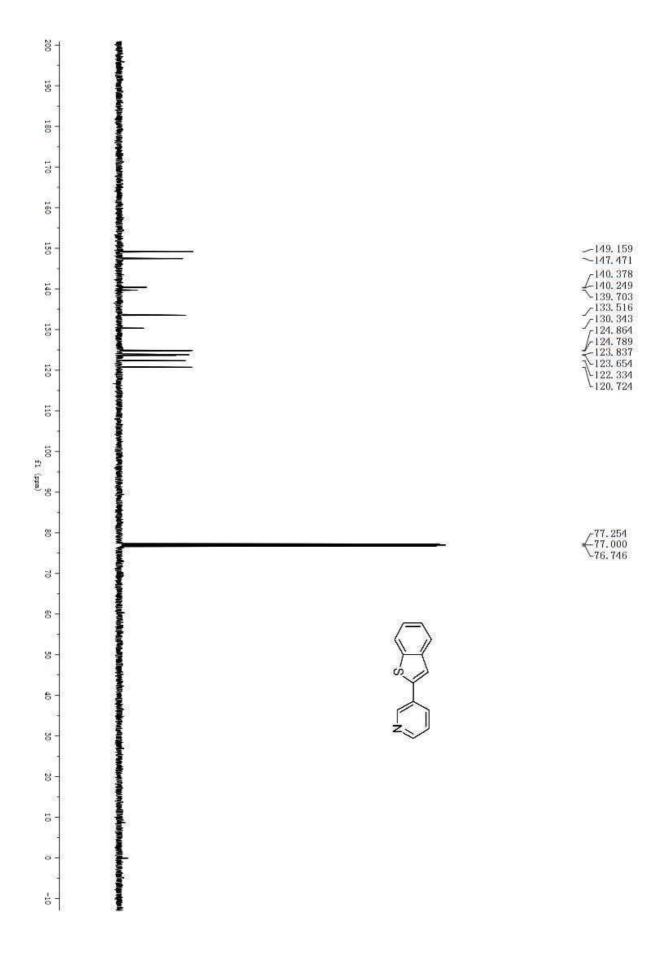
${\bf 2\text{-}(thiophen-2\text{-}yl)benzo} [b] thiophene~(2k)$





${\it 3-(benzo[\it b] thiophen-2-yl)} pyridine~(2l)$





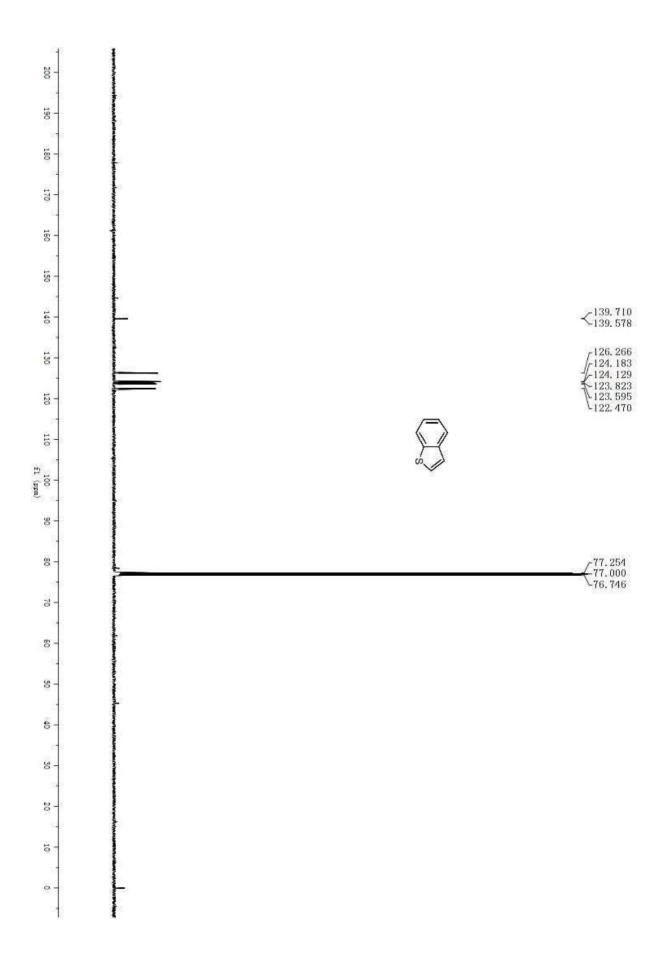
benzo[b]thiophene (2m) 9.5 9.0 8.5 7. 894 7. 879 7. 835 7. 819 7. 444 7. 367 7. 353 7. 353 7. 356 7. 356 7. 346 7. 336 7. 325 7. 255 8.0 1. 00 1. 00∑ 7.5 1.00∼ 3.00√ 7.0 6.5 6.0 5.5 5.0 4 f1 (ppm) 4.5 4.0 3.5 3.0 2.5 2.0 1.5

