Supplementary Material

Synthesis of aryl-substituted indanones and indenes *via* a highly efficient ligand-free palladium-catalyzed Suzuki coupling process

Yuming Song, [a]* Yamei Xie,[a] Minjian Chen,[a] Jingping Qu,[a] and Hongfan Hu,[b] Xiaomei Lang,[b] Shan Xue,[b] Yin Ran,[b] and Shixuan Xin[b]*

[a] State Key Laboratory of Fine Chemicals, School of Pharmaceutical Science and Technology, Dalian University of Technology. Dalian 116024, P. R. China

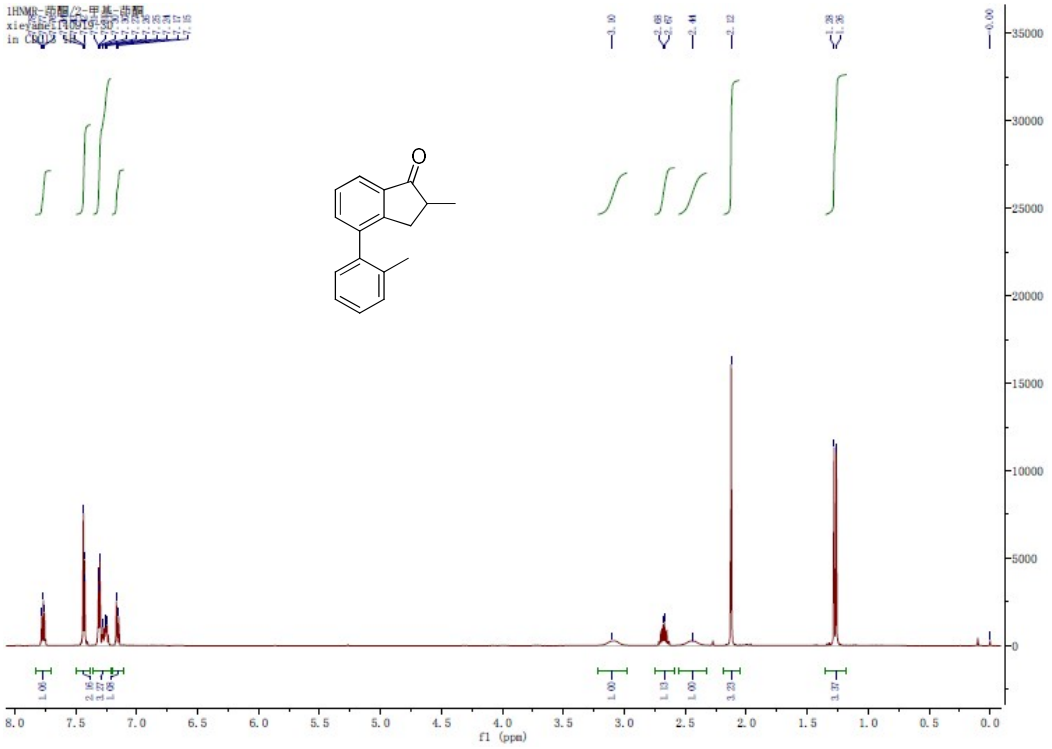
[b] PetroChina Petrochemical Research Institute, Block A42, PetroChina Innovation Base, Shahe Township, Changping District, Beijing 102206, P. R. China

E-mail: song-ym@dlut.edu.cn; xinshixuan@petrochina.com.cn

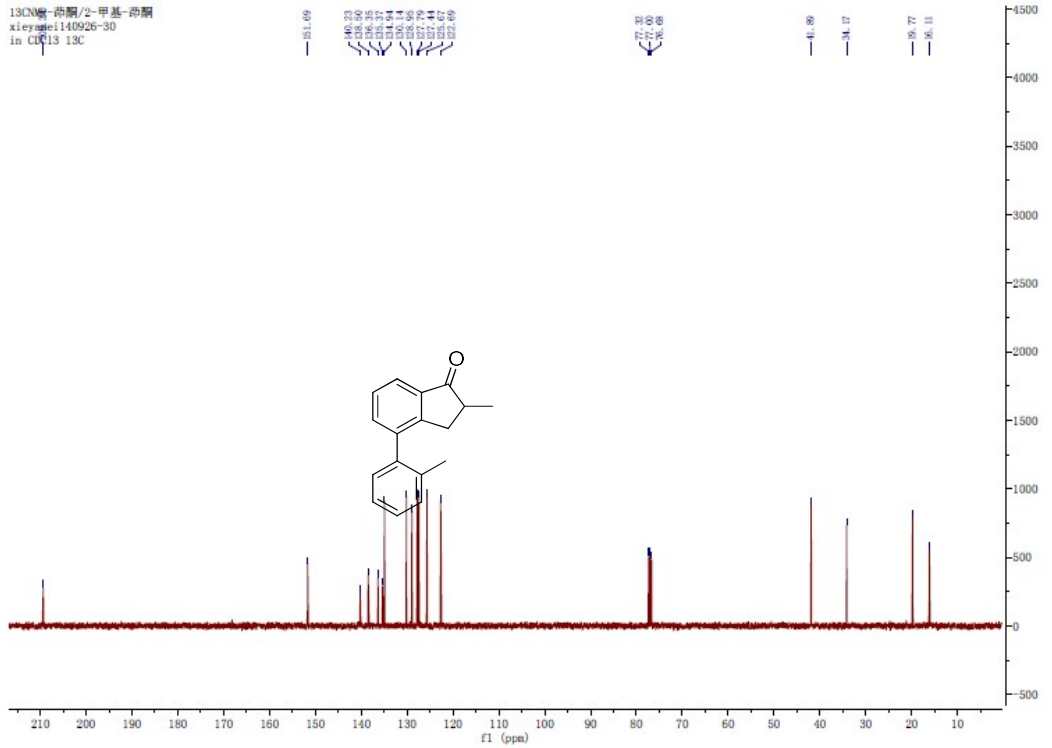
.

Table of Contents for Supporting Information

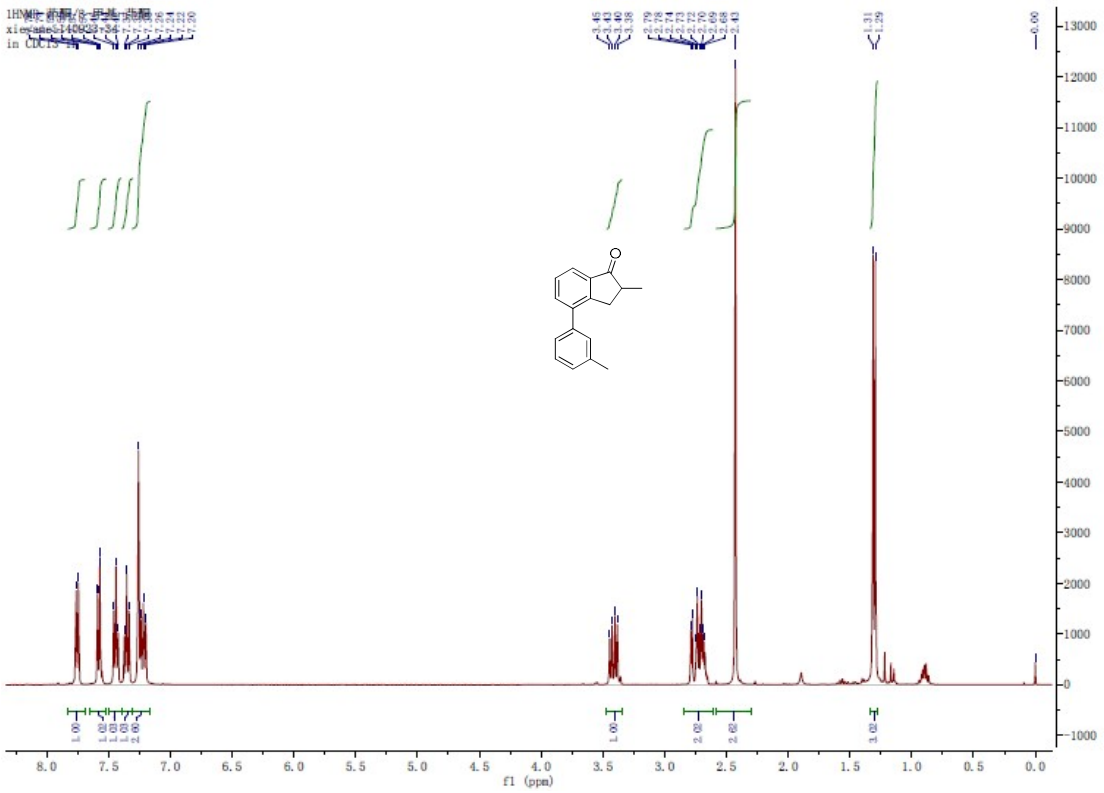
1 ^{1}H and ^{13}C NMR spectra of 4-aryl-2-methyl substituted indenones



