

**Metal-Free Synthesis of Allylic Amines by
Cross-Dehydrogenative-Coupling of 1,3-Diarylpropenes with Anilines
and Amides under Mild Conditions**

Zhiming Wang,^{1,2} Hanjie Mo,¹ Dongping Cheng,^{1,3} and Weiliang Bao*,¹

¹Department of Chemistry, Zhejiang University (Xixi Campus), Hangzhou, Zhejiang
310028, China

²School of Petrochemical Engineering, Changzhou University, Changzhou, Jiangsu
213164, China

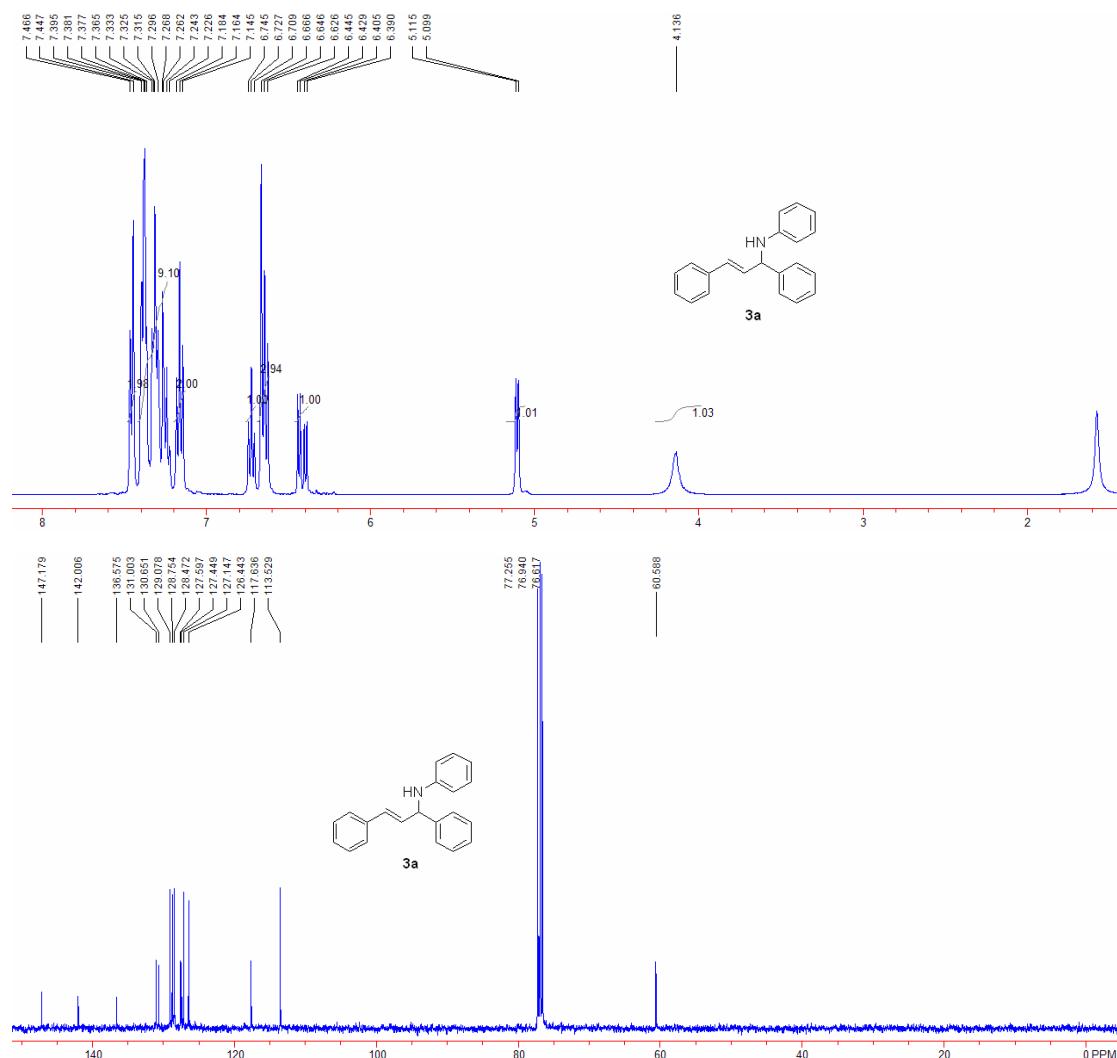
³College of Pharmaceutical Science, Zhejiang University of Technology, Hangzhou
310014, Zhejiang, China.

wlbao@css.zju.edu.cn

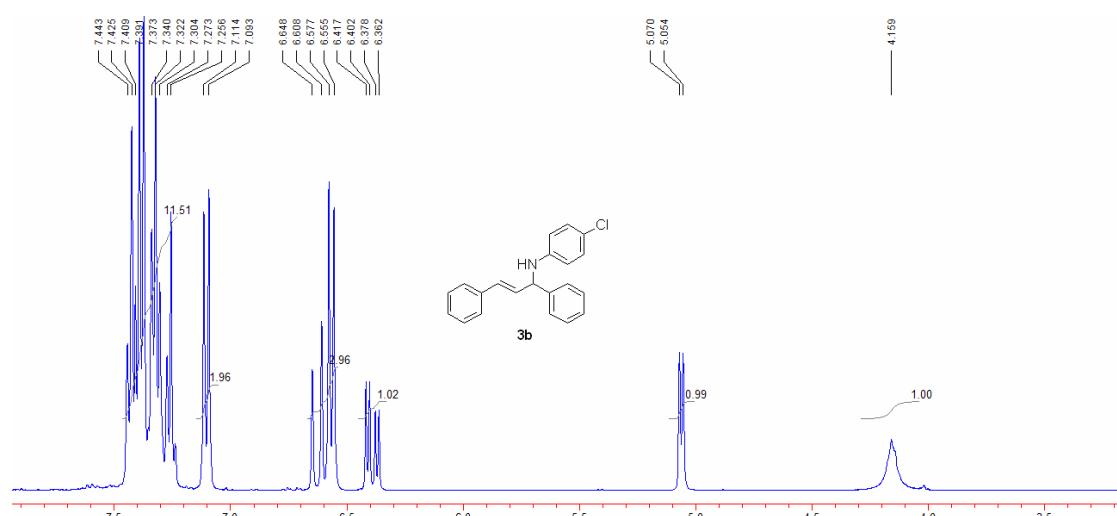
**Supporting Information
List of contents**

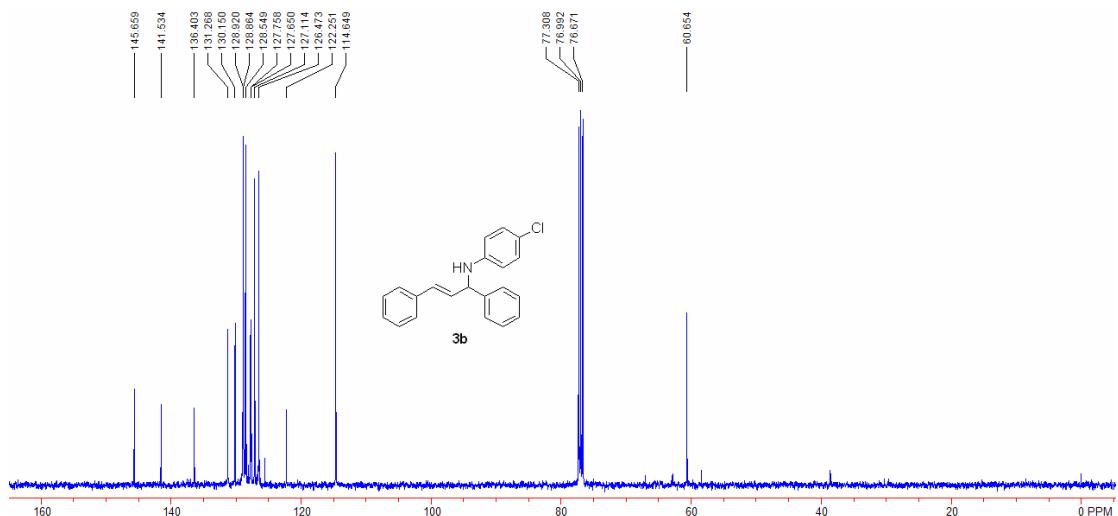
¹ H and ¹³ C NMR spectra copies of compounds 3a-3x	2-15
¹ H and ¹³ C NMR spectra copies of compounds 4a	15
¹ H and ¹³ C NMR spectra copies of compounds 6a-6n	16-24

3a HNMR 400 MHz, CNMR 100 MHz

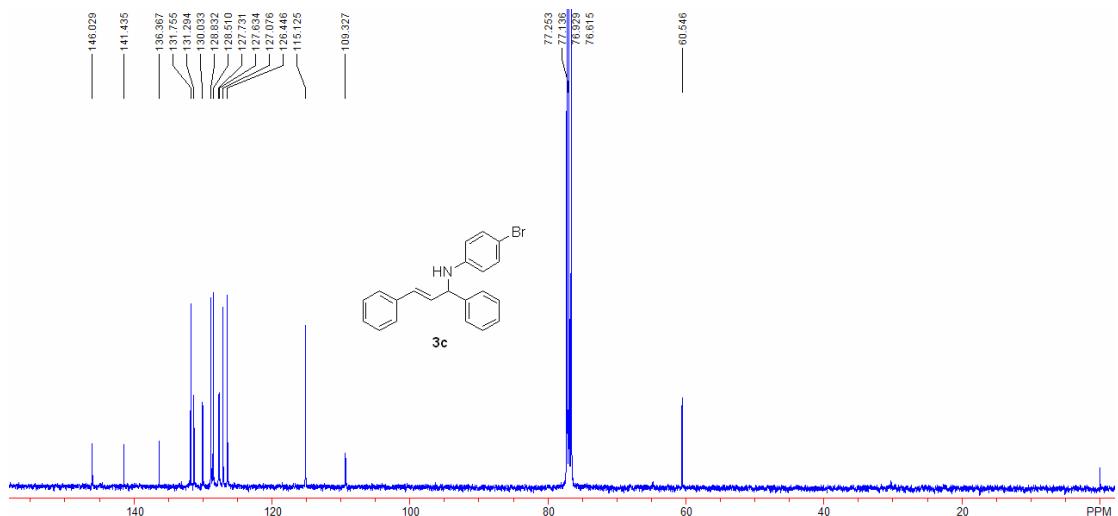
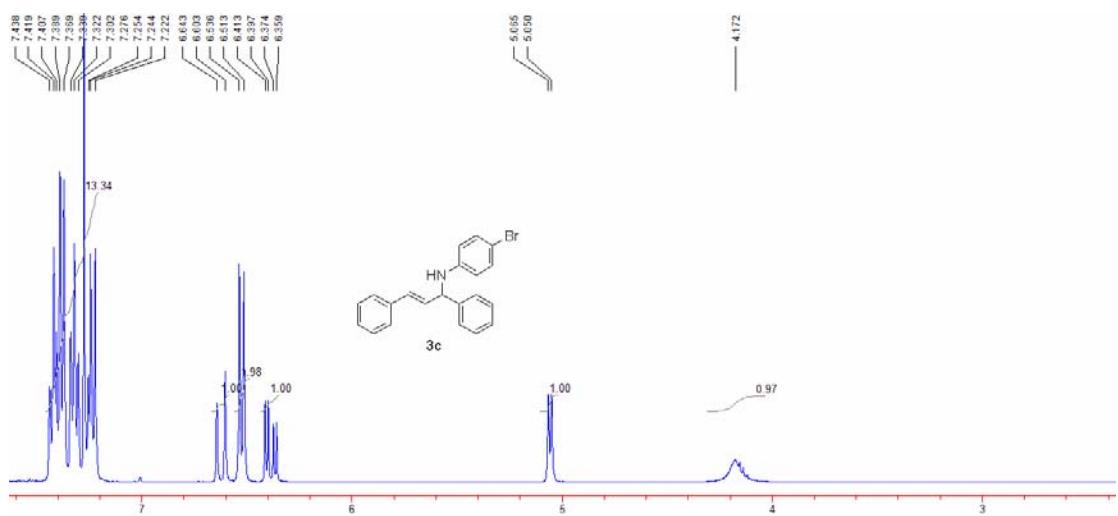