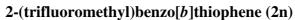
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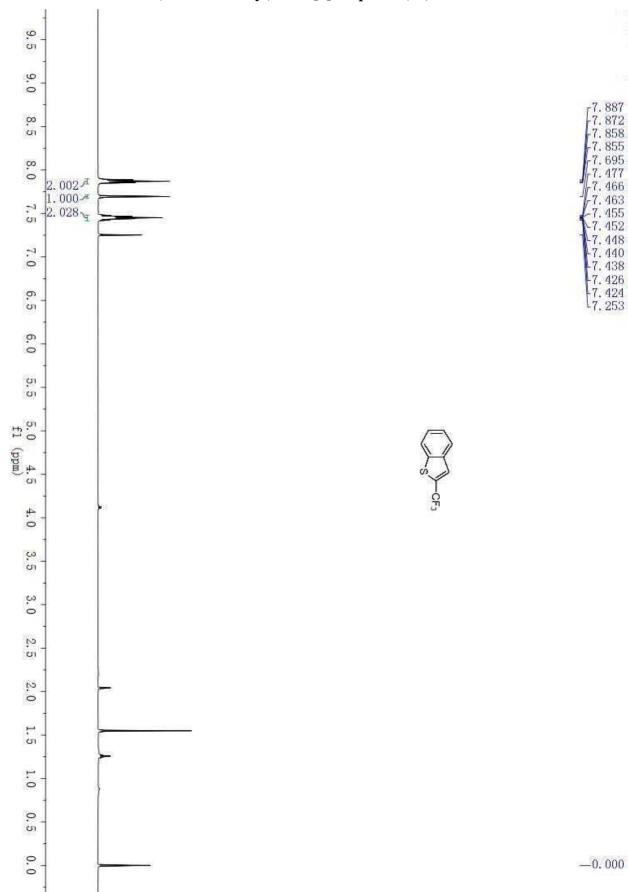
1.0