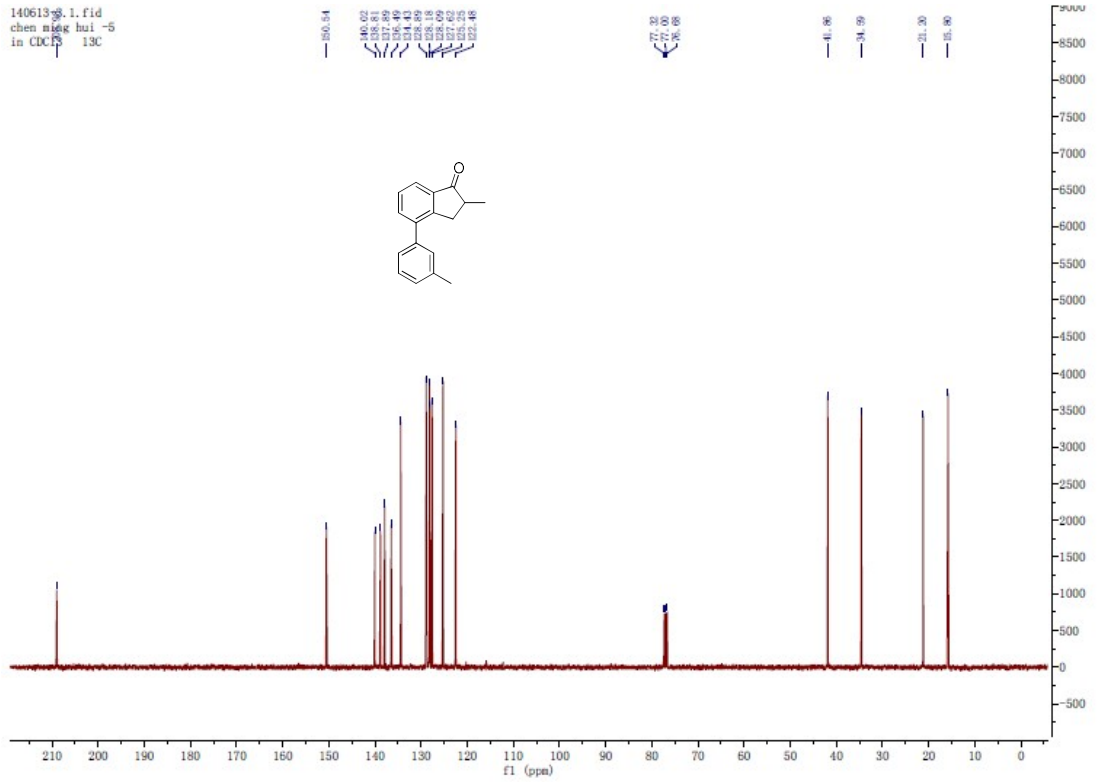
^{1}H NMR of 9a$_{1}$



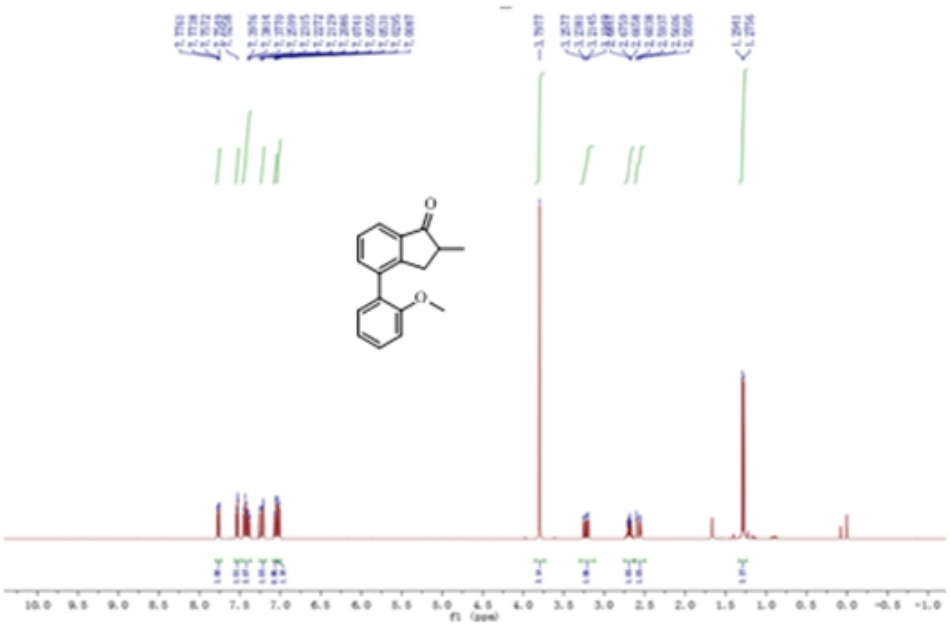
^{13}C NMR of 9a$_{1}$



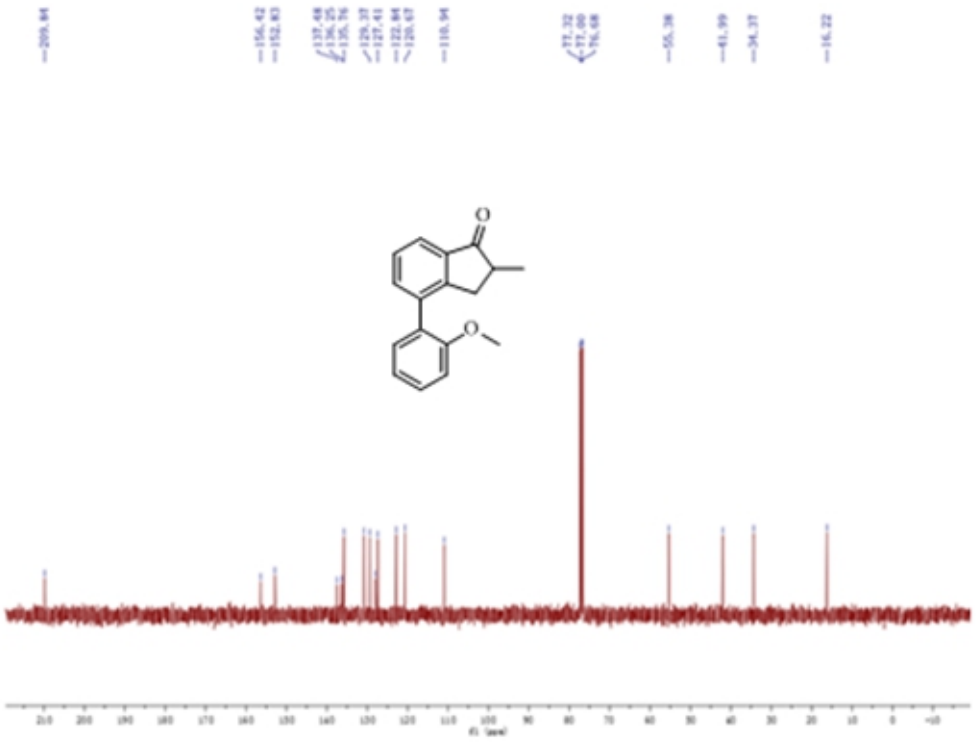
^{1}H NMR of 9a$_2$



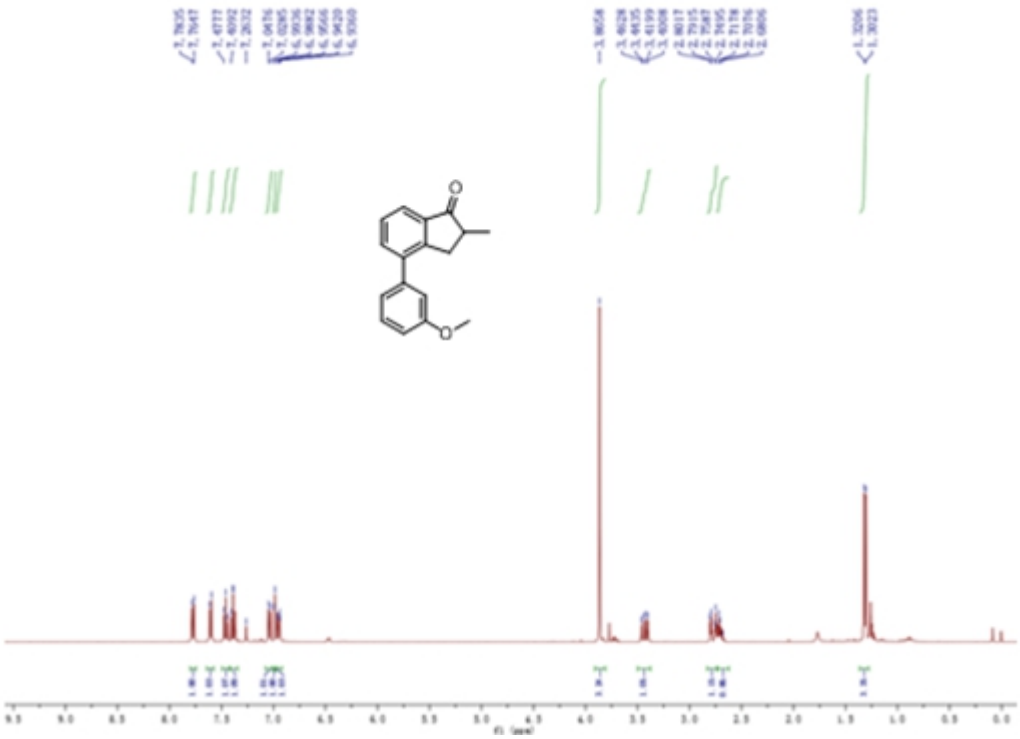
^{13}C NMR of 9a$_2$



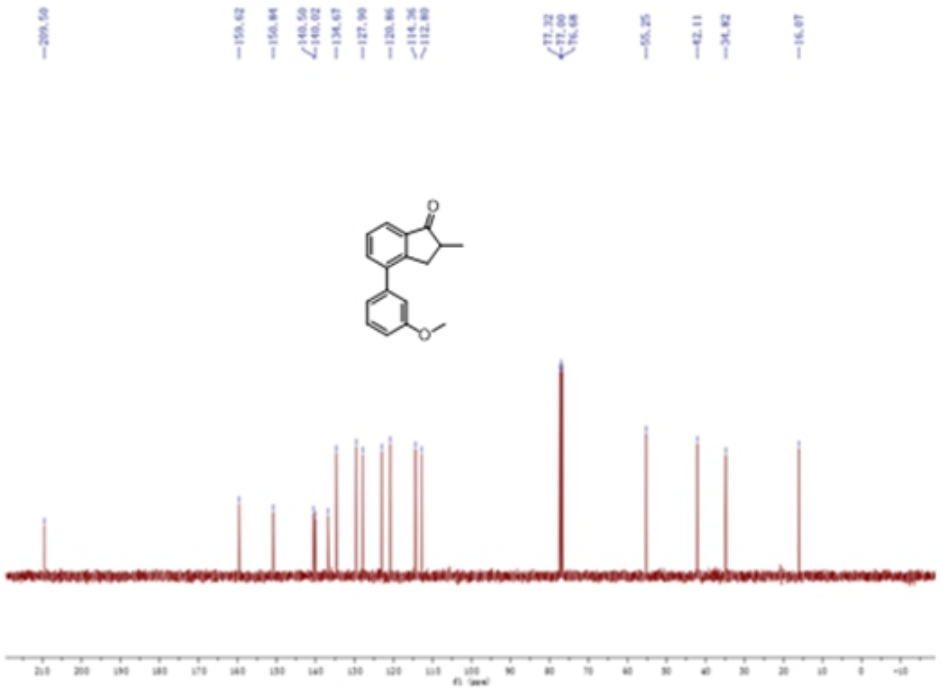
^{1}H NMR of 9a$_3$



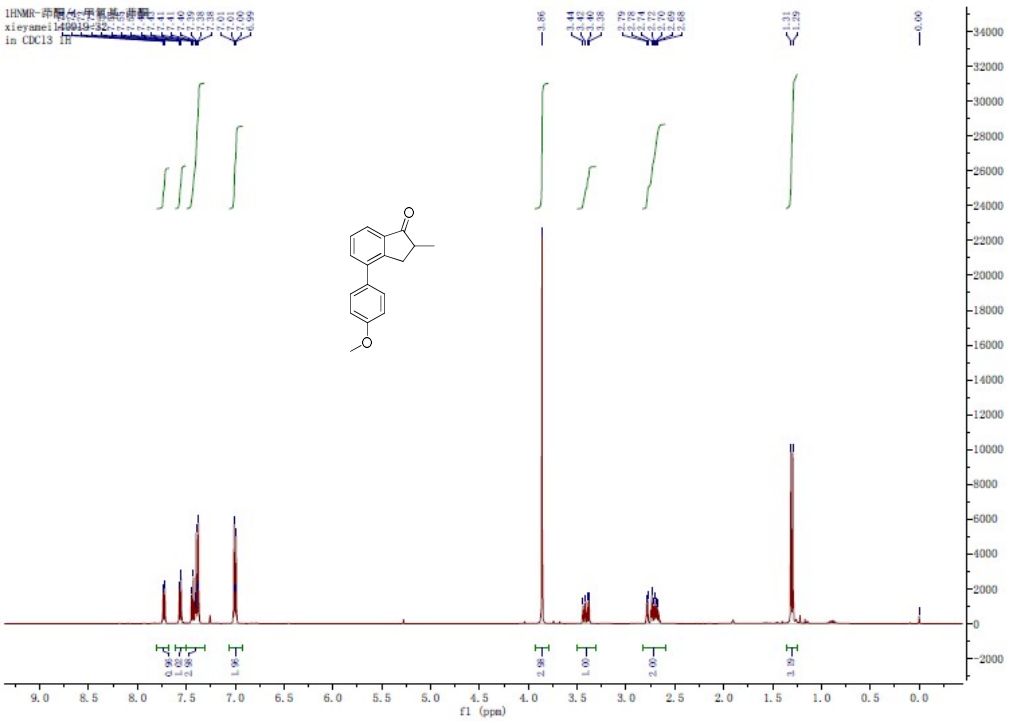
^{13}C NMR of 9a$_3$



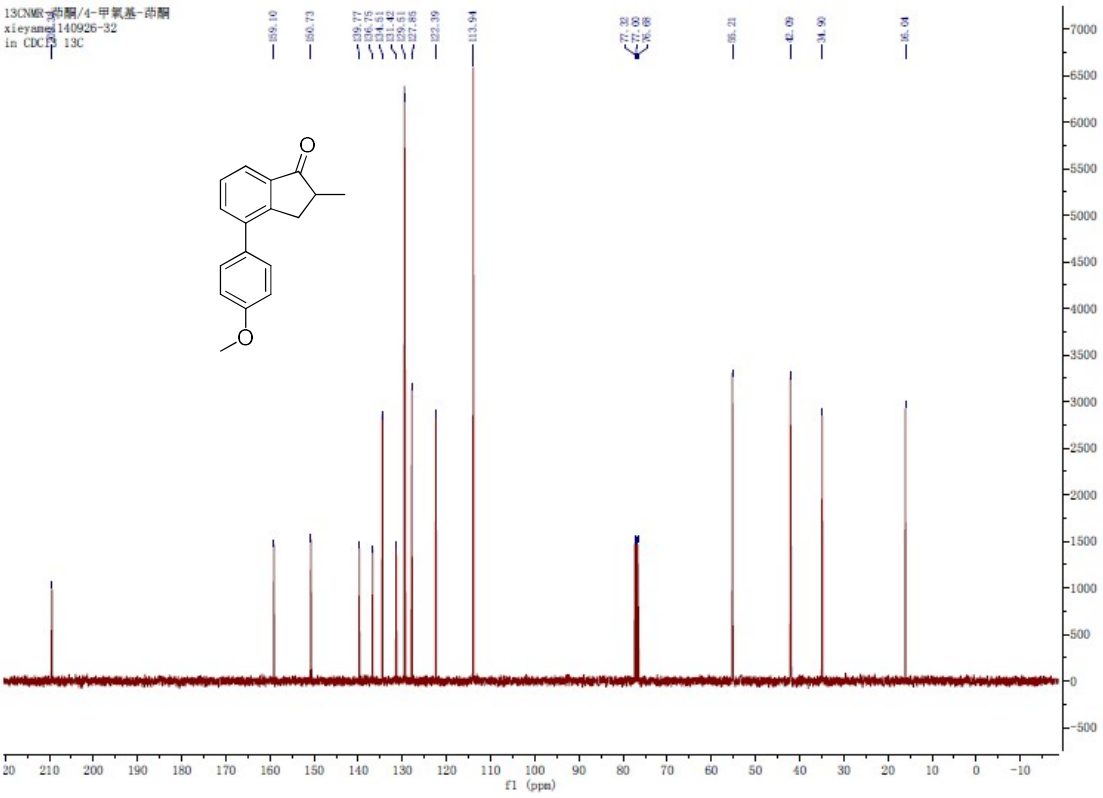
^{1}H NMR of 9a$_{4}$



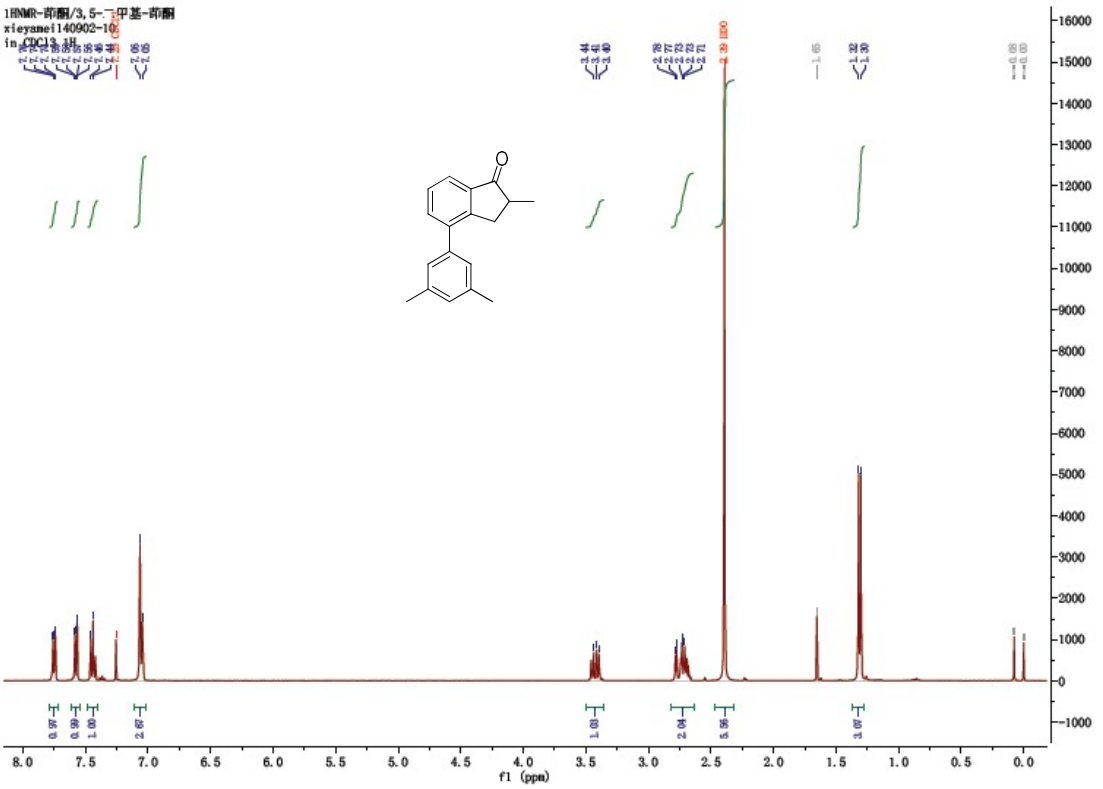
^{13}C NMR of 9a$_{4}$



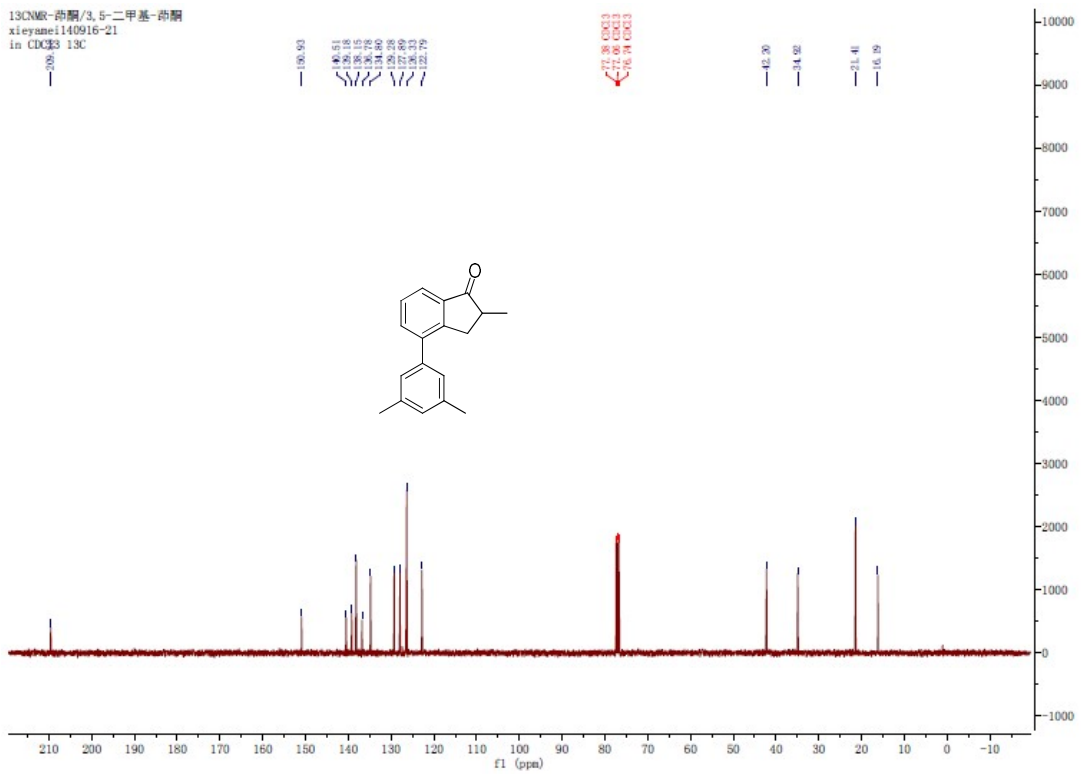
^{1}H NMR of 9a$_5$



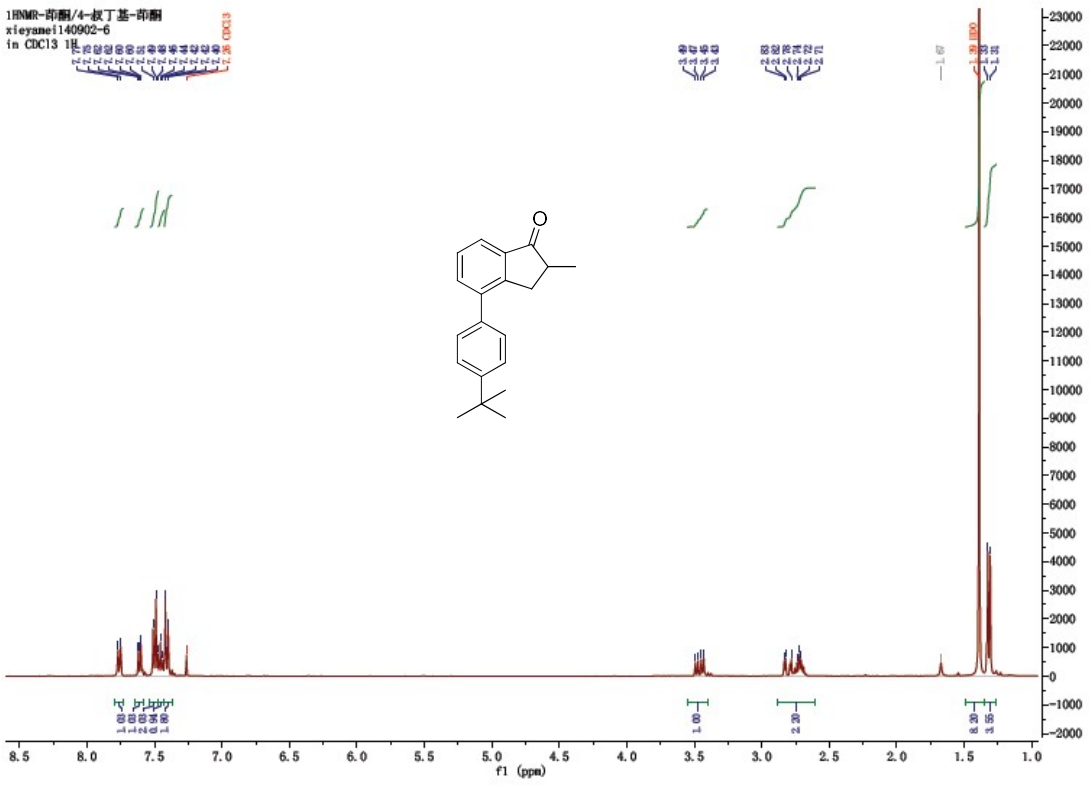
^{13}C NMR of 9a$_5$



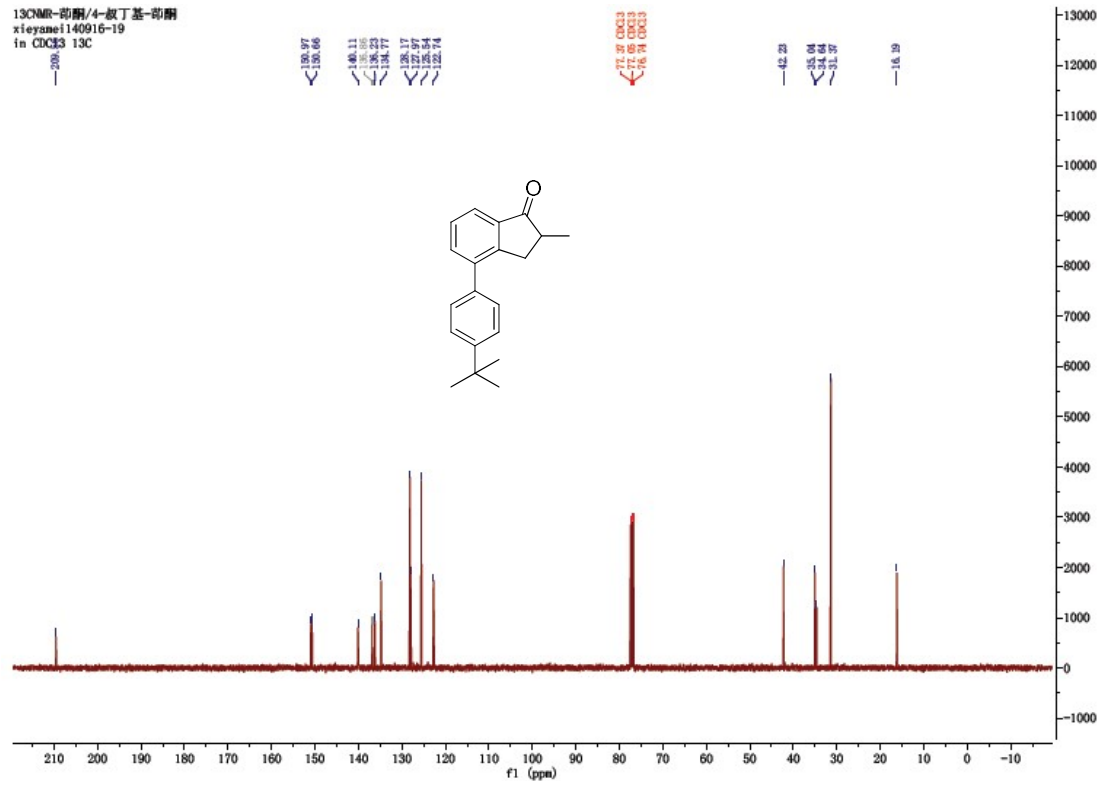
^{1}H NMR of 9a$_6$



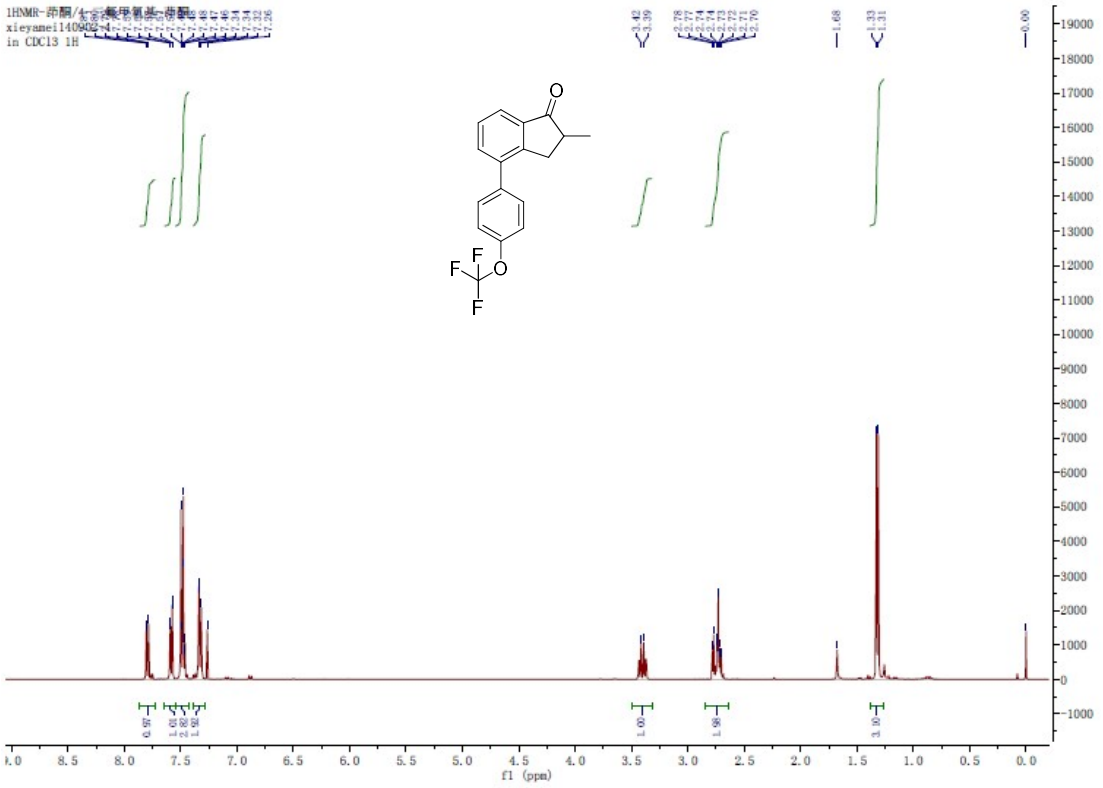
^{13}C NMR of 9a$_6$



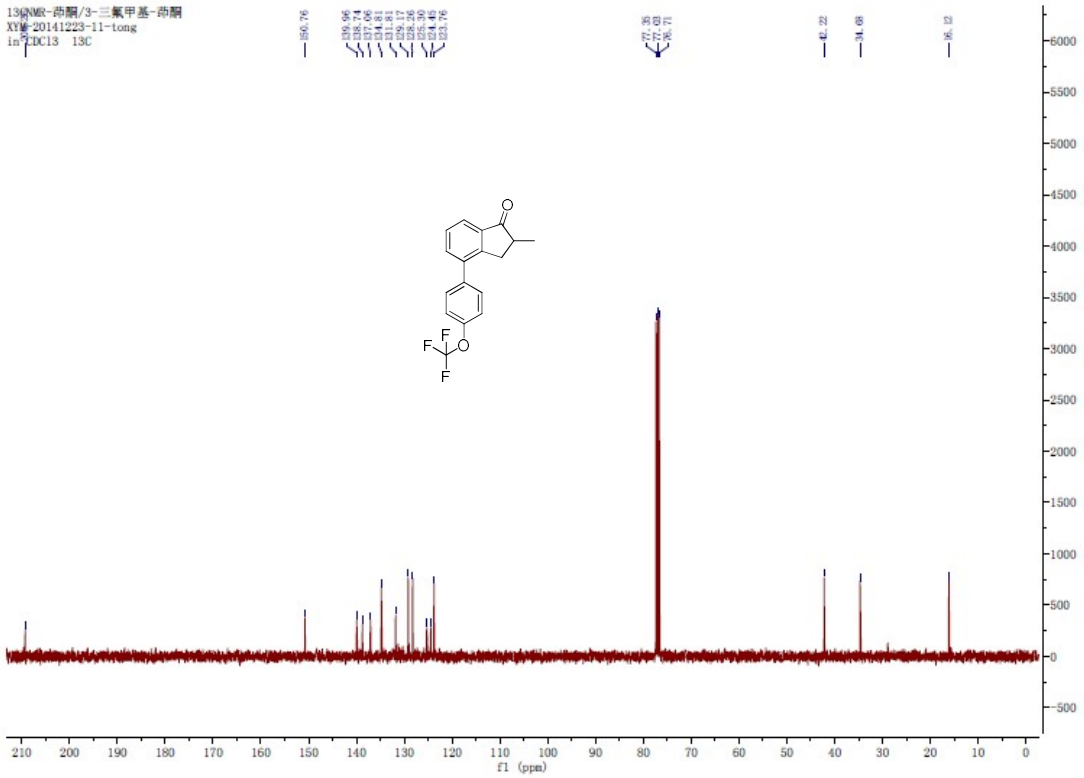
^{1}H NMR of 9a$_7$



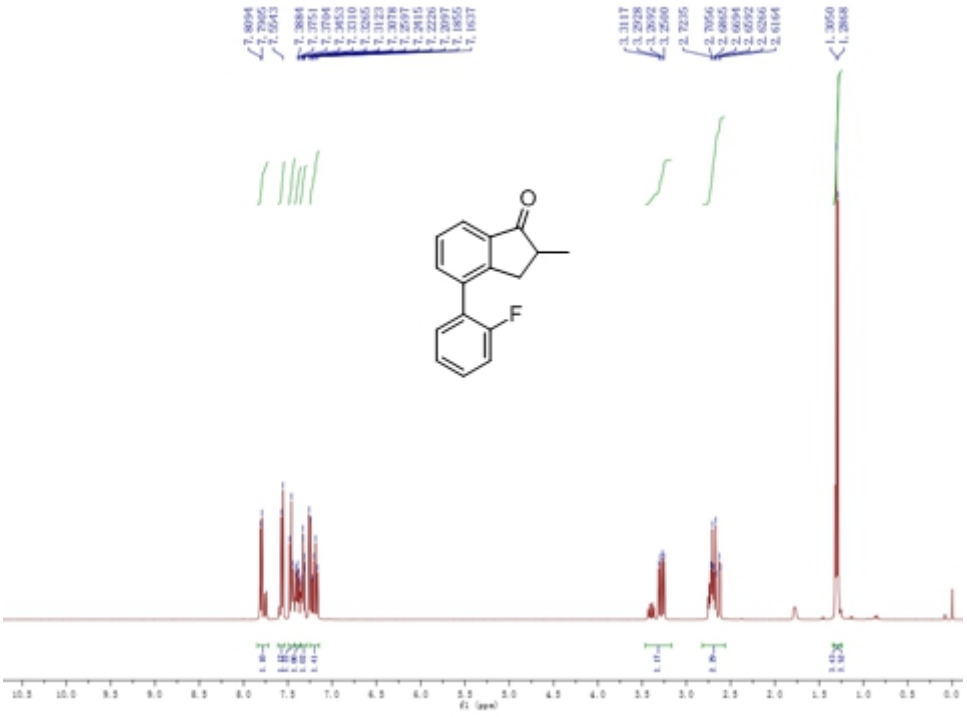
^{13}C NMR of 9a$_7$



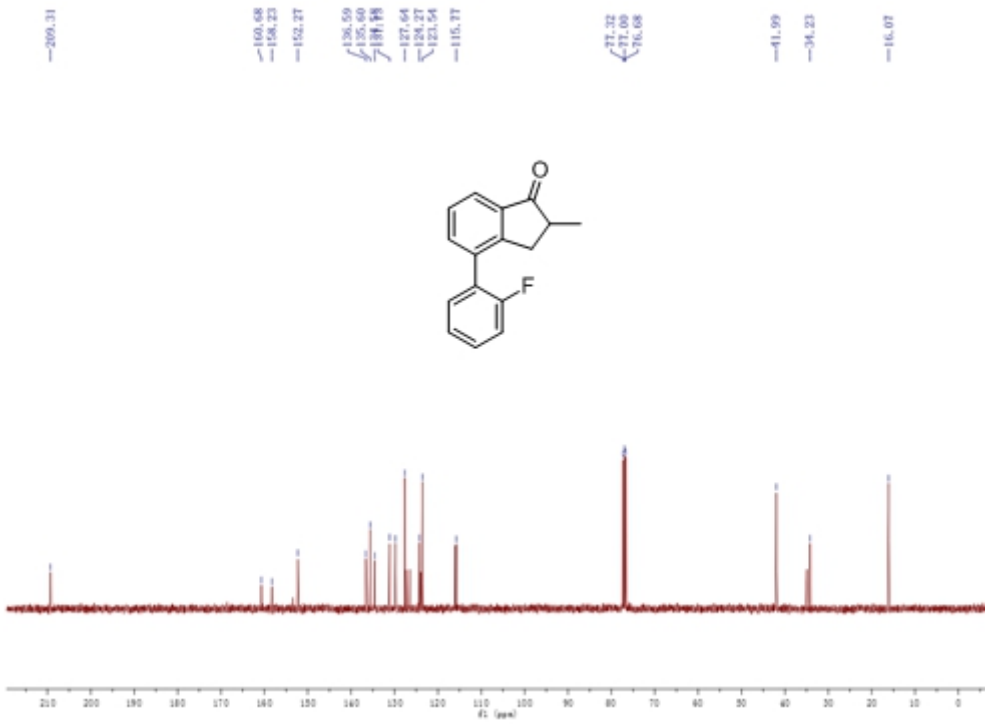
^{1}H NMR of 9a$_8$



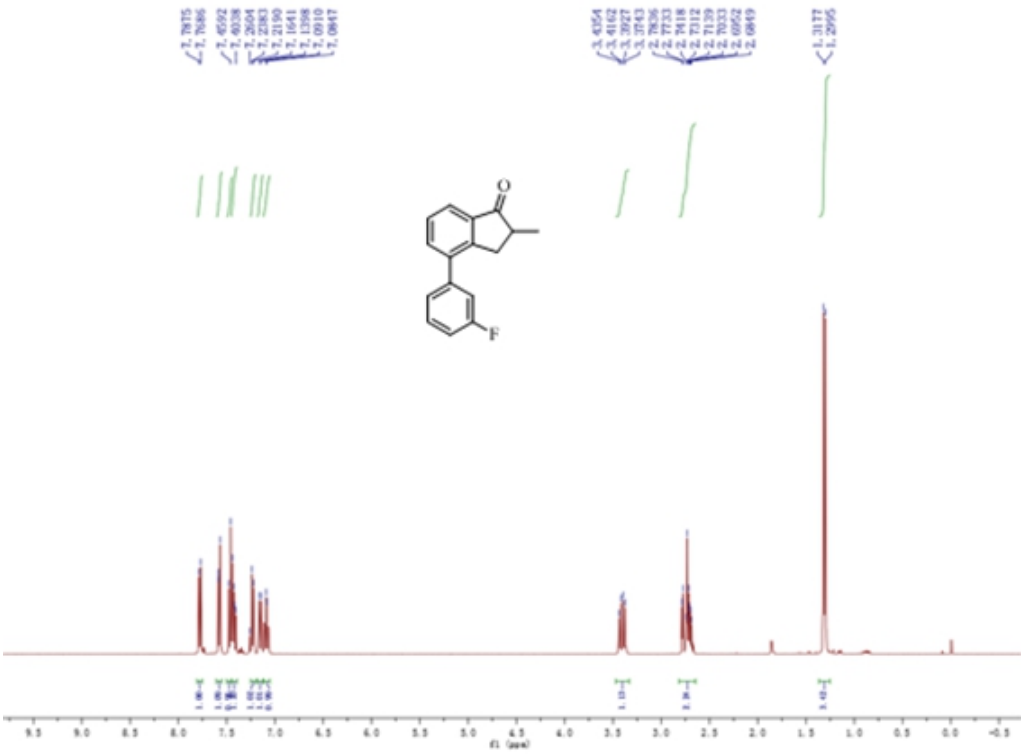
^{13}C NMR of 9a$_8$



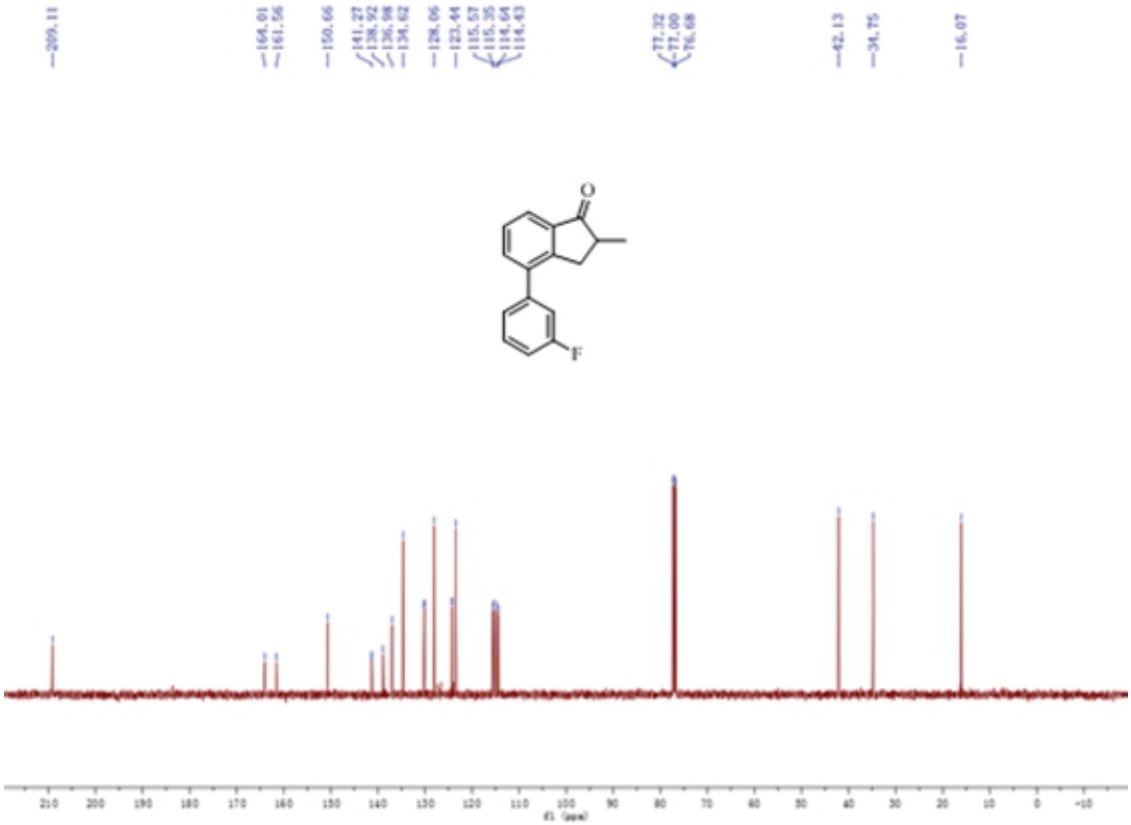
^{1}H NMR of 9a$_9$



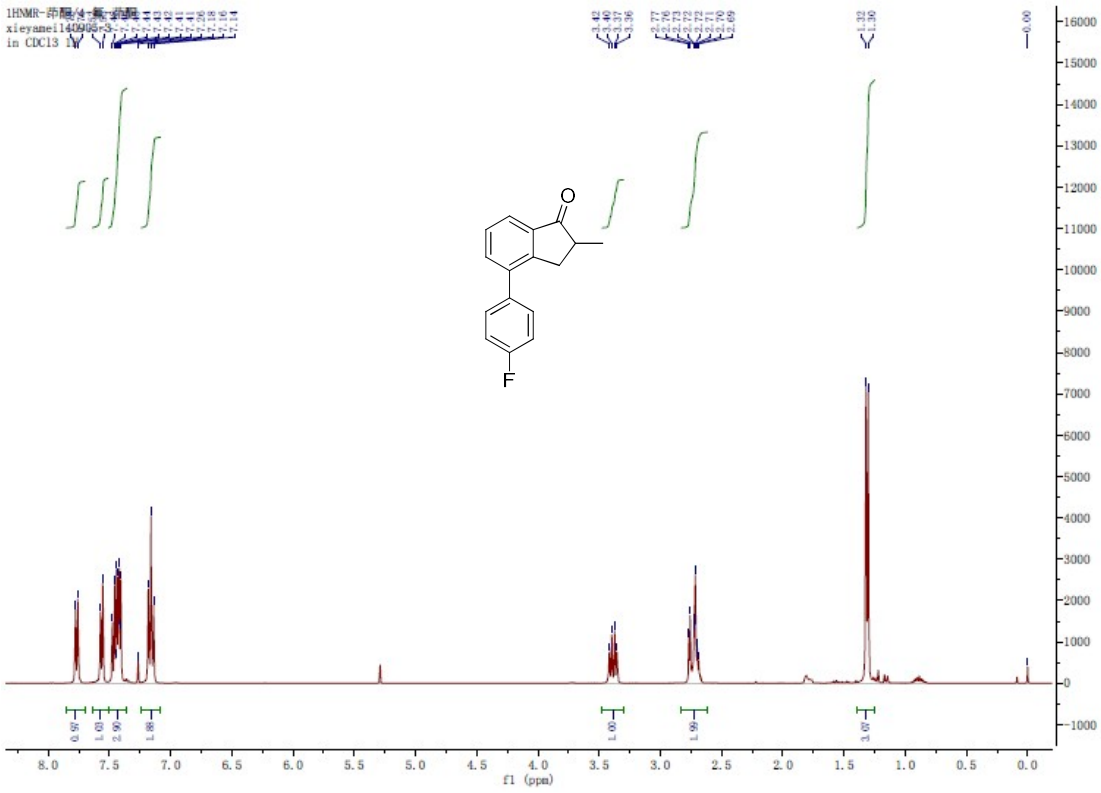
^{13}C NMR of 9a$_9$



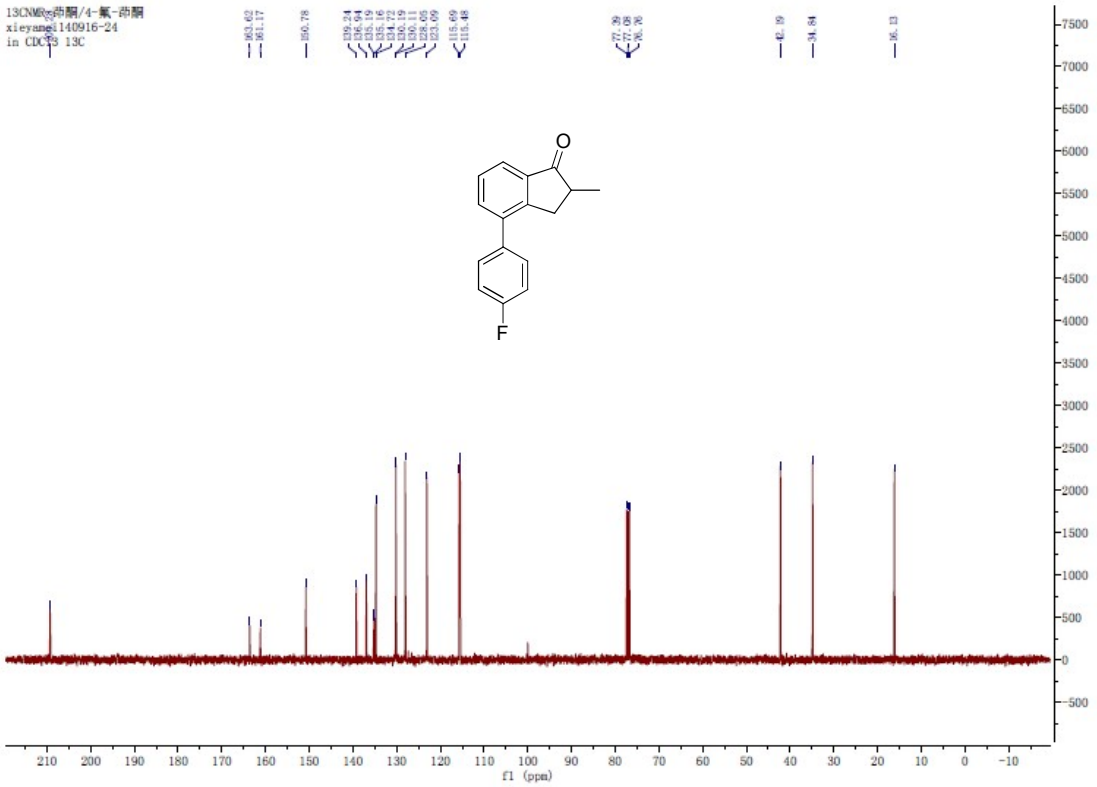
^{1}H NMR of 9a$_{10}$



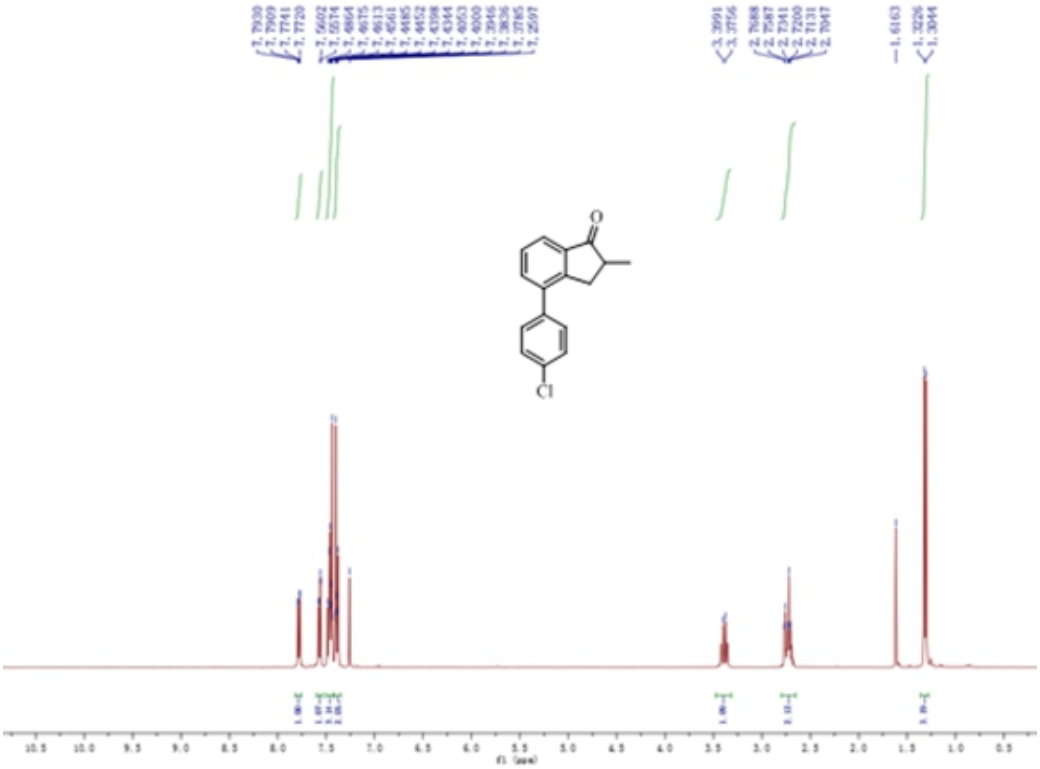
^{13}C NMR of 9a$_{10}$



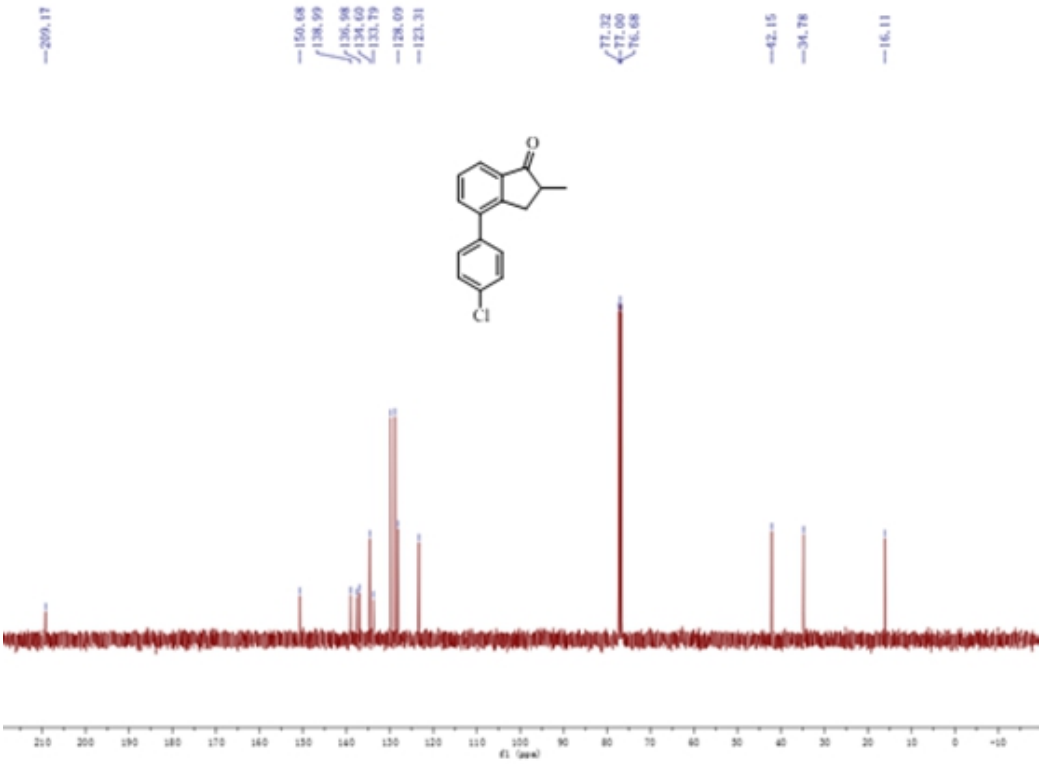
^{1}H NMR of 9a$_{11}$



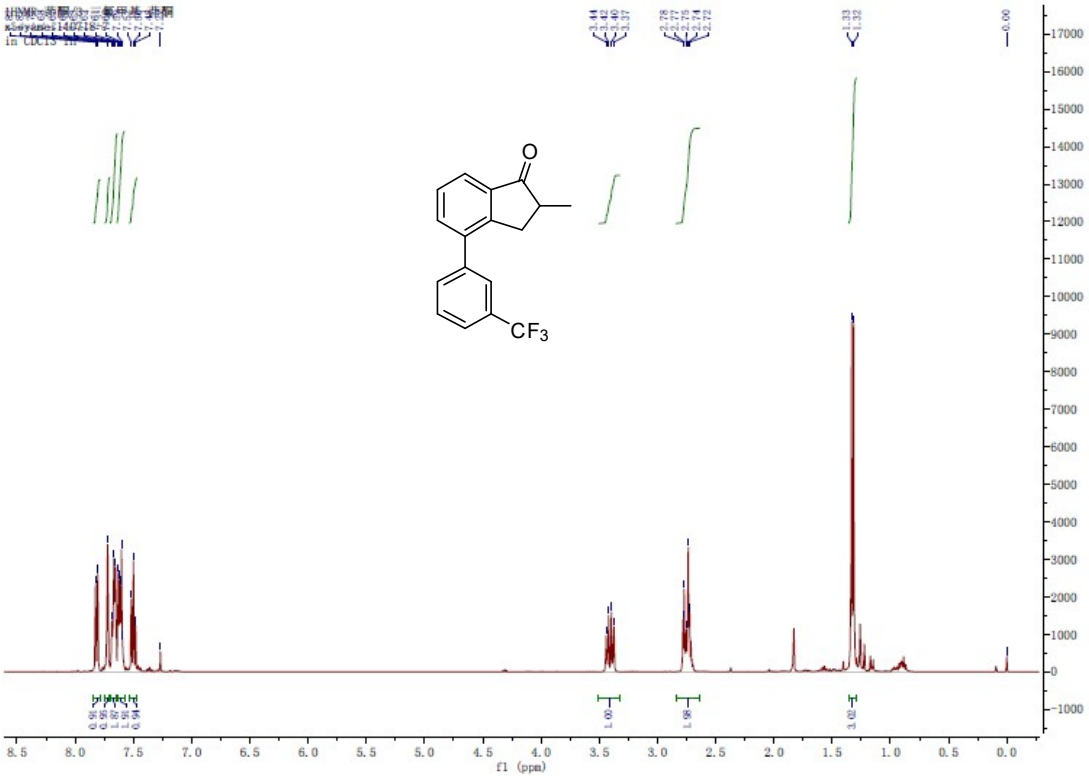
^{13}C NMR of 9a$_{11}$



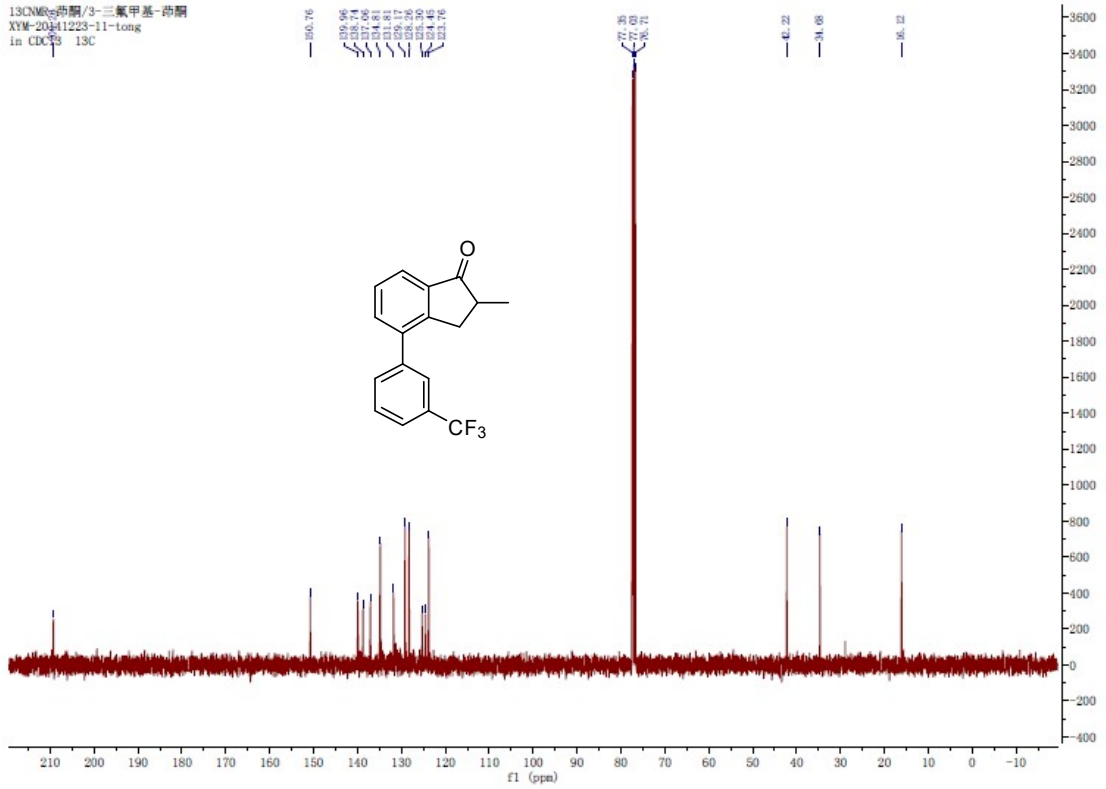
^{1}H NMR of 9a$_{12}$



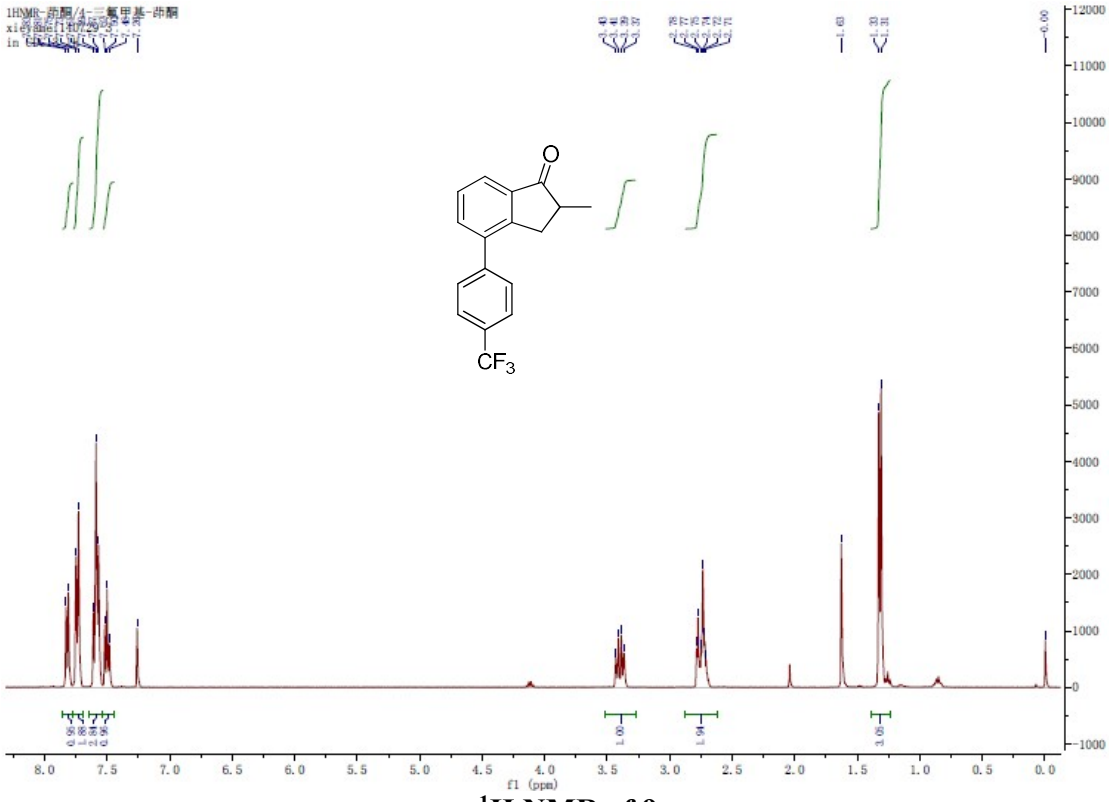
^{13}C NMR of 9a[12]



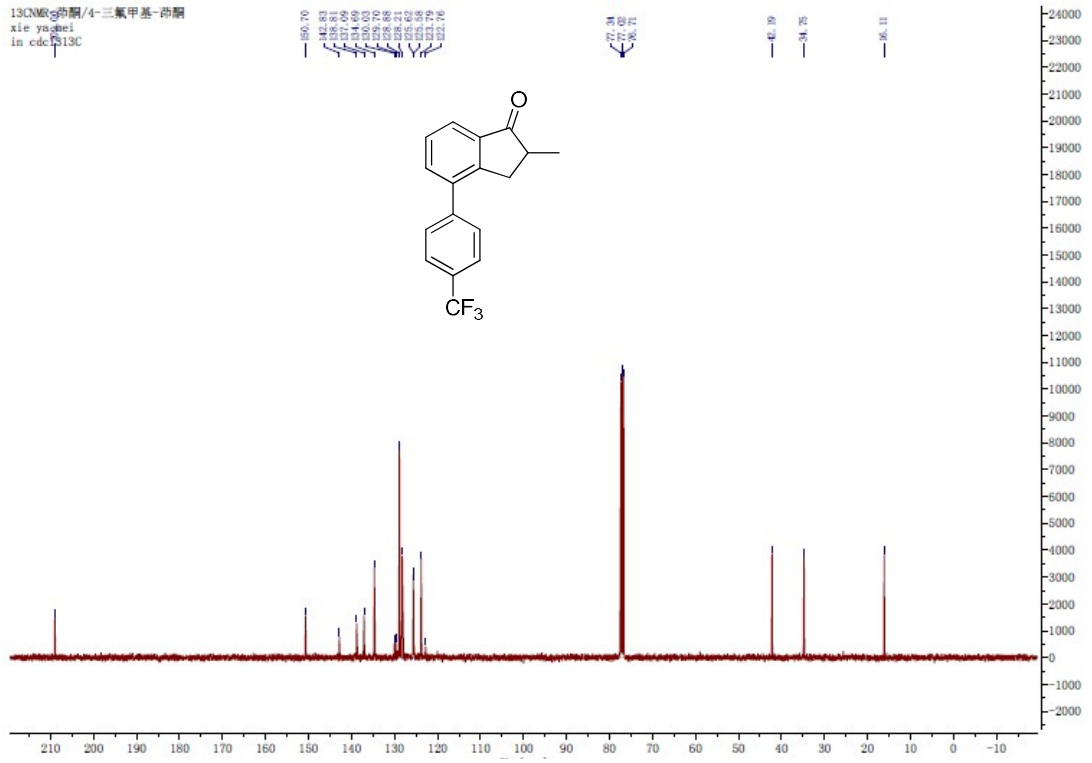
^{1}H NMR of 9a[13]