3b HNMR 400 MHz, CNMR 100 MHz

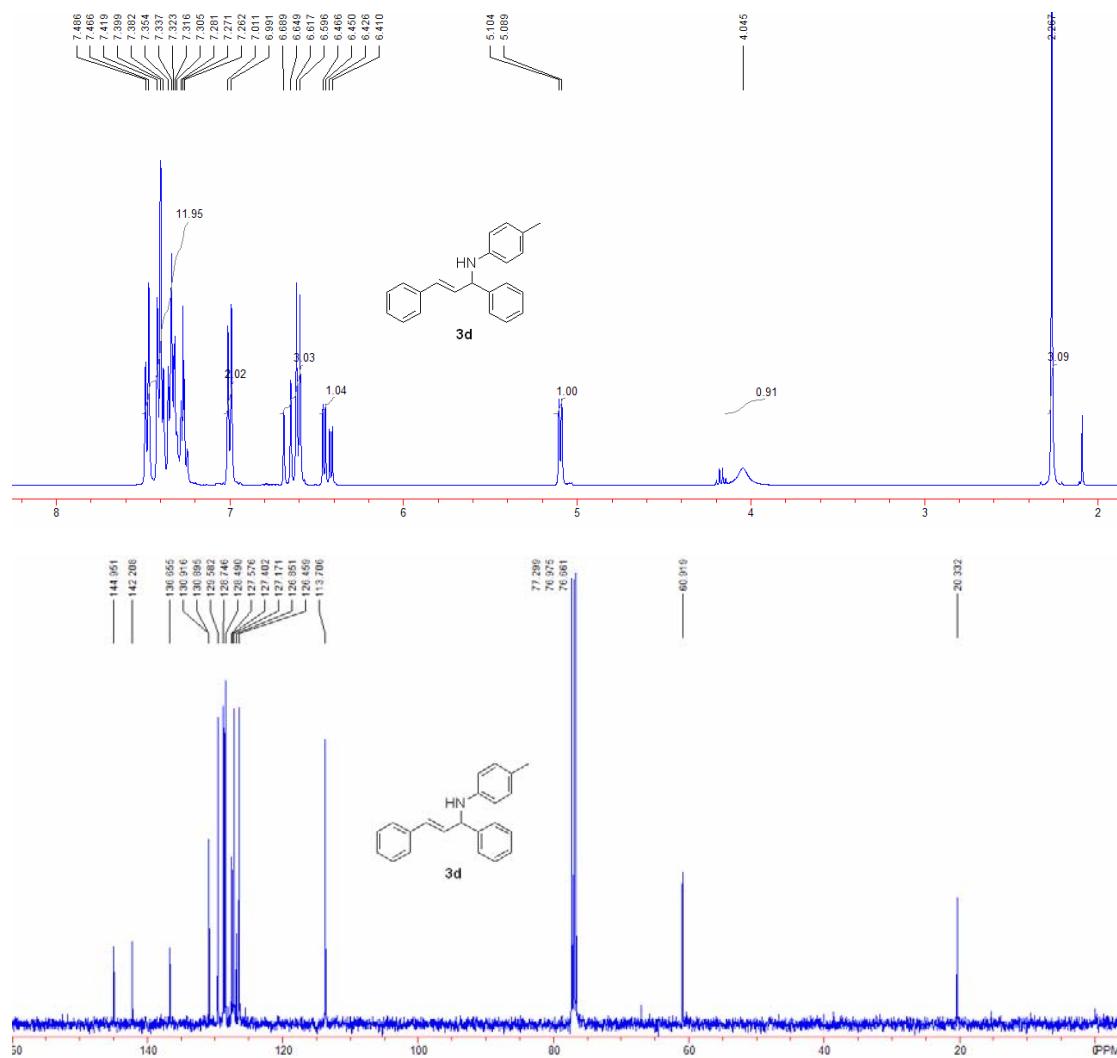




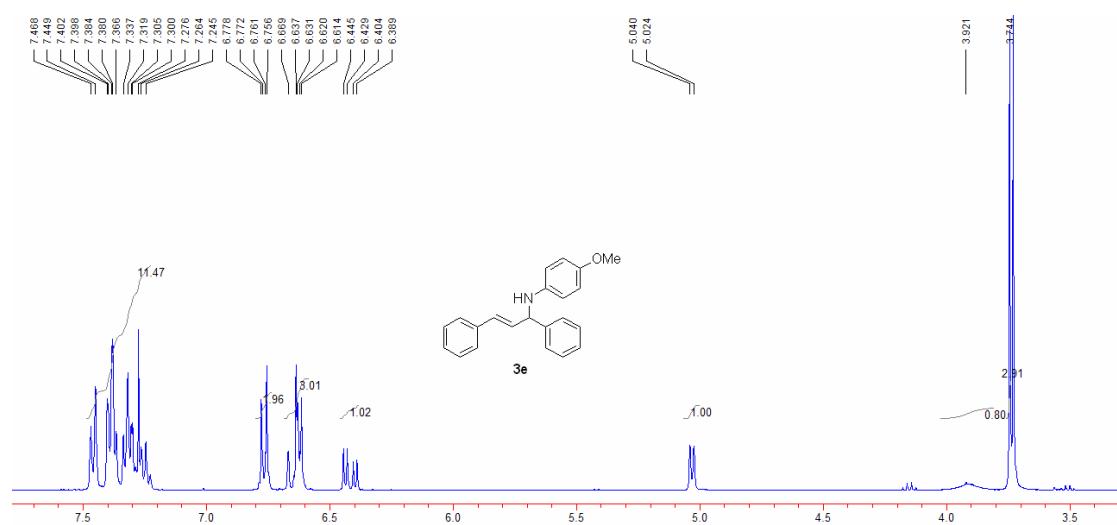
3c HNMR 400 MHz, CNMR 100 MHz

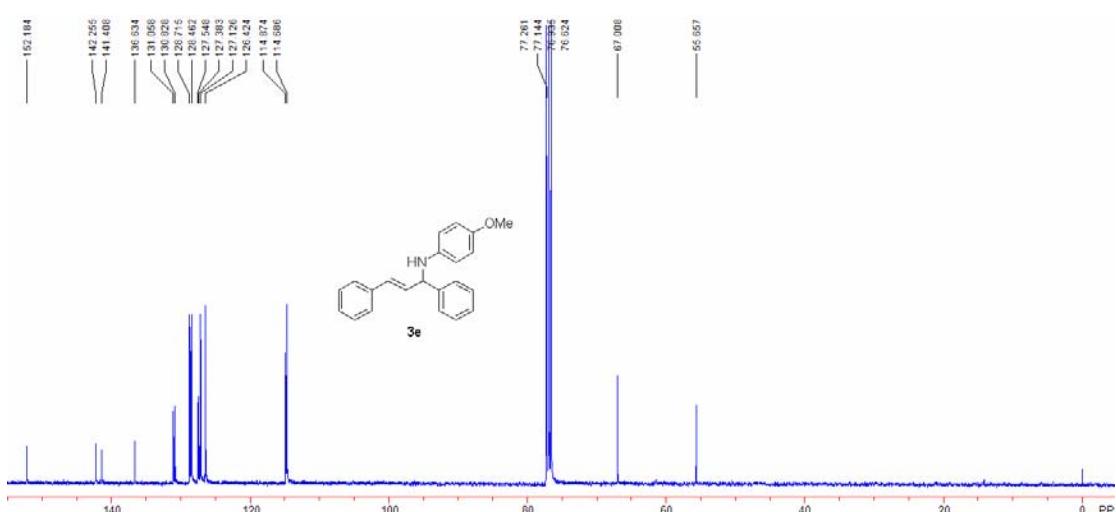


3d HNMR 400 MHz, CNMR 100 MHz

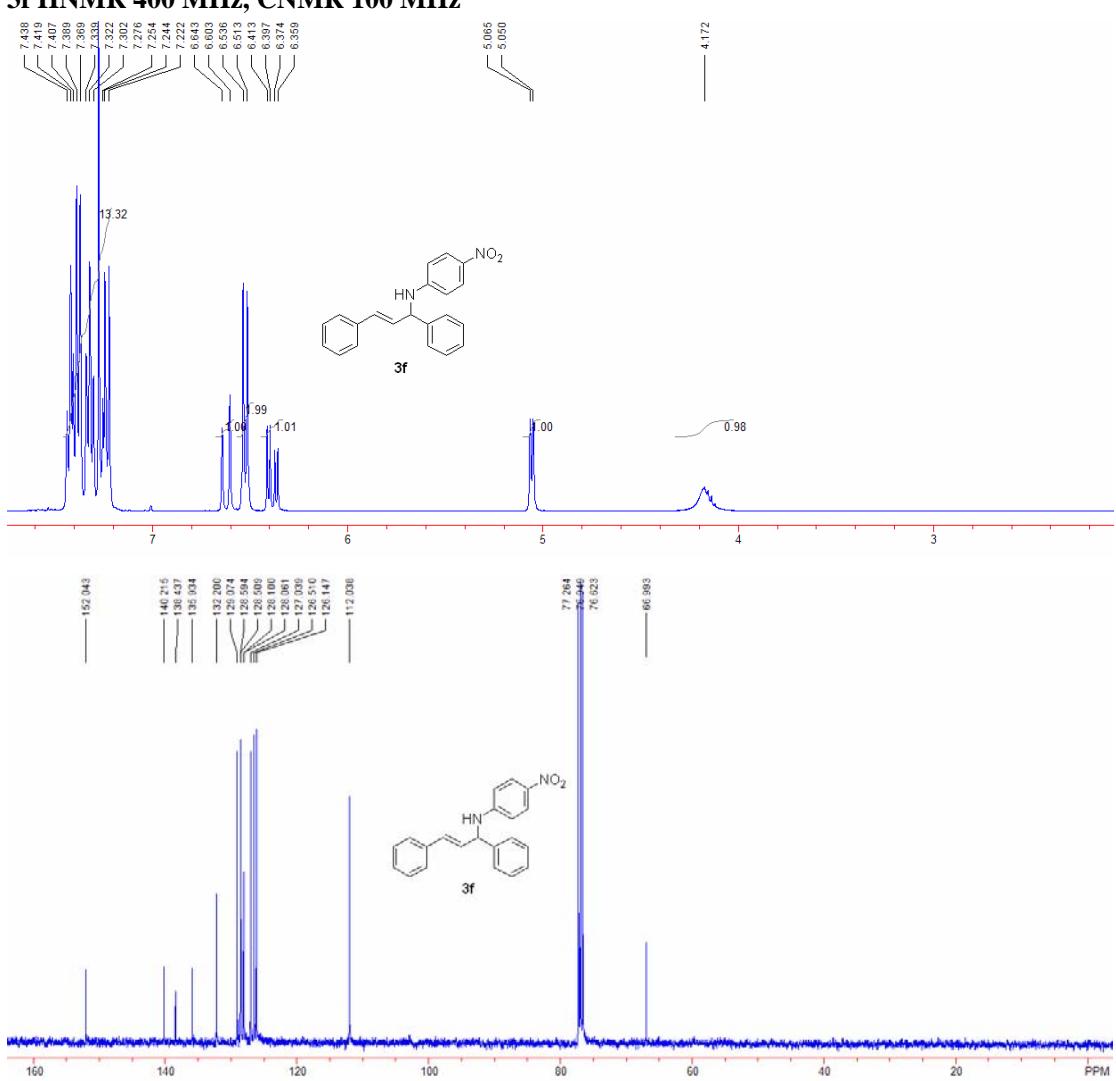


3e HNMR 400 MHz, CNMR 100 MHz

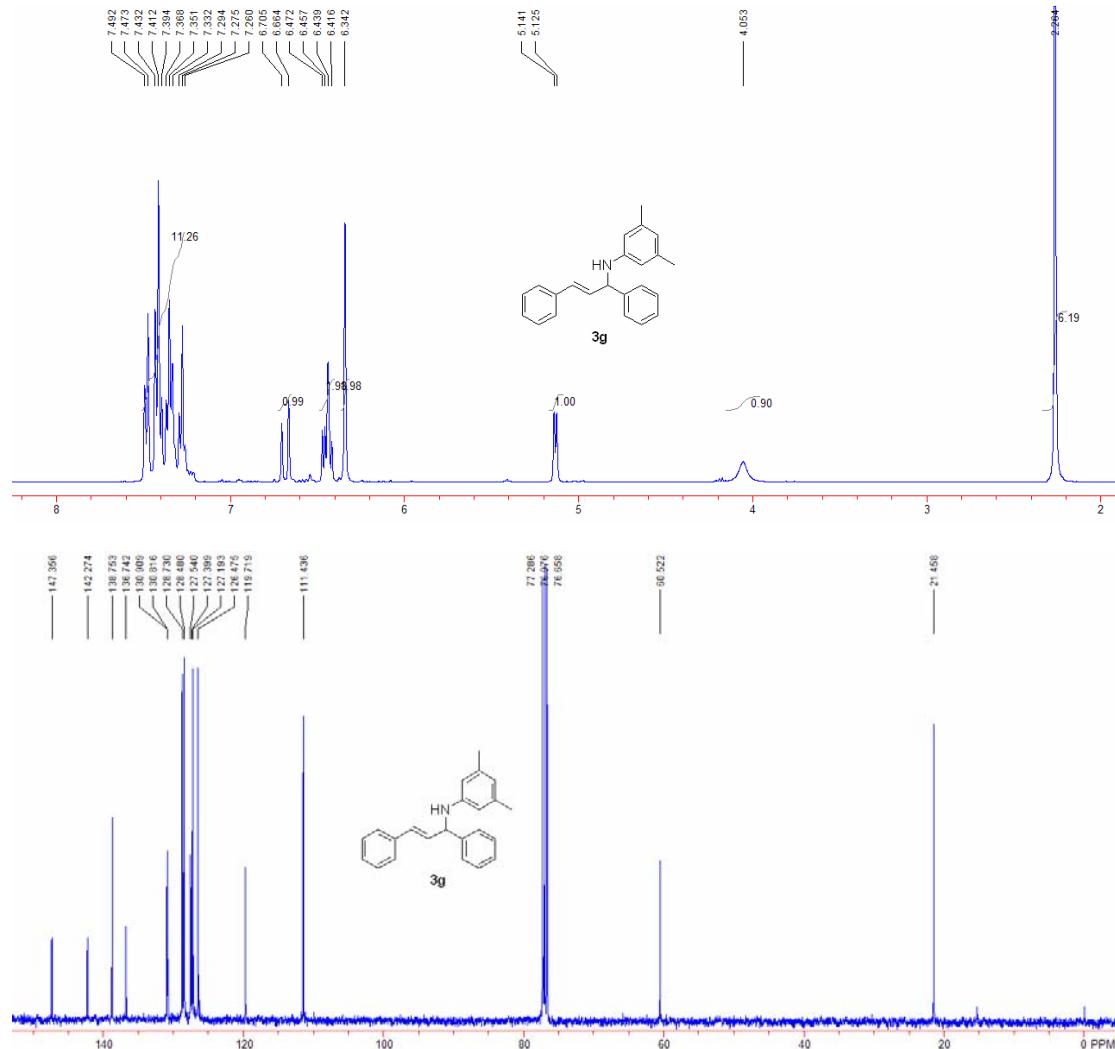




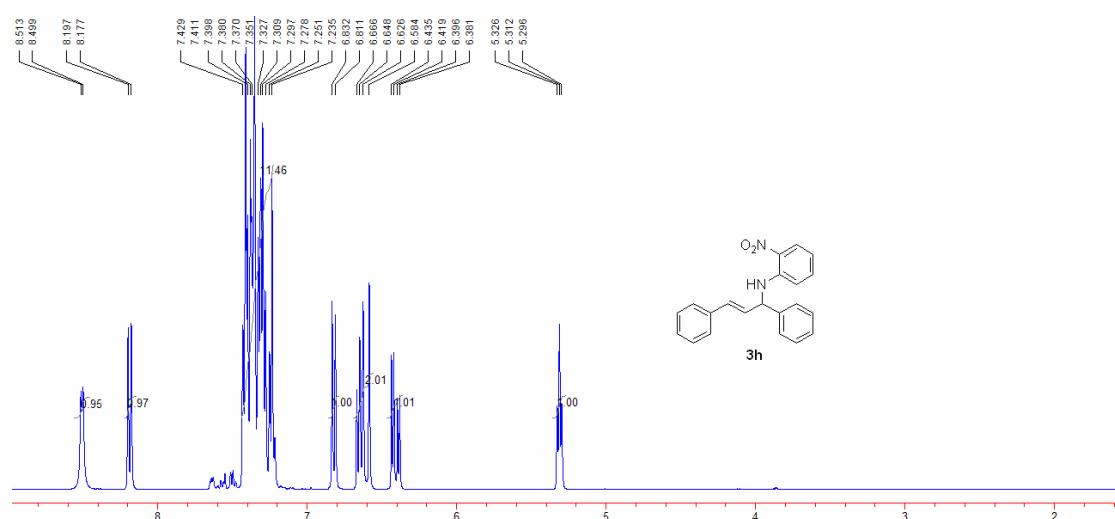
3f HNMR 400 MHz, CNMR 100 MHz

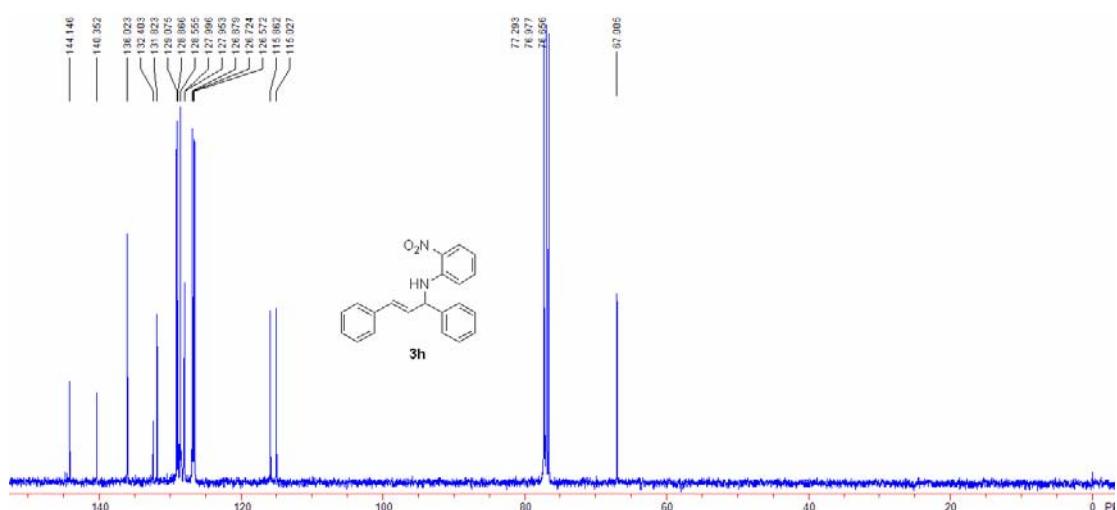


3g HNMR 400 MHz, CNMR 100 MHz

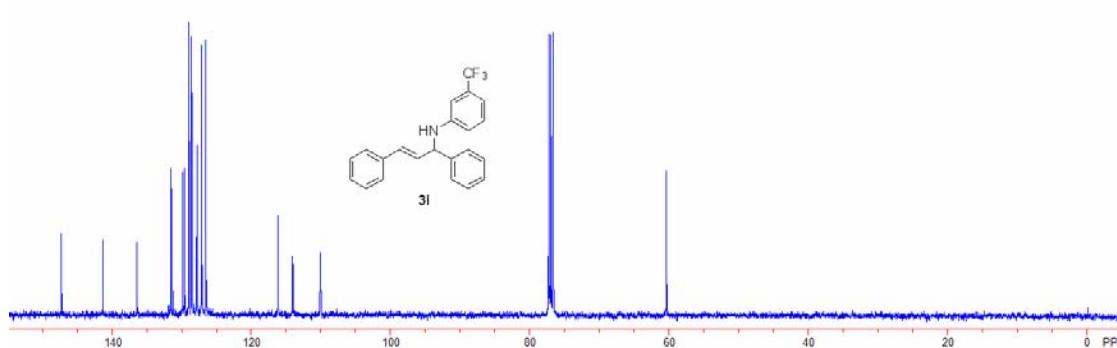
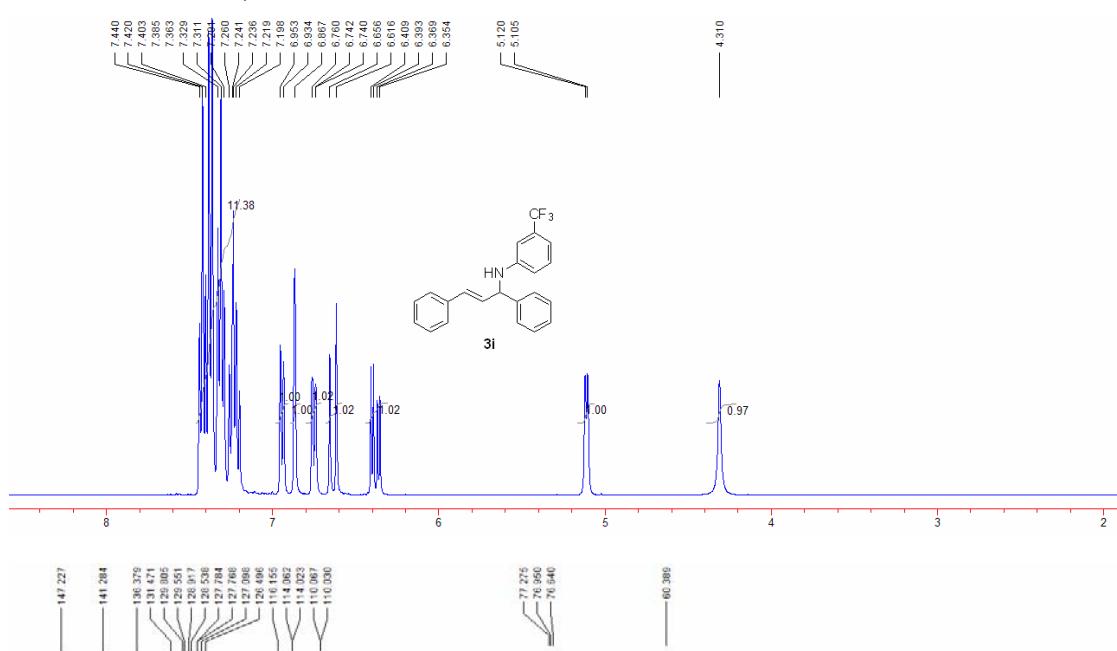