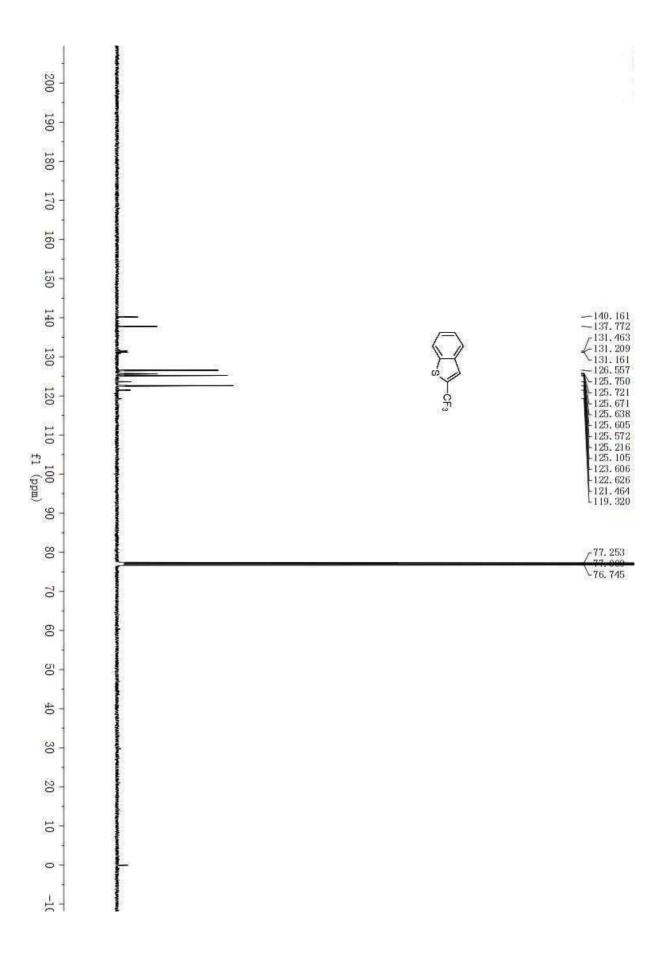
0.5

0.0

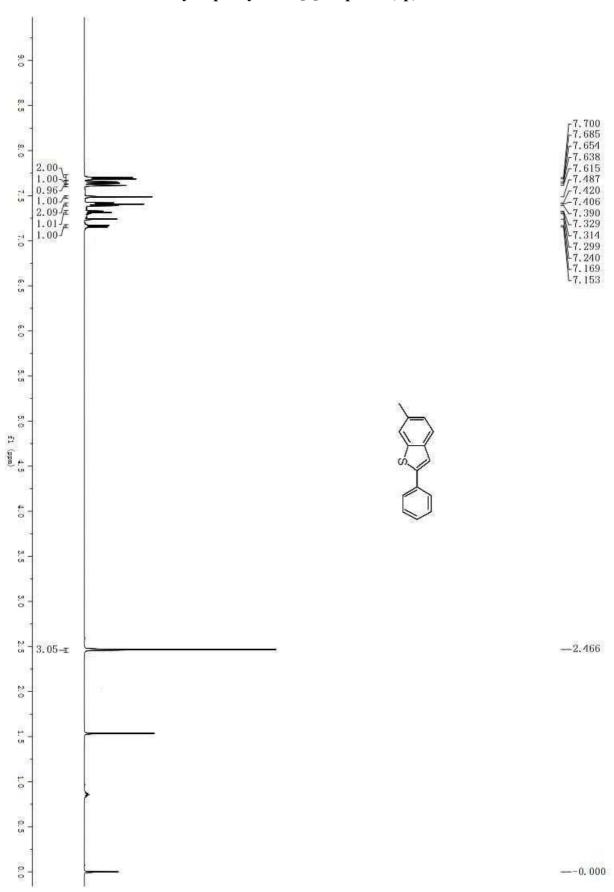


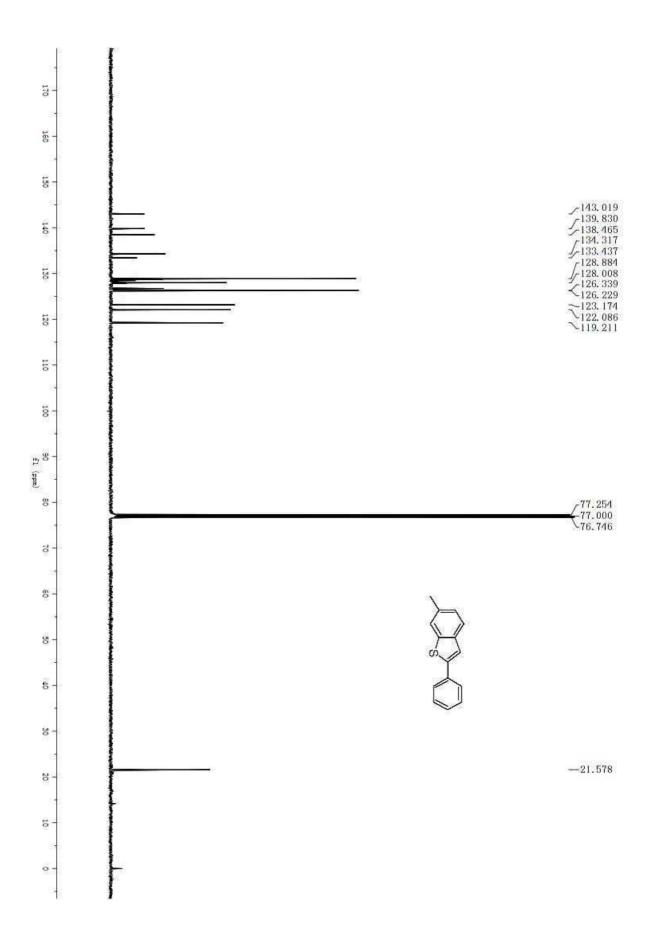