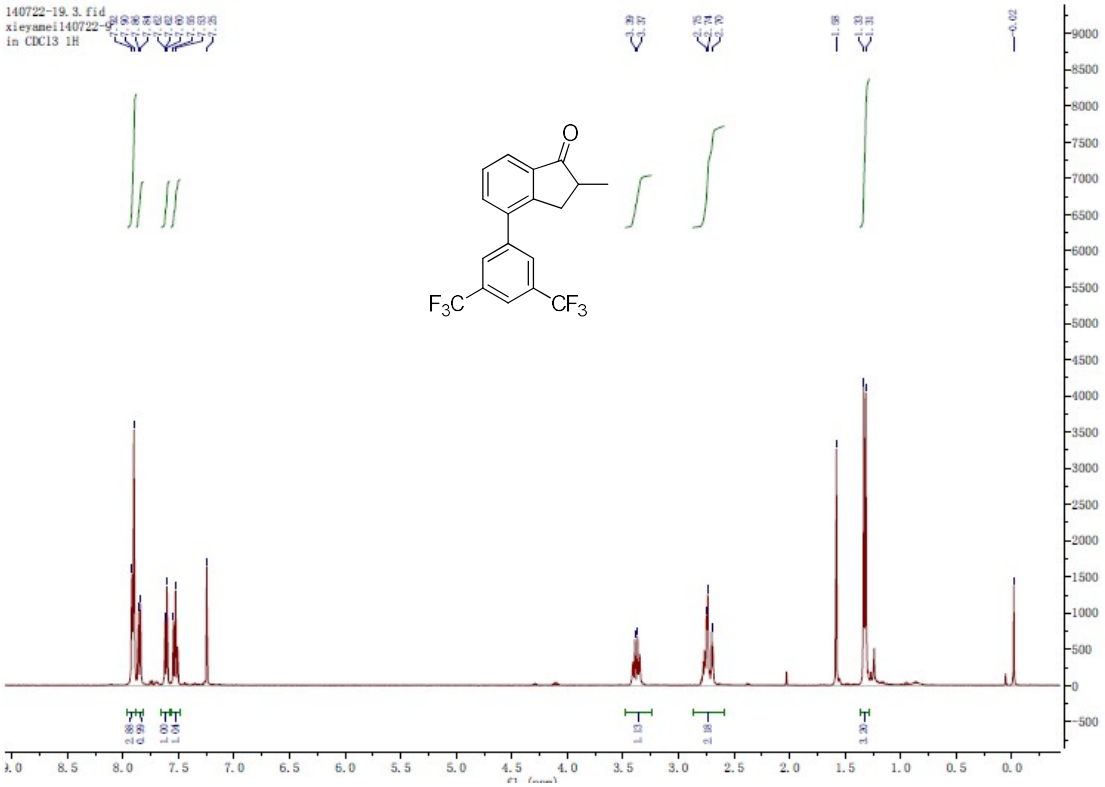
^{13}C NMR of 9a$_{13}$



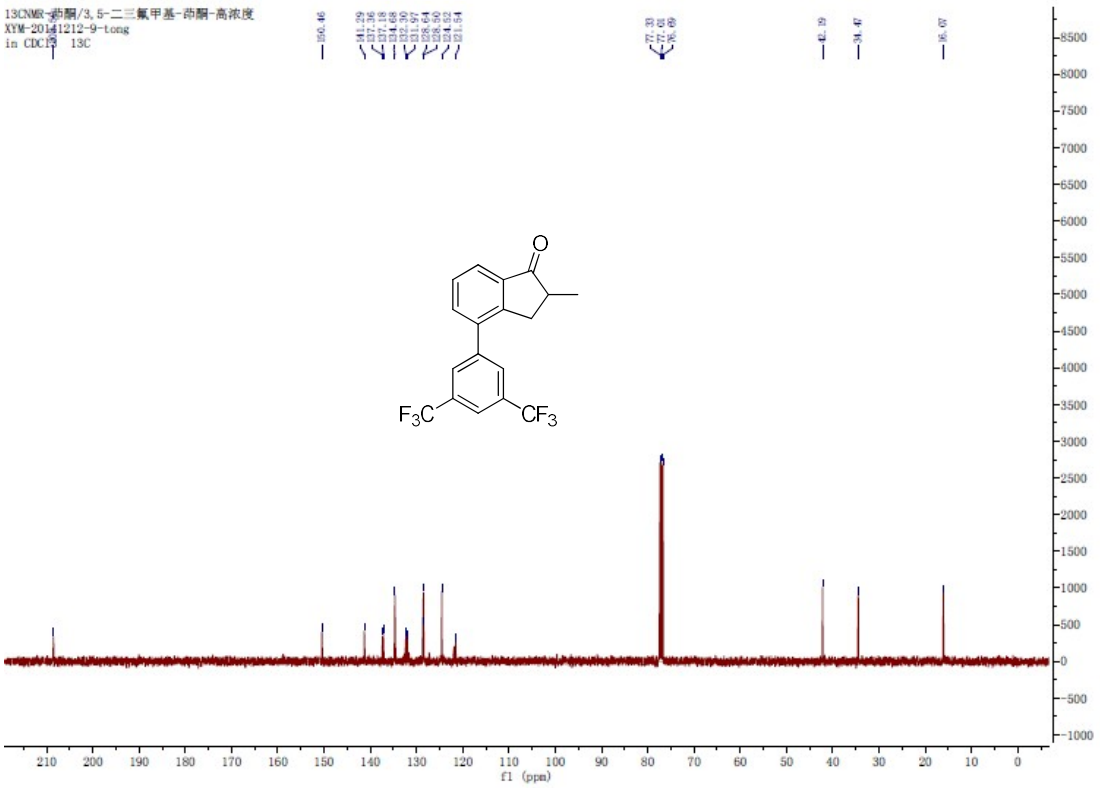
^{1}H NMR of 9a$_{14}$



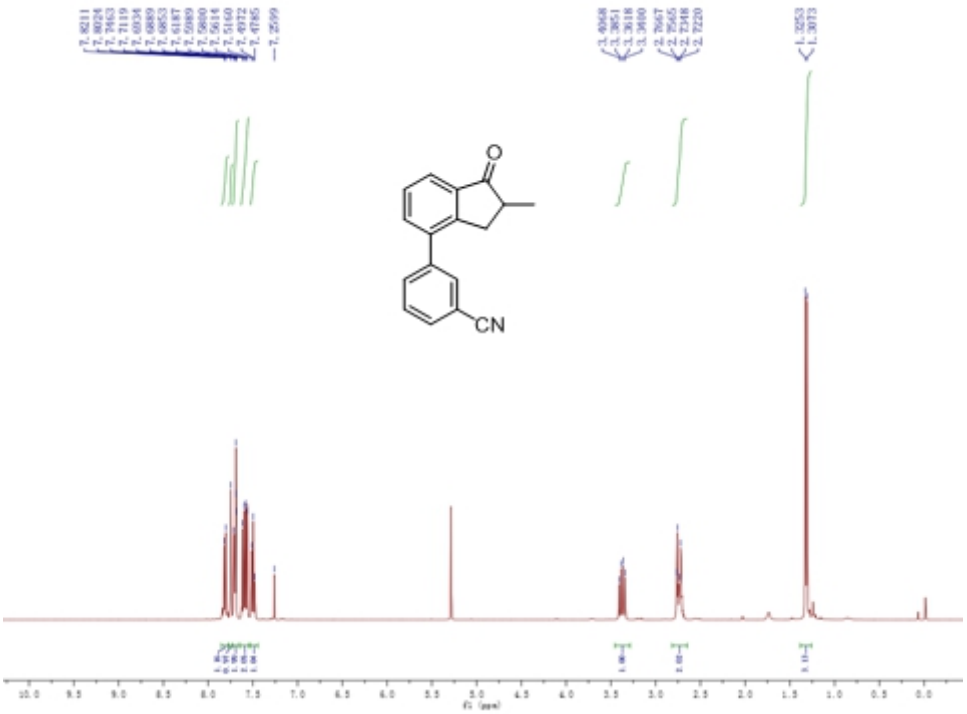
^{13}C NMR of 9a$_{14}$



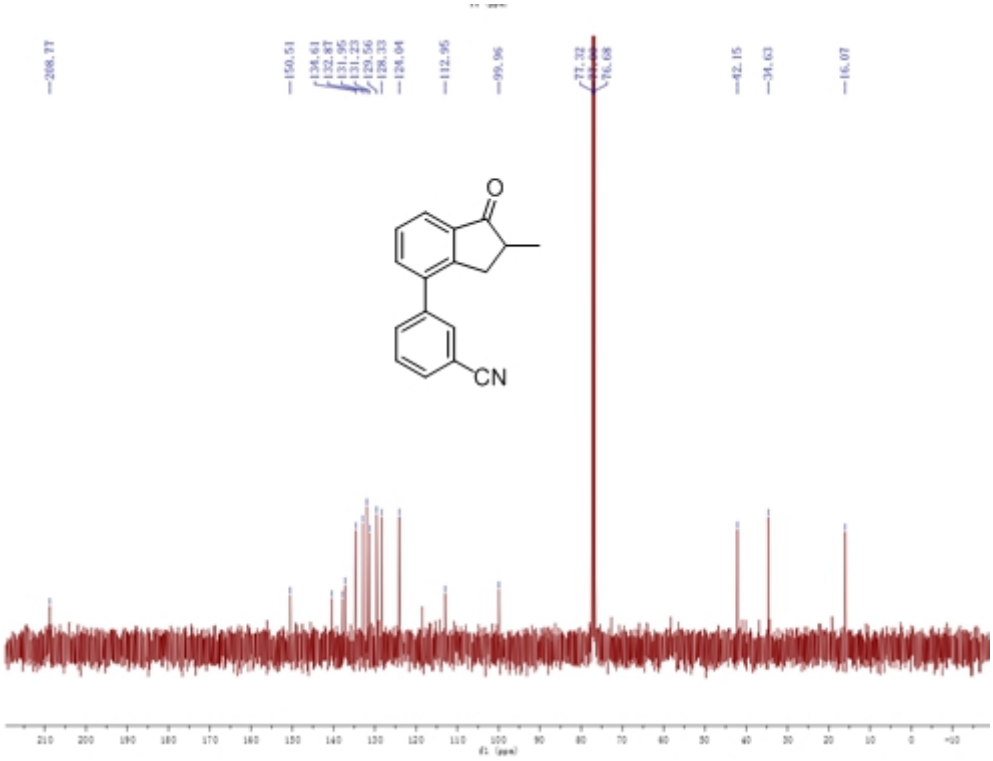
^{1}H NMR of 9a$_{15}$



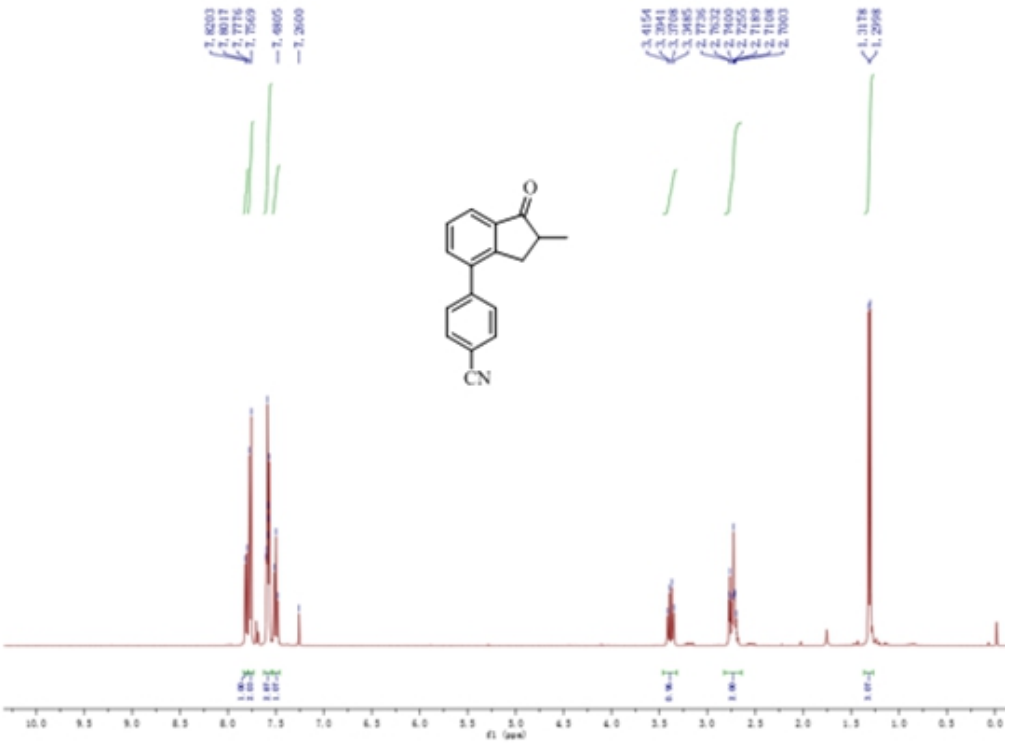
^{13}C NMR of 9a$_{15}$



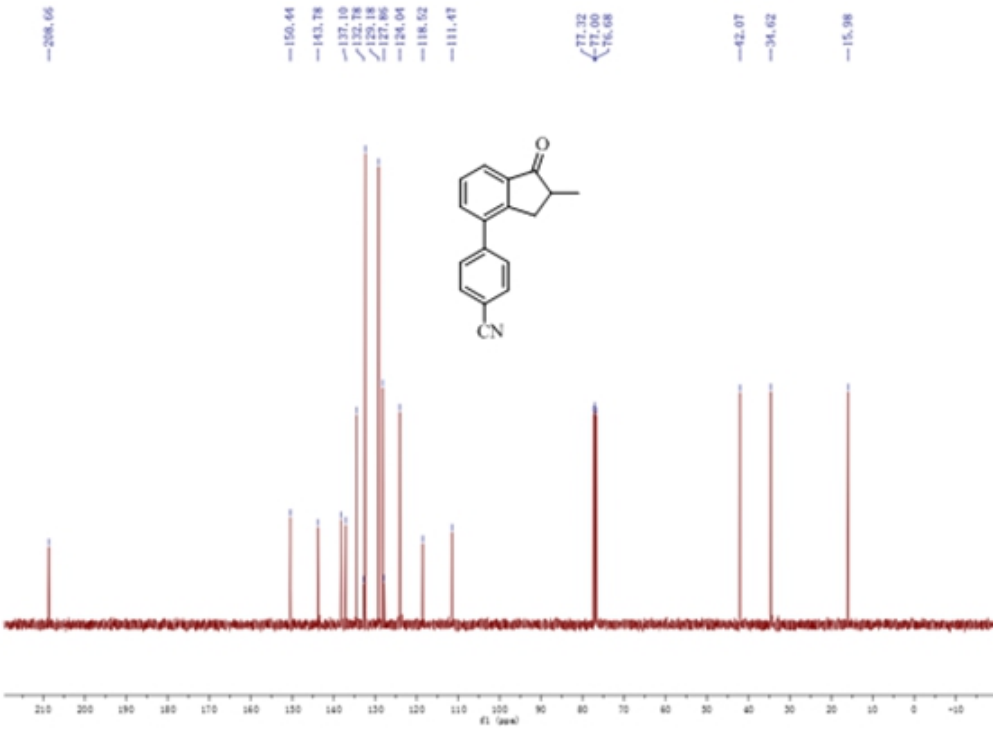
^{1}H NMR of 9a$_{16}$



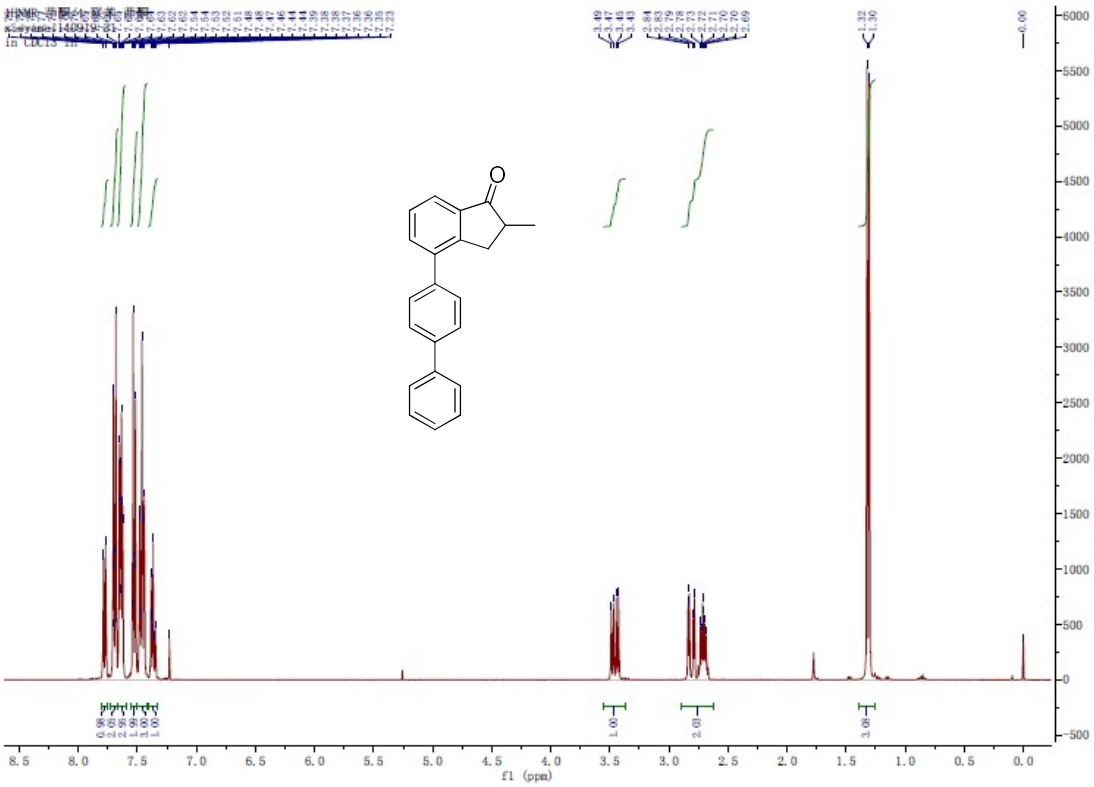
^{13}C NMR of 9a$_{16}$



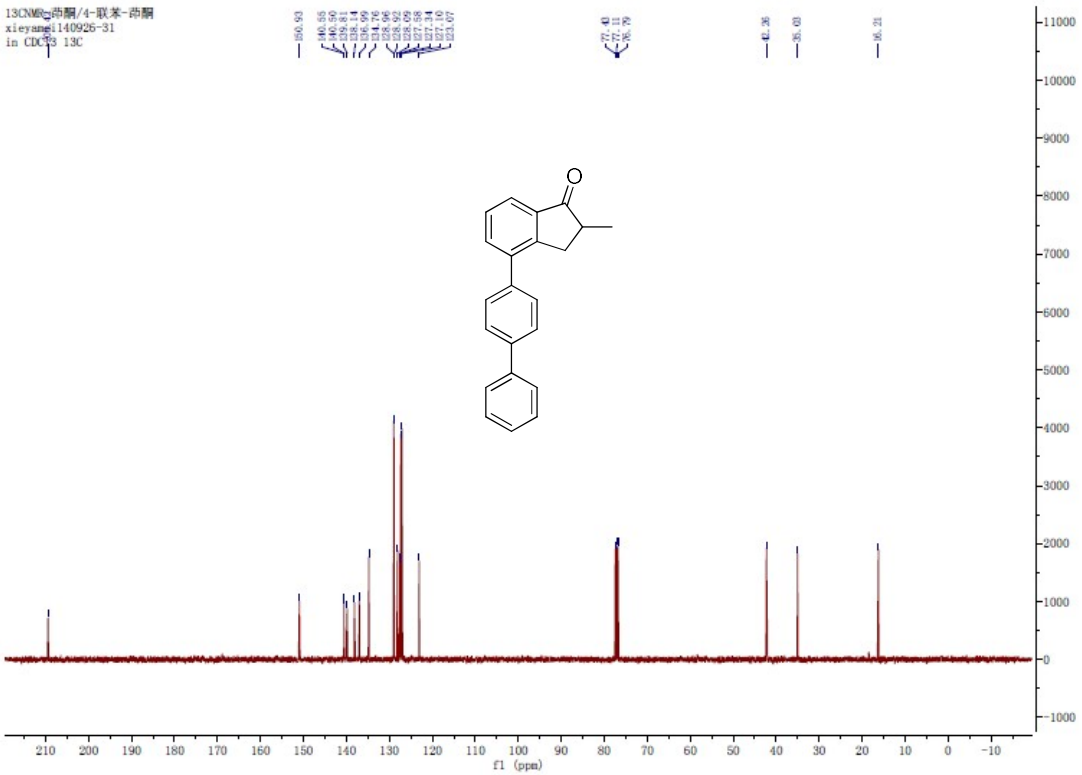
^{1}H NMR of 9a$_{17}$



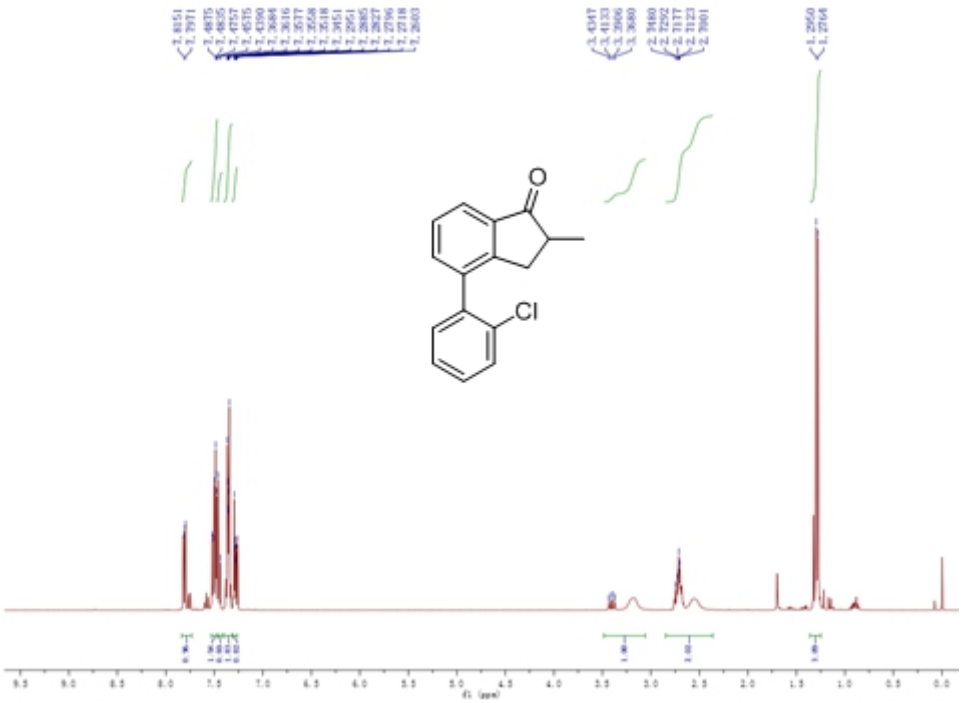
^{13}C NMR of 9a[17]



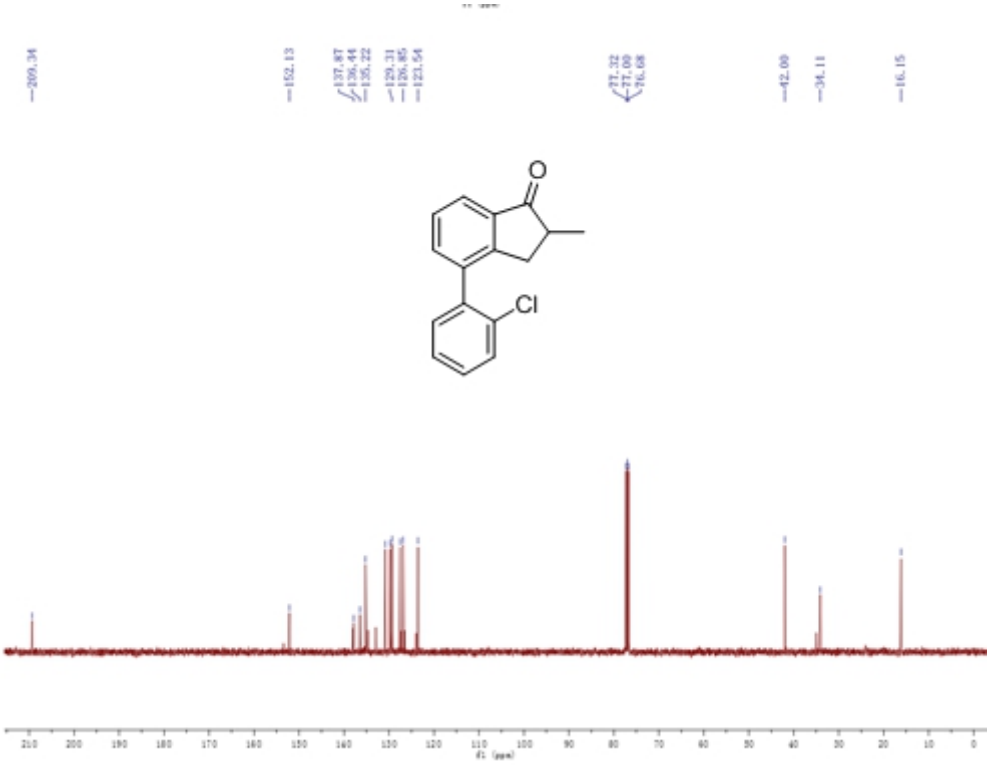
^{1}H NMR of 9a[18]