3h HNMR 400 MHz, CNMR 100 MHz

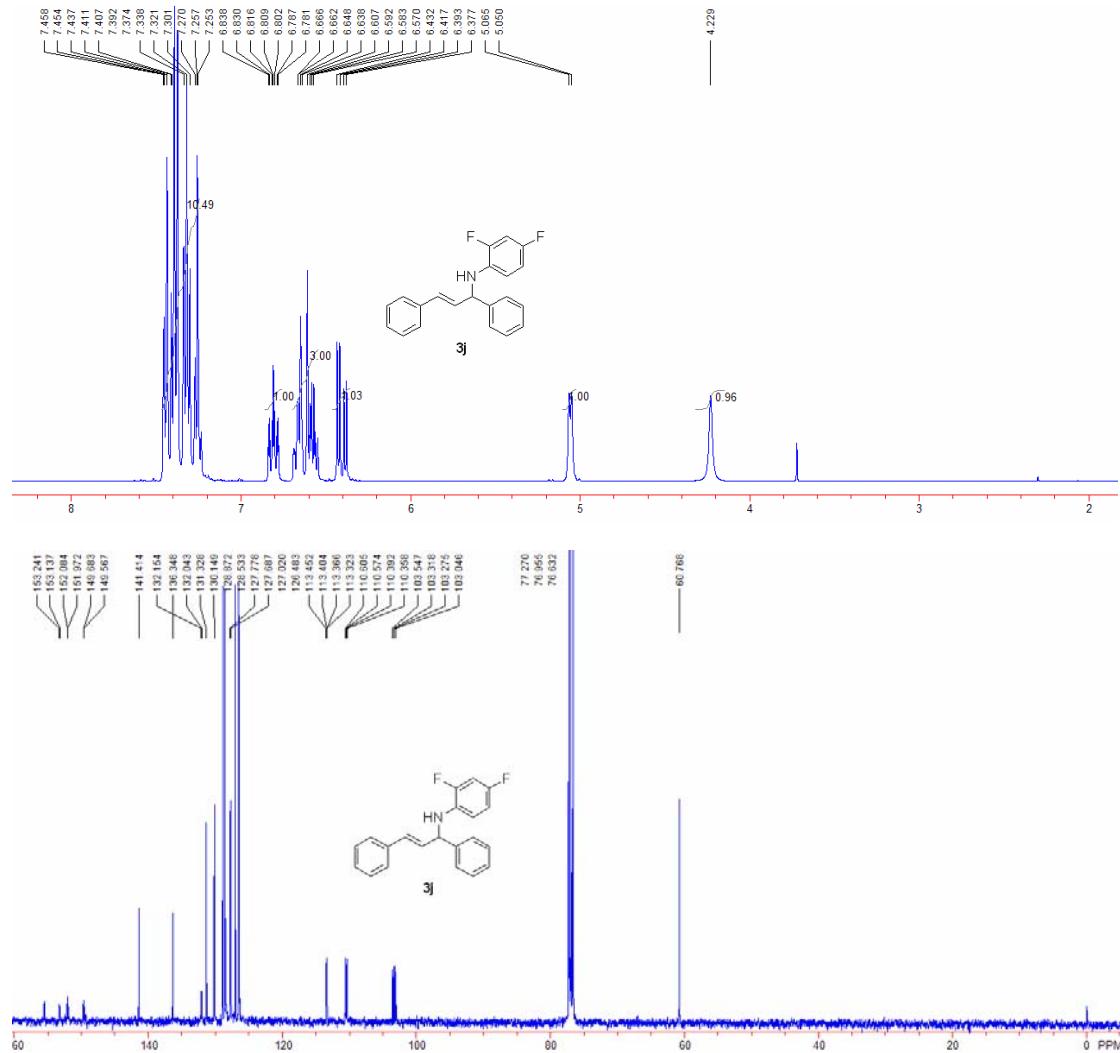




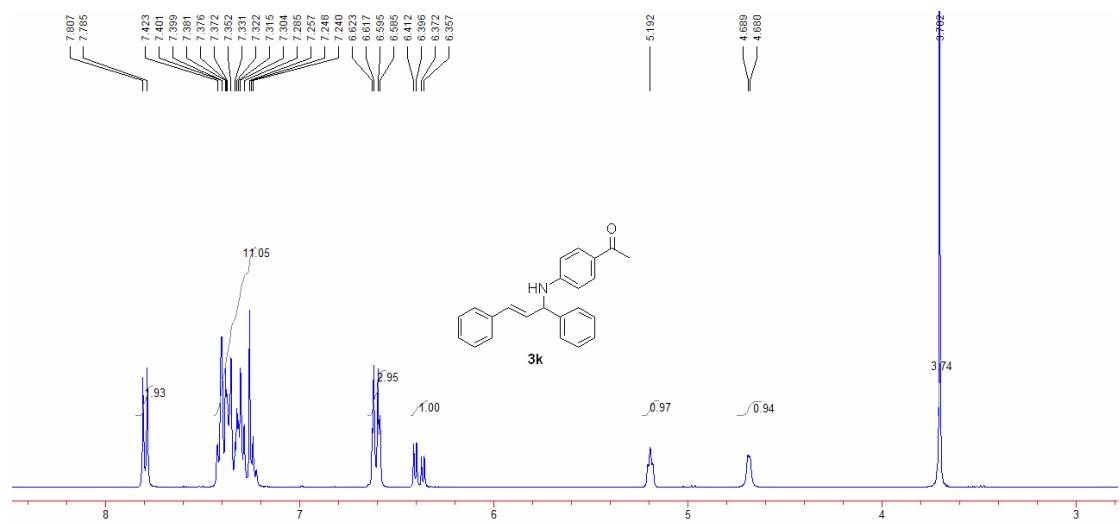
3i HNMR 400 MHz, CNMR 100 MHz

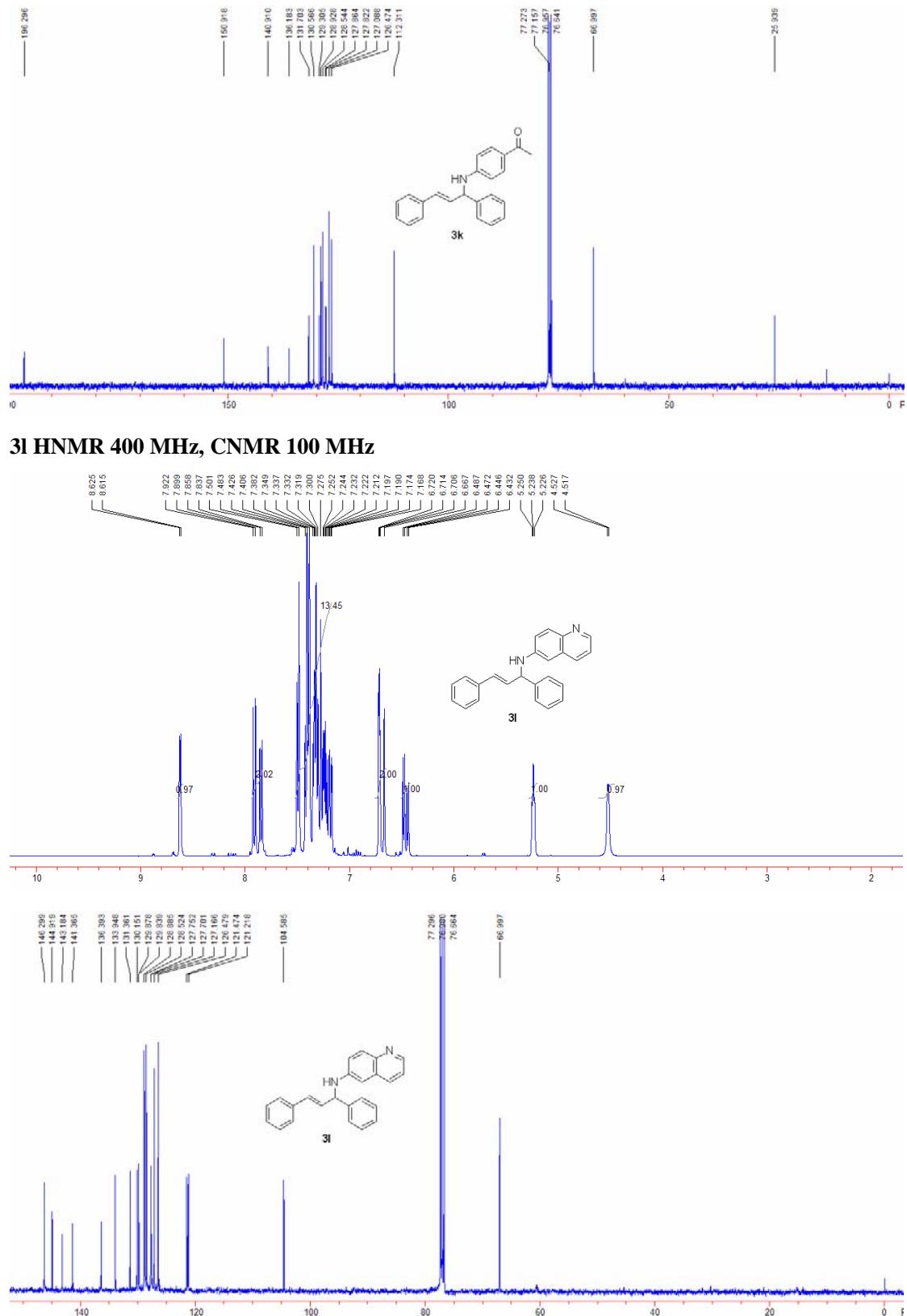


3j HNMR 400 MHz, CNMR 100 MHz

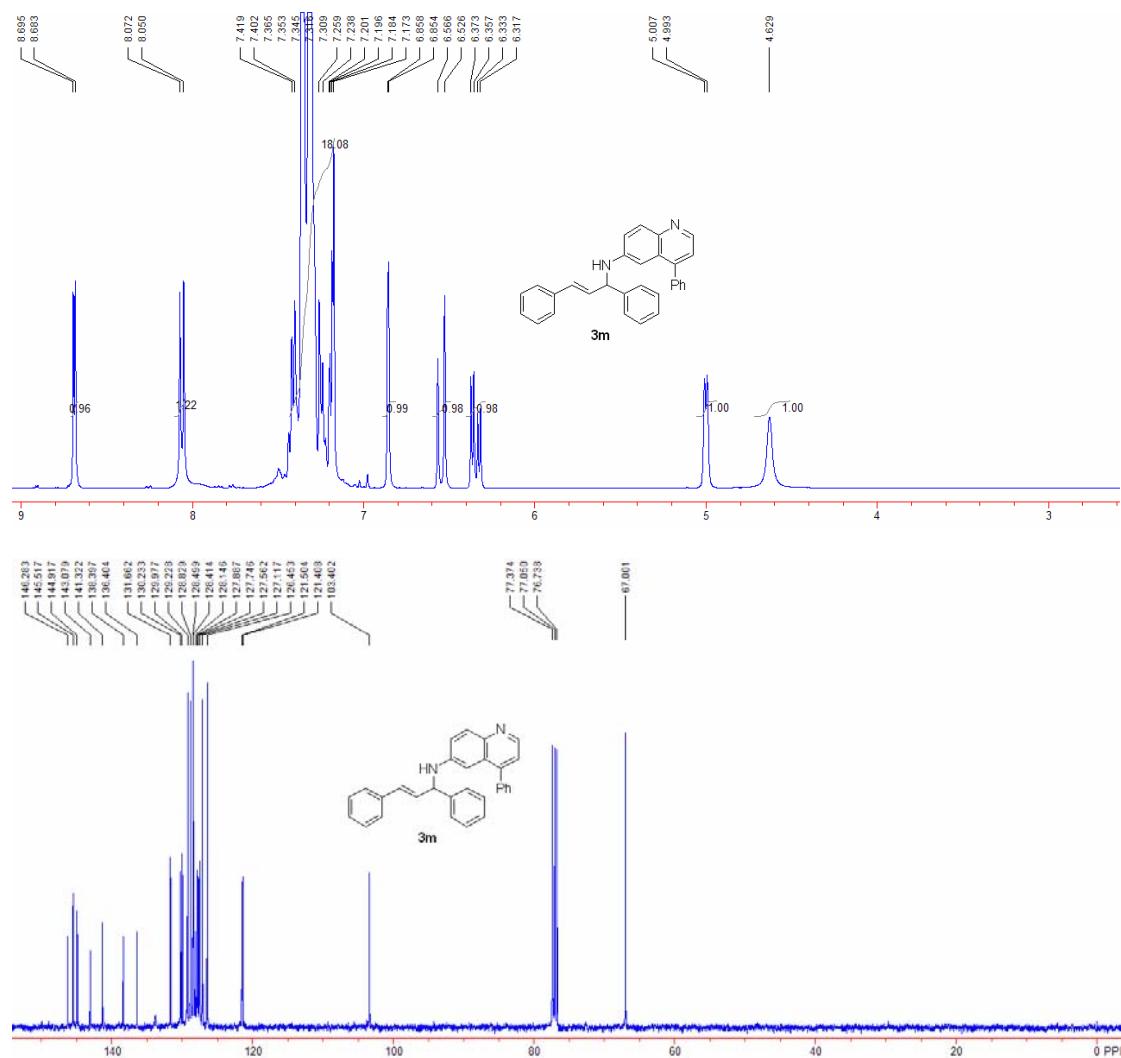


3k HNMR 400 MHz, CNMR 100 MHz

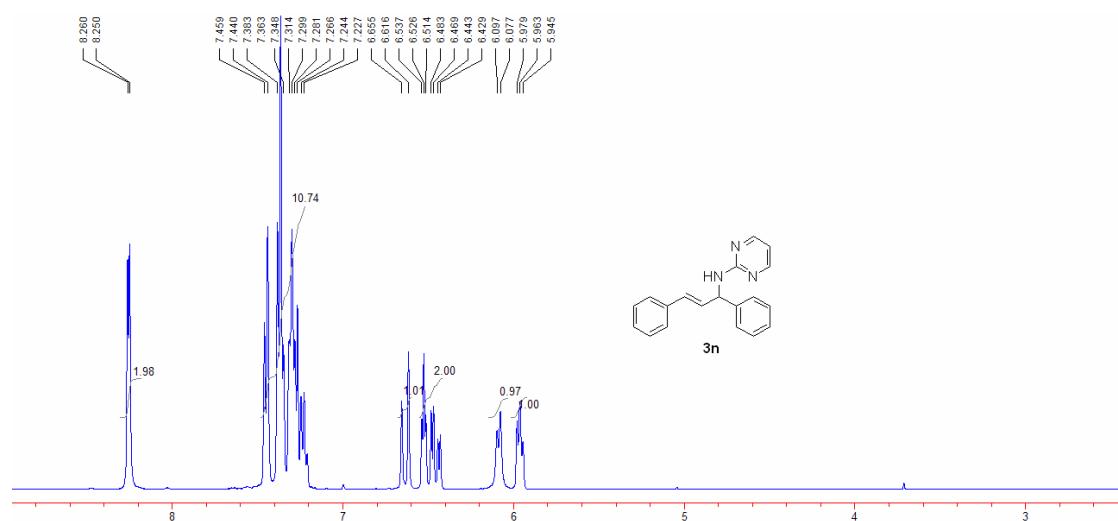


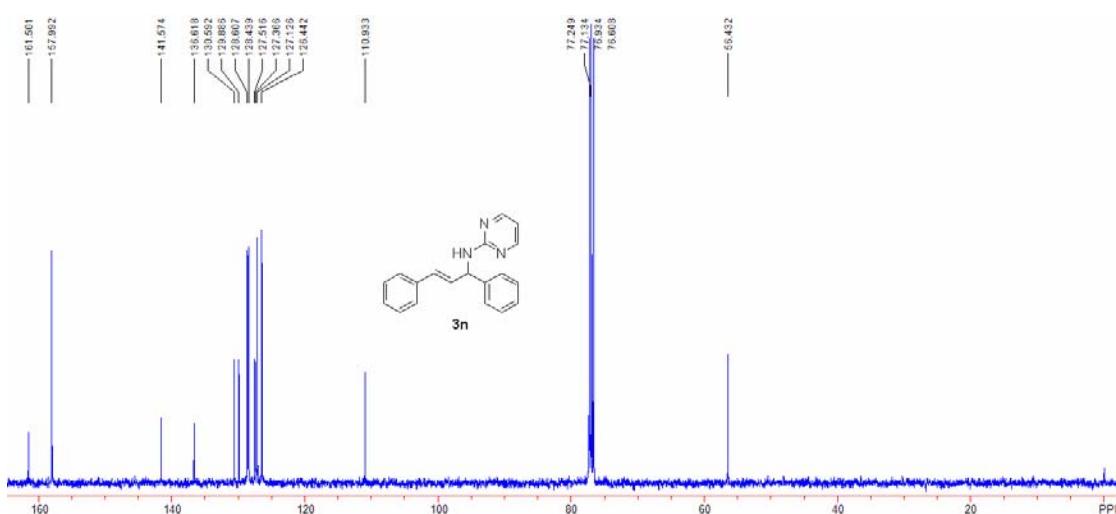


3m HNMR 400 MHz, CNMR 100 MHz

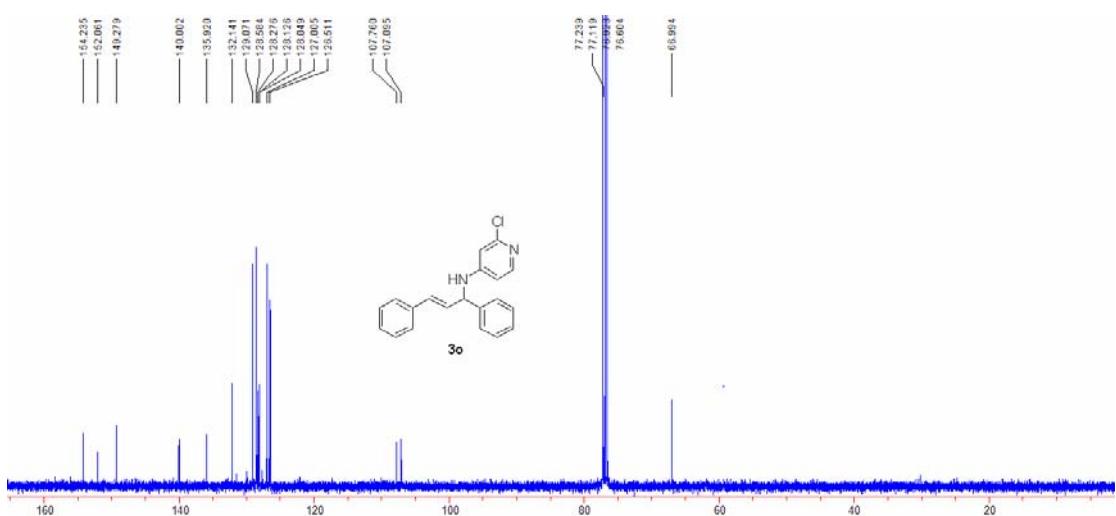
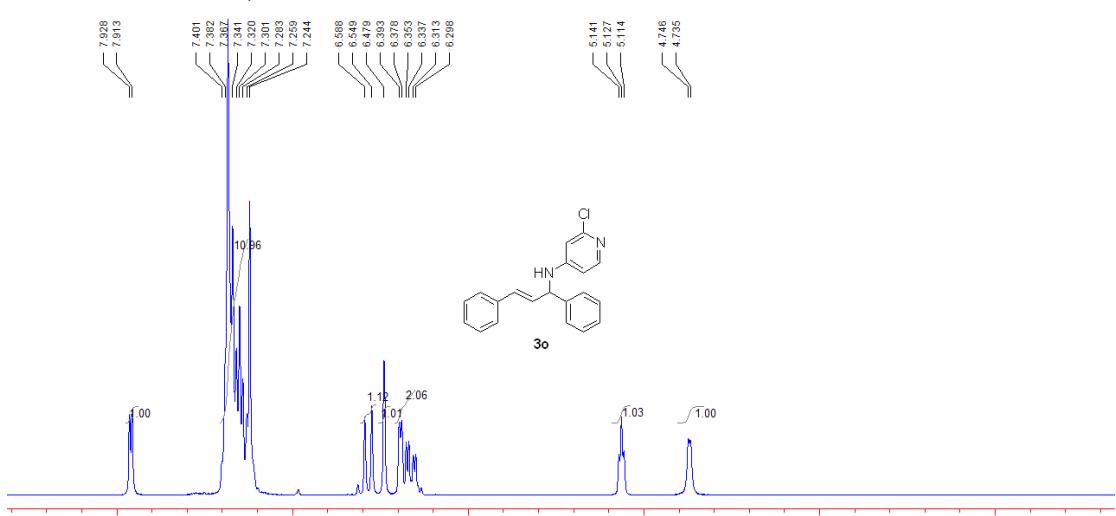