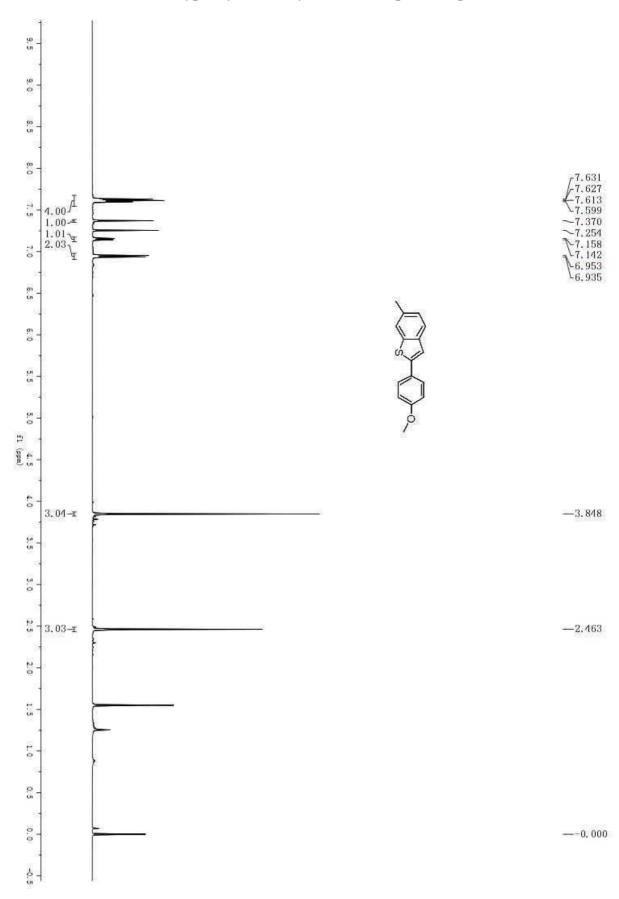


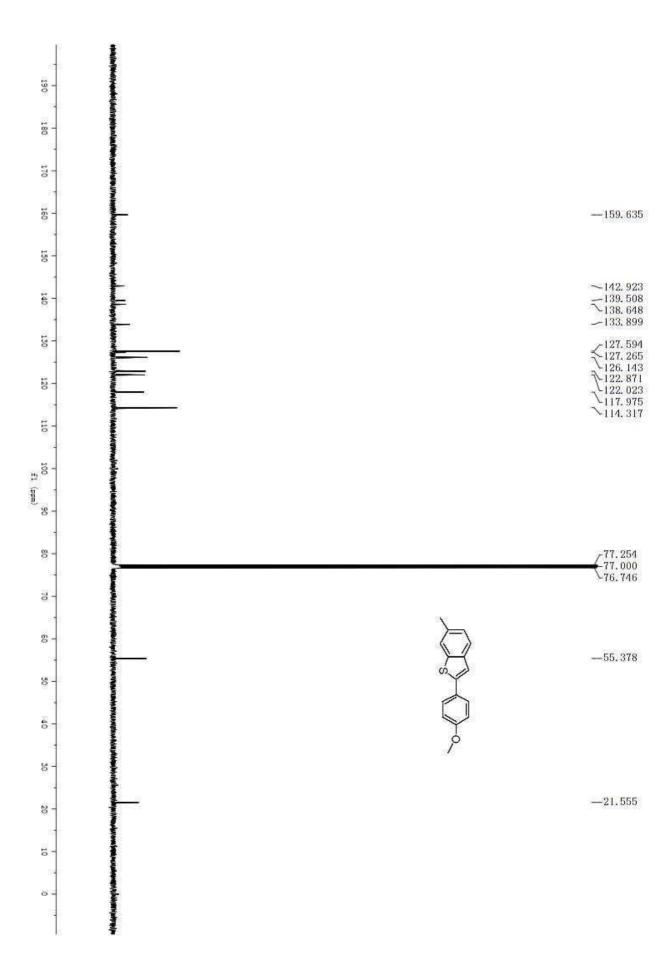
${\bf 6\text{-}methyl\text{-}2\text{-}phenylbenzo} [b] \\ \textbf{thiophene} \ (\mathbf{2p})$