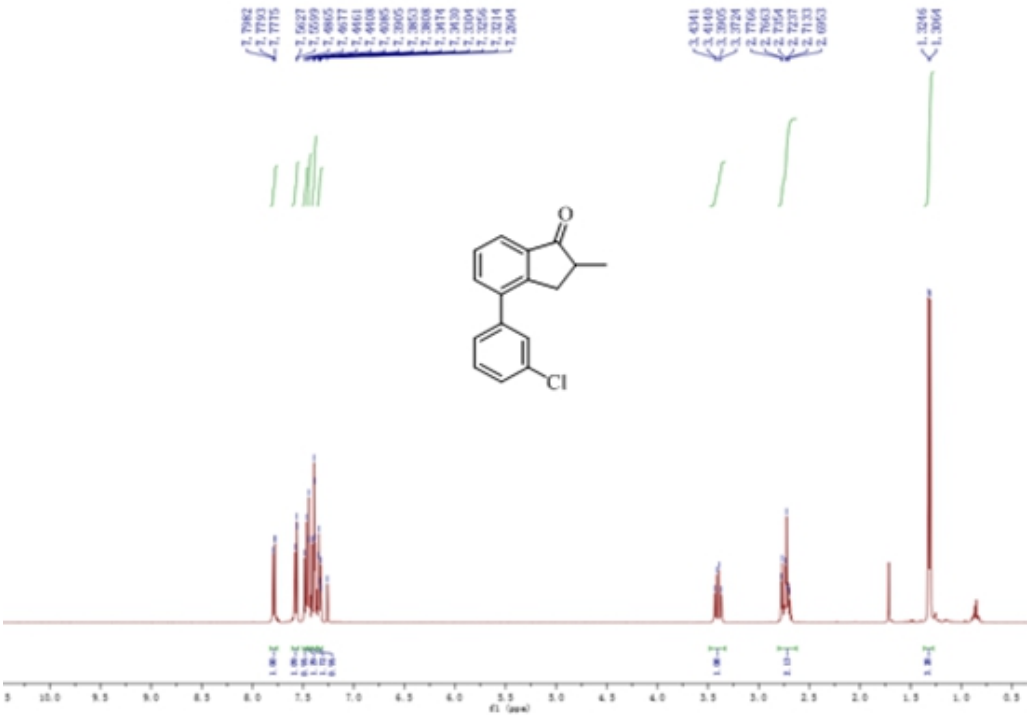
^{13}C NMR of 9a$_{18}$



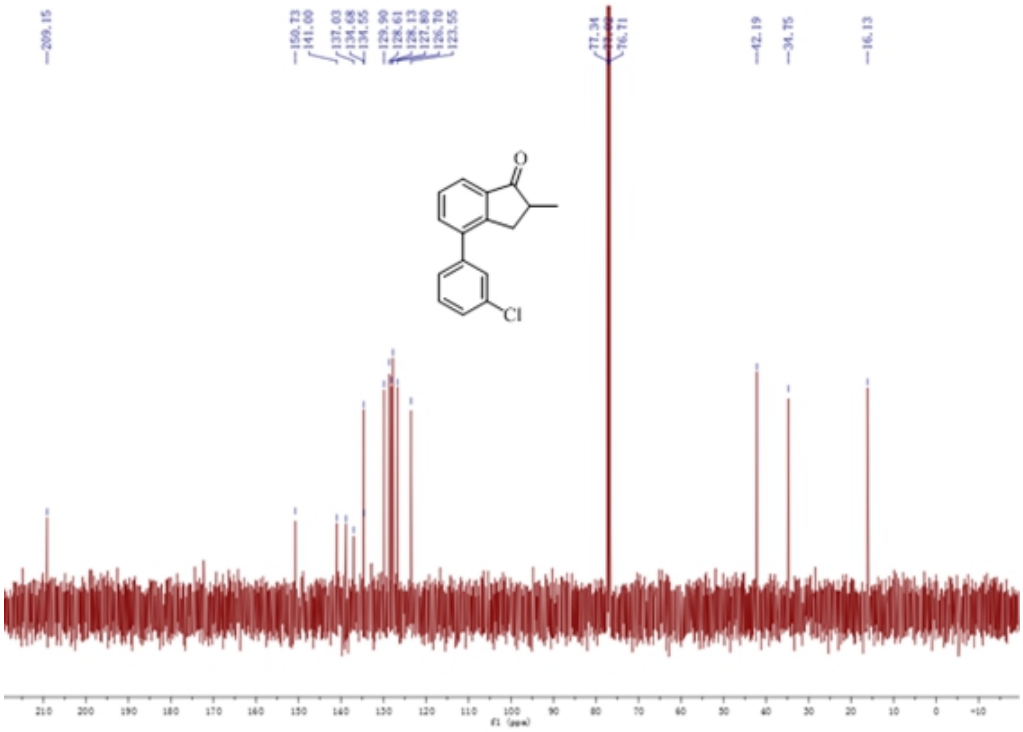
^{1}H NMR of 9a$_{19}$



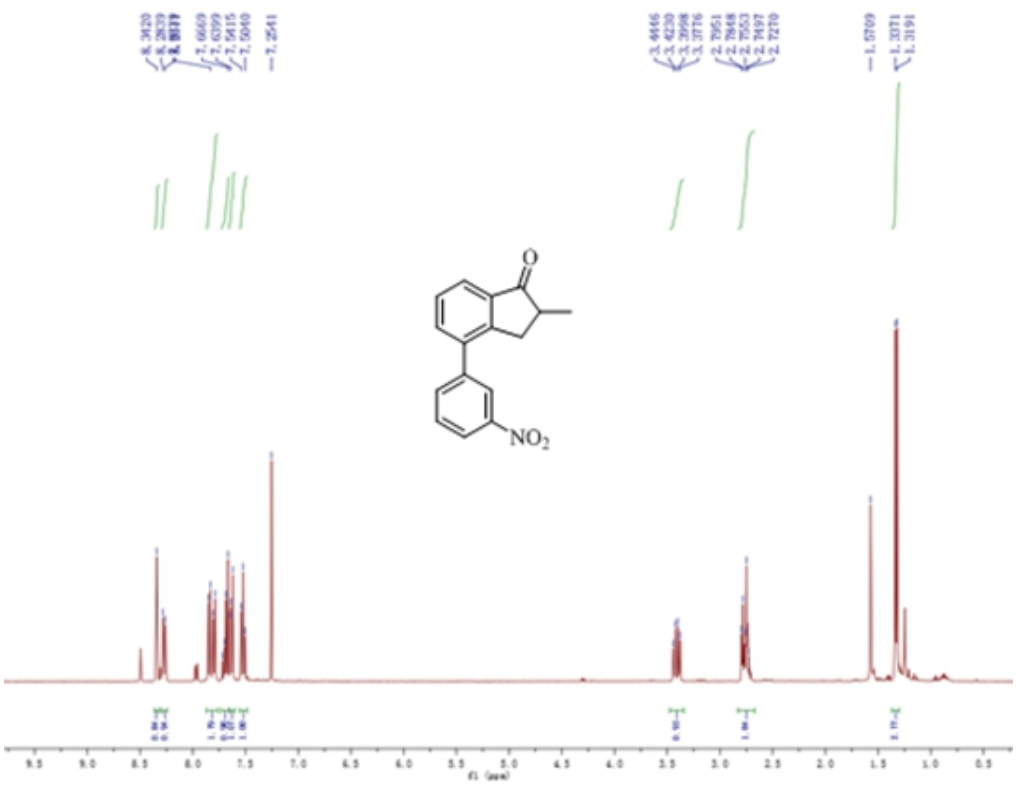
^{13}C NMR of 9a$_{19}$



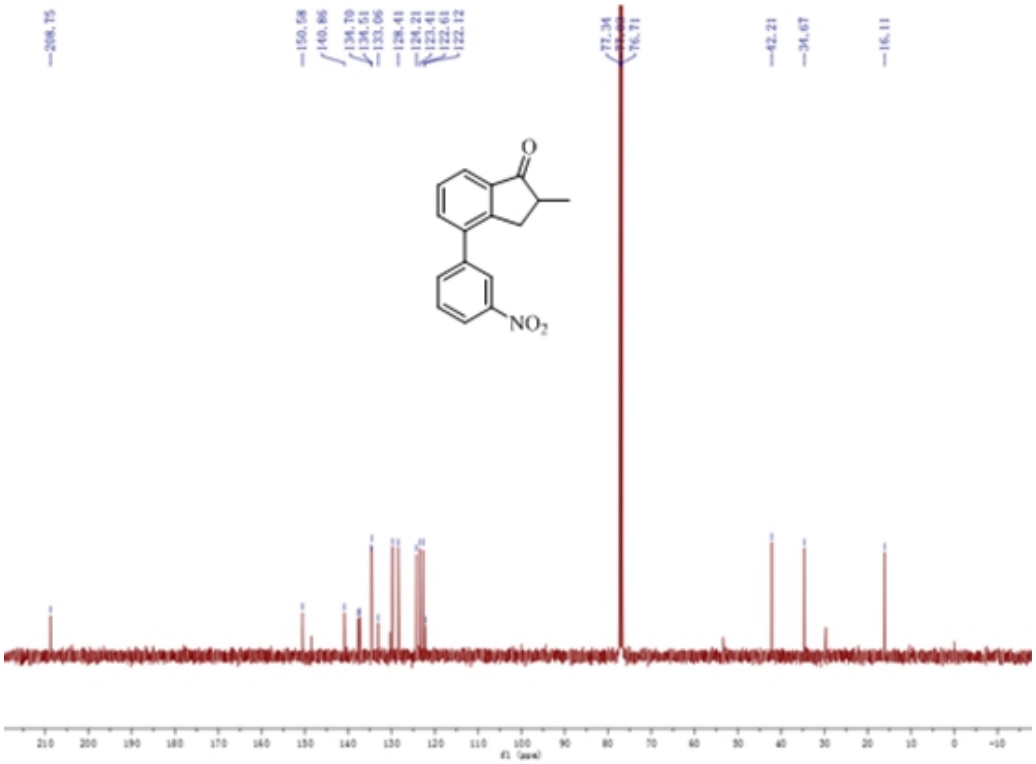
^{1}H NMR of 9a$_{20}$



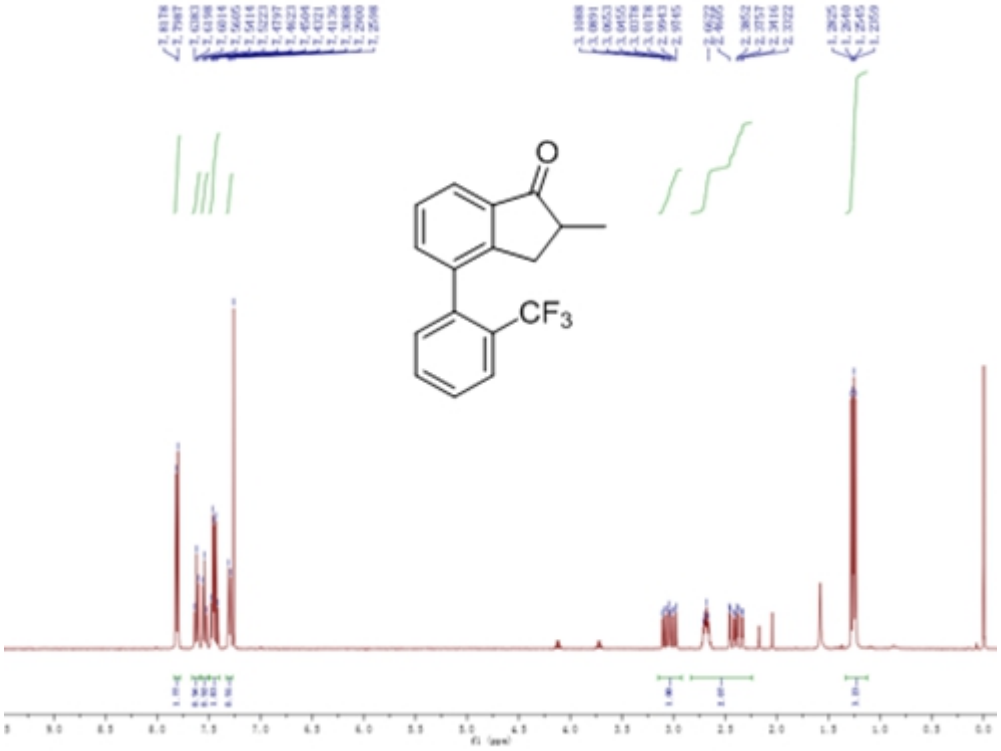
^{13}C NMR of 9a$_{20}$



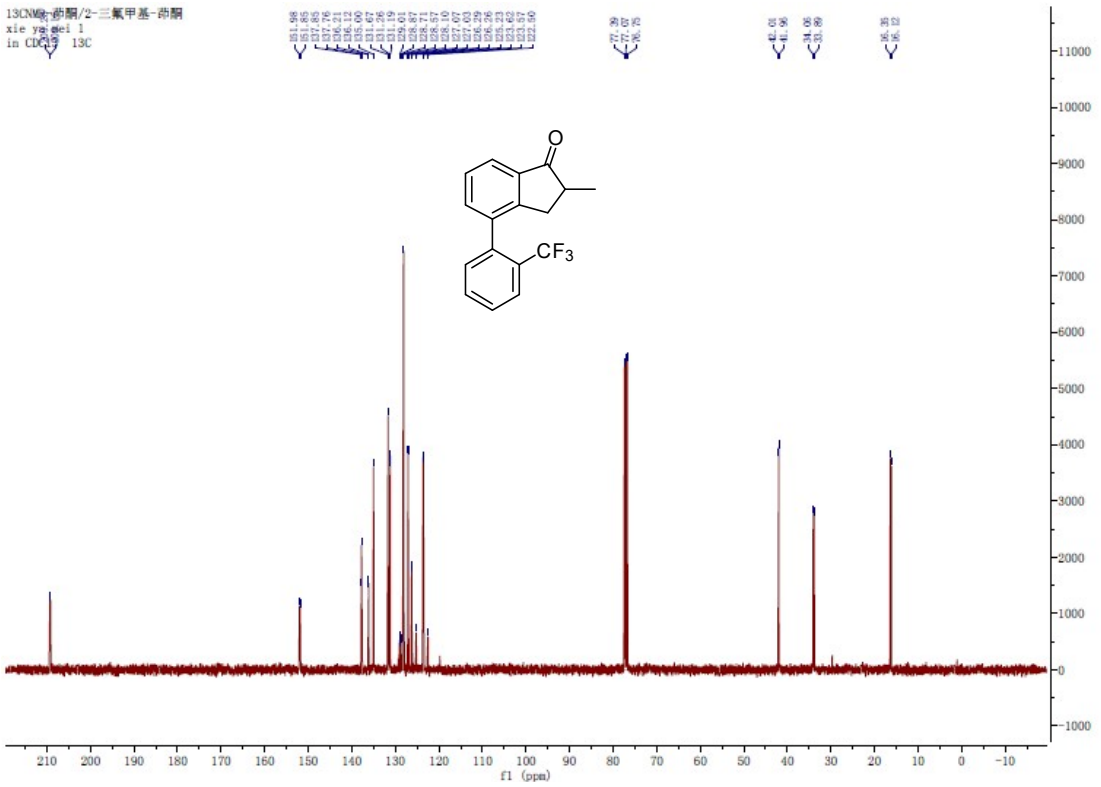
^{1}H NMR of 9a$_{21}$



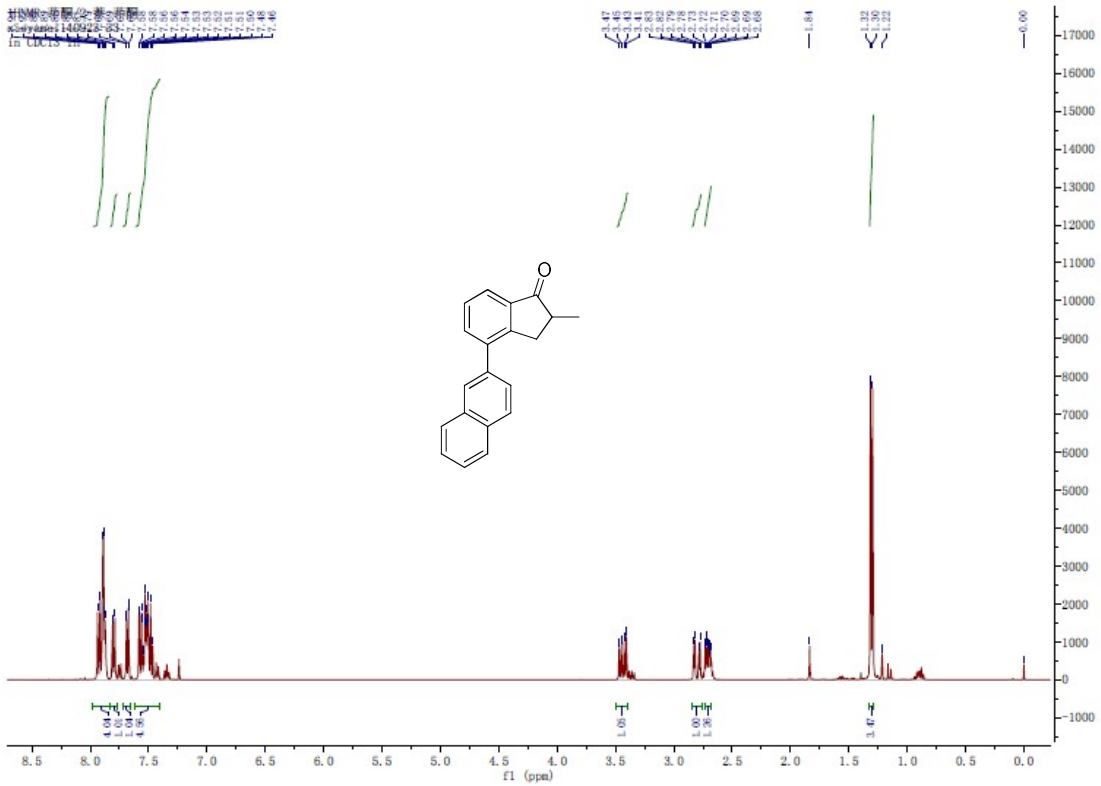
^{13}C NMR of 9a$_{21}$



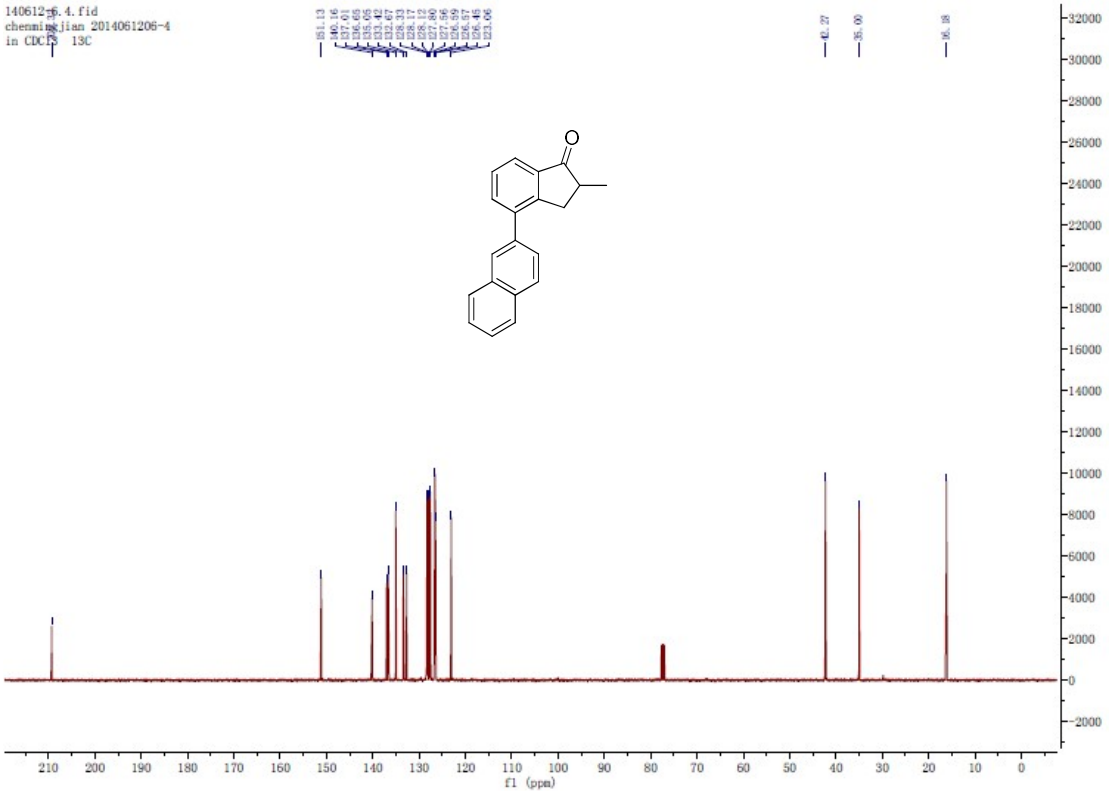
^{1}H NMR of 9a$_{22}$



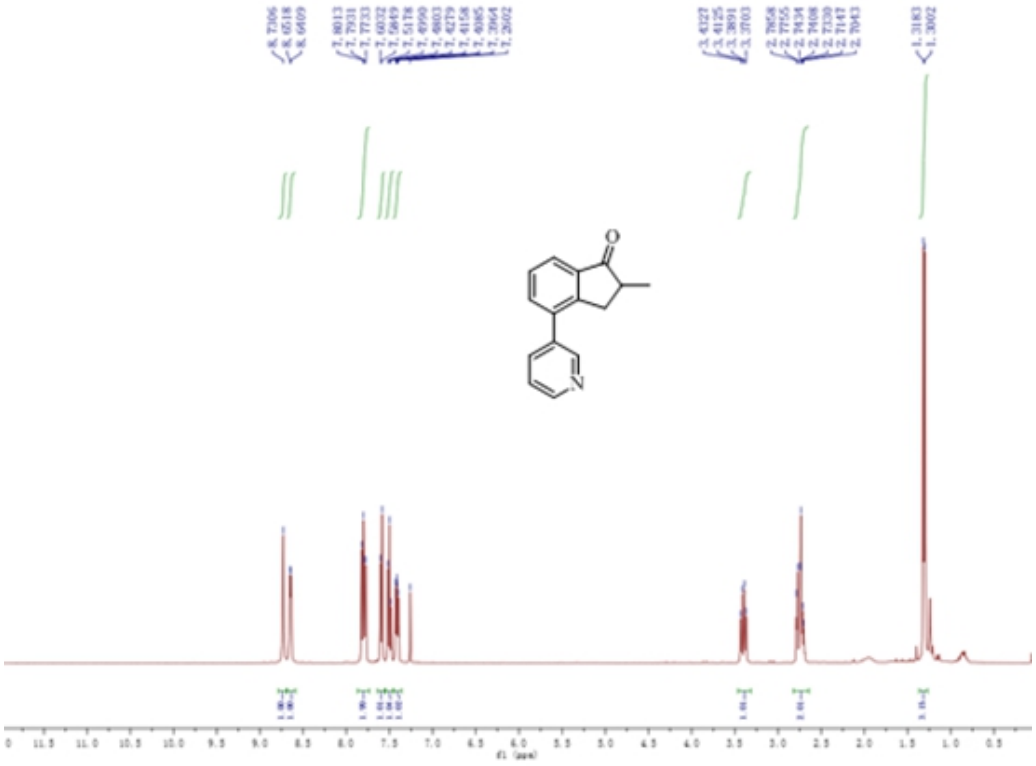
^{13}C NMR of 9a$_{22}$



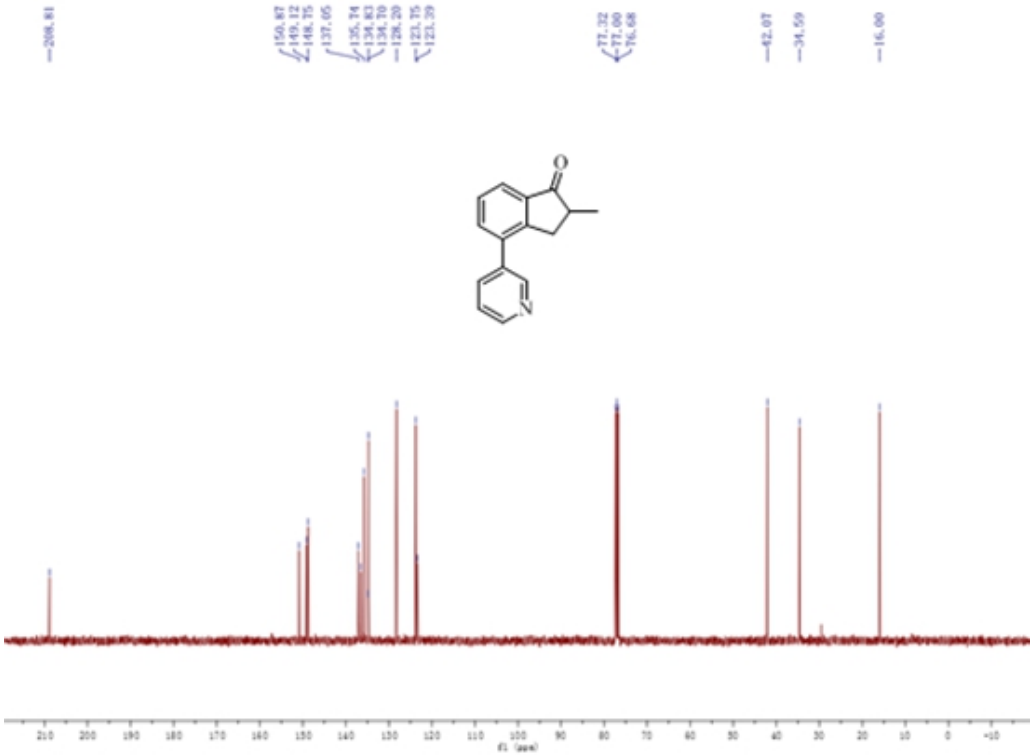
^{1}H NMR of 9a$_{23}$



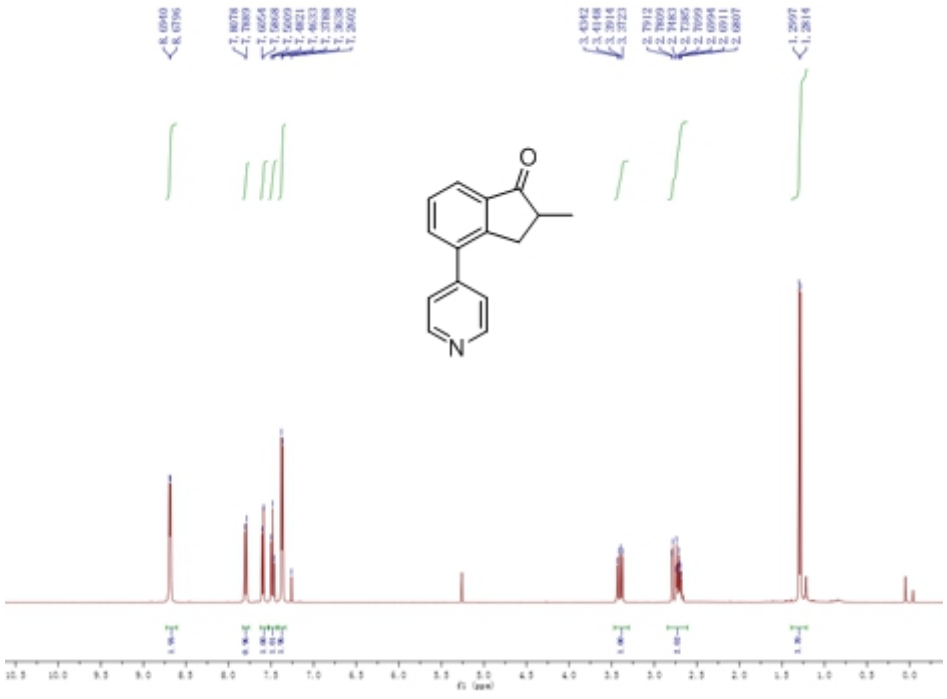
^{13}C NMR of 9a$_{23}$



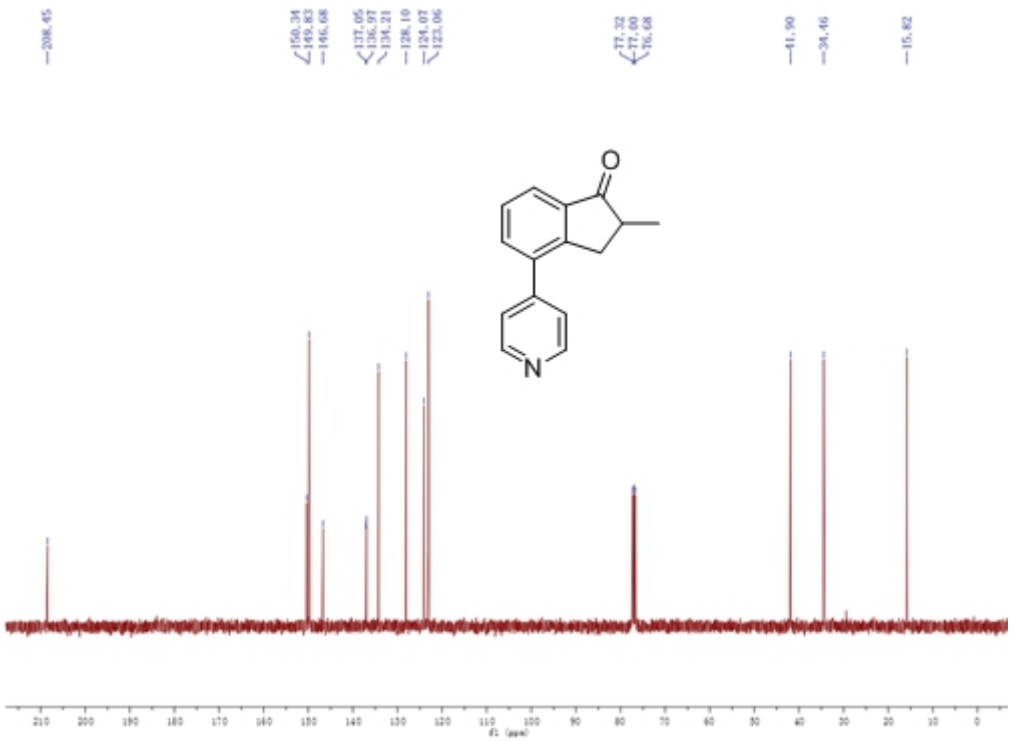
^{1}H NMR of 9b$_{1}$