3n HNMR 400 MHz, CNMR 100 MHz

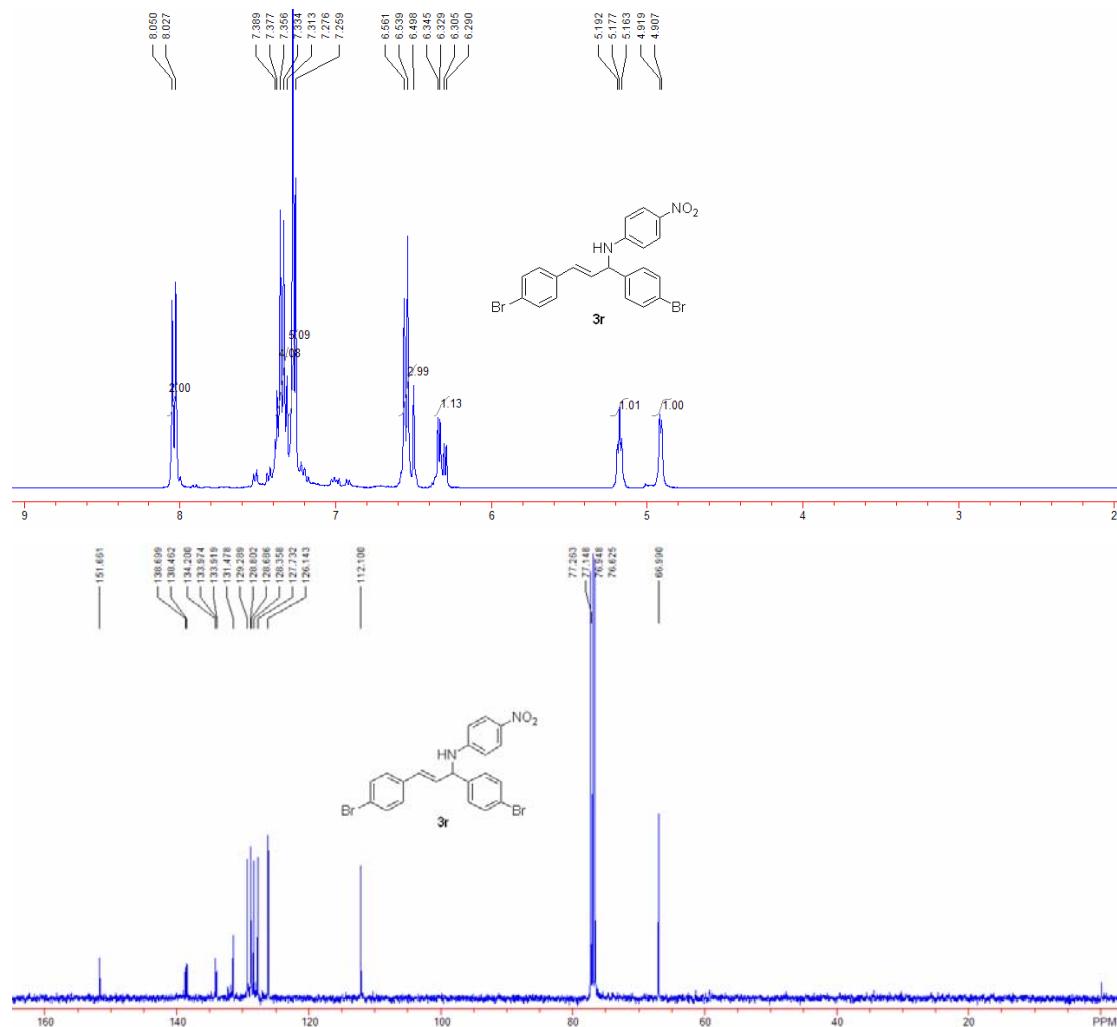


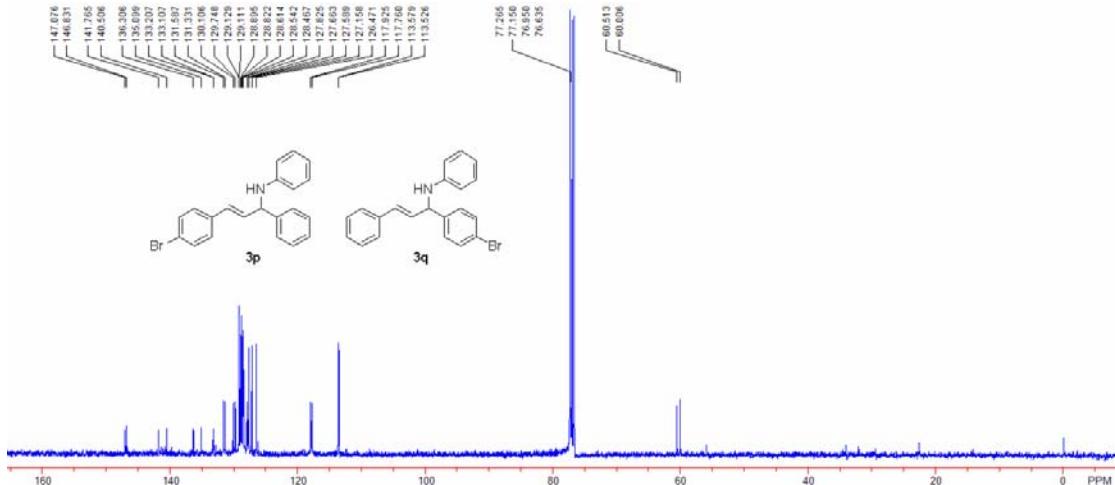


3o HNMR 400 MHz, CNMR 100 MHz

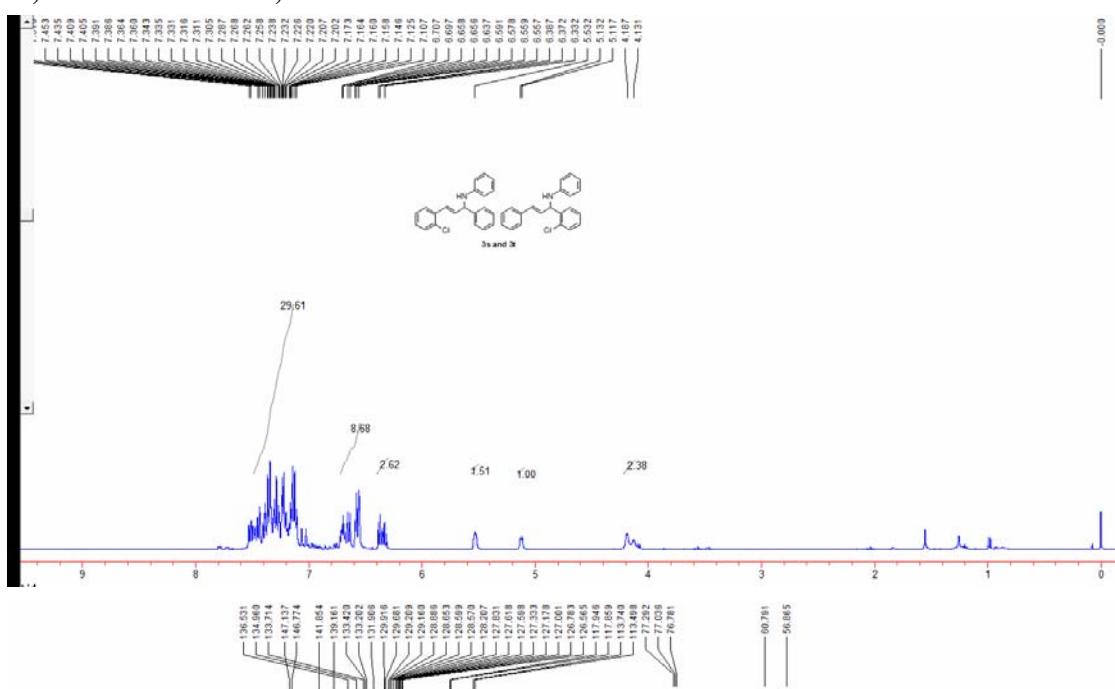


3p HNMR 400 MHz, CNMR 100 MHz



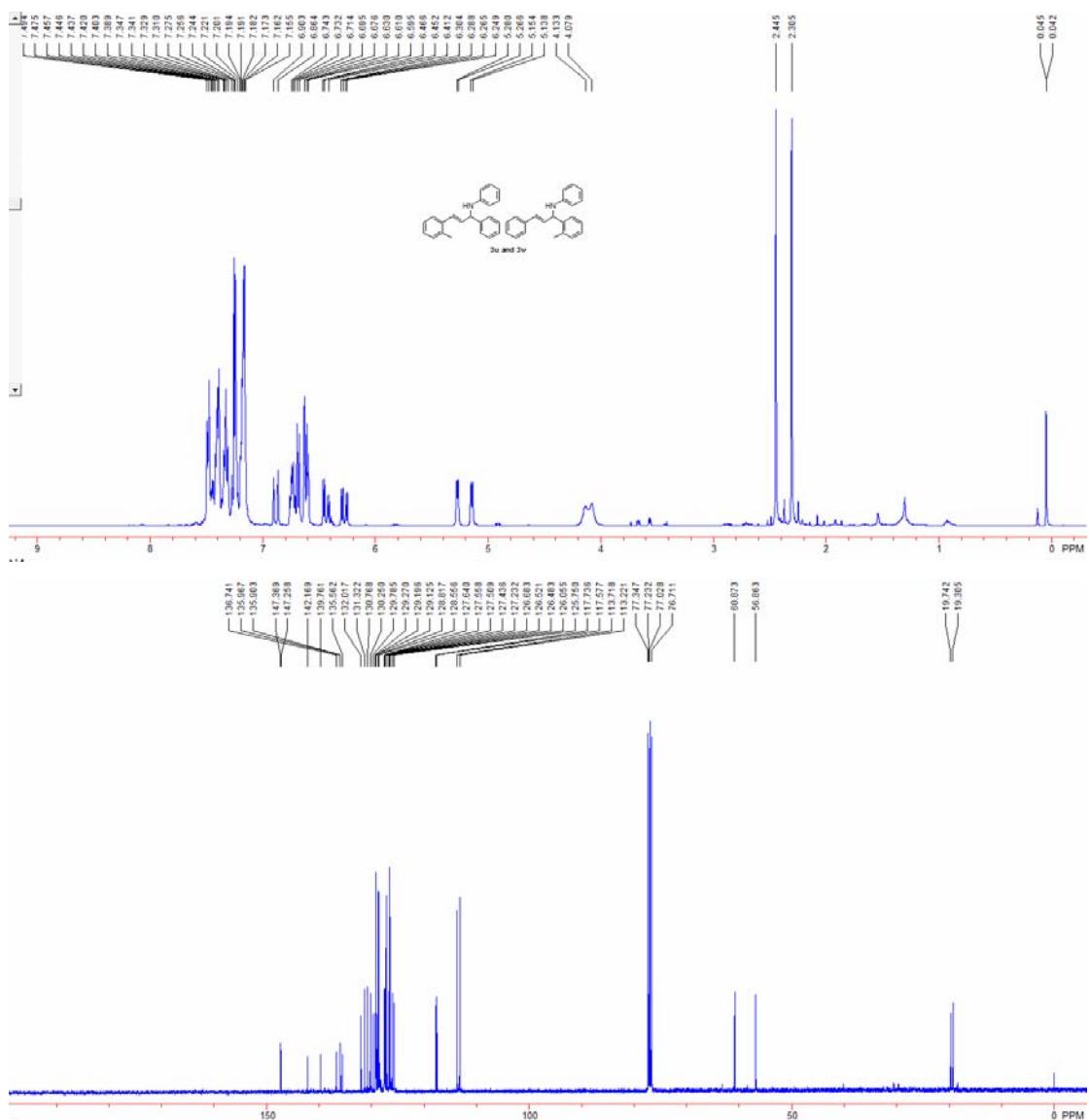


3s,3t HNMR 400 MHz, CNMR 100 MHz

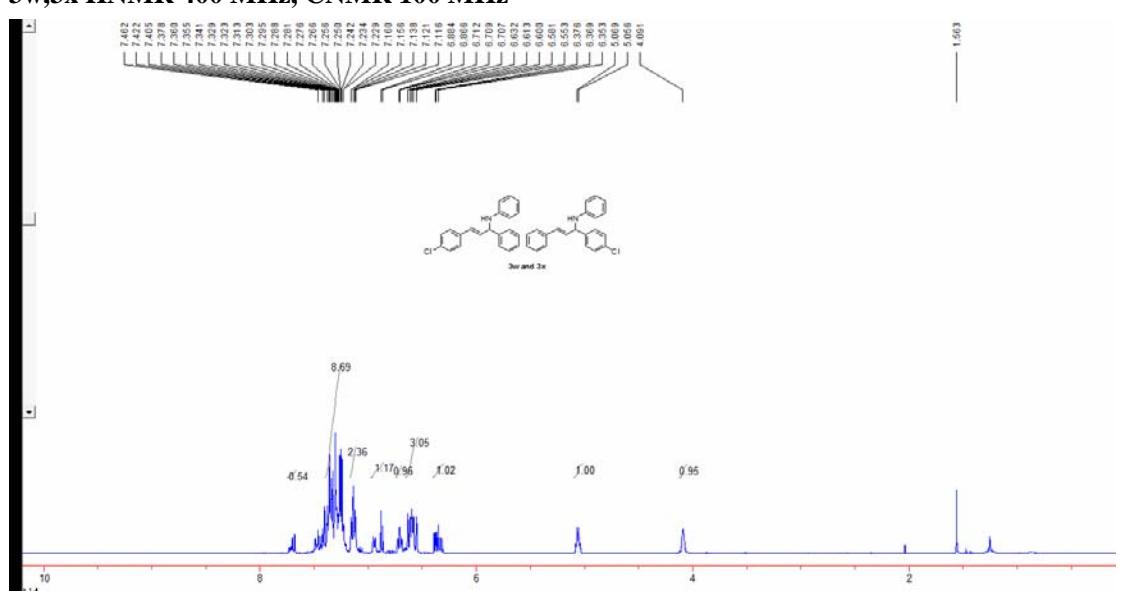


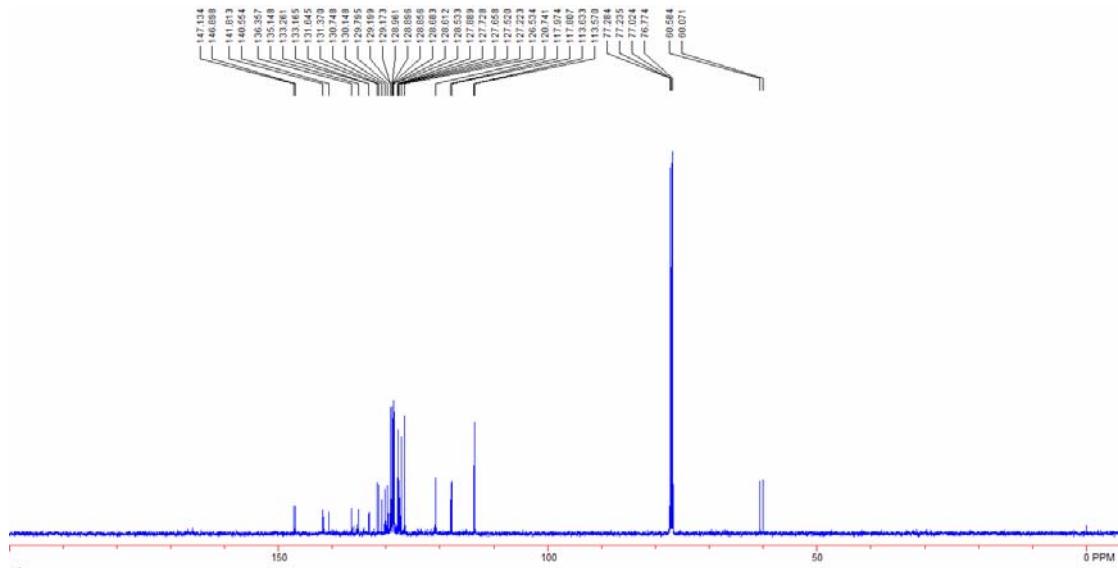
The figure displays a proton NMR spectrum (1H NMR) with the x-axis labeled "PPM". The spectrum shows several distinct peaks. A very small peak is visible at approximately 154 ppm. A cluster of peaks is centered around 135 ppm, with the most intense peak in this group at approximately 135.5 ppm. Another cluster of peaks is centered around 115 ppm, with the most intense peak at approximately 115.5 ppm. A sharp, dominant peak is located at approximately 70 ppm. A smaller peak is visible at approximately 45 ppm.