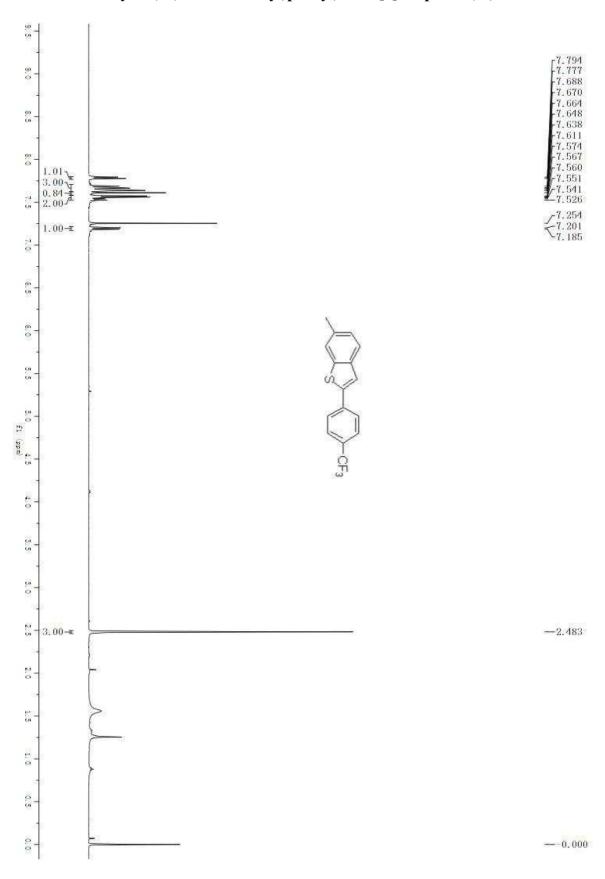


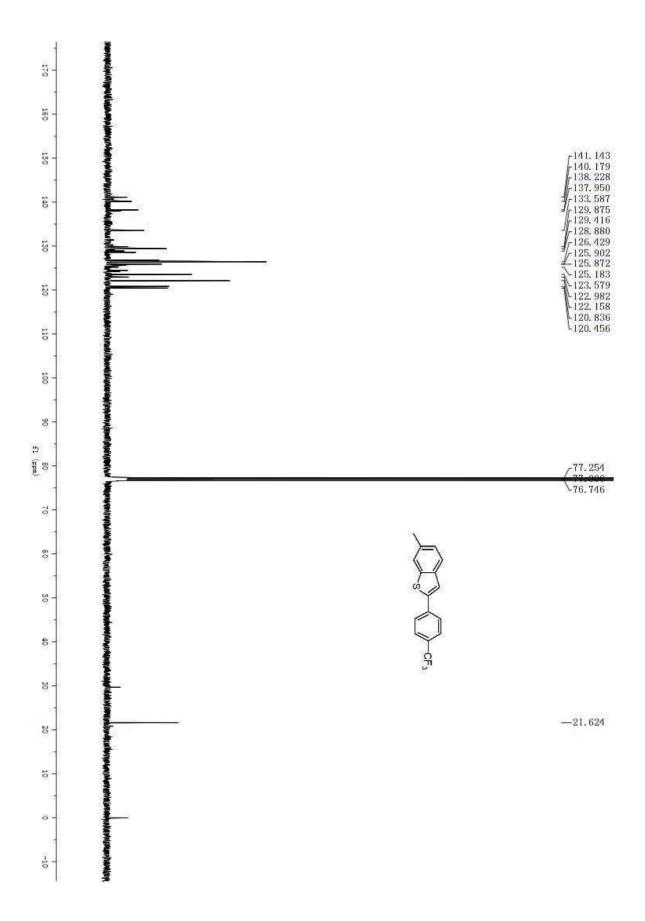
${\bf 2\text{-}(4\text{-}methoxyphenyl)\text{-}6\text{-}methylbenzo} [b] thiophene~(2q)$