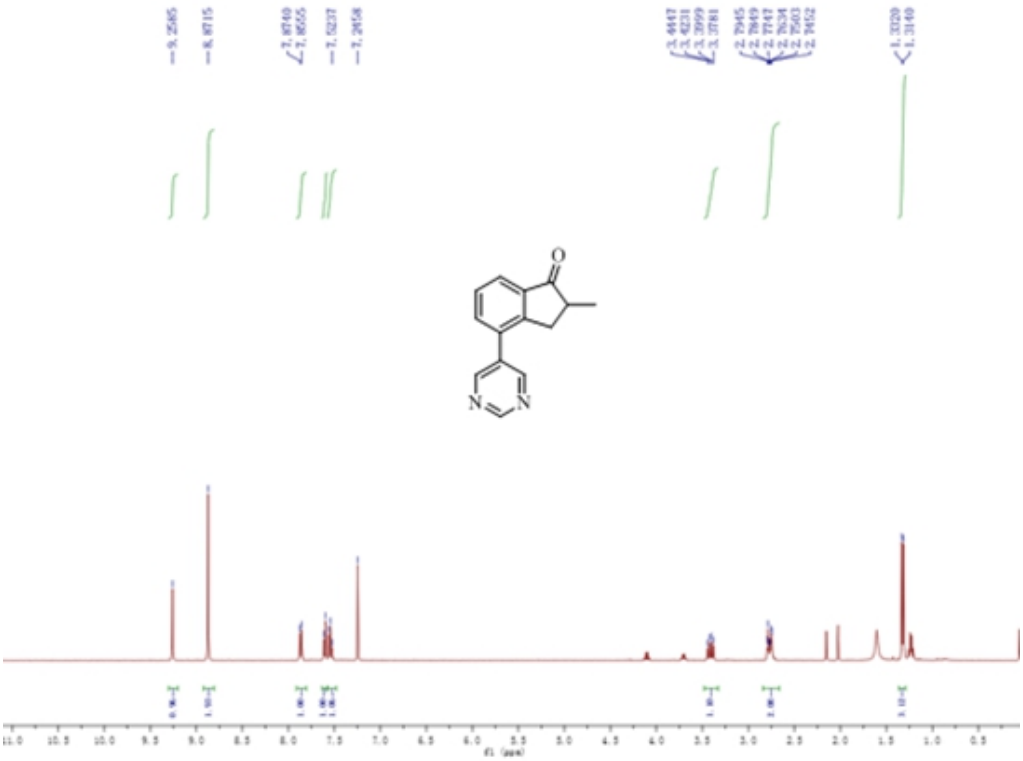
^{13}C NMR of 9b$_1$



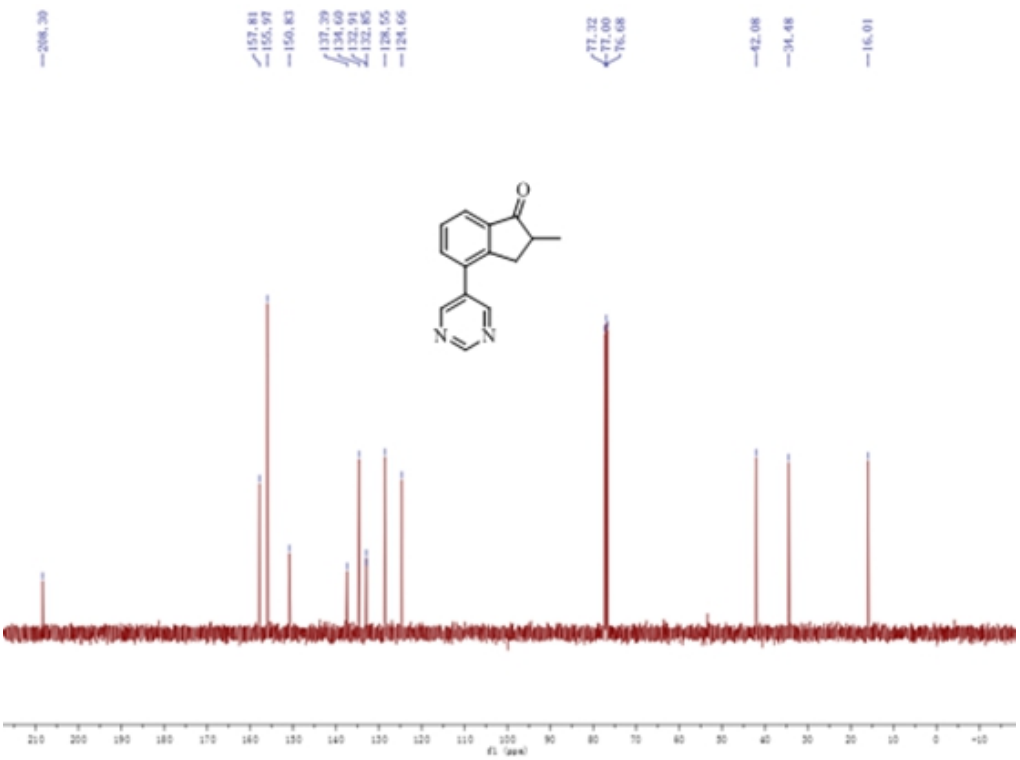
^{1}H NMR of 9b$_2$



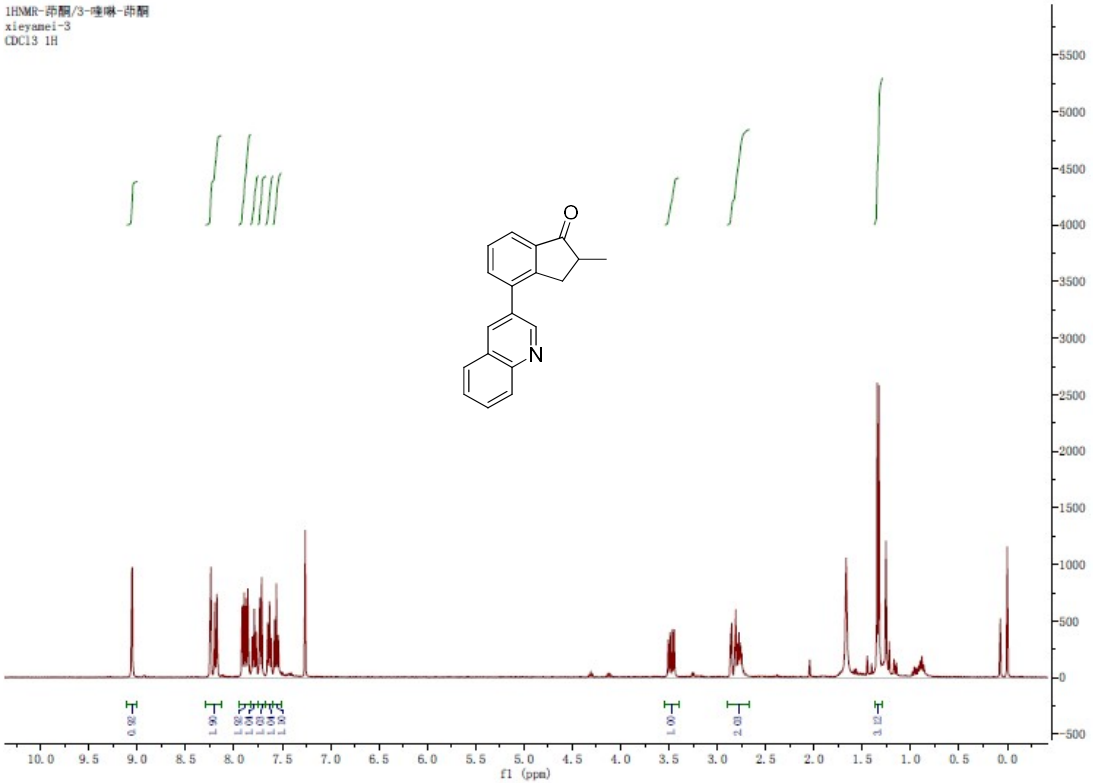
^{13}C NMR of 9b$_2$



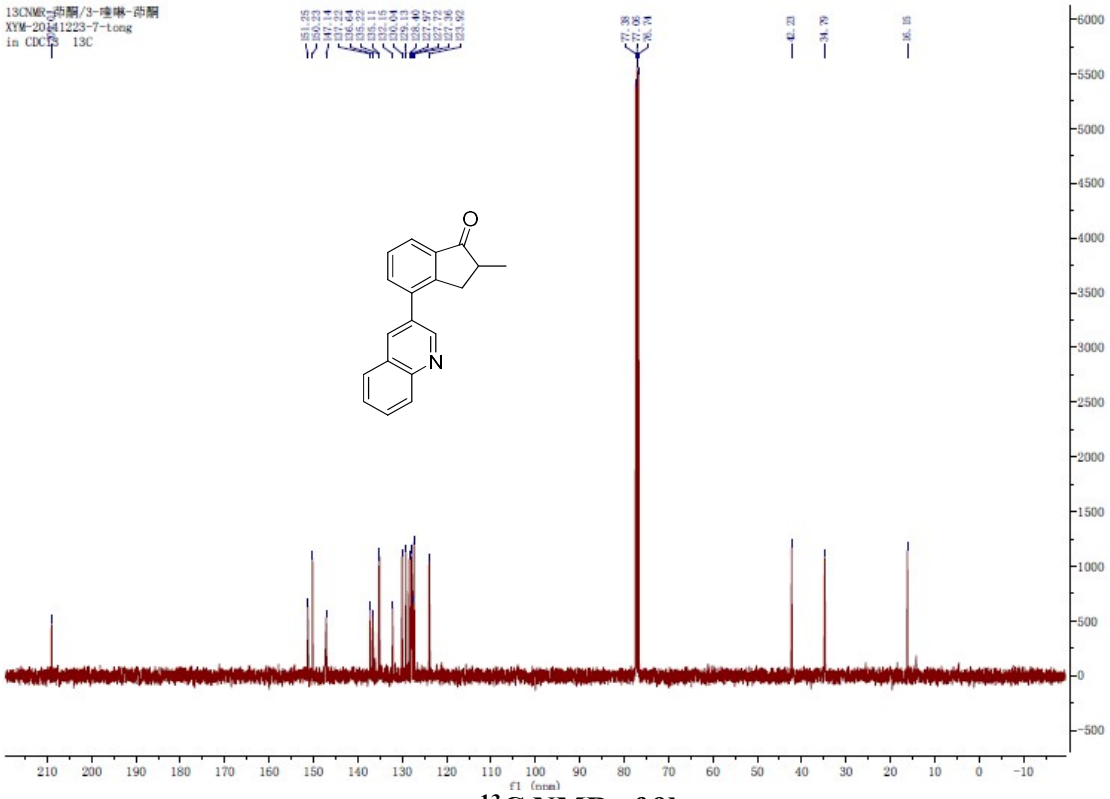
^{1}H NMR of 9b$_3$



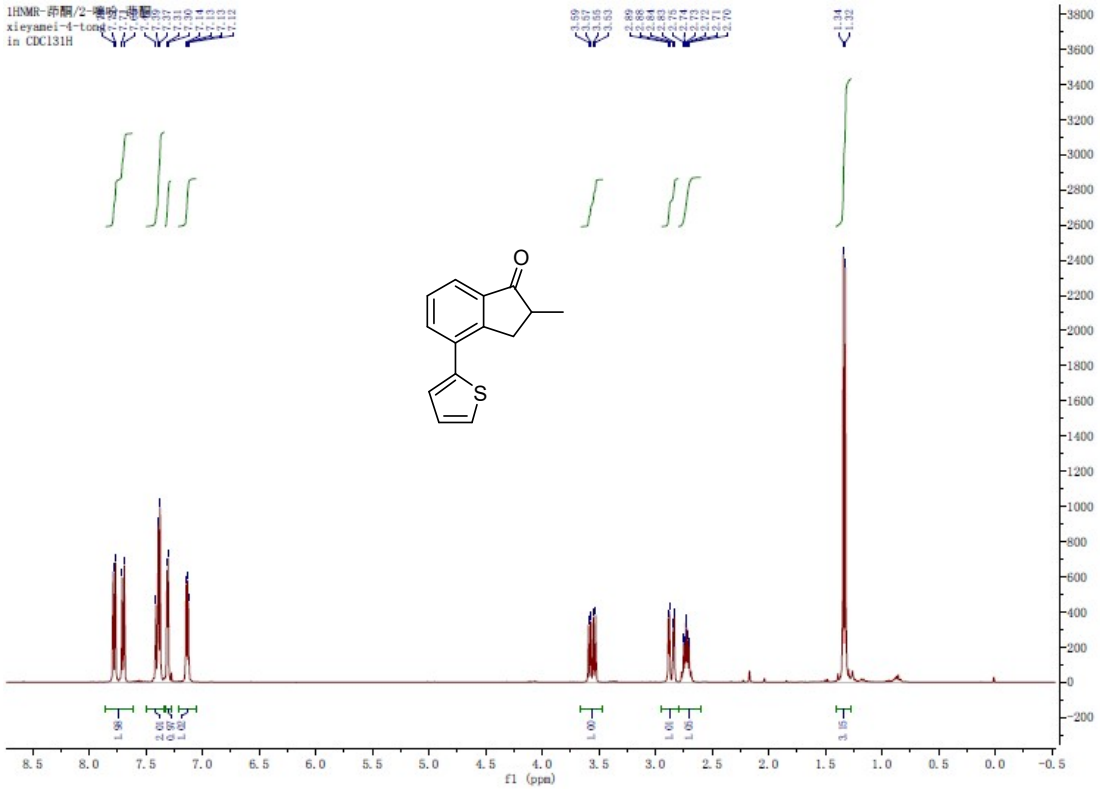
^{13}C NMR of 9b$_3$



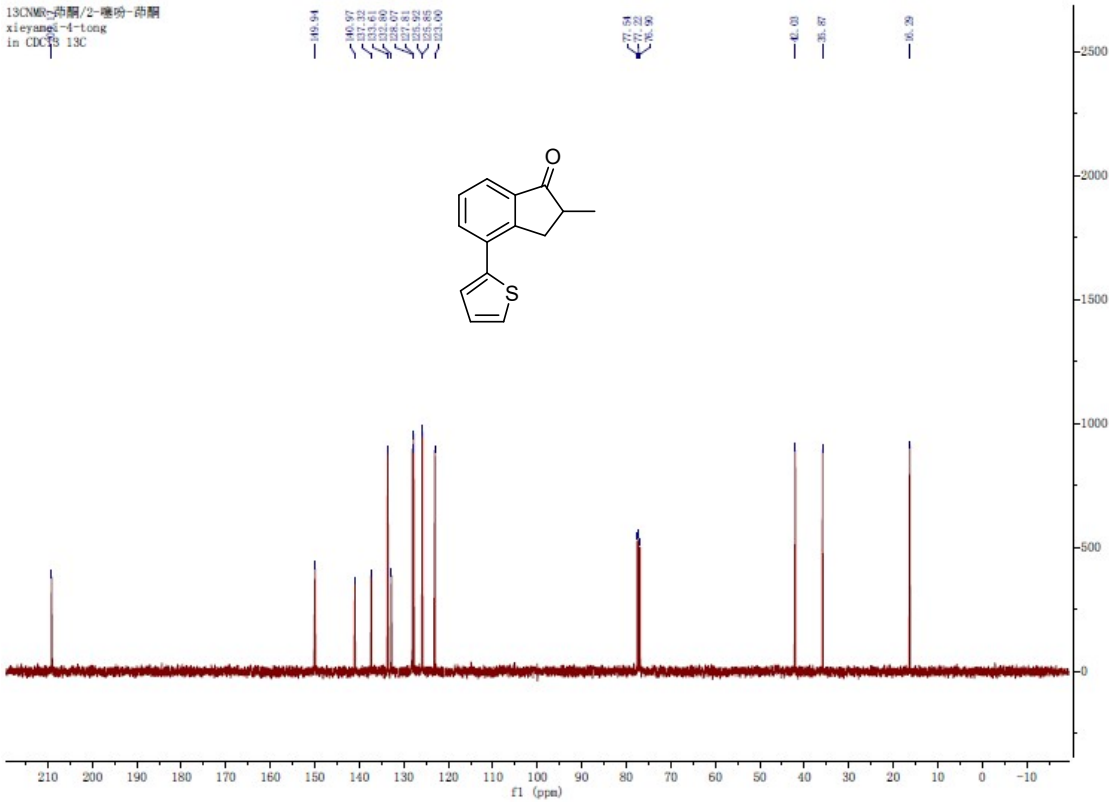
^{1}H NMR of 9b$_4$



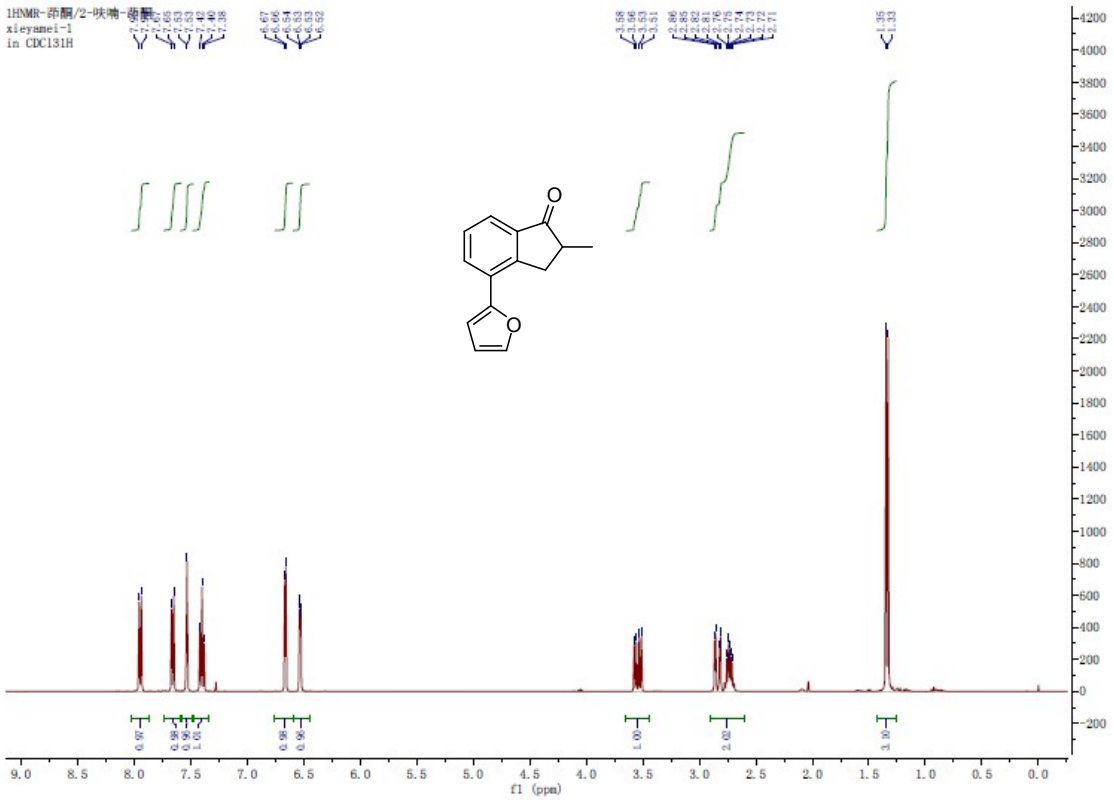
^{13}C NMR of 9b$_4$



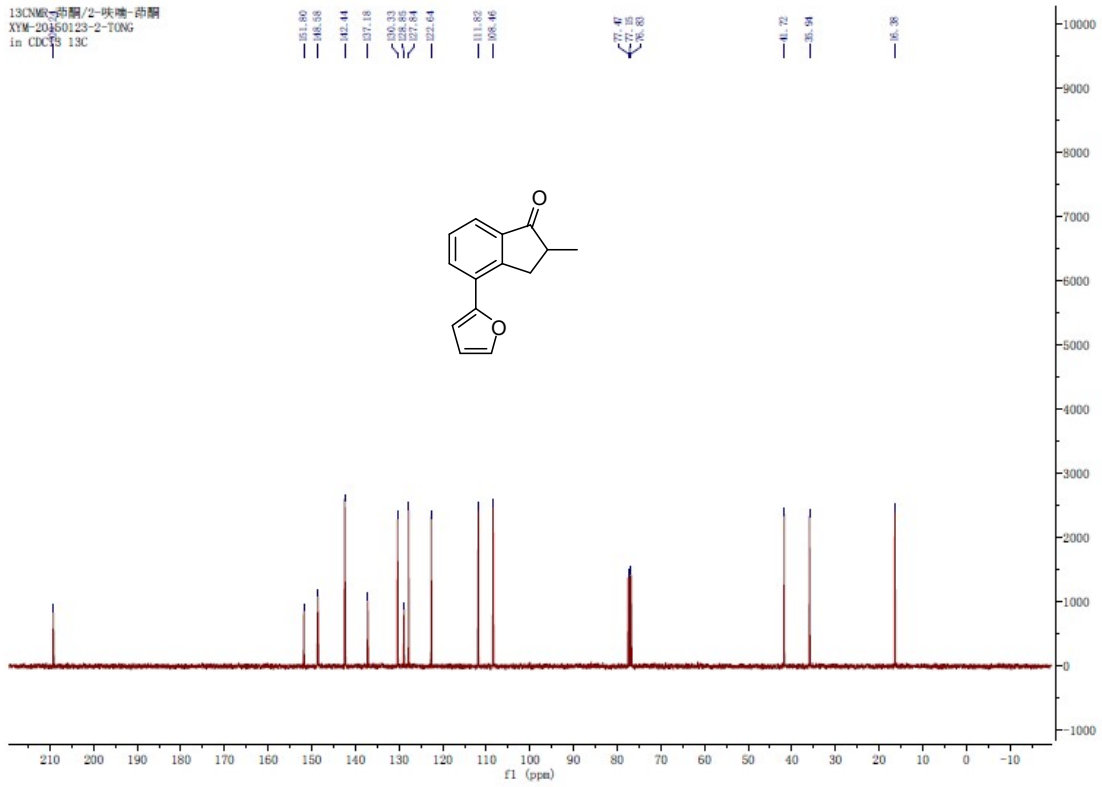
^{1}H NMR of 9b$_5$



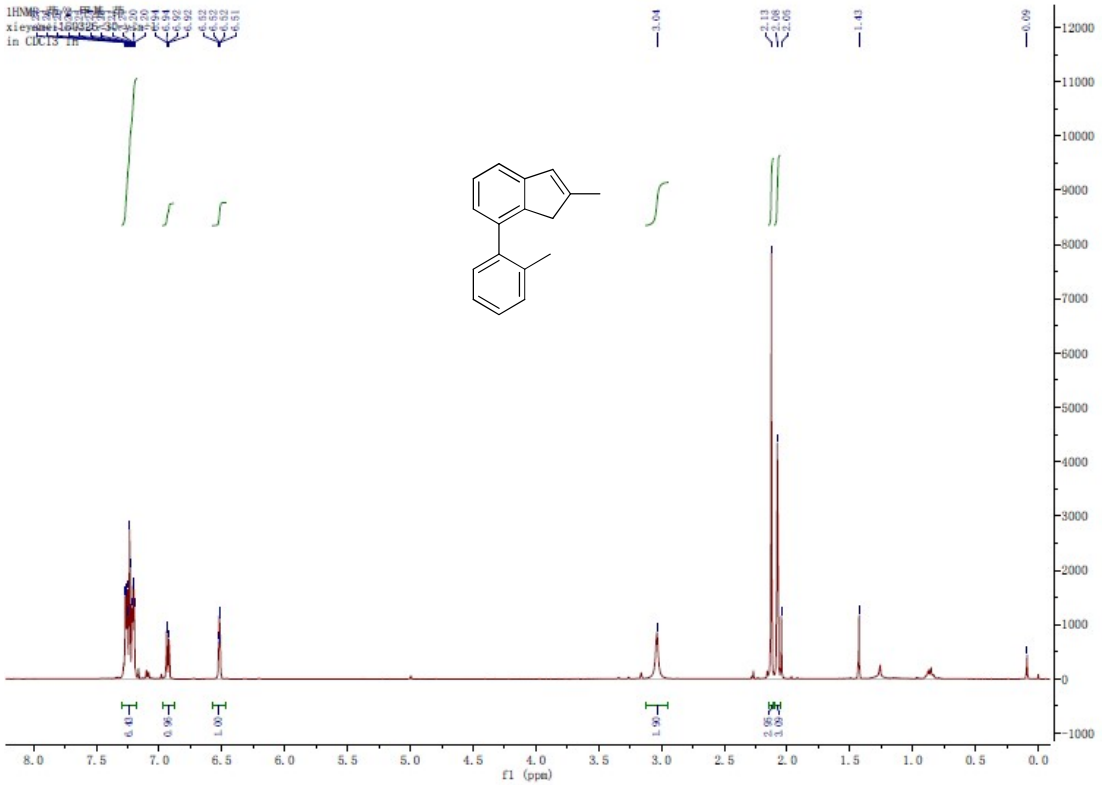
^{13}C NMR of 9b$_5$



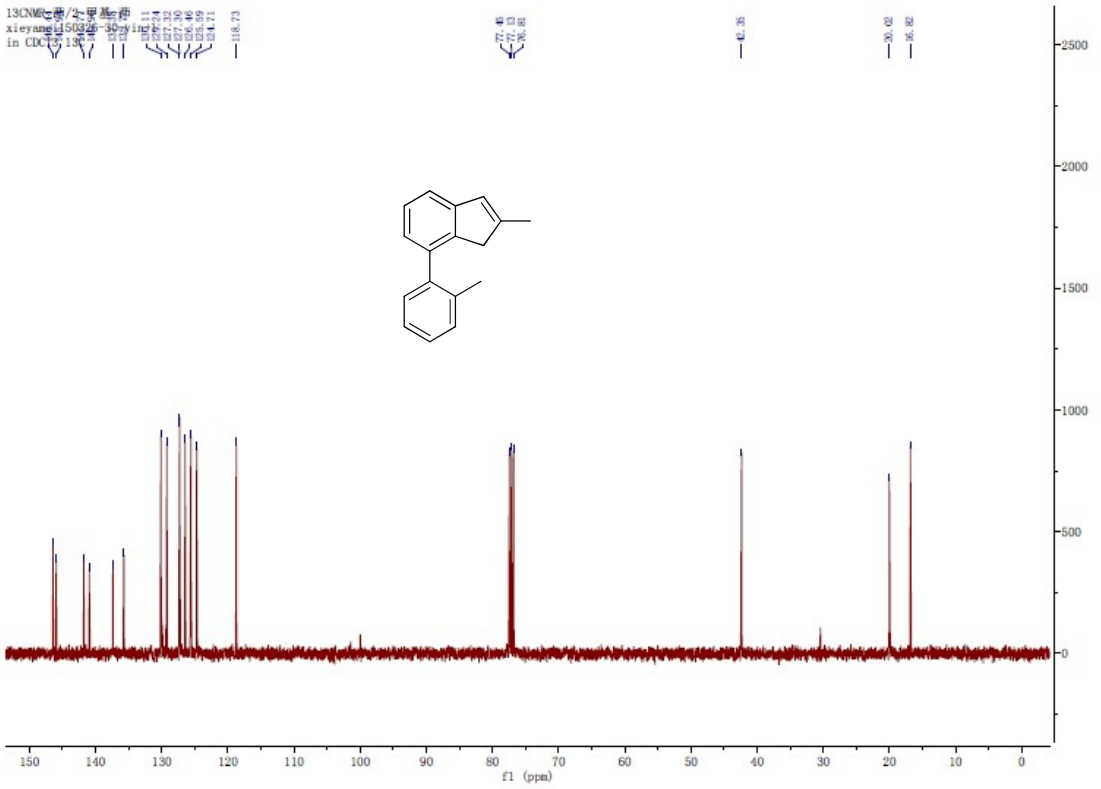
^{1}H NMR of 9b$_6$



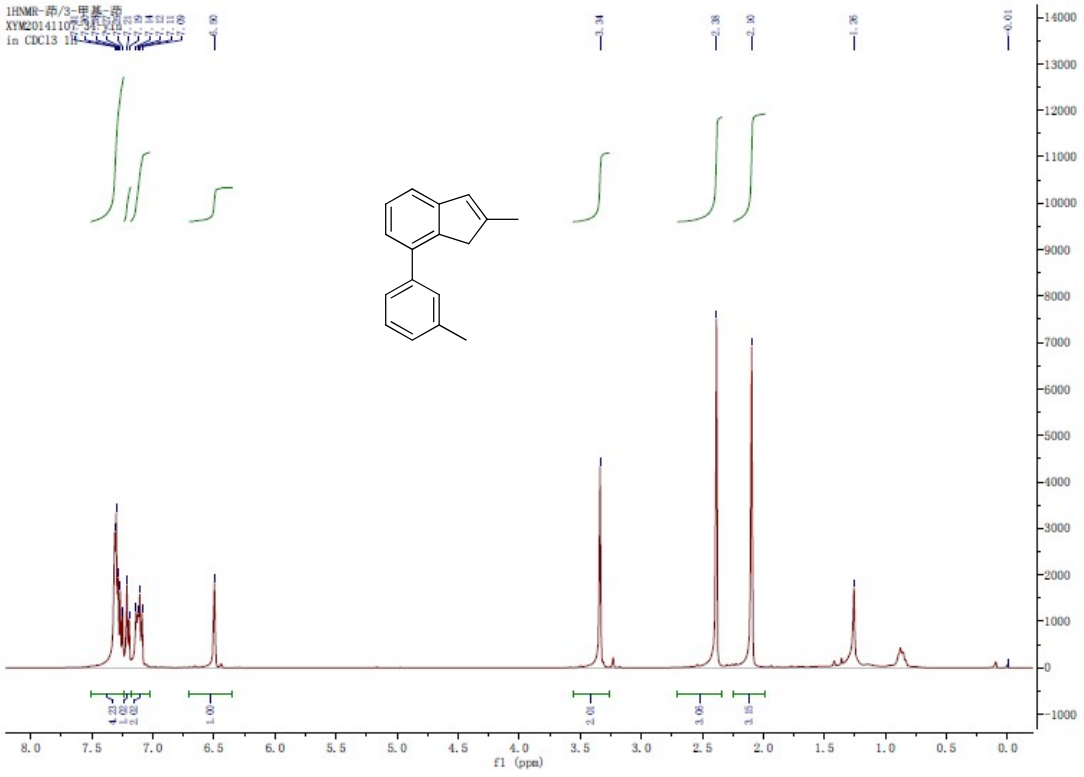
^{13}C NMR of 9b$_6$



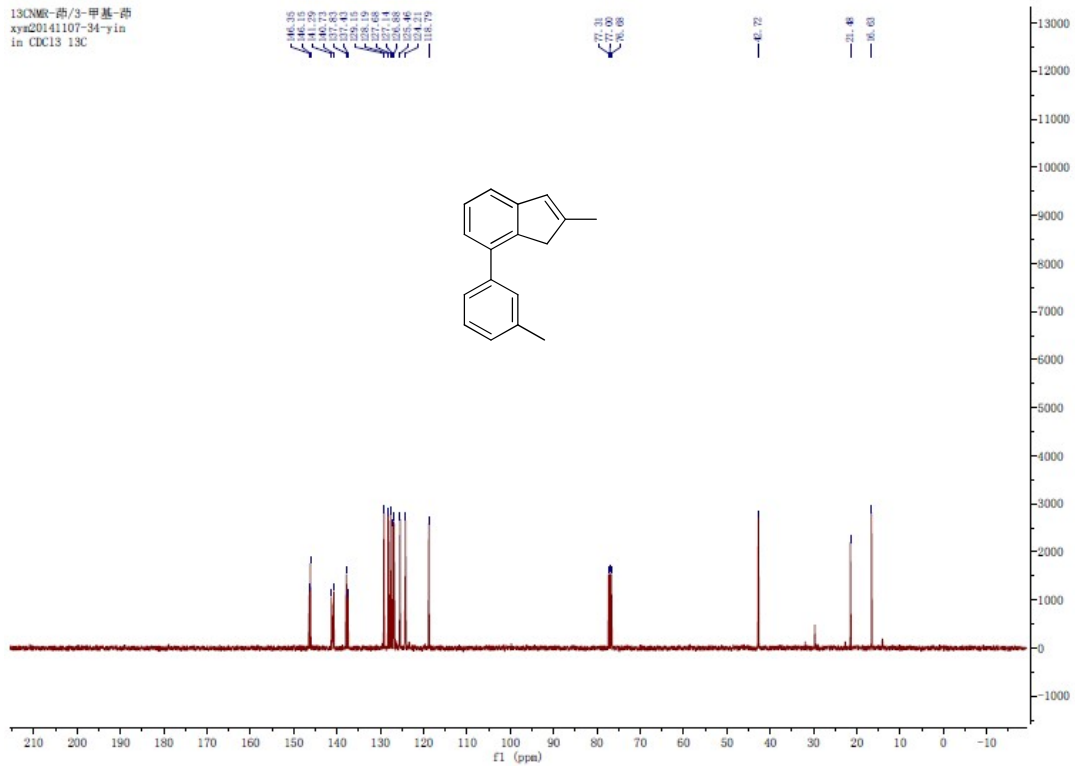
^{1}H NMR of 10a$_1$



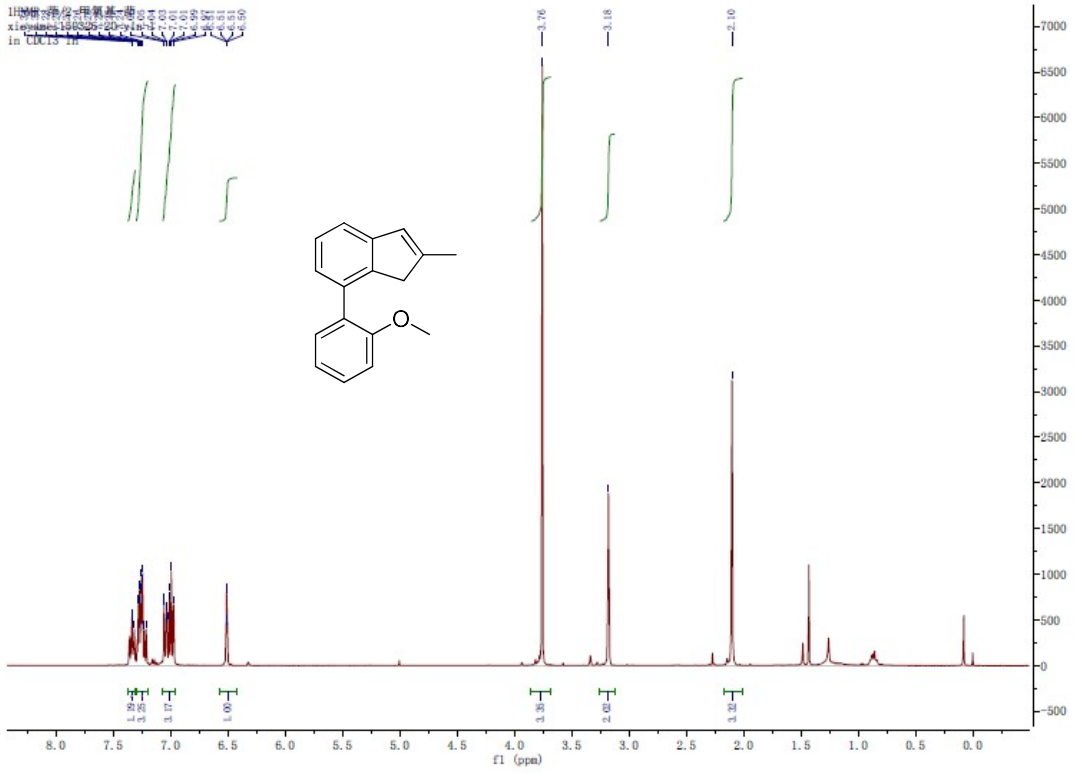
^{13}C NMR of 10a$_1$