3u,3v HNMR 400 MHz, CNMR 100 MHz

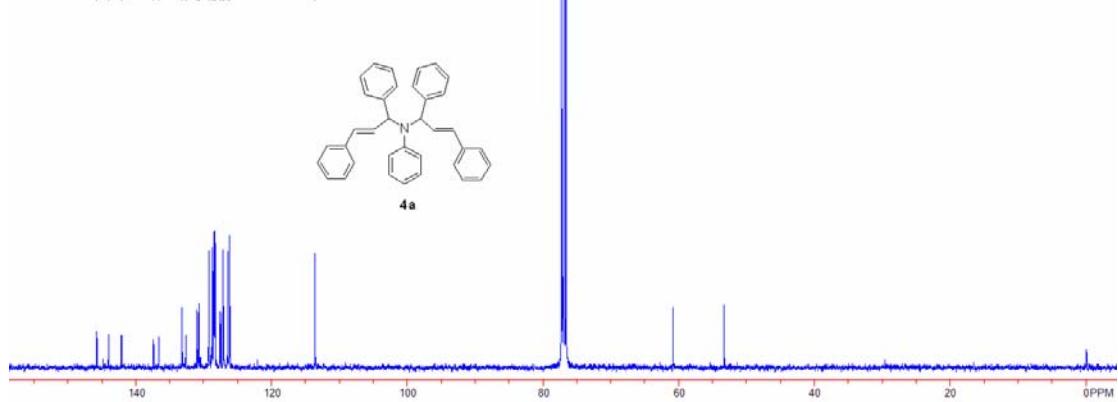
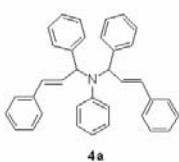
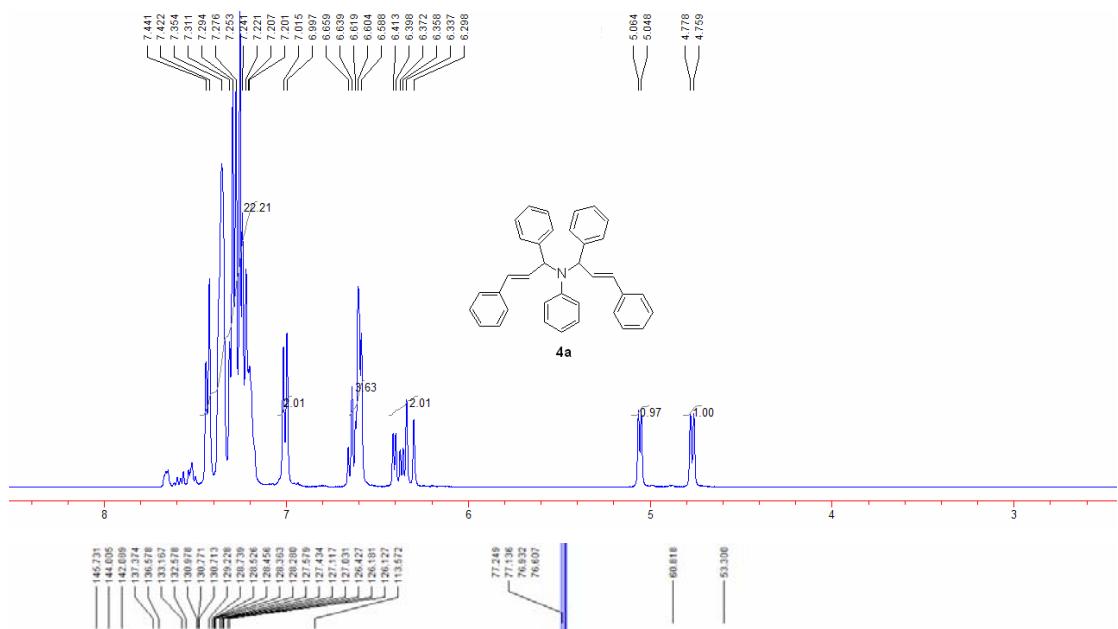


3w,3x HNMR 400 MHz, CNMR 100 MHz

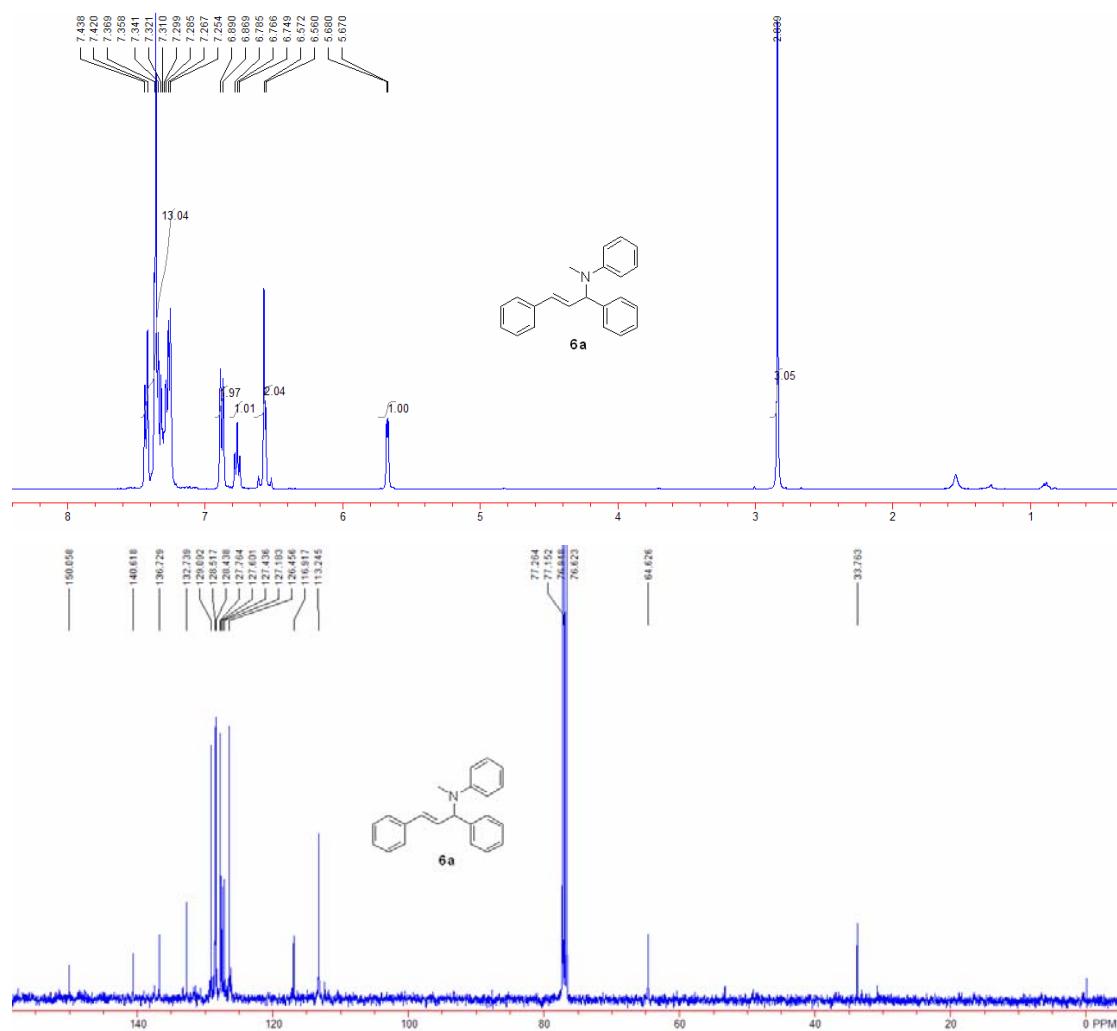




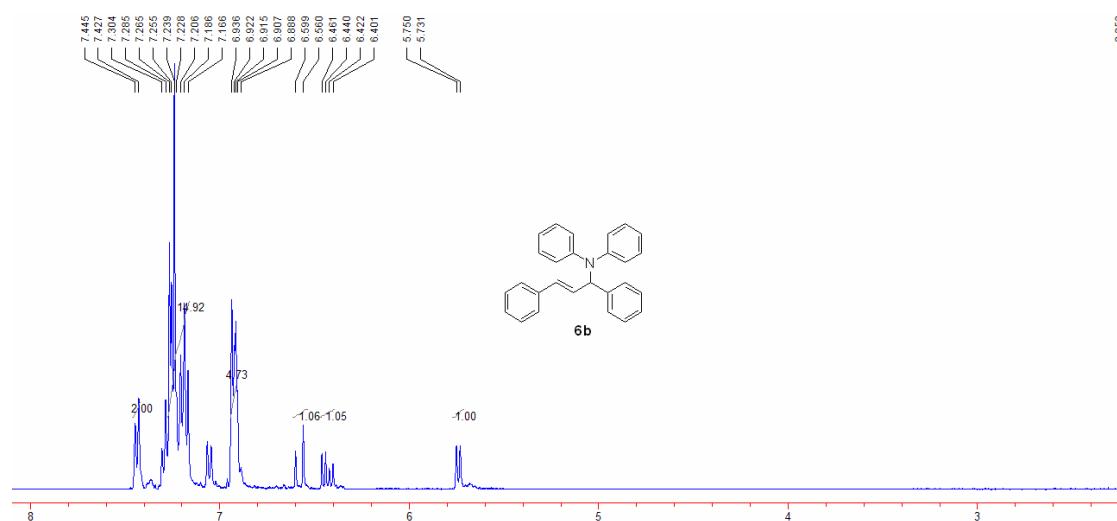
4a HNMR 400 MHz, CNMR 100 MHz

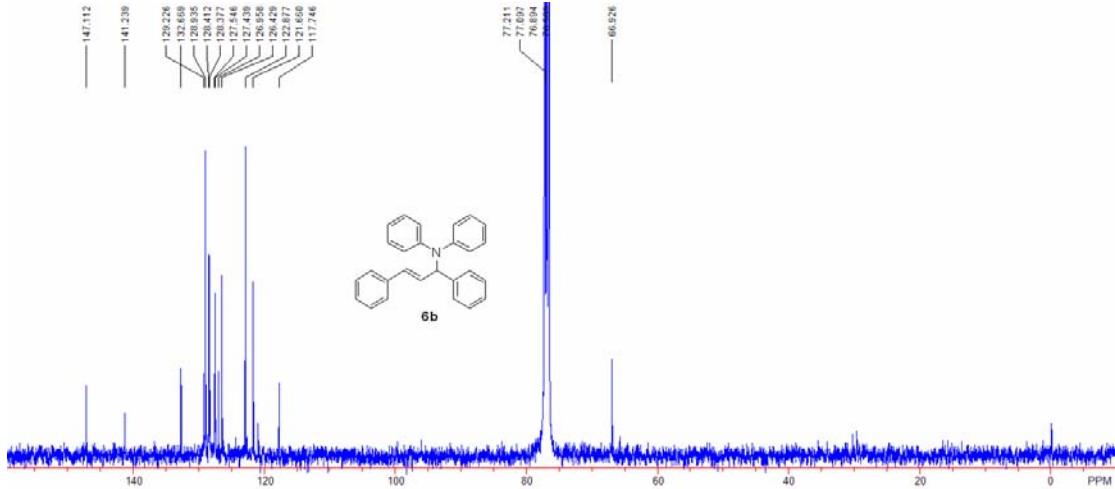


6a HNMR 400 MHz, CNMR 100 MHz

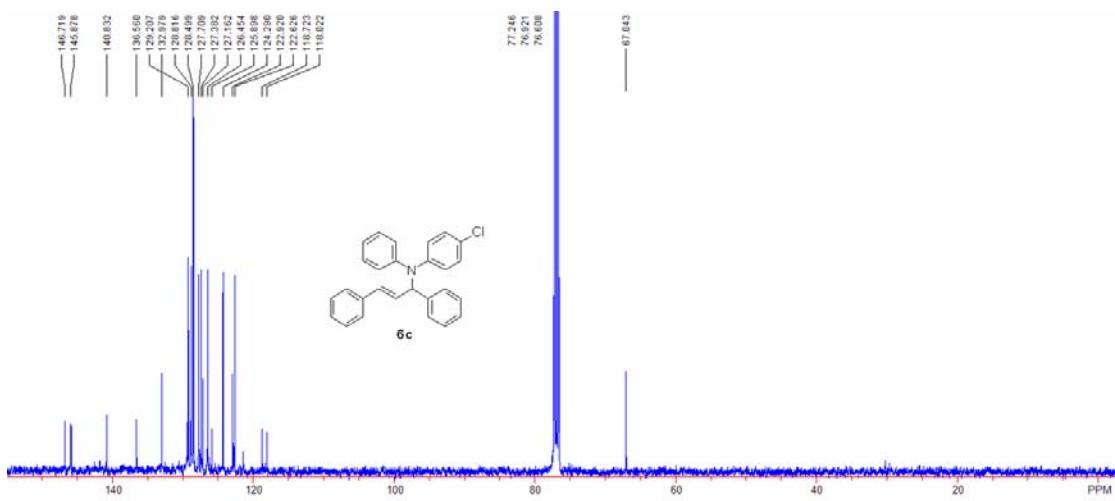
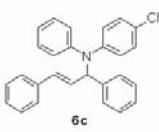
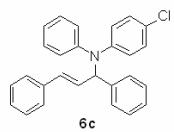
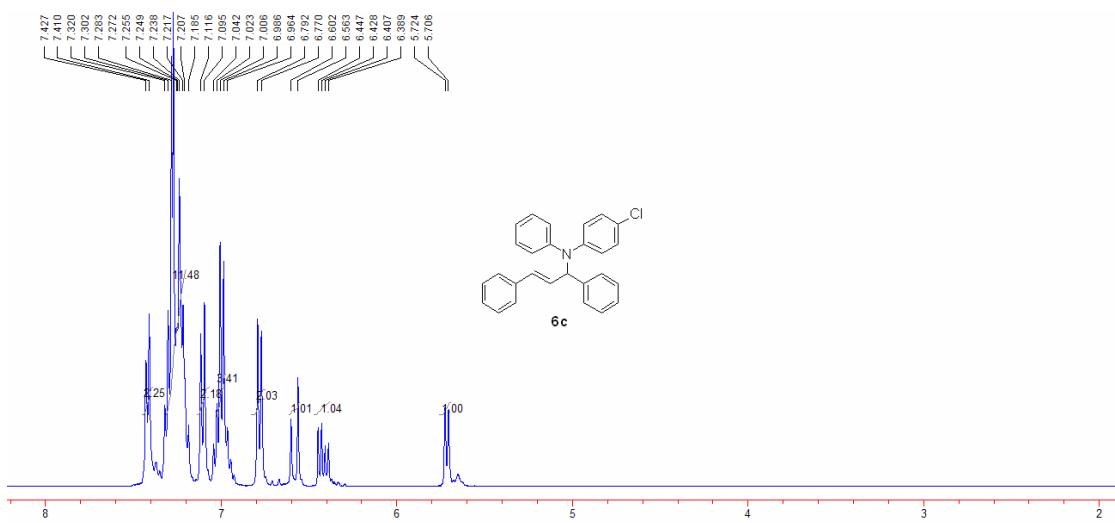