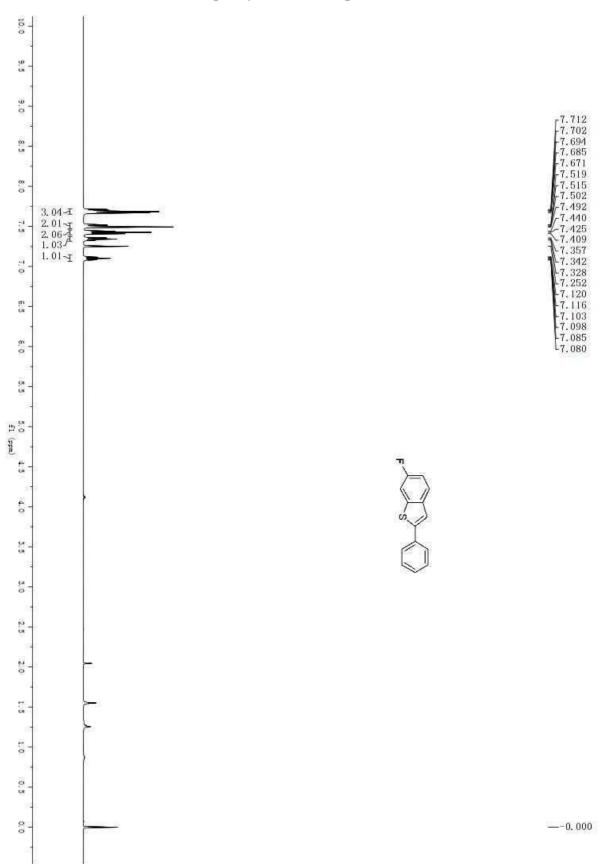


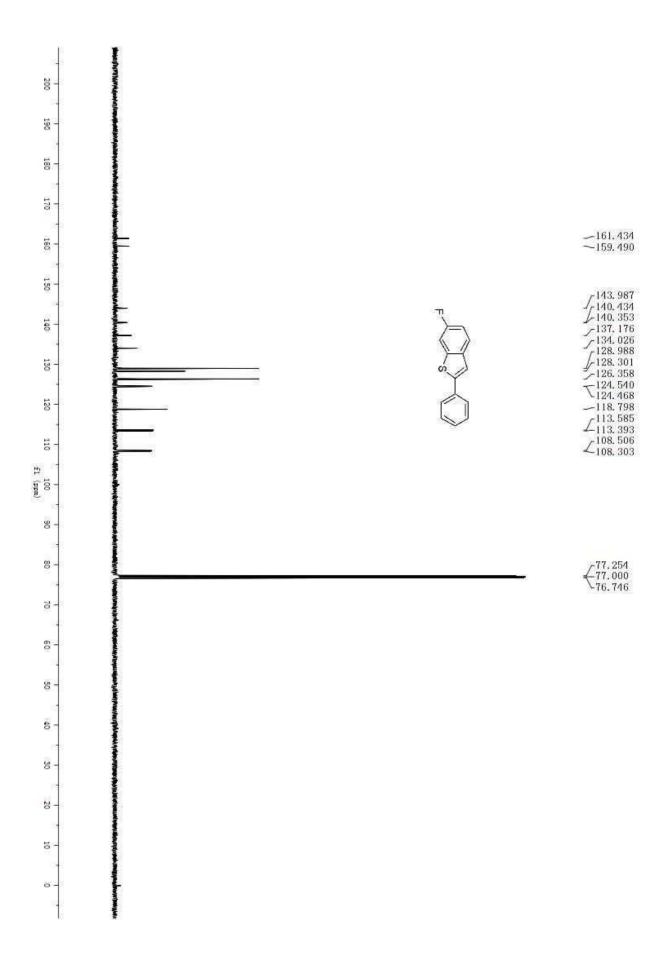
 $6\text{-}methyl\text{-}2\text{-}(4\text{-}(trifluoromethyl)phenyl)benzo} [b] thiophene~(2r)$





$\textbf{6-fluoro-2-phenylbenzo} [b] \textbf{thiophene} \ (2\textbf{s}) \\$





$\textbf{6-fluoro-2-p-tolylbenzo} [b] \textbf{thiophene} \ (2\textbf{t}) \\$