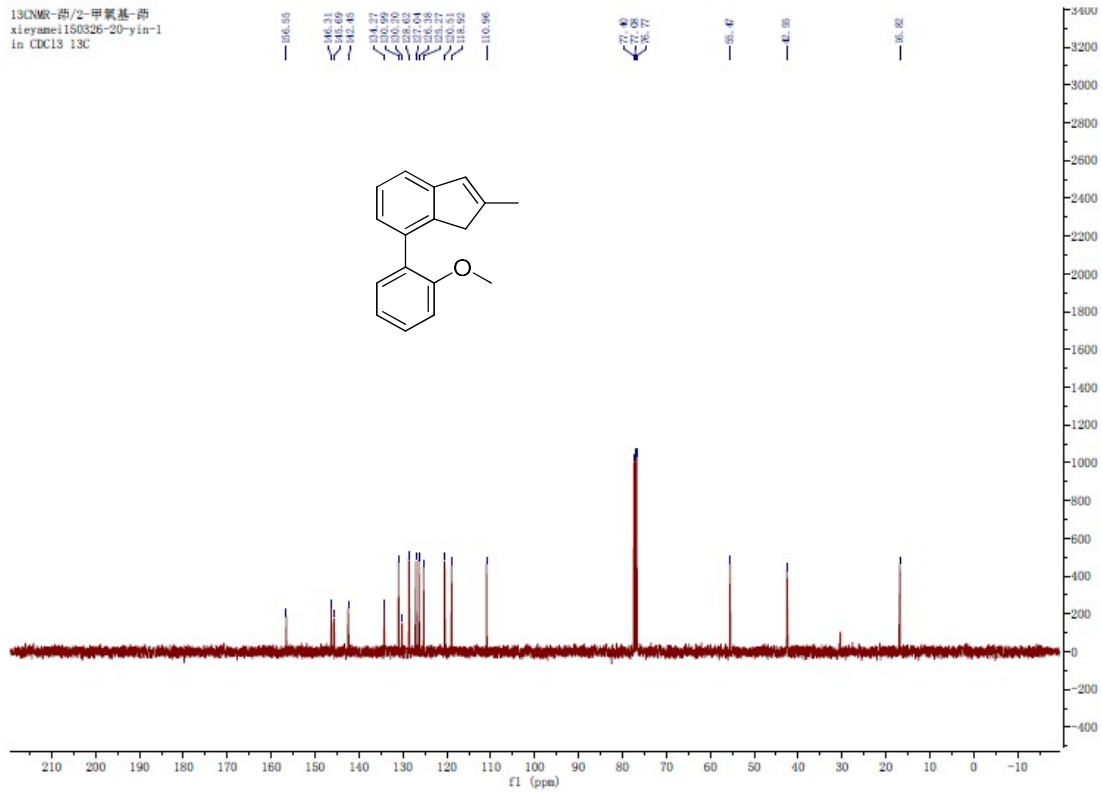
^{1}H NMR of 10a$_2$



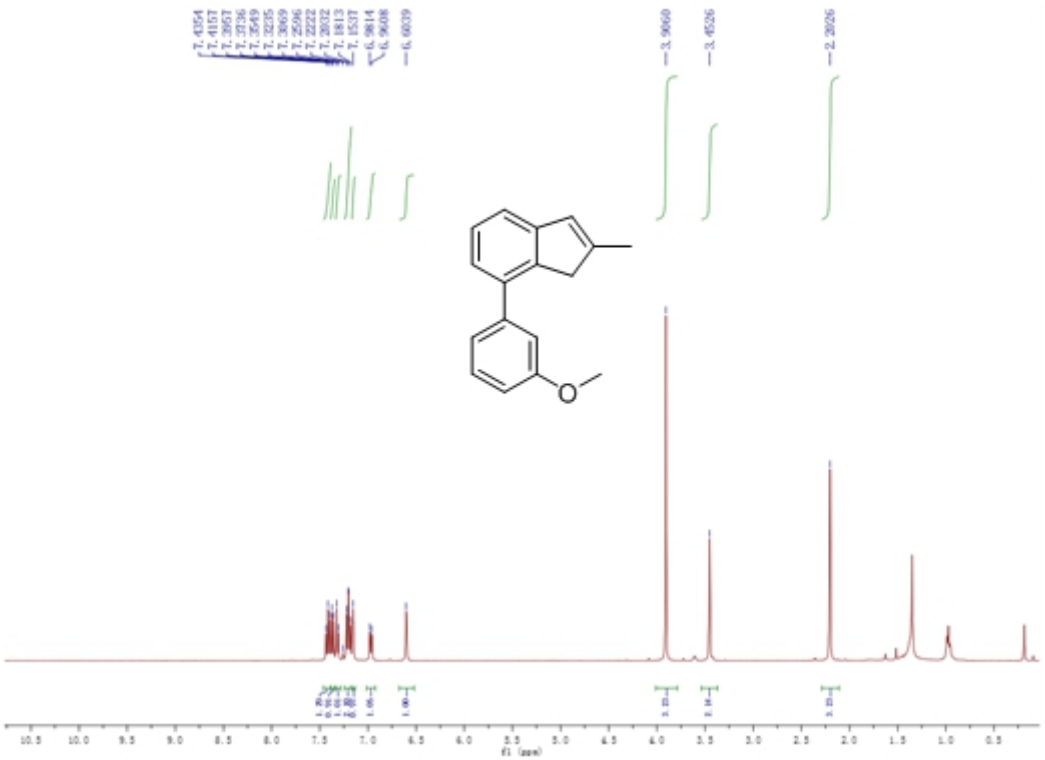
^{13}C NMR of 10a$_2$



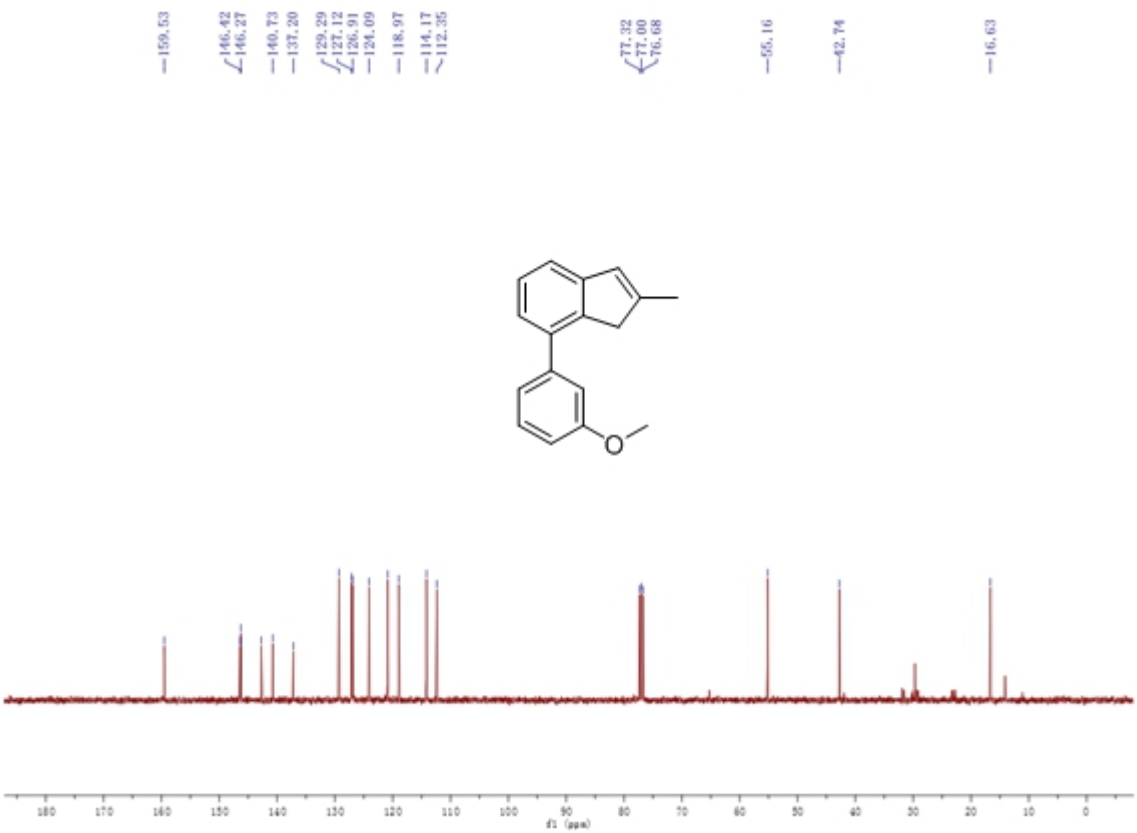
^{1}H NMR of 10a$_3$



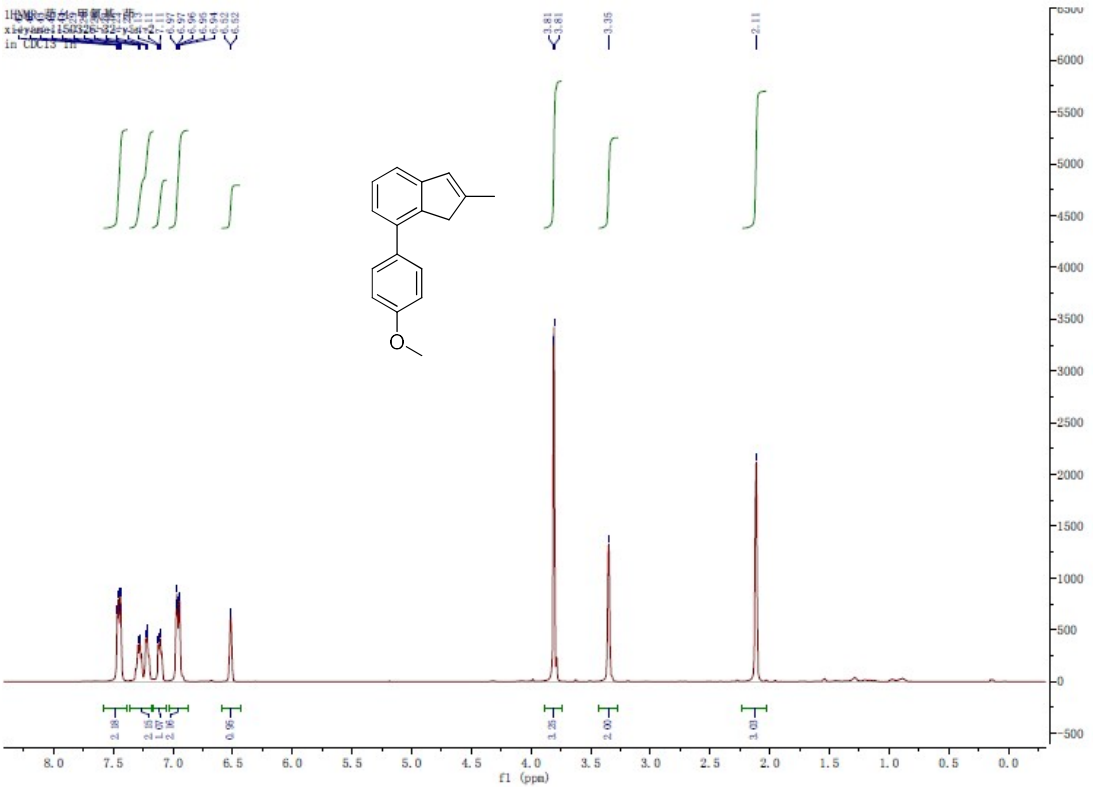
^{13}C NMR of 10a$_3$



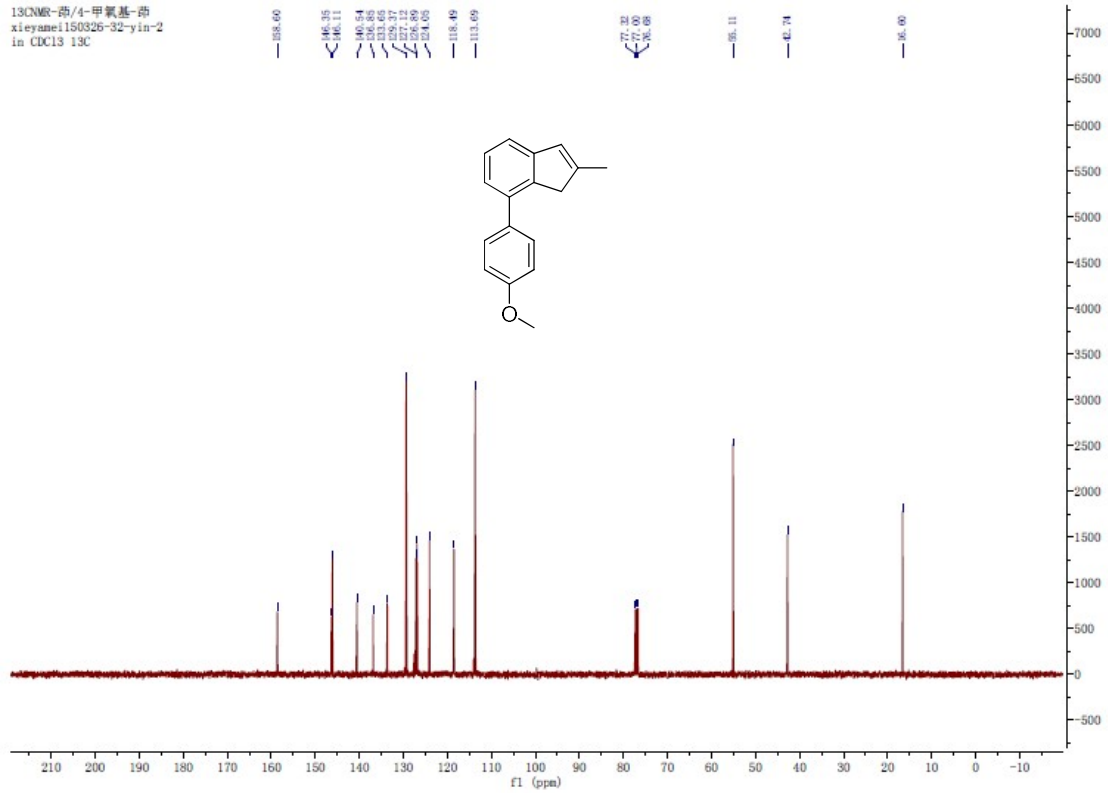
^{1}H NMR of 10a$_4$



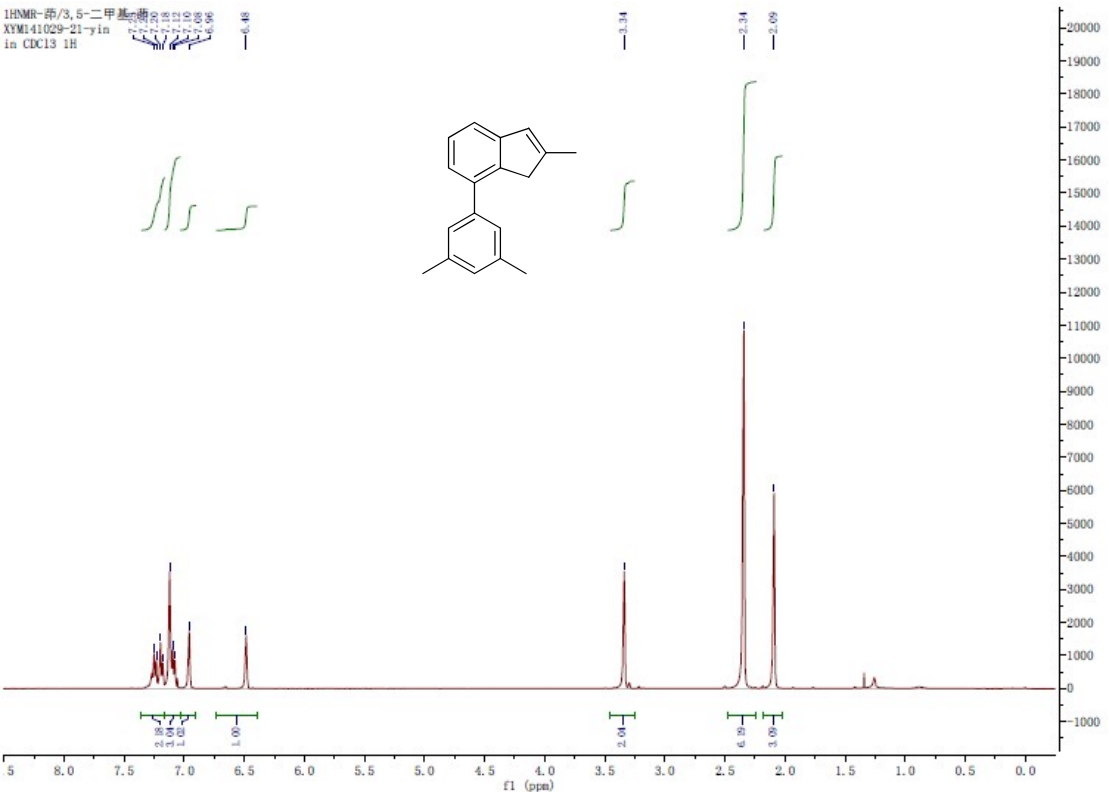
^{13}C NMR of 10a4



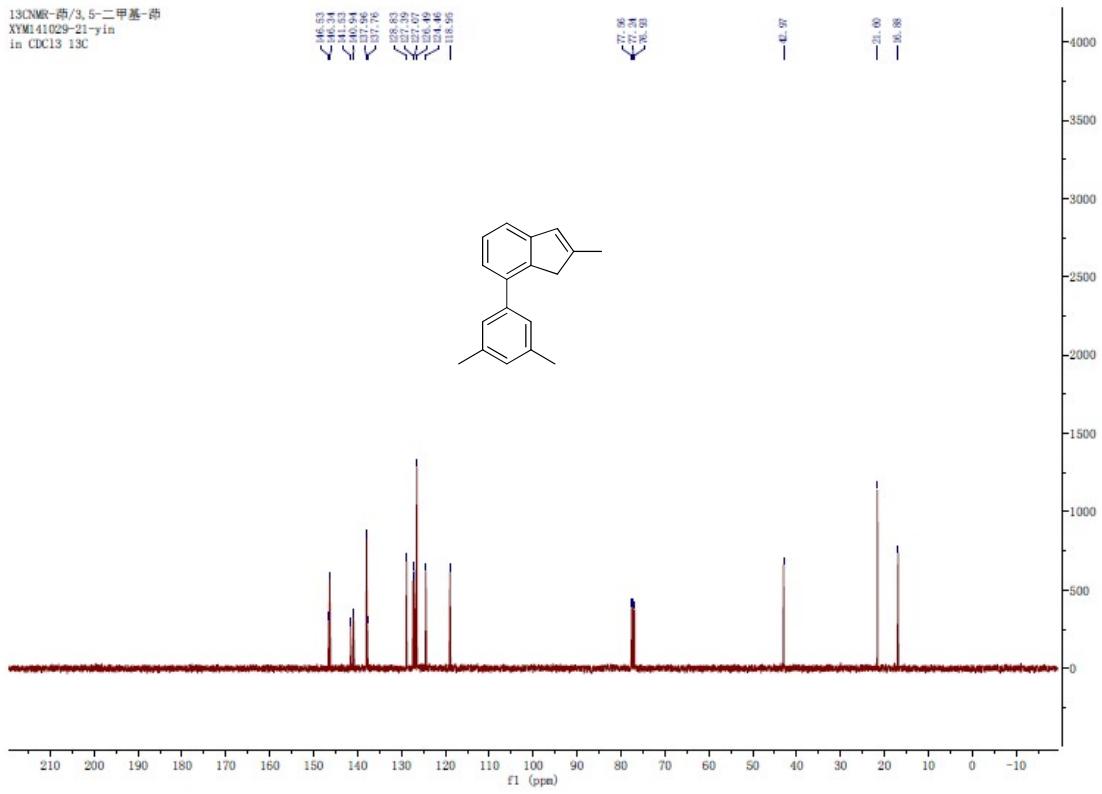
^{1}H NMR of 10a5



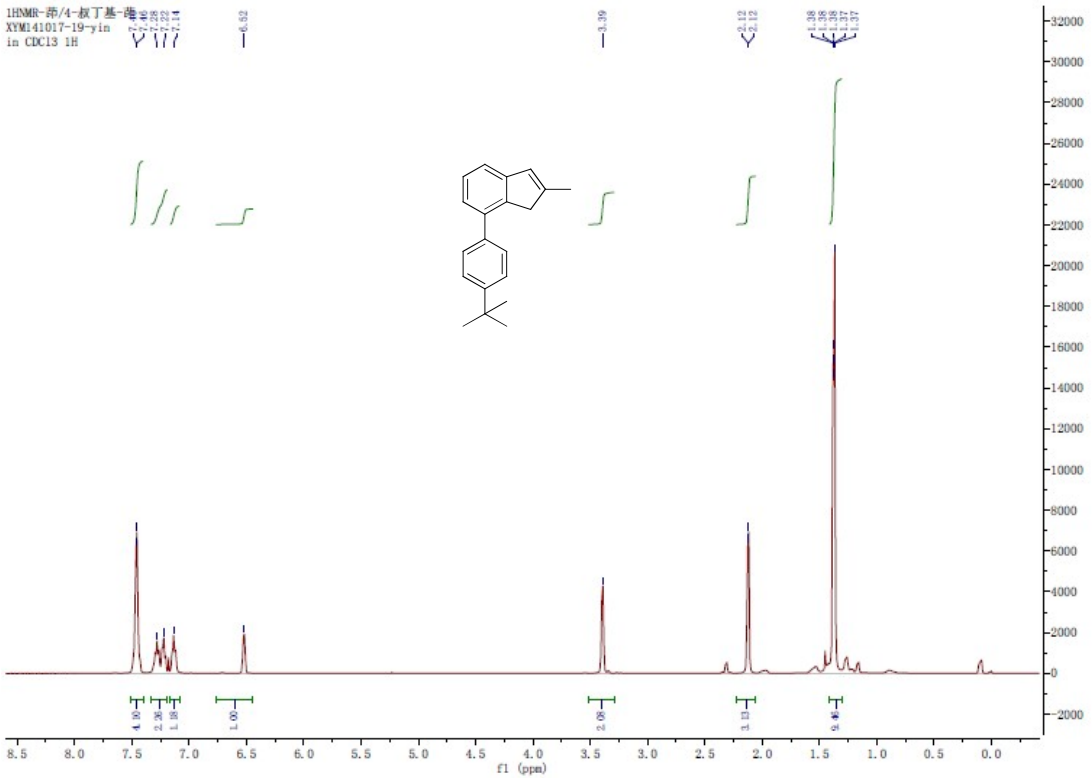
^{13}C NMR of 10a5



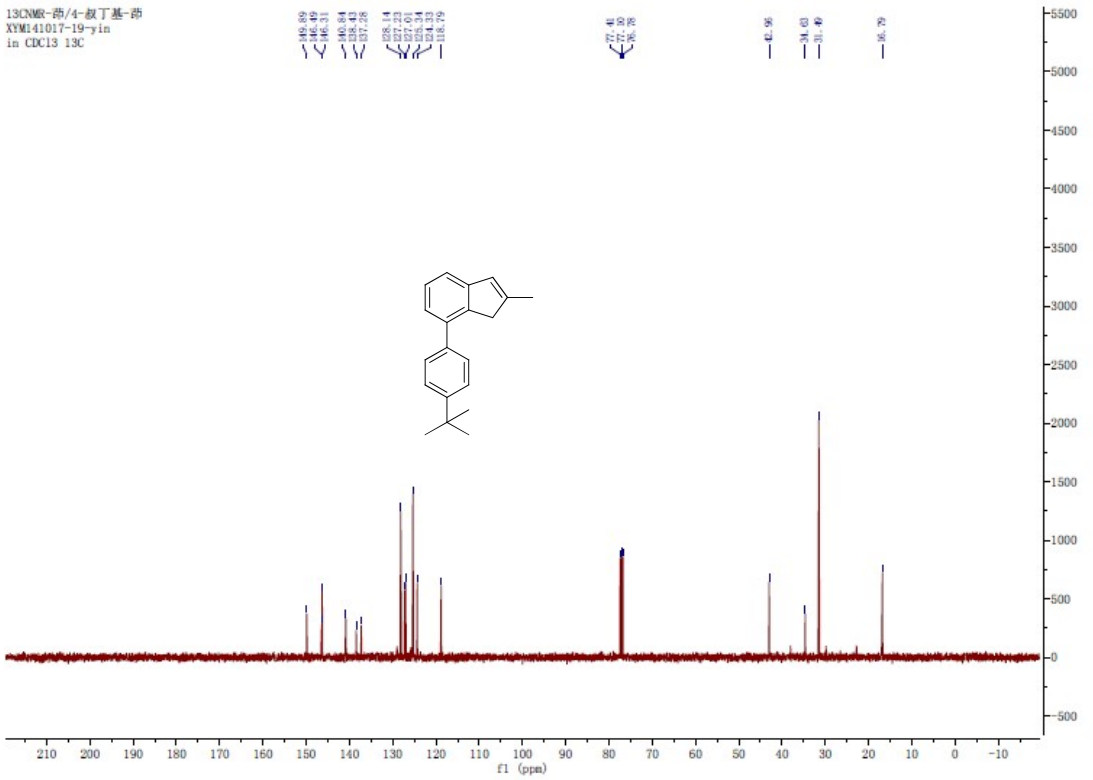
^{1}H NMR of 10a6



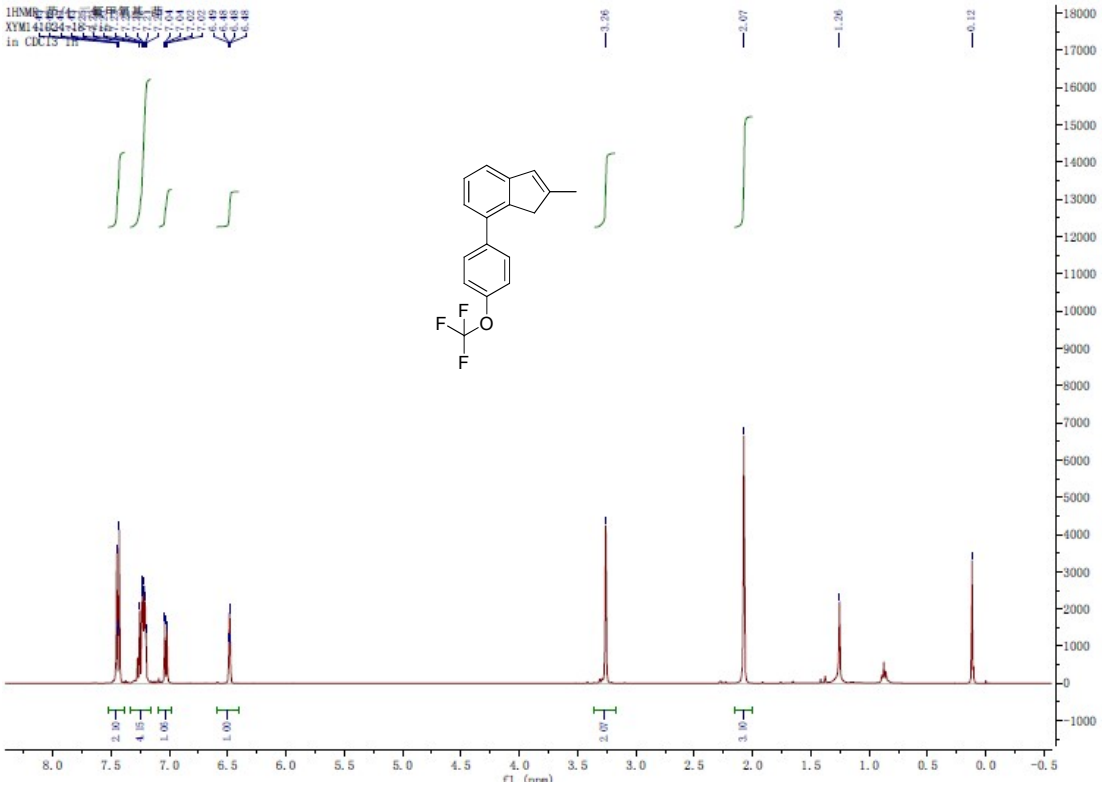
^{13}C NMR of 10a$_6$



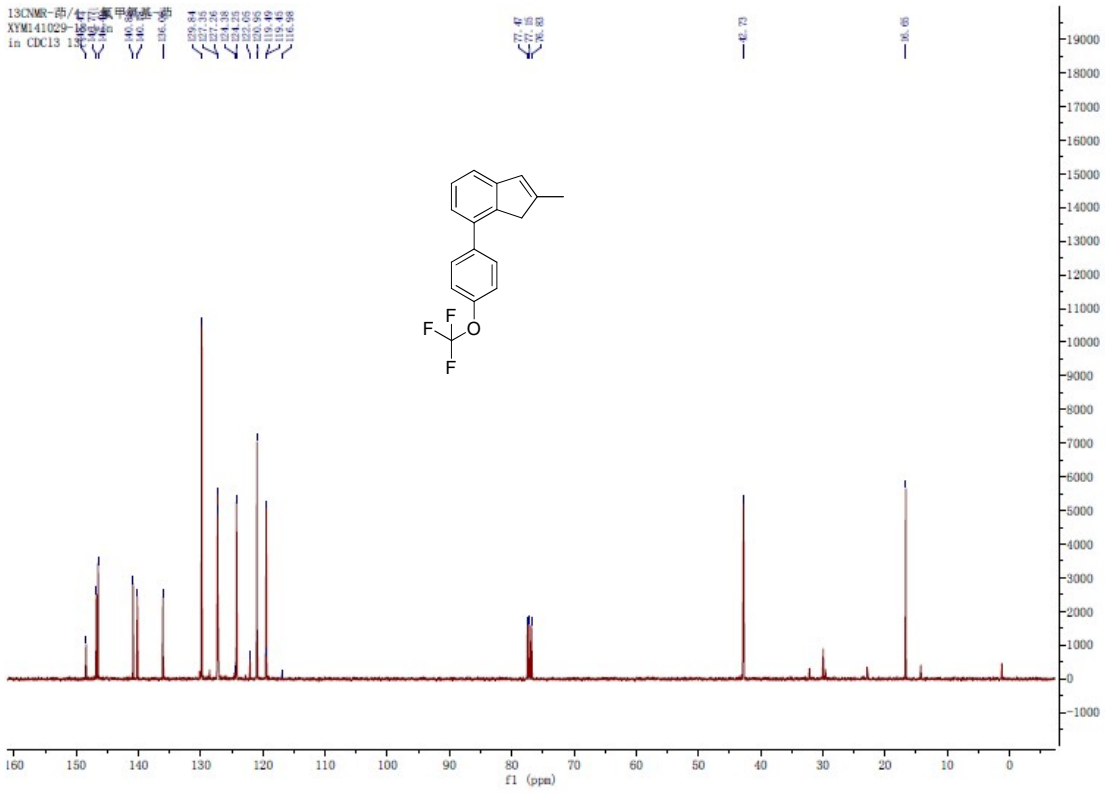
^{1}H NMR of 10a$_7$



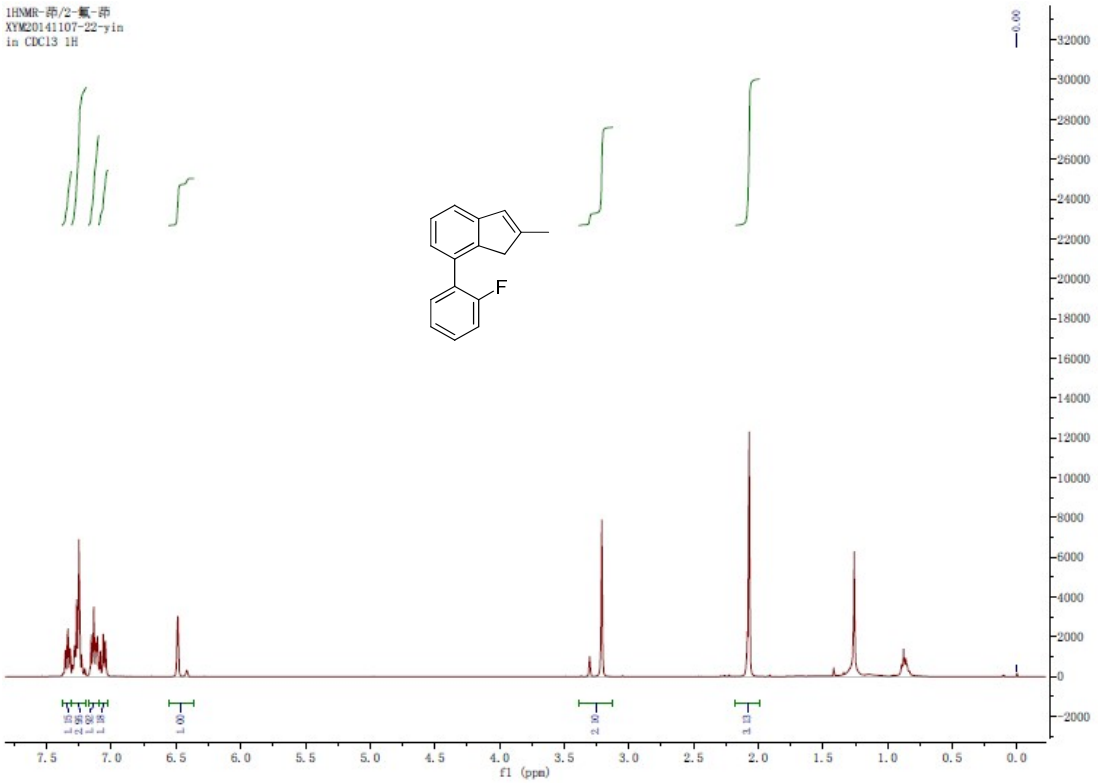
^{13}C NMR of 10a[7]



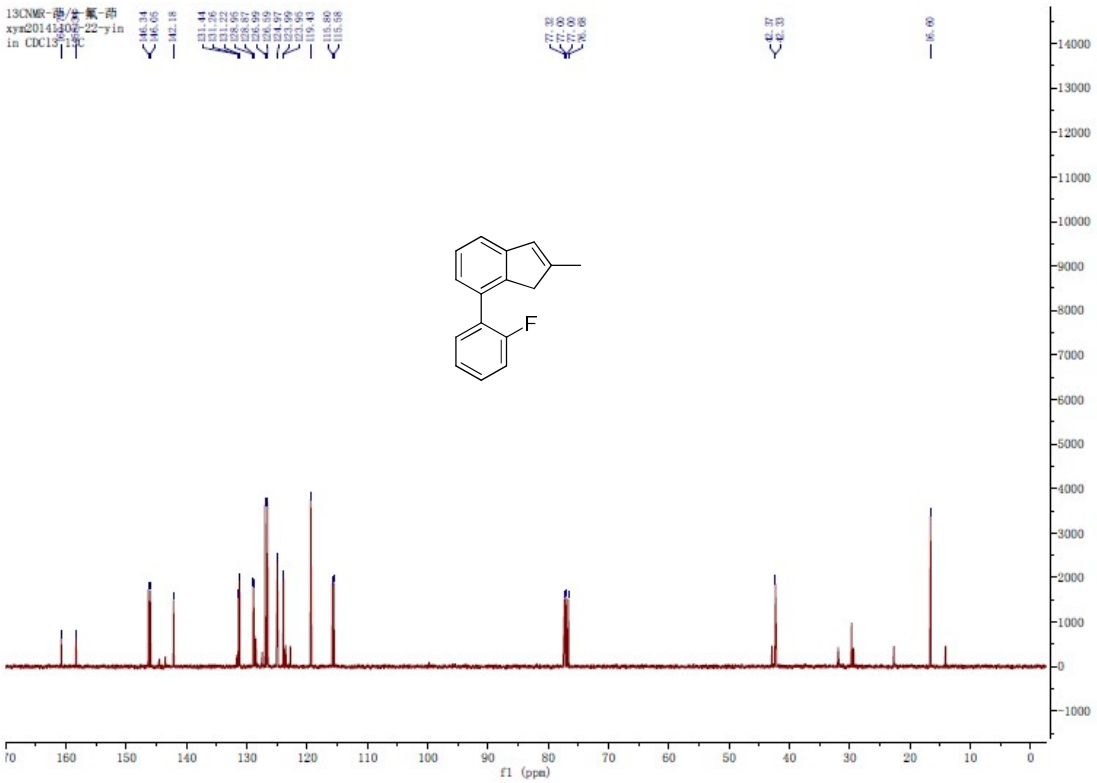
^{1}H NMR of 10a[8]