6b HNMR 400 MHz, CNMR 100 MHz

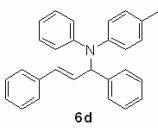
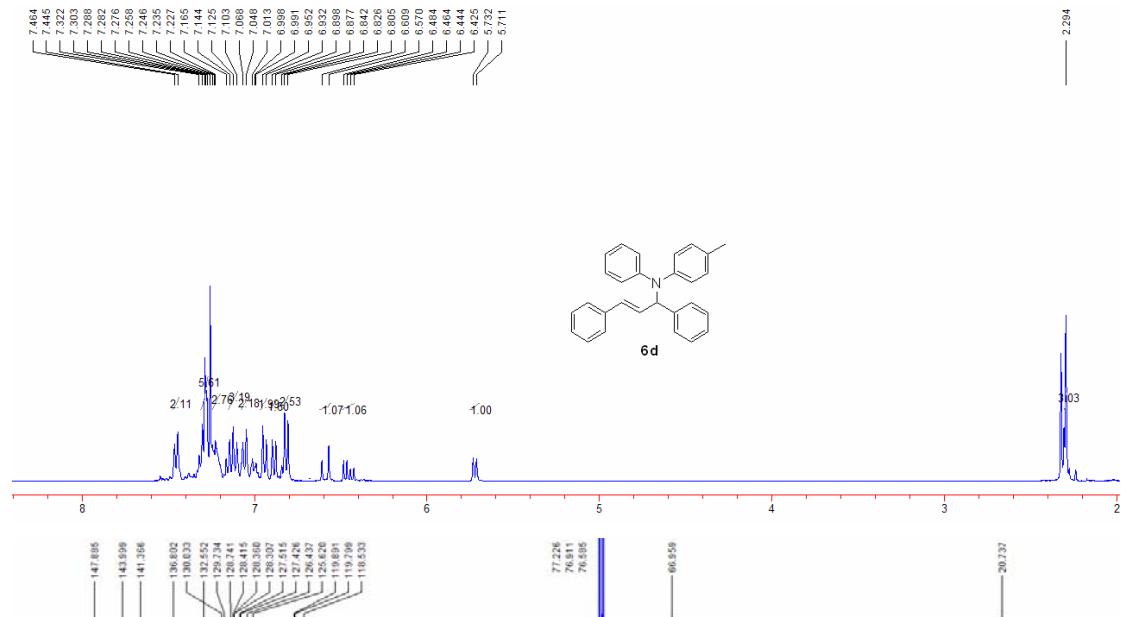




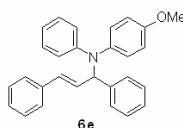
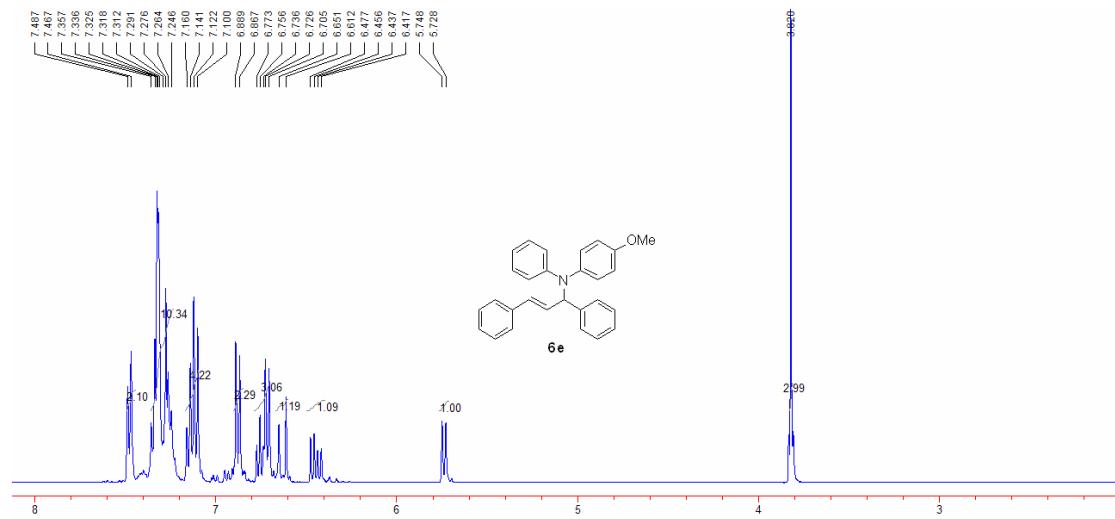
6c HNMR 400 MHz, CNMR 100 MHz