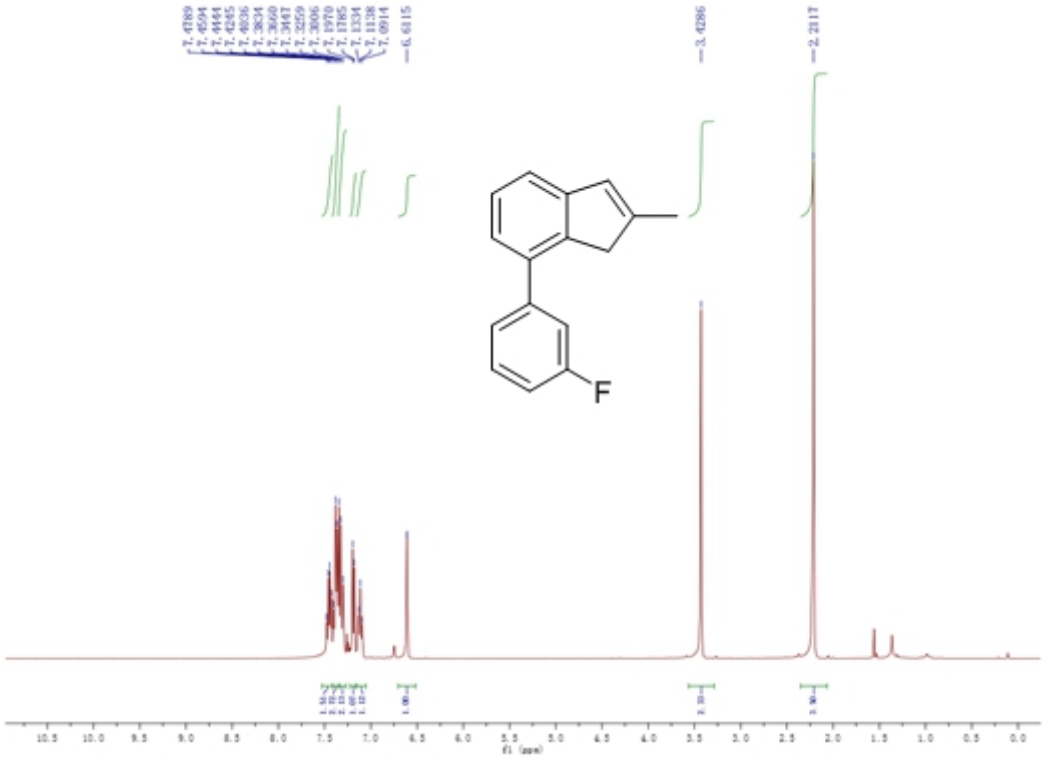
^{13}C NMR of 10a$_8$



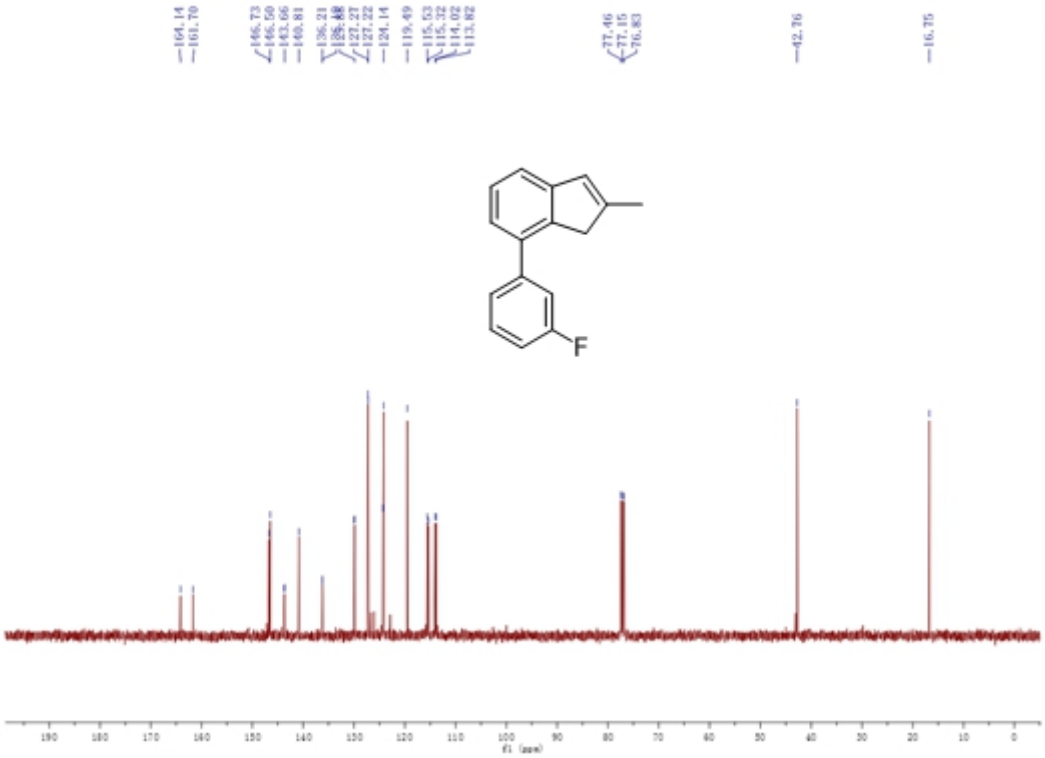
^{1}H NMR of 10a$_9$



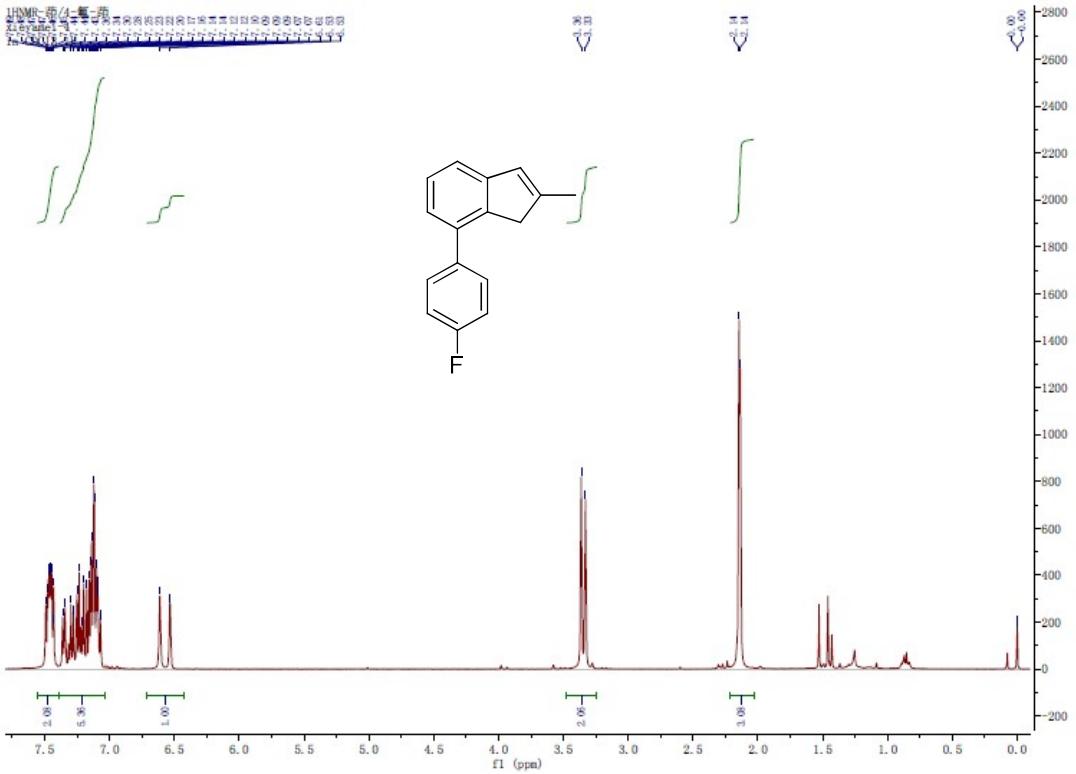
^{13}C NMR of 10a$_9$



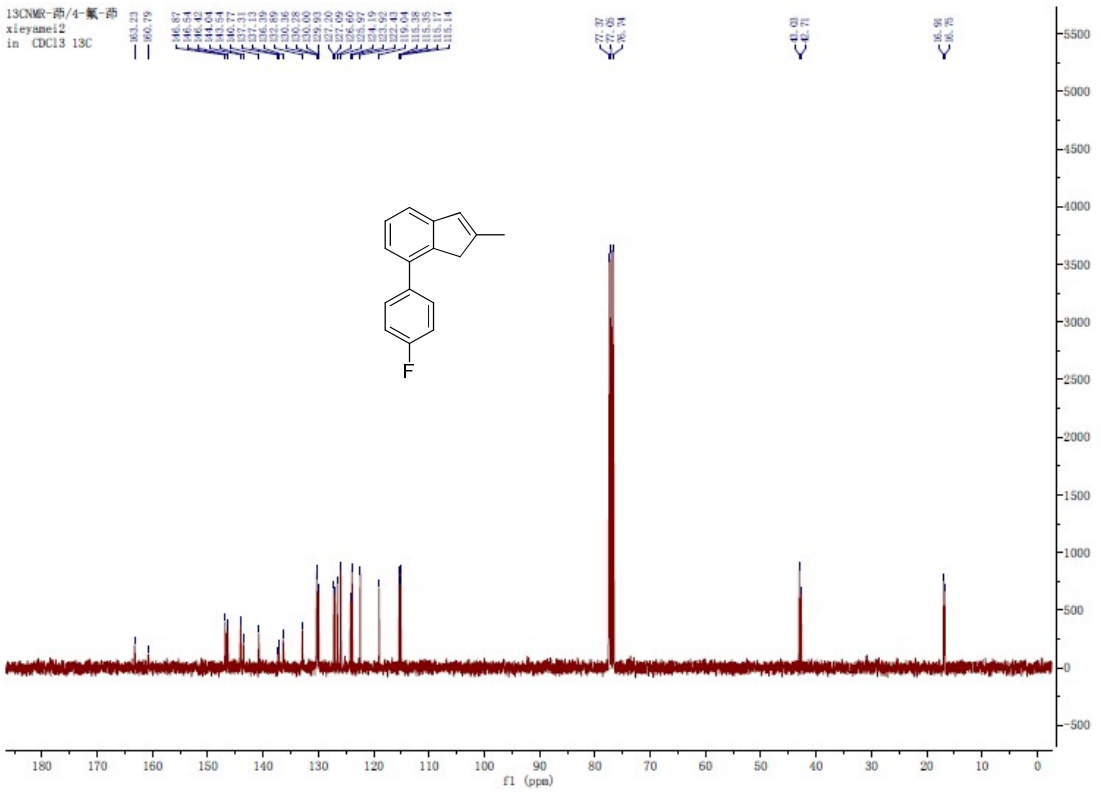
^{1}H NMR of 10a$_{10}$



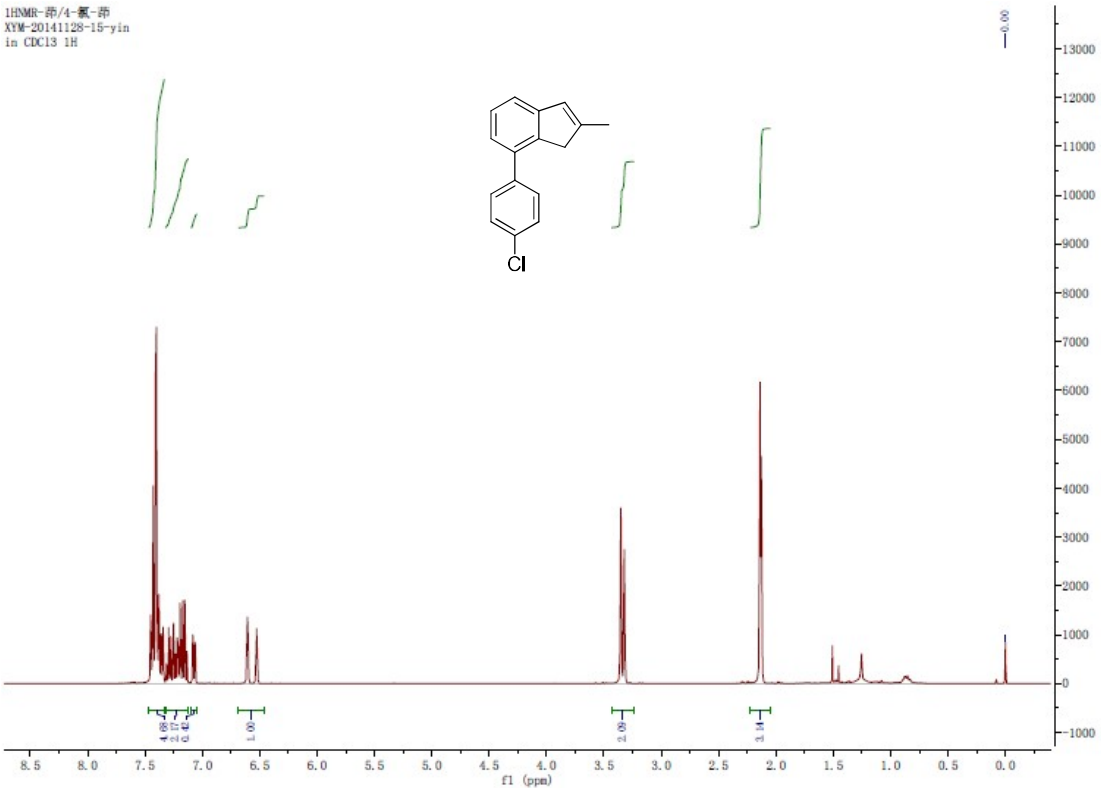
^{13}C NMR of 10a$_{10}$



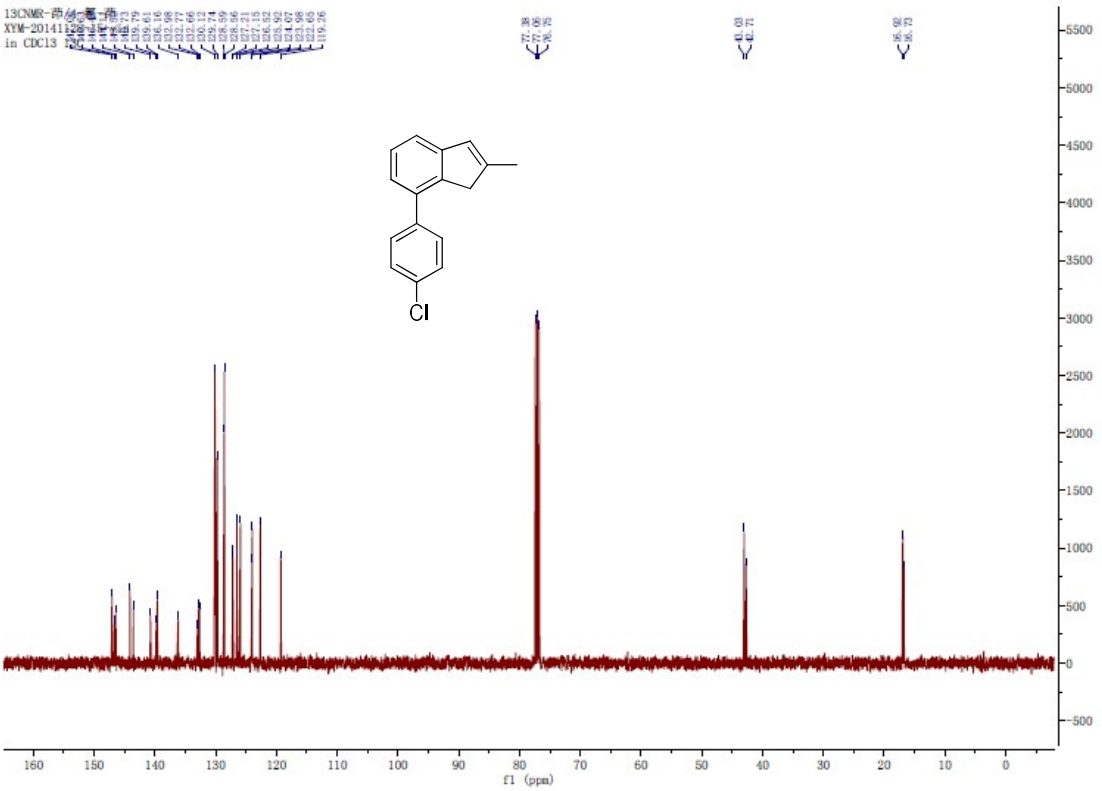
^{1}H NMR of 10a$_{11}$



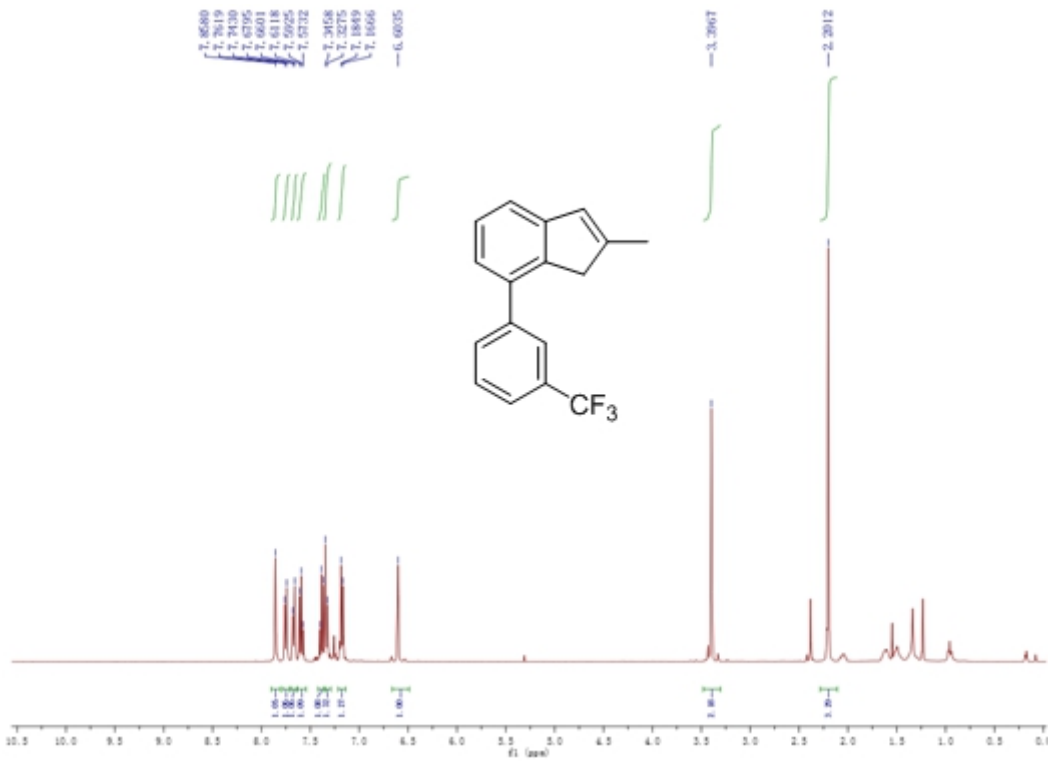
^{13}C NMR of 10a$_{11}$



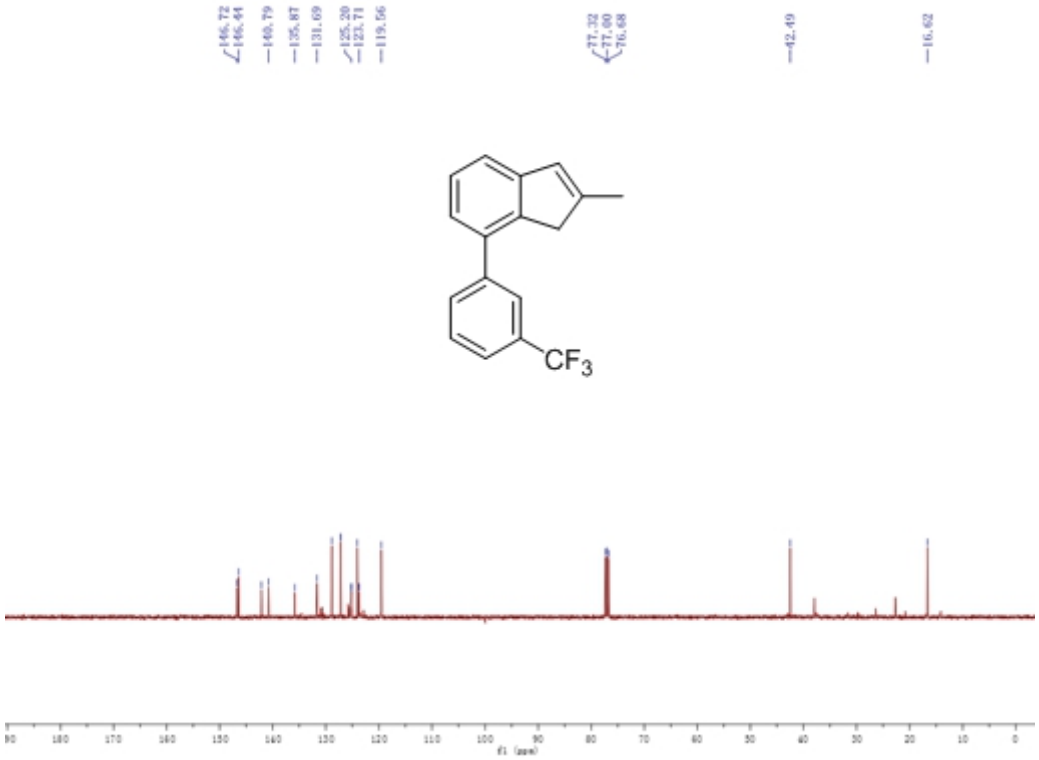
^{1}H NMR of 10a$_{12}$



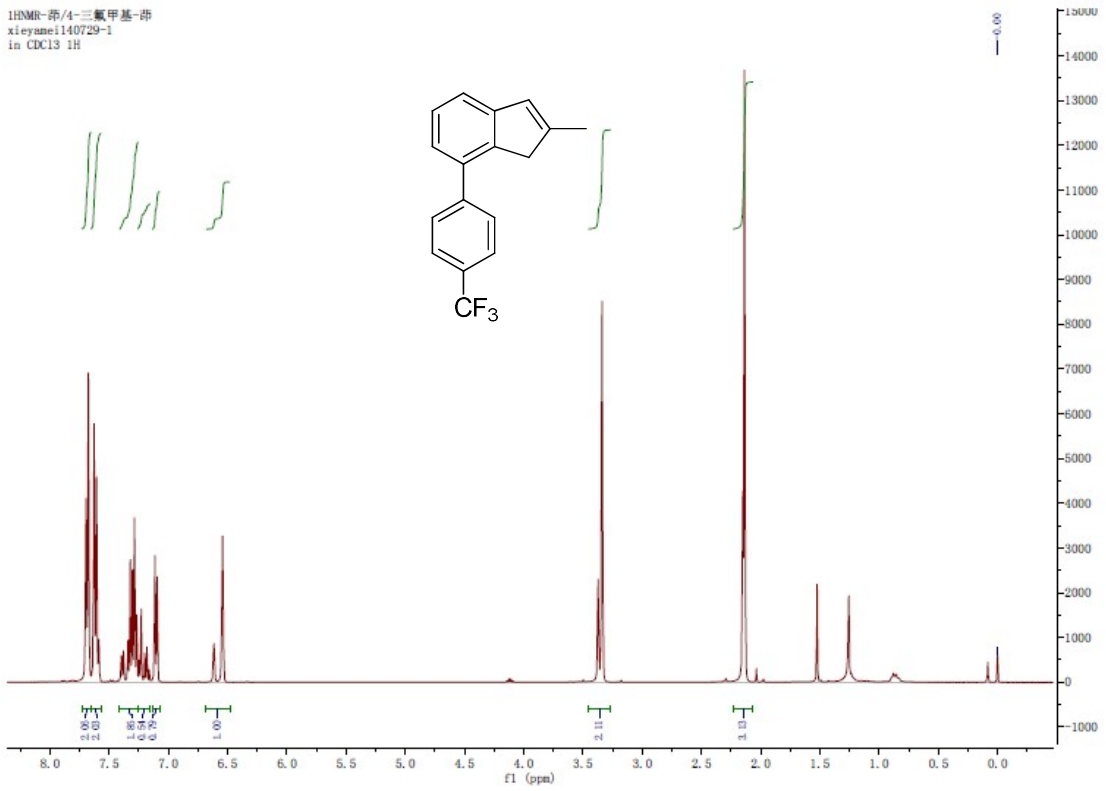
^{13}C NMR of 10a$_{12}$



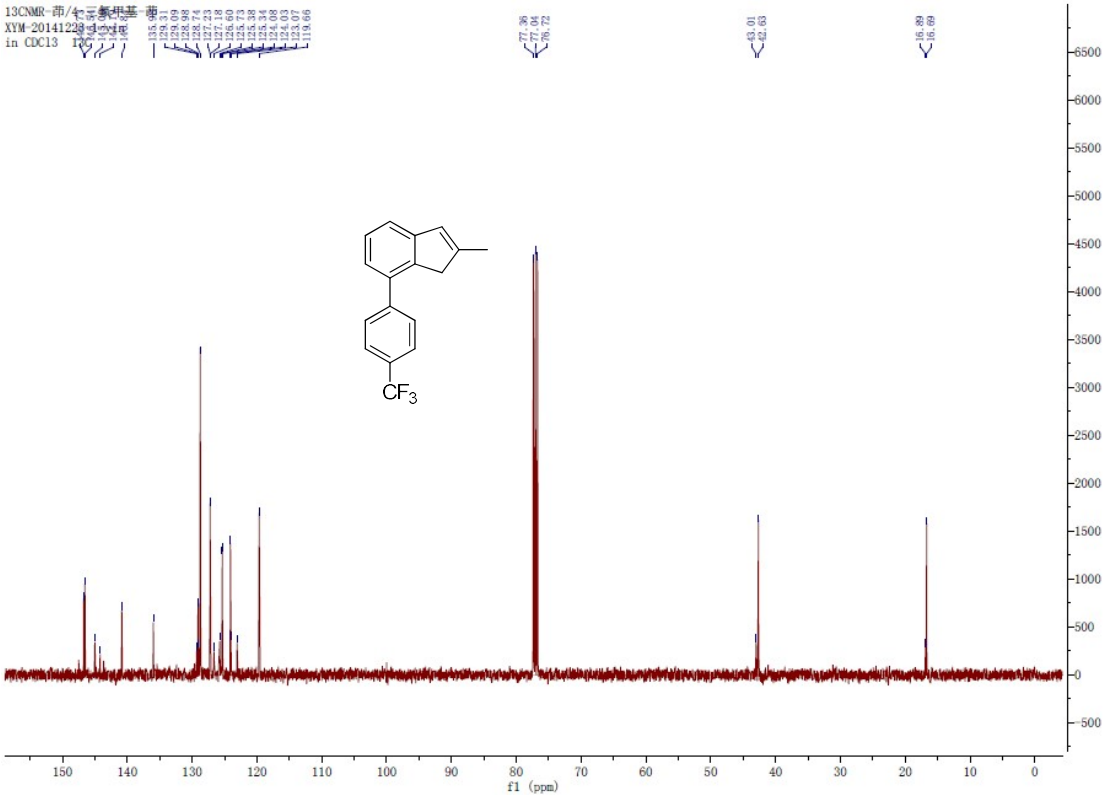
^{1}H NMR of 10a$_{13}$



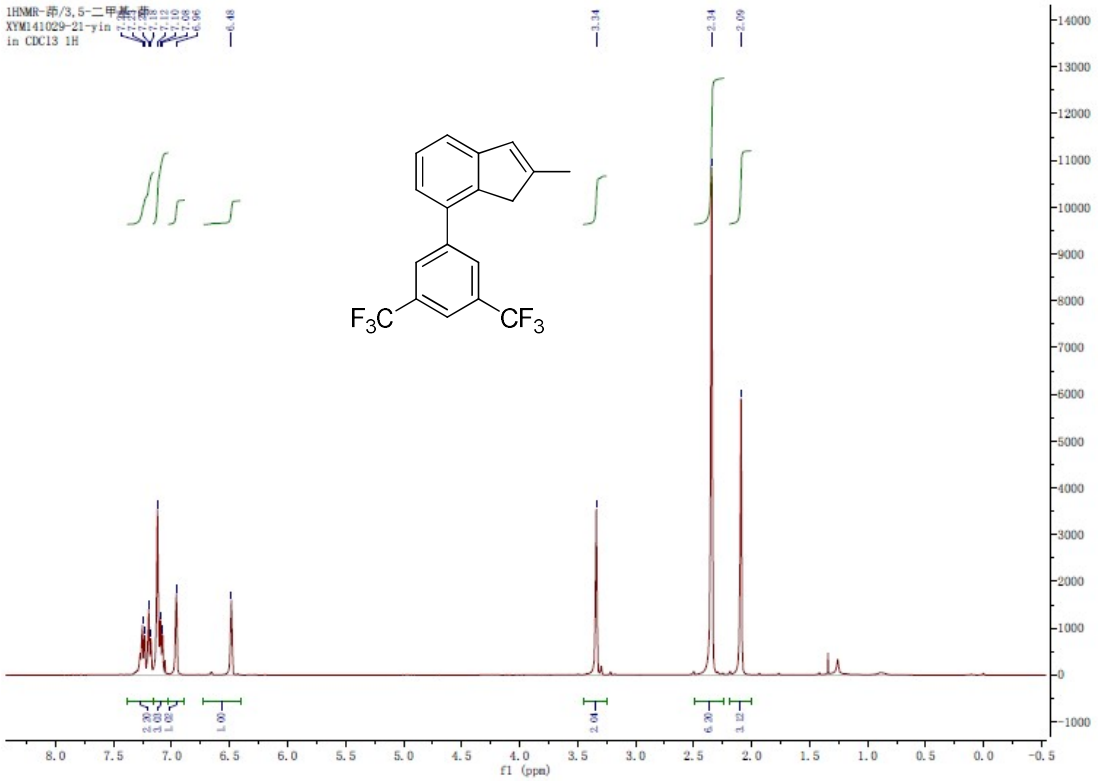
^{13}C NMR of 10a$_{13}$



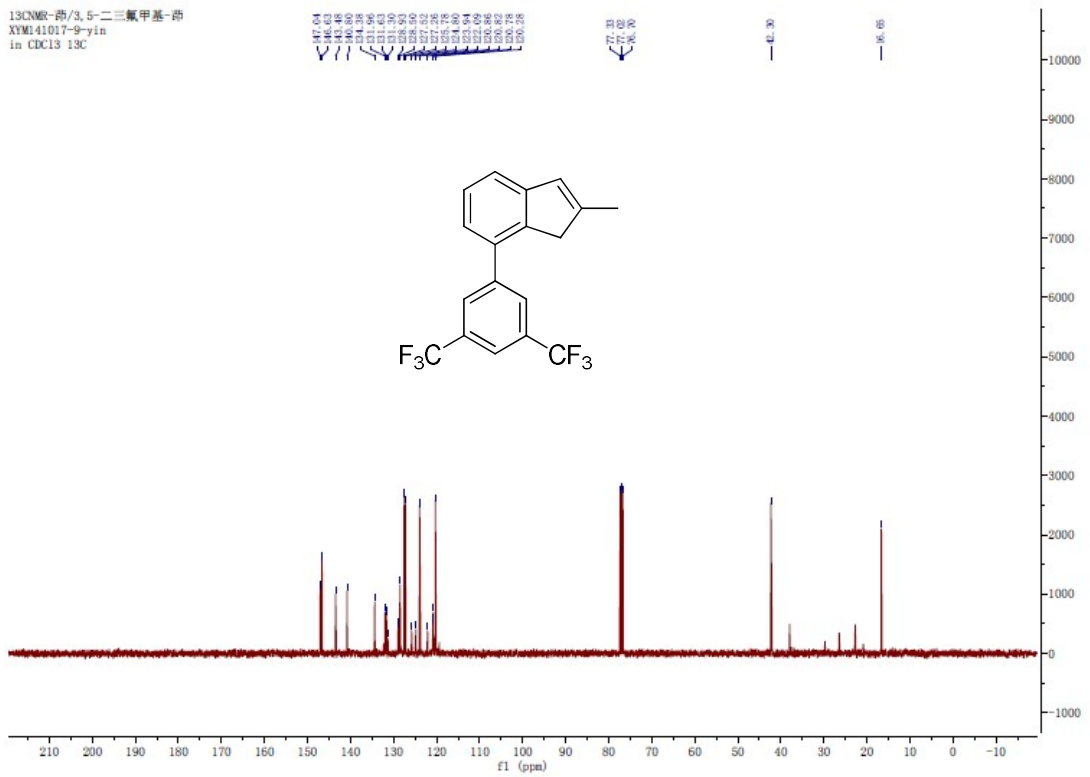
^{1}H NMR of 10a$_{14}$



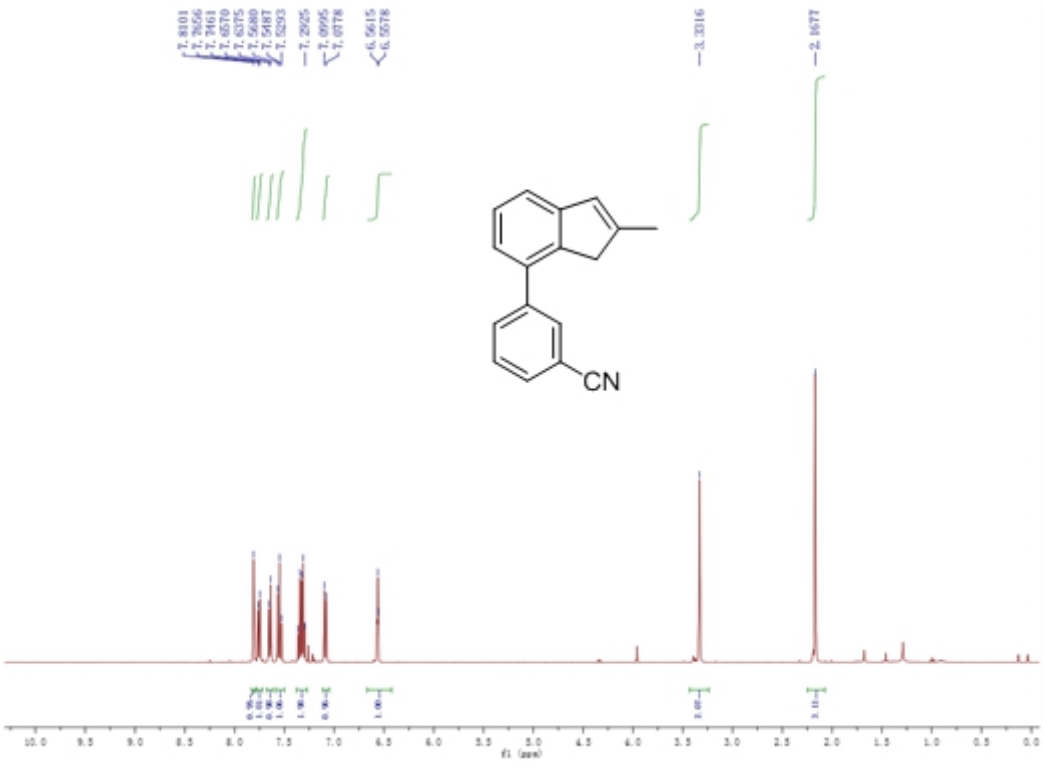
^{13}C NMR of 10a$_{14}$



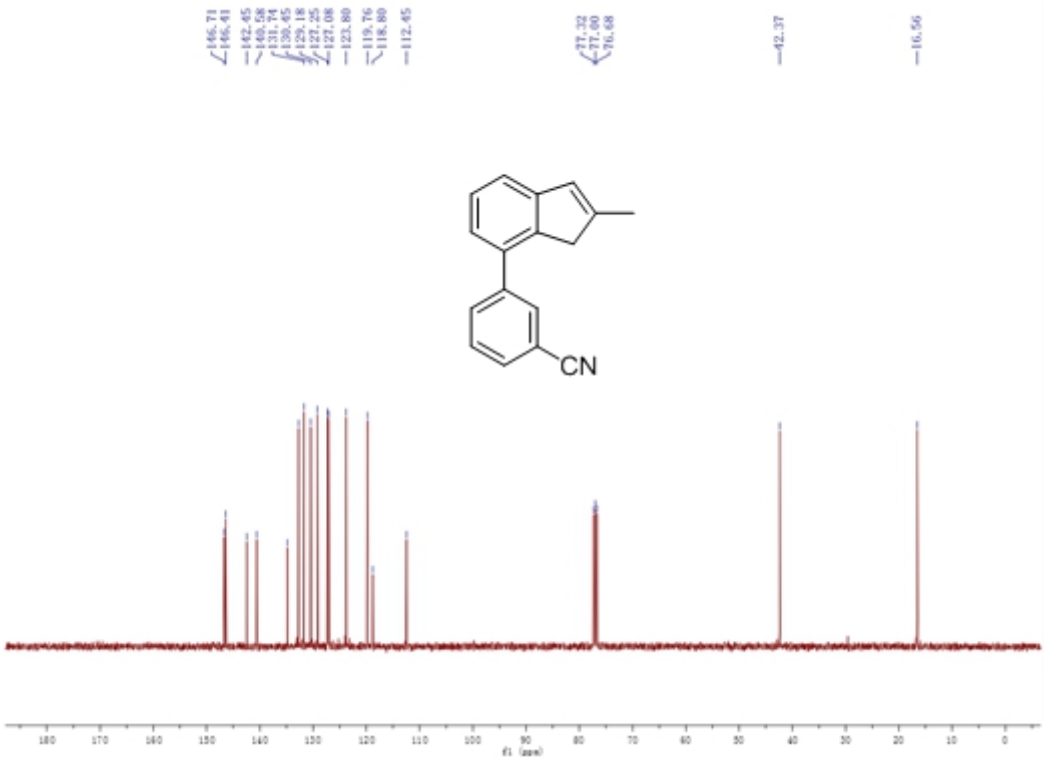
^{1}H NMR of 10a$_{15}$



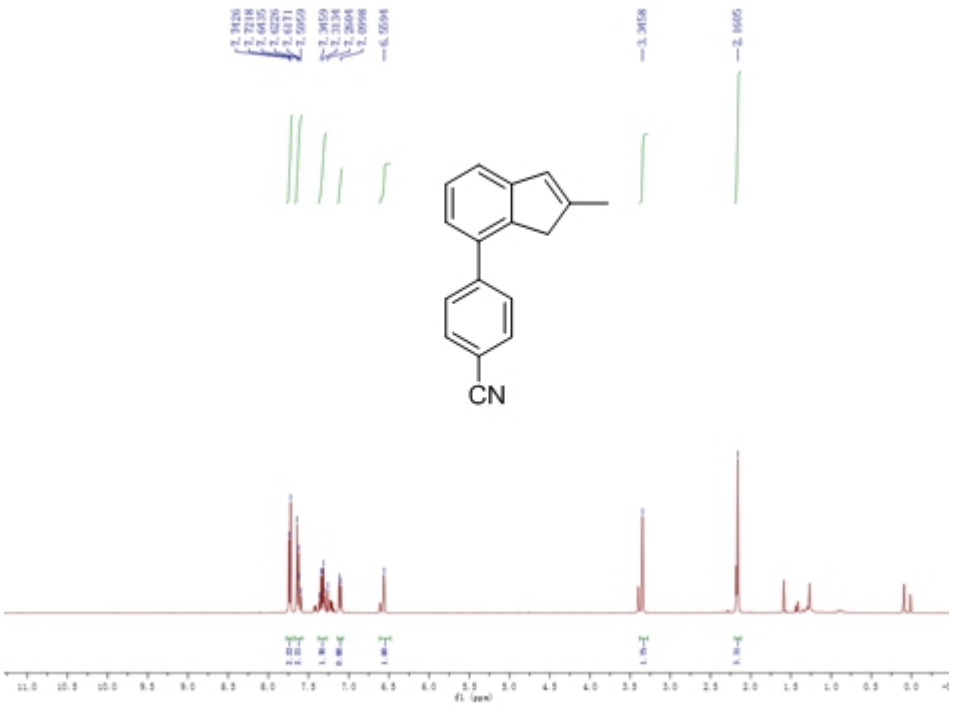
^{13}C NMR of 10a$_{15}$



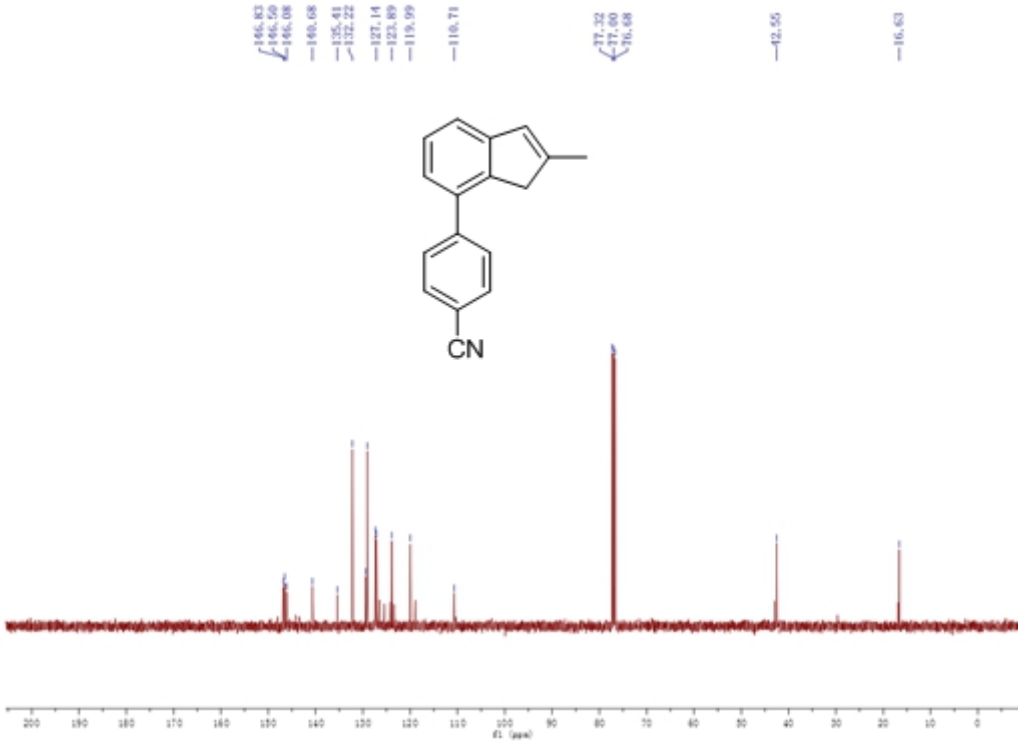
^{1}H NMR of 10a$_{16}$



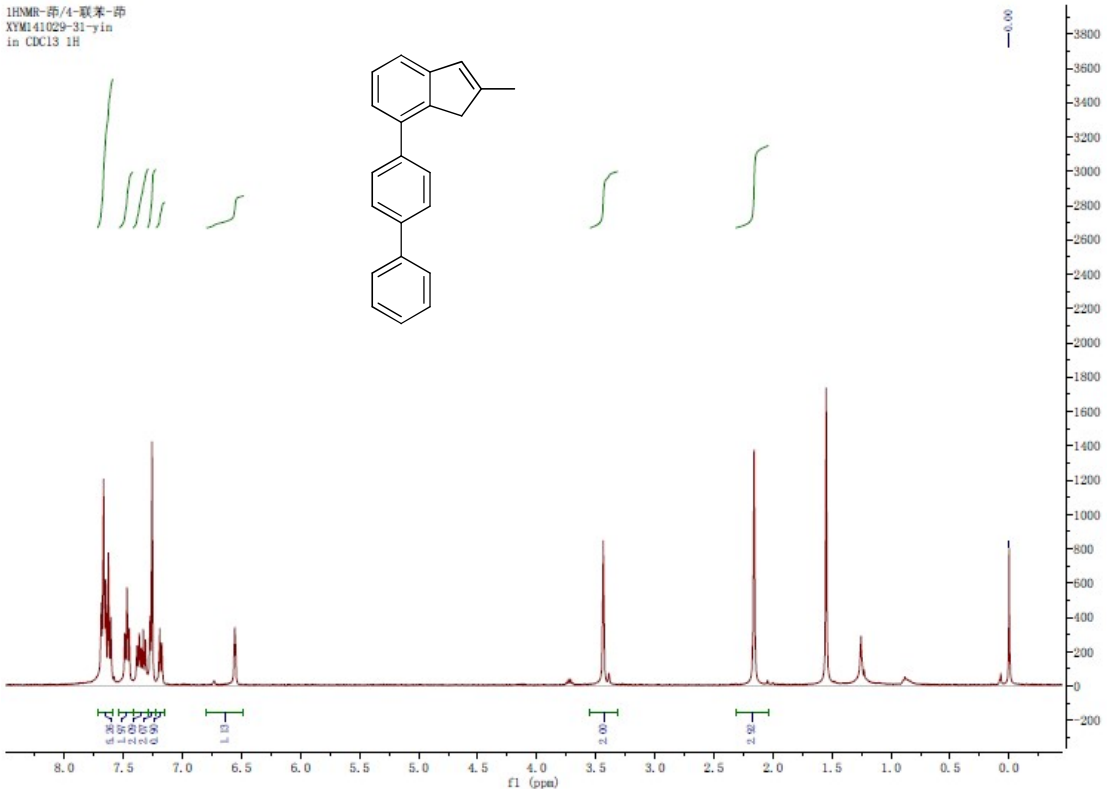
^{13}C NMR of 10a$_{16}$



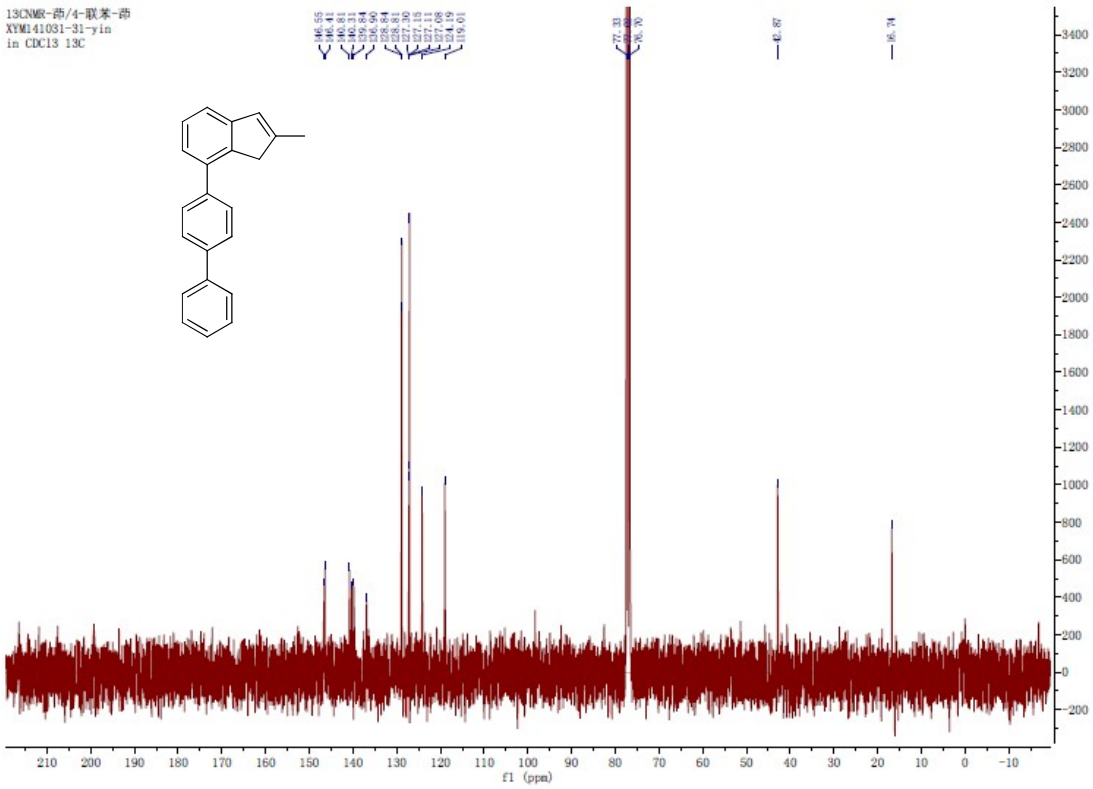