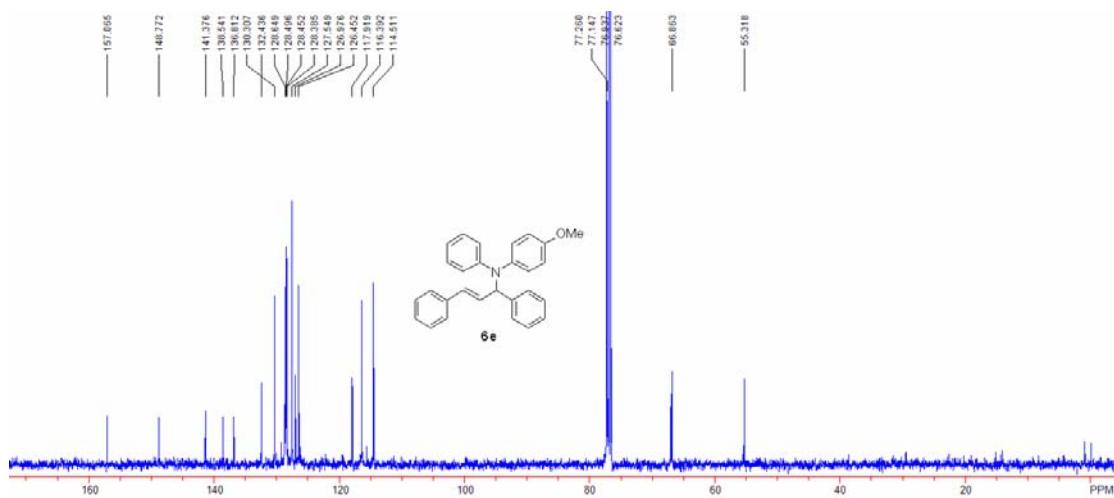


6d HNMR 400 MHz, CNMR 100 MHz

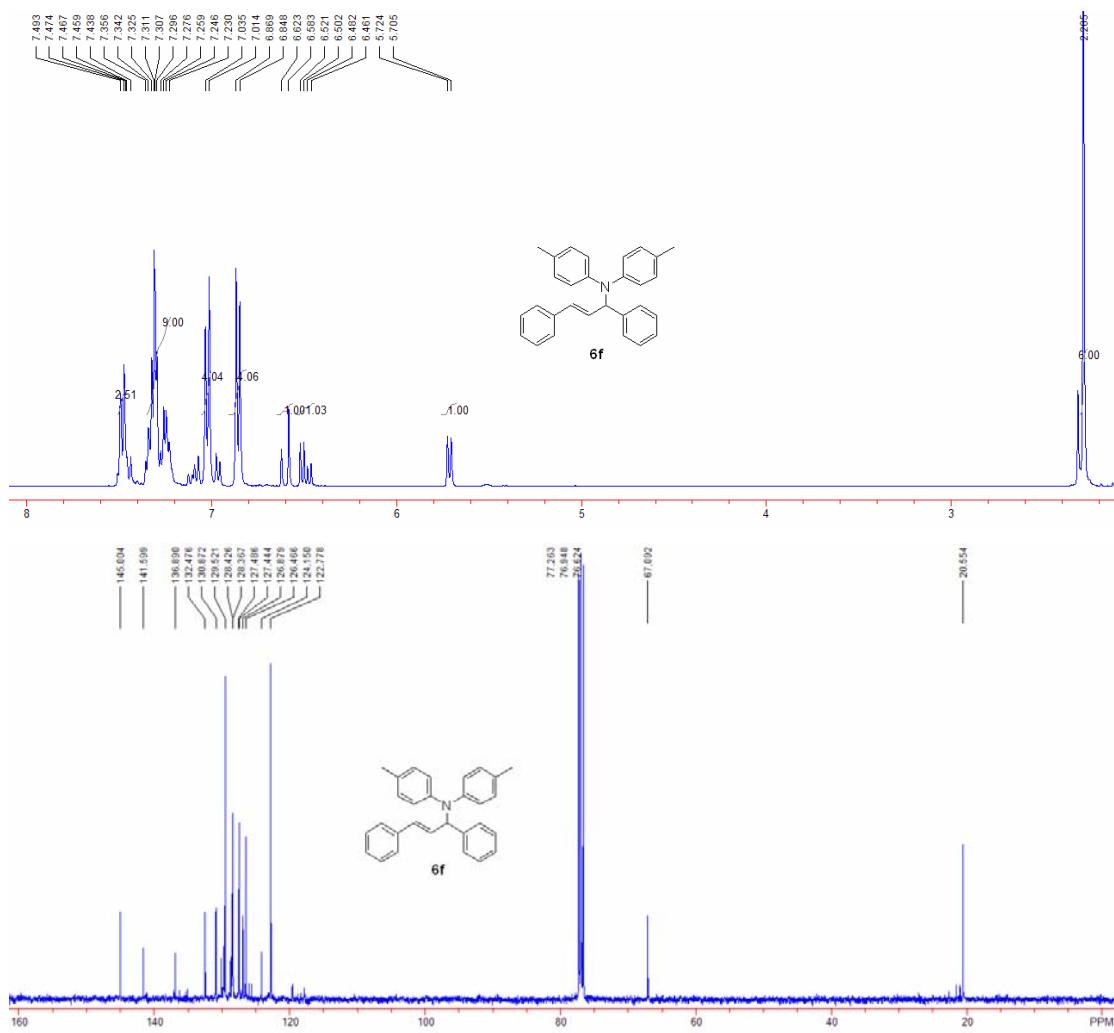


6e HNMR 400 MHz, CNMR 100 MHz

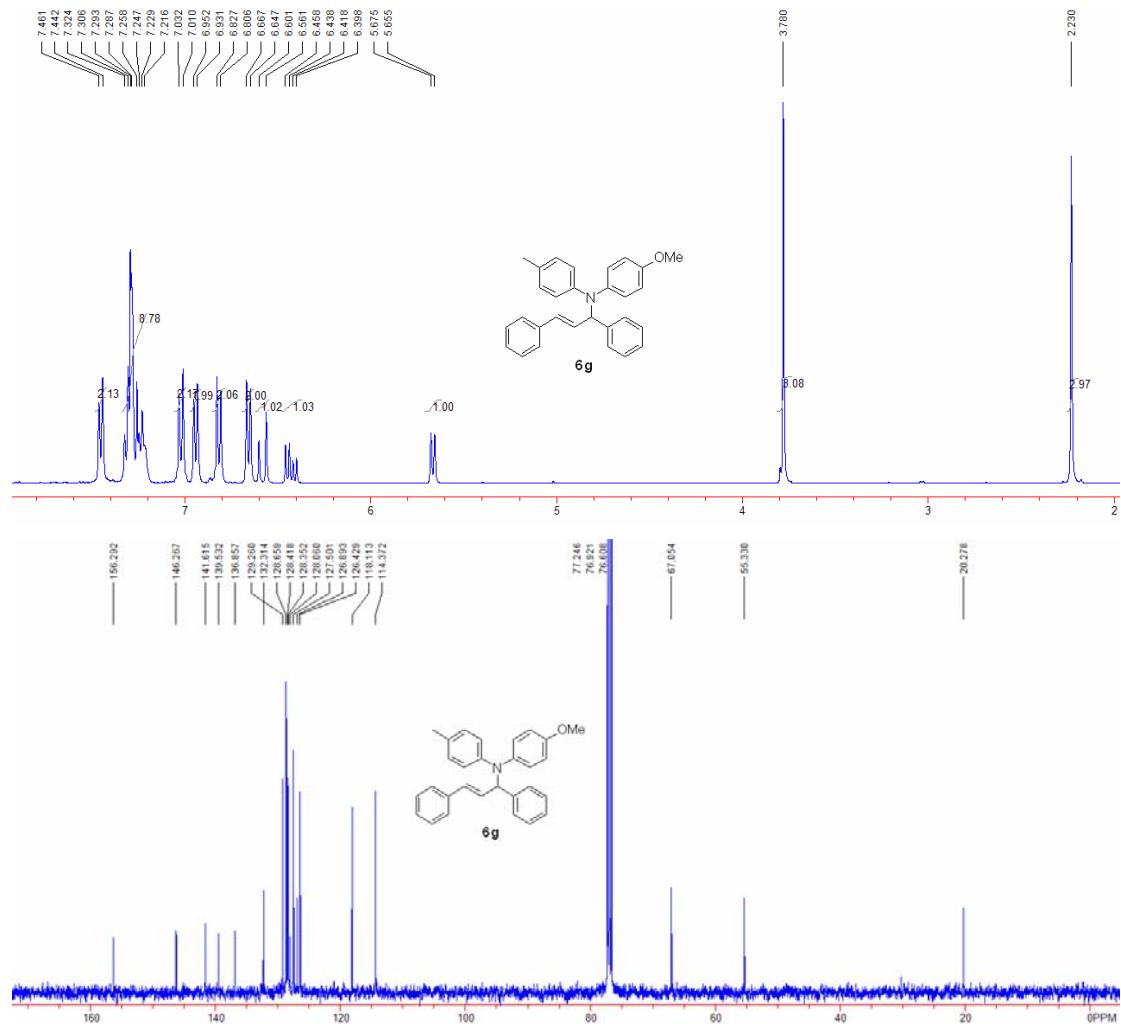




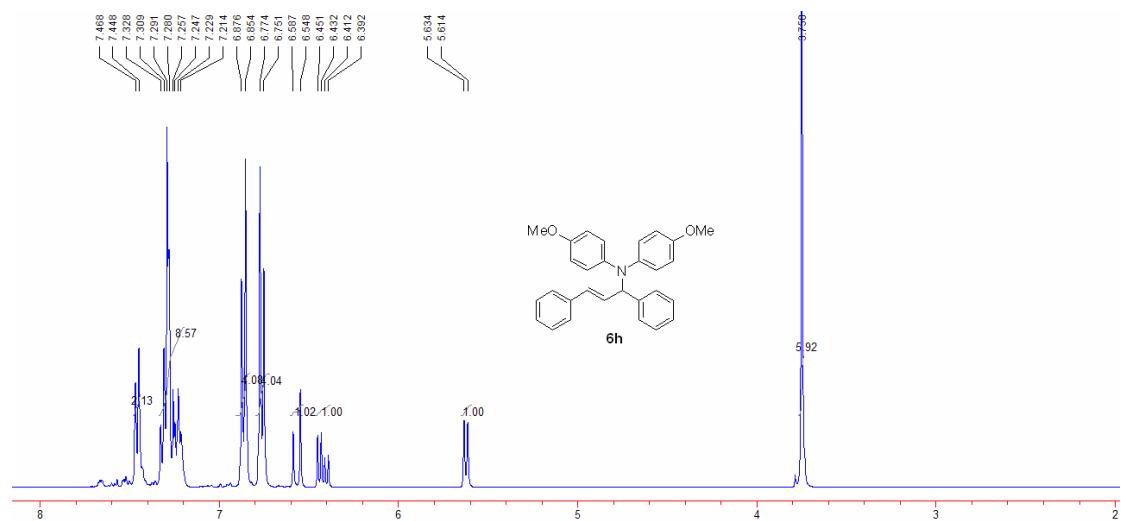
6f HNMR 400 MHz, CNMR 100 MHz

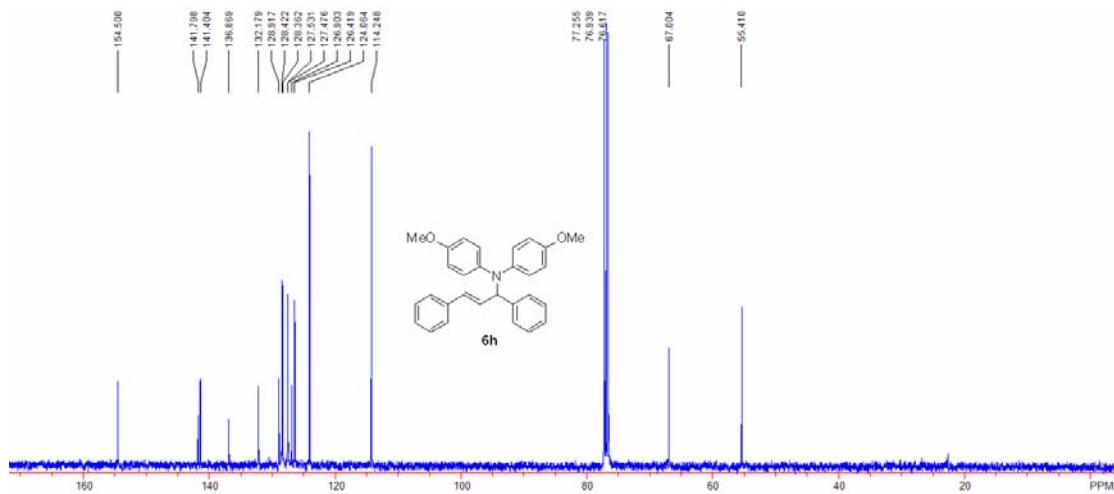


6g HNMR 400 MHz, CNMR 100 MHz

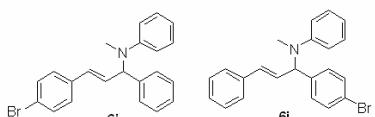
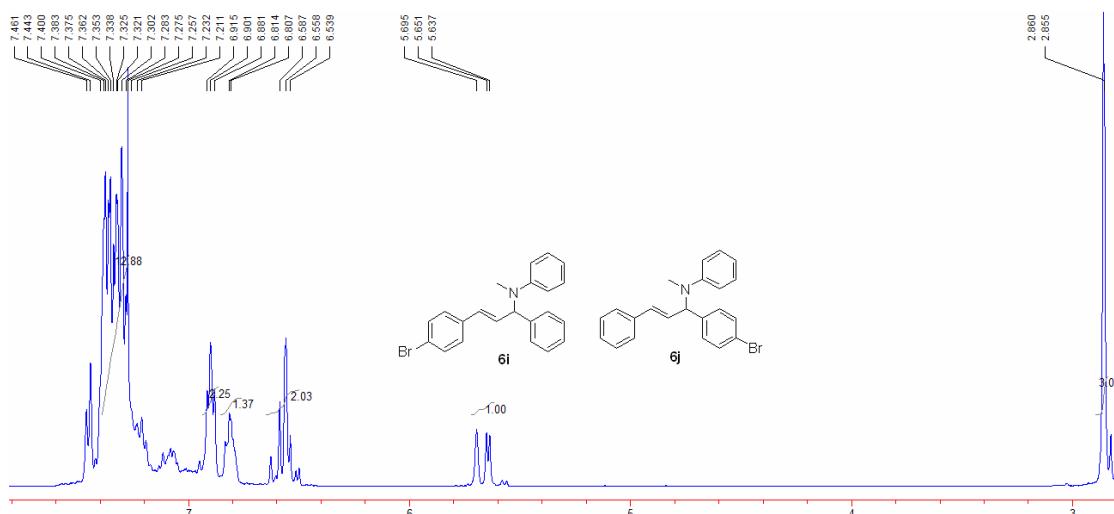


6h HNMR 400 MHz, CNMR 100 MHz

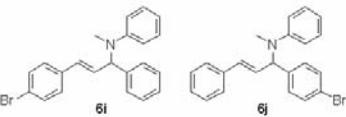




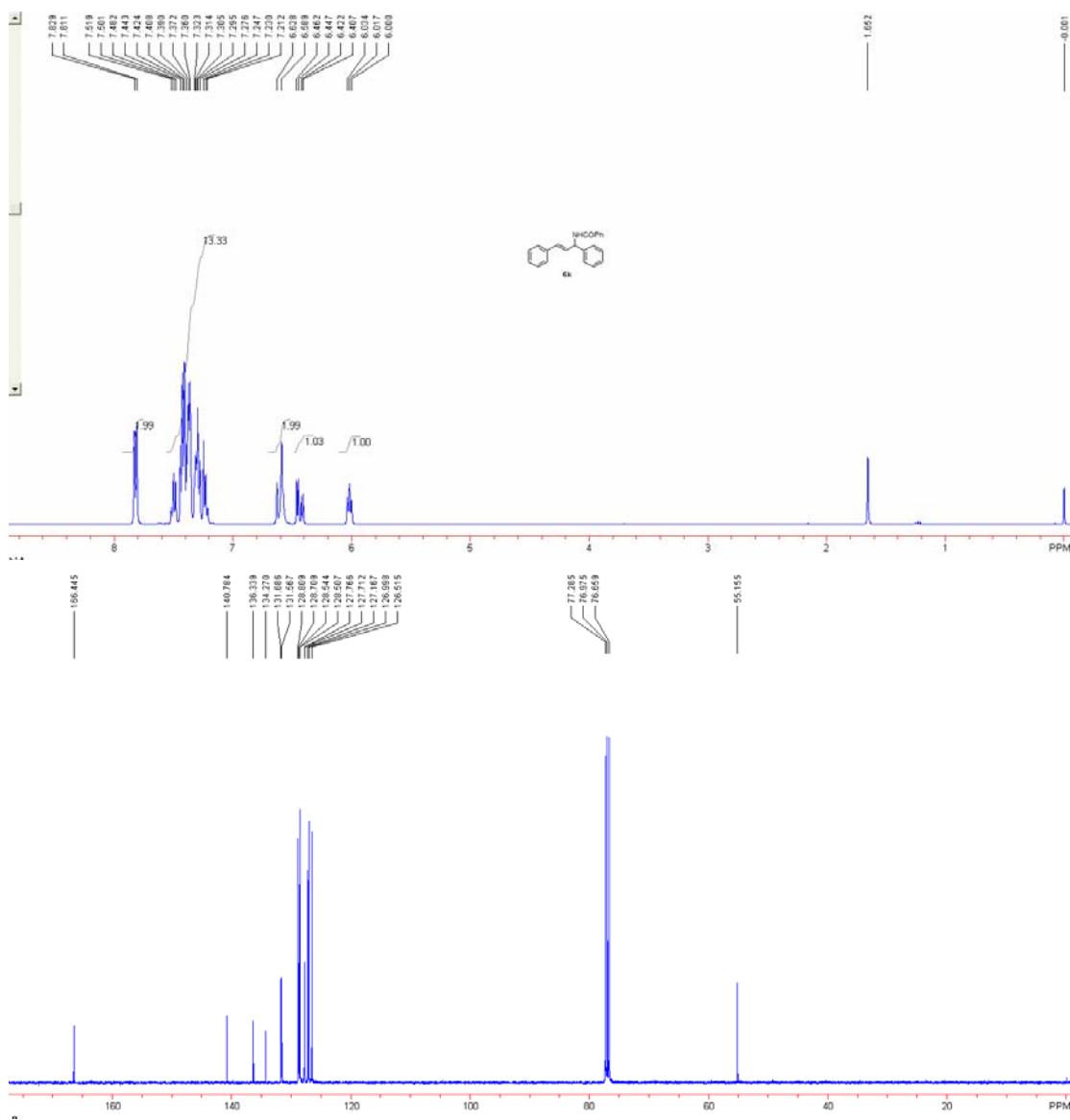
6i,6j HNMR 400 MHz, CNMR 100 MHz



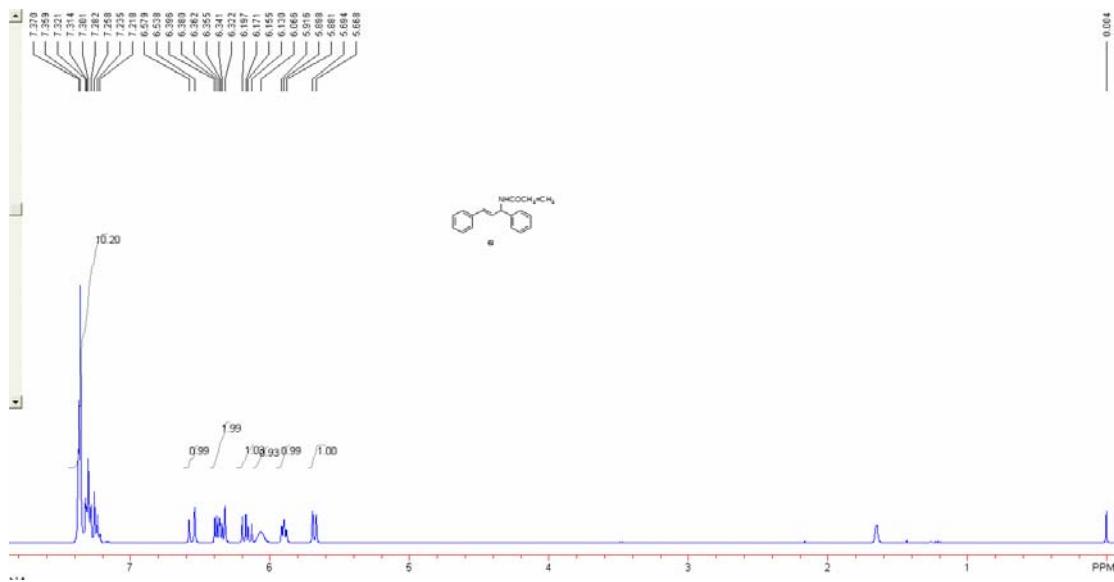
The figure displays the ^1H NMR spectrum of compound **6j**. The x-axis represents the chemical shift in