^{1}H NMR of 10a$_{17}$



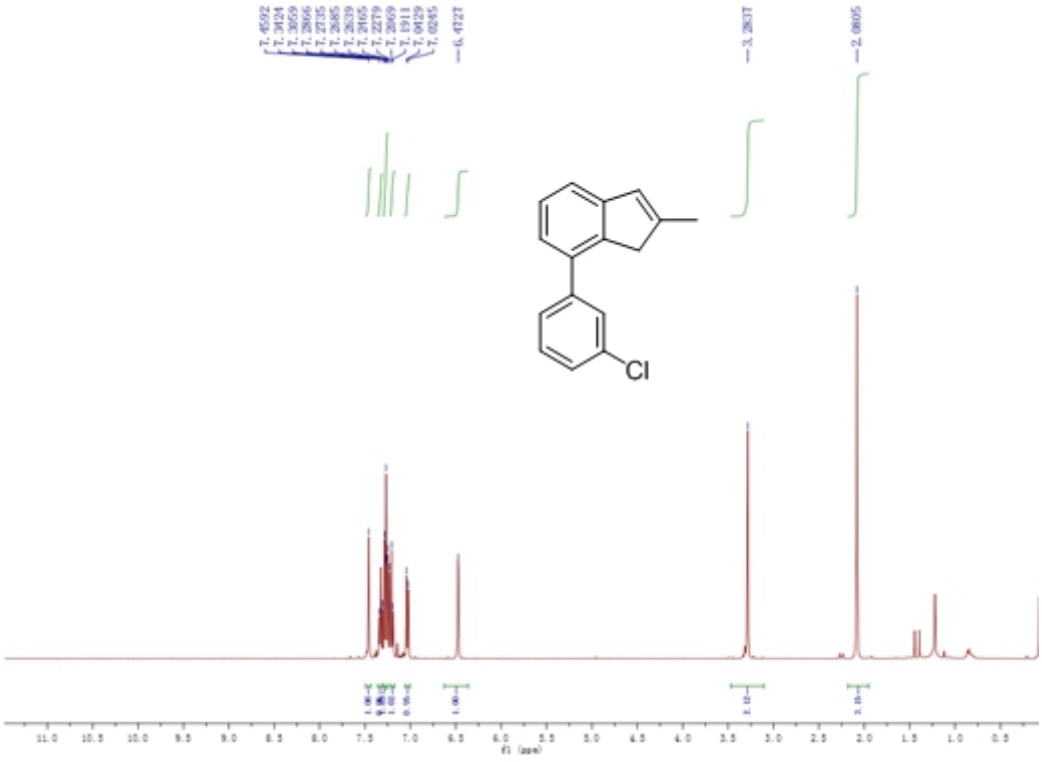
^{13}C NMR of 10a$_{17}$



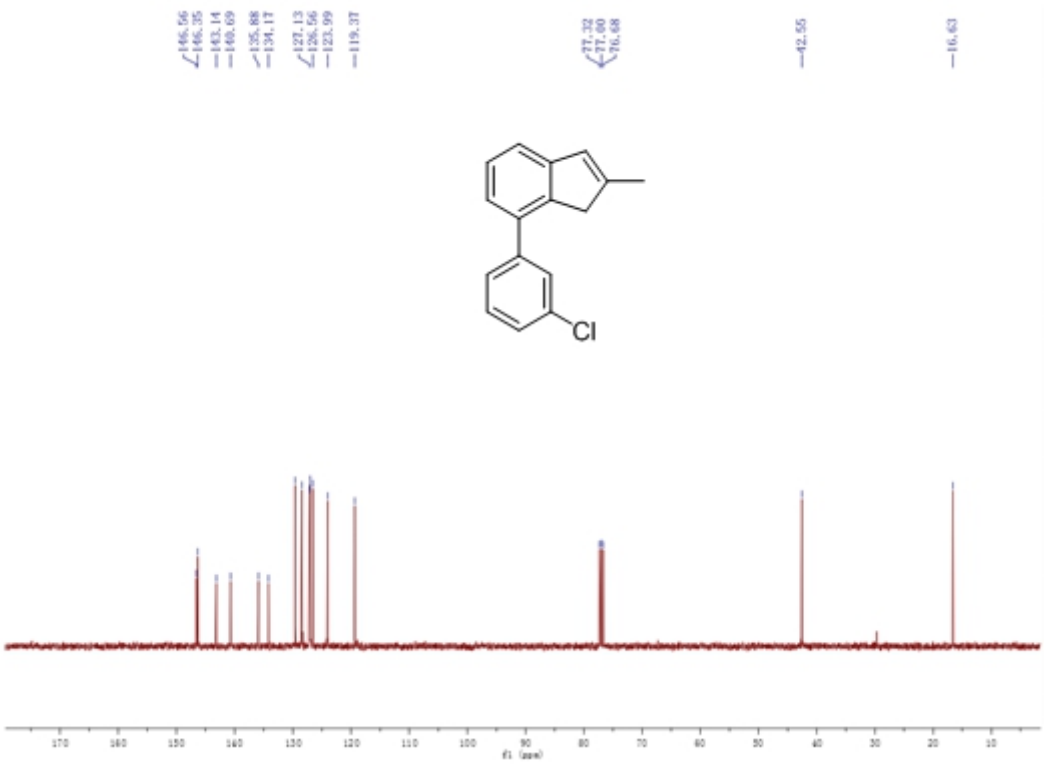
^{1}H NMR of 10a$_{18}$



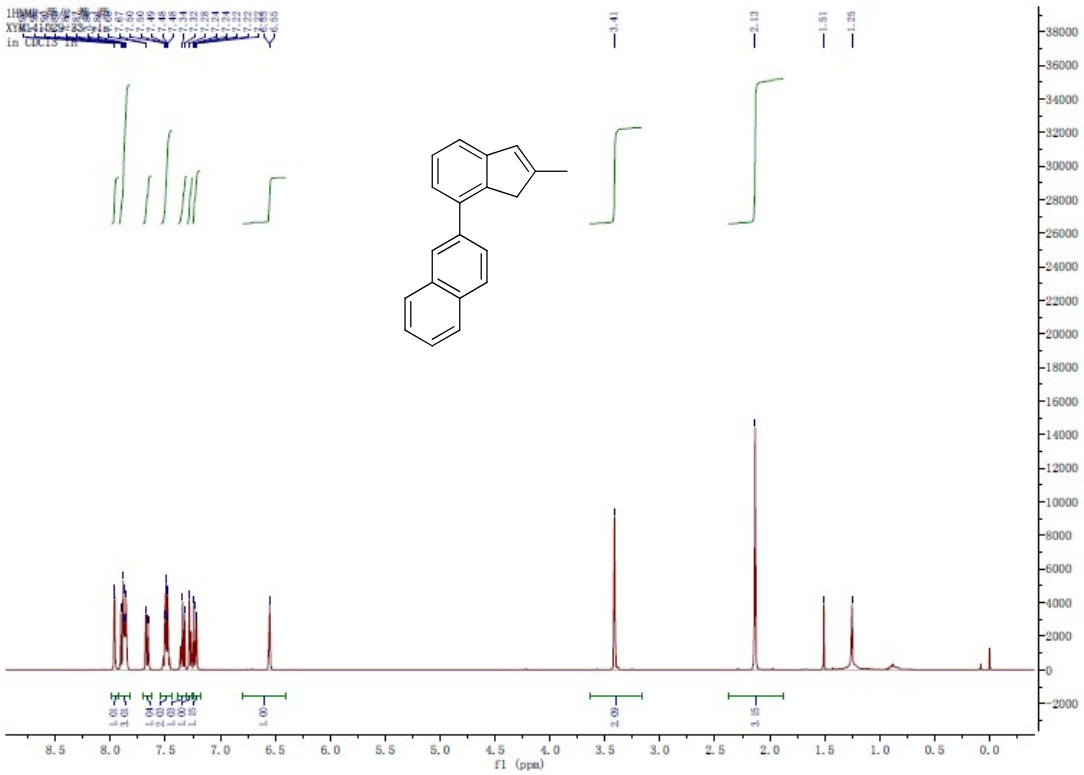
^{13}C NMR of 10a$_{18}$



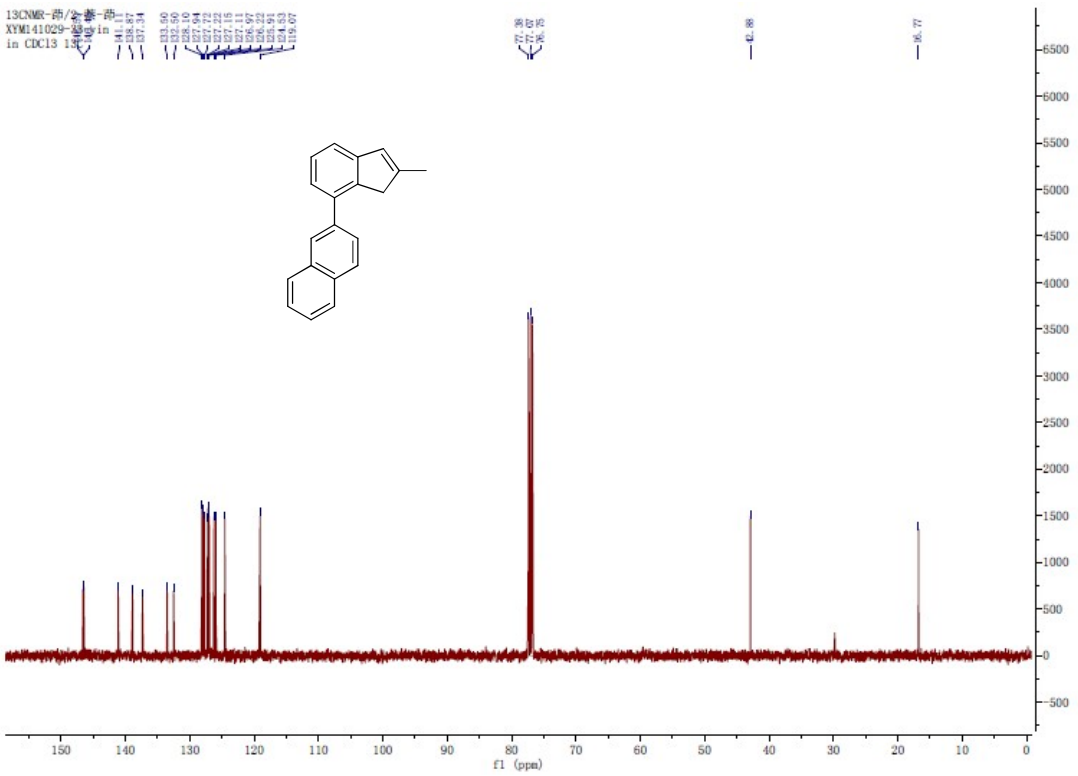
^{1}H NMR of 10a$_{20}$



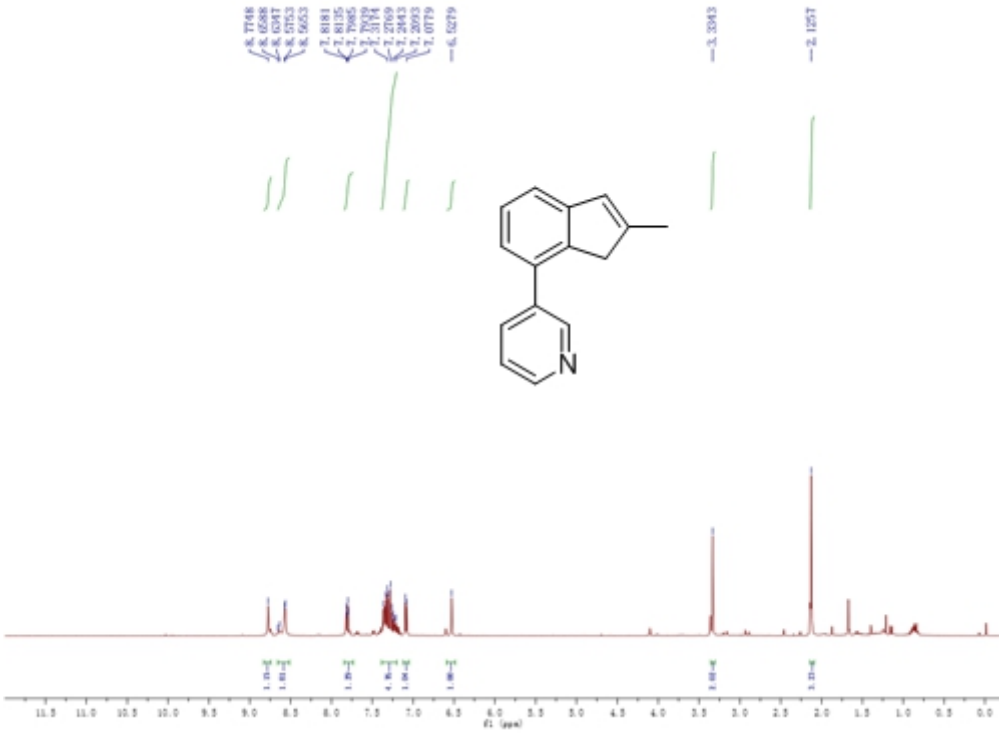
^{13}C NMR of 10a$_{20}$



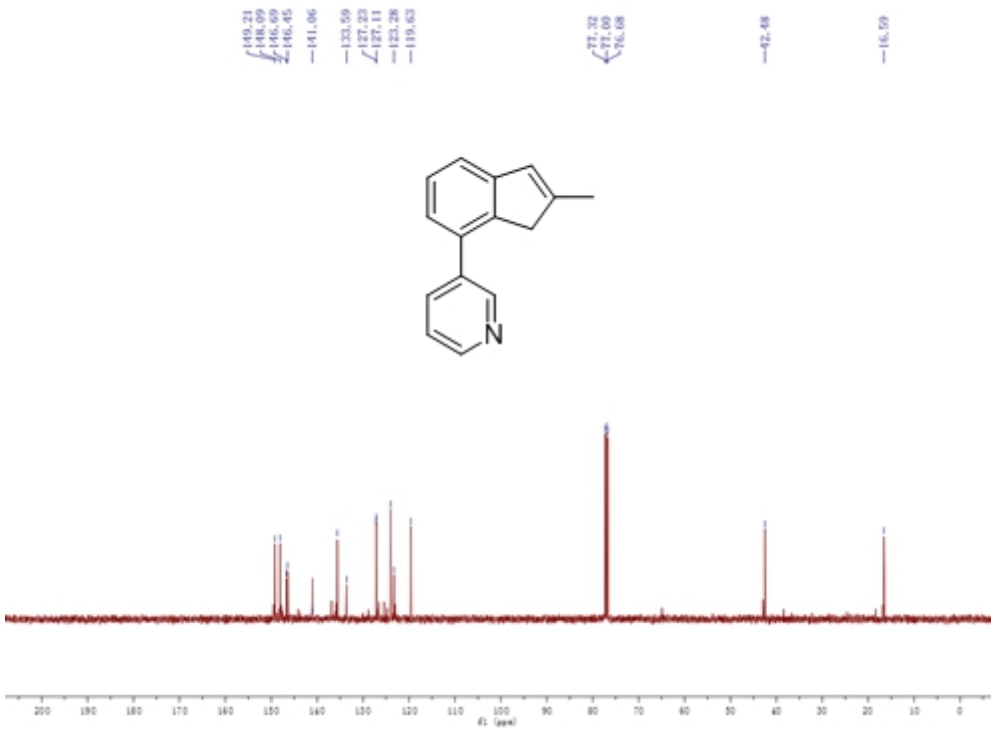
^{1}H NMR of 10a$_{23}$



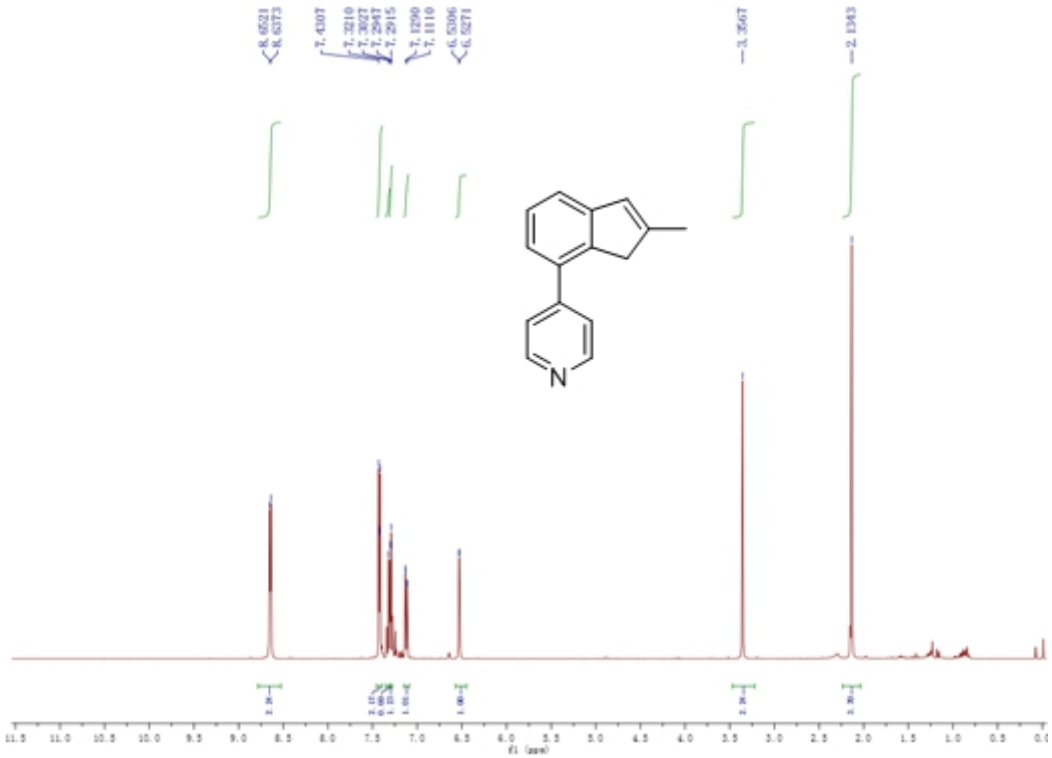
^{13}C NMR of 10a$_{23}$



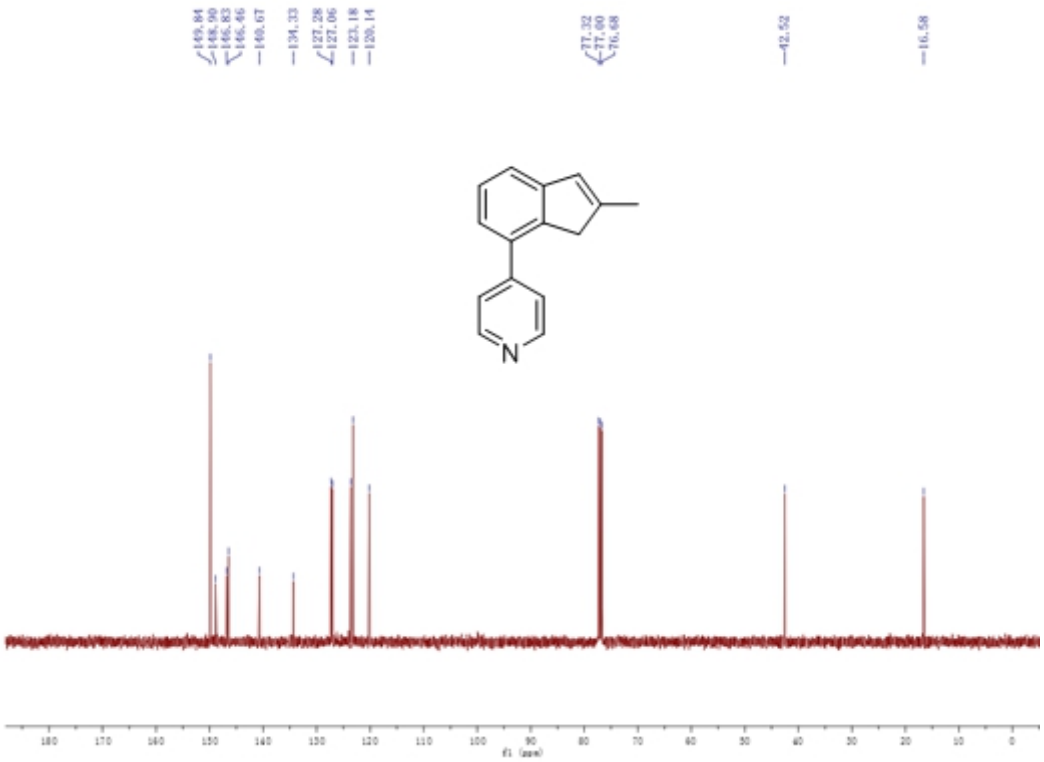
^{1}H NMR of 10b$_{1}$



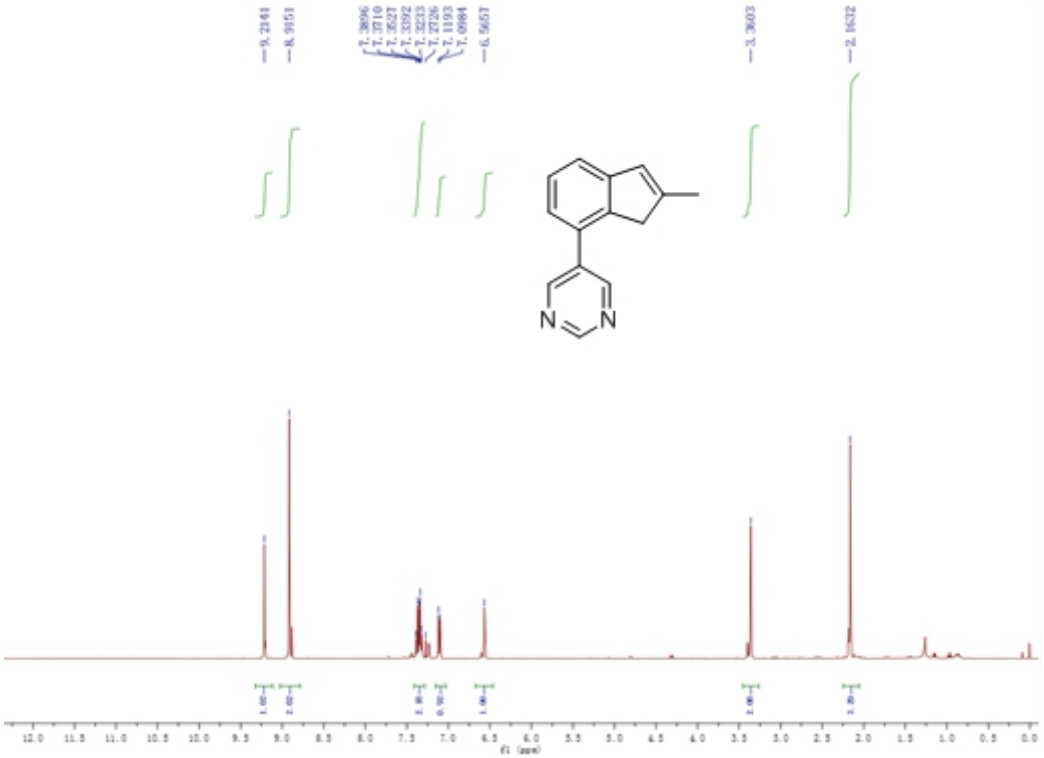
^{13}C NMR of 10b$_1$



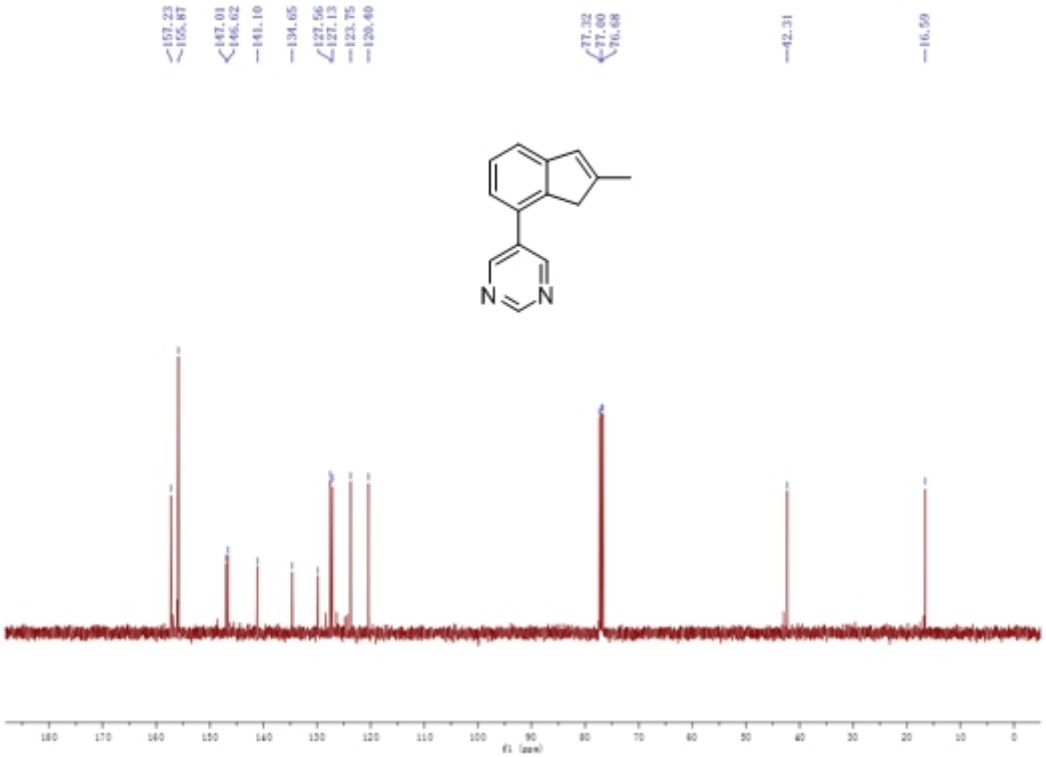
^{1}H NMR of 10b$_2$



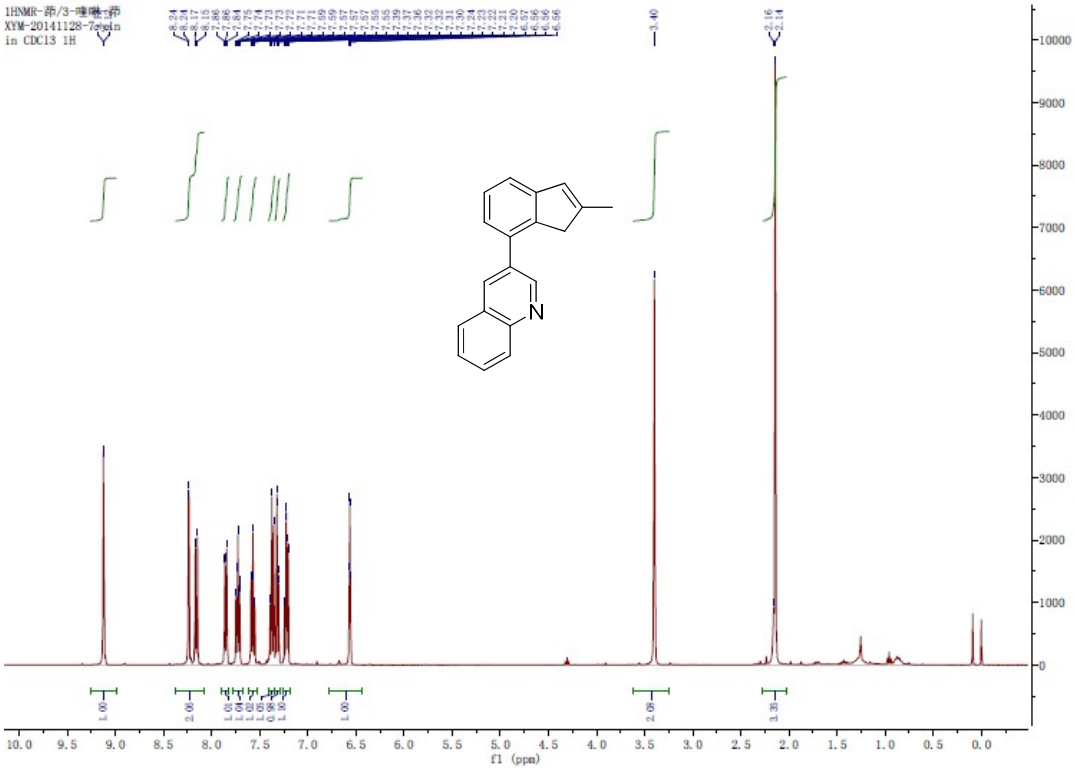
^{13}C NMR of 10b$_2$



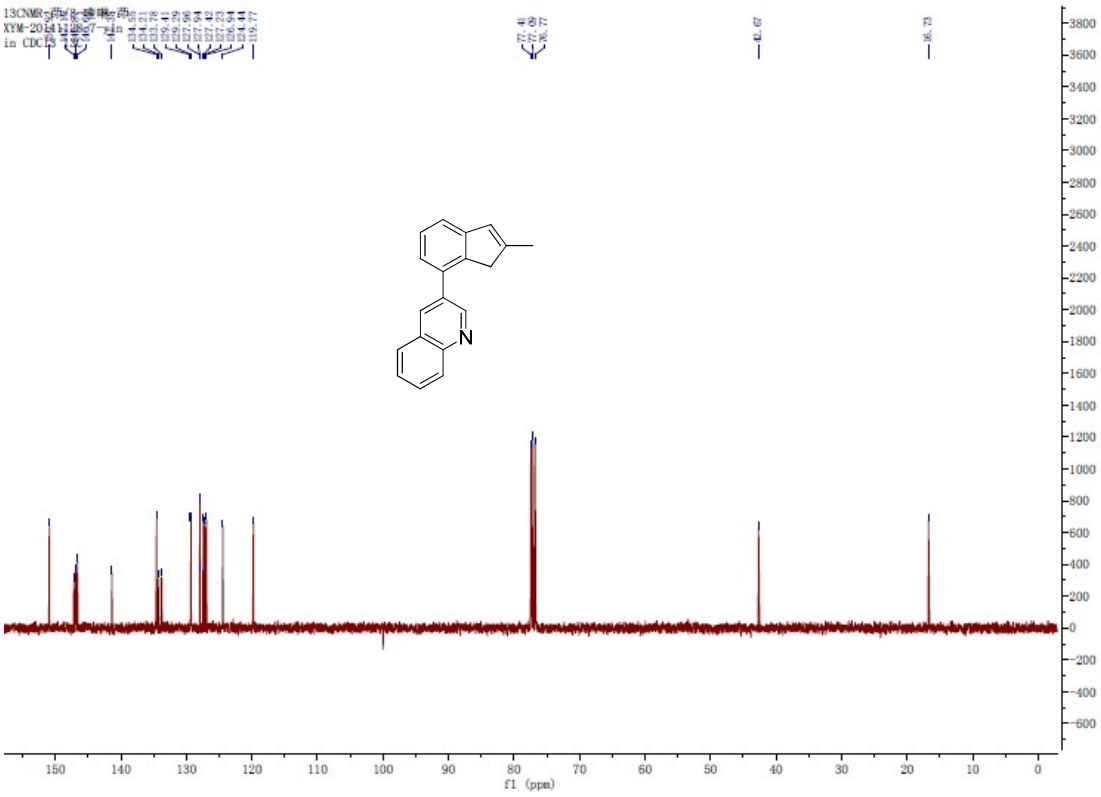
^{1}H NMR of 10b$_3$



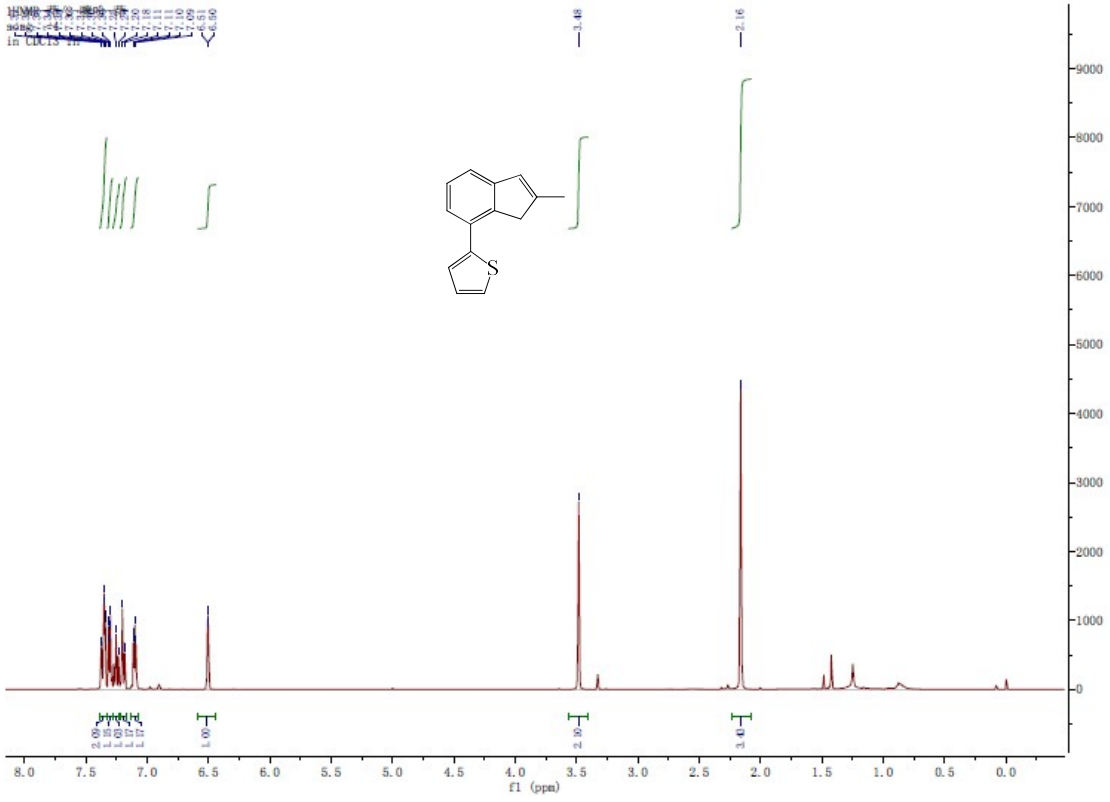
^{13}C NMR of 10b$_3$



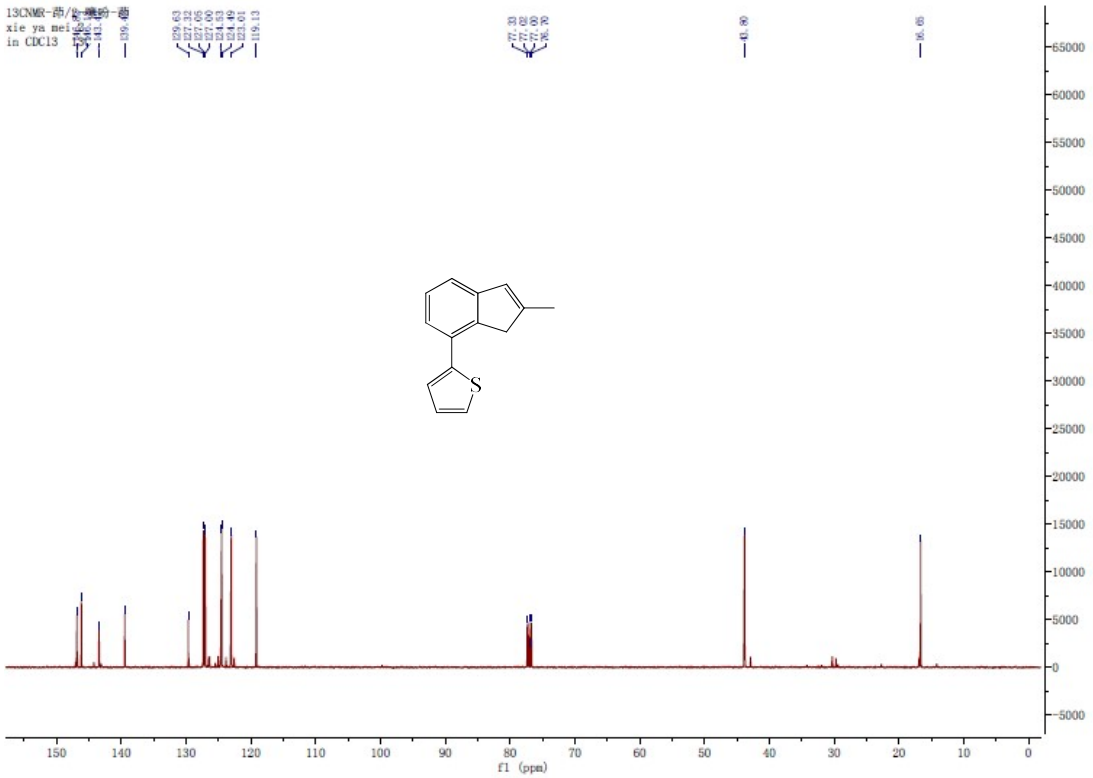
^{1}H NMR of 10b$_4$



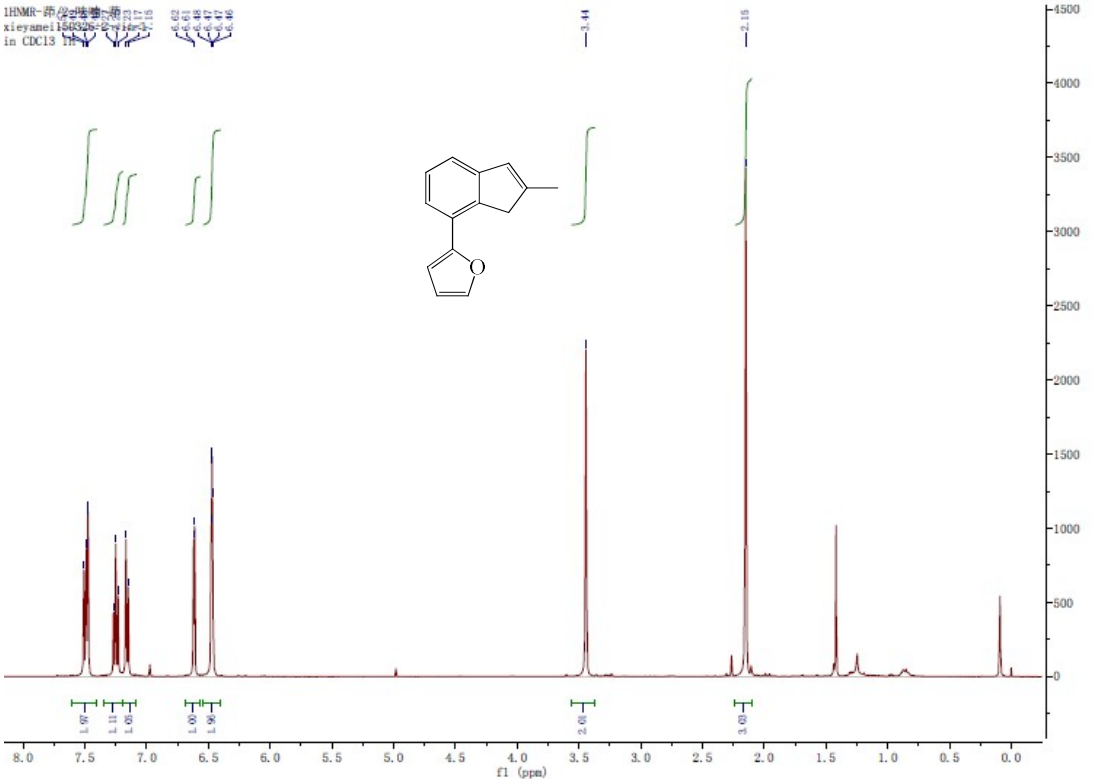
^{13}C NMR of 10b4



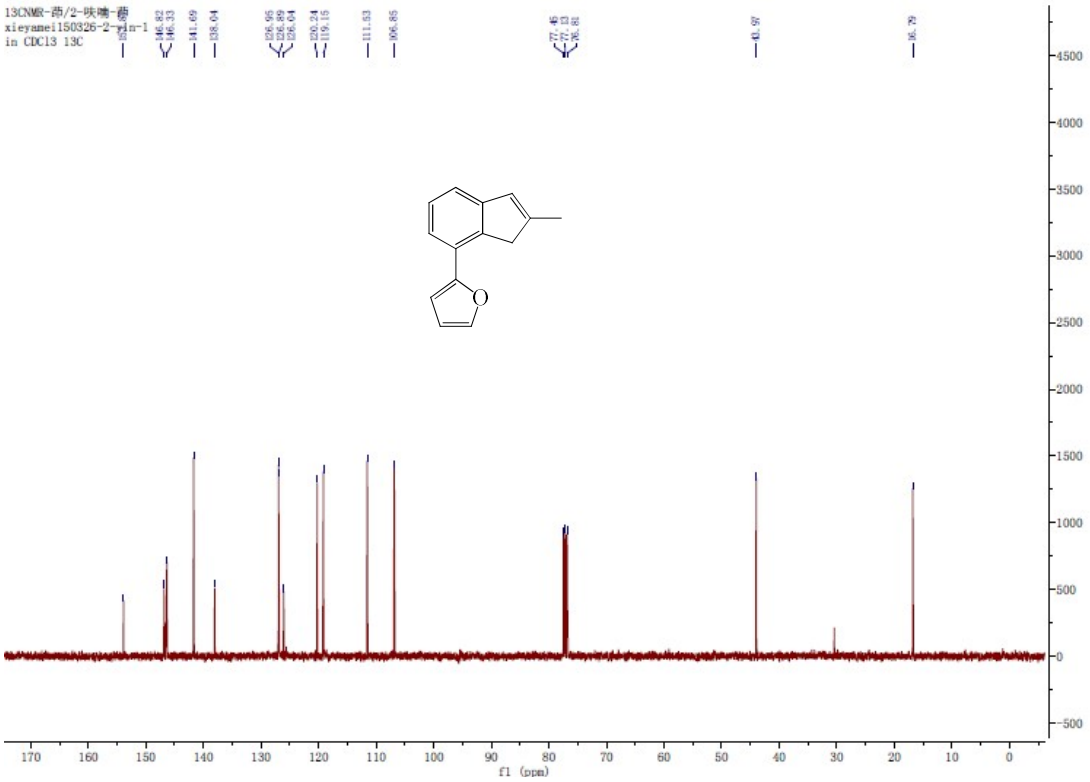
^{1}H NMR of 10b5



^{13}C NMR of 10b$_5$



^{1}H NMR of 10b$_6$



^{13}C NMR of 10b$_6$