PPM, ranging from 160 to 20. Key peaks are labeled with their corresponding chemical shifts: 149.94, 149.68, 140.74, 130.18, 135.47, 131.98, 137.95, 129.14, 129.15, 128.65, 128.42, 128.38, 128.35, 128.32, 128.34, 127.92, 127.63, 127.58, 127.47, 127.46, 127.45, 127.44, 127.43, 127.42, 127.41, 127.40, 126.98, 126.97, 126.96, 126.95, 117.29, 117.28, 117.04, 117.03, 113.37, and 113.26. The spectrum shows two main chemical structures: **6i**, which has a 4-bromo-phenyl group, and **6j**, which has a 4-bromo-phenyl group at the para position of the phenyl ring attached to the nitrogen atom.

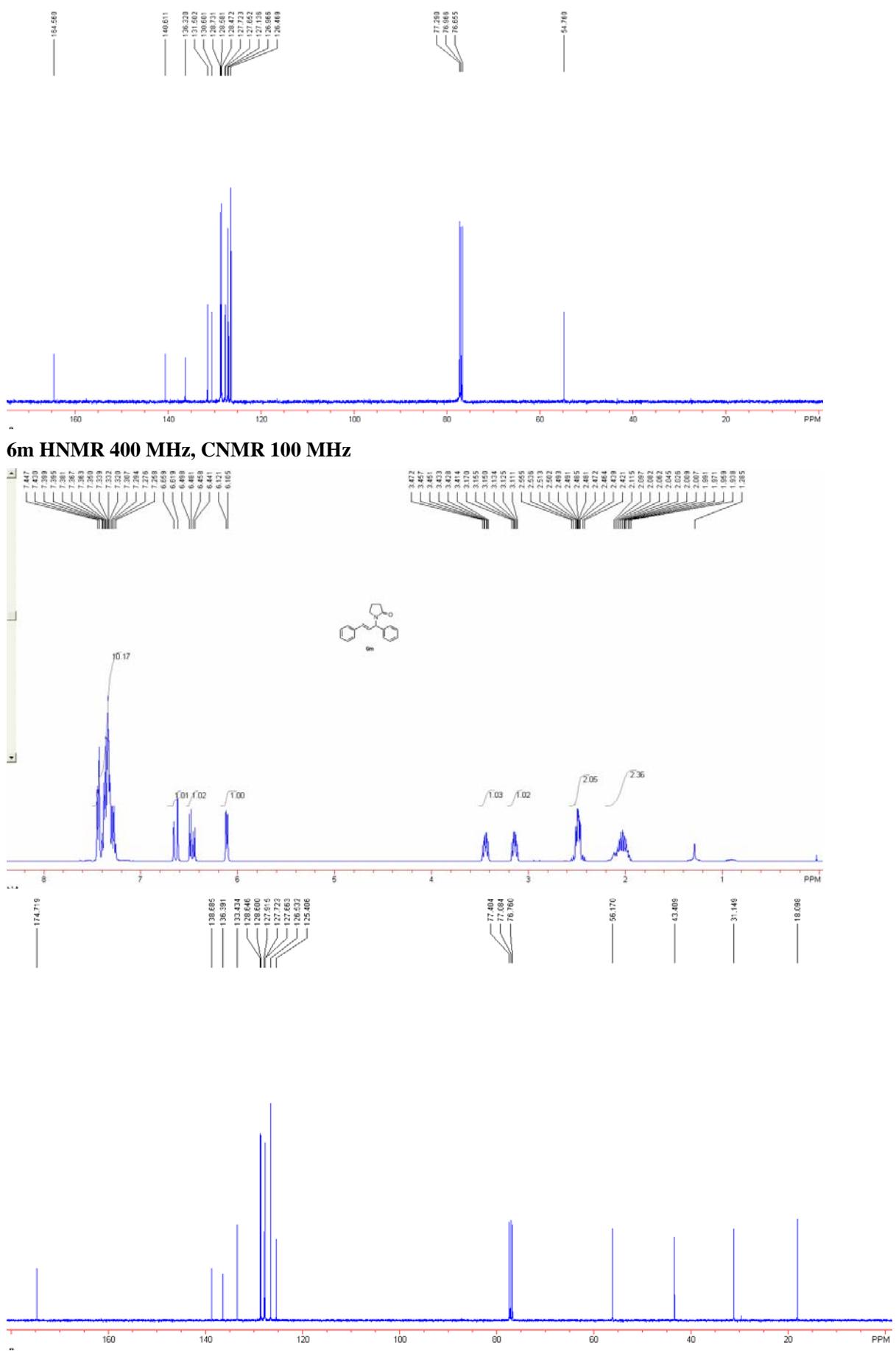


6k HNMR 400 MHz, CNMR 100 MHz



6l HNMR 400 MHz, CNMR 100 MHz





6n HNMR 400 MHz, CNMR 100 MHz

