Supporting Information for

Synthesis of medium sized aryl-fused nitrogen heterocycles *via* sequential aryne aza-Claisen rearrangement/Ring-Closing Metathesis

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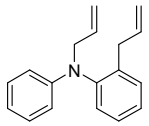
Contents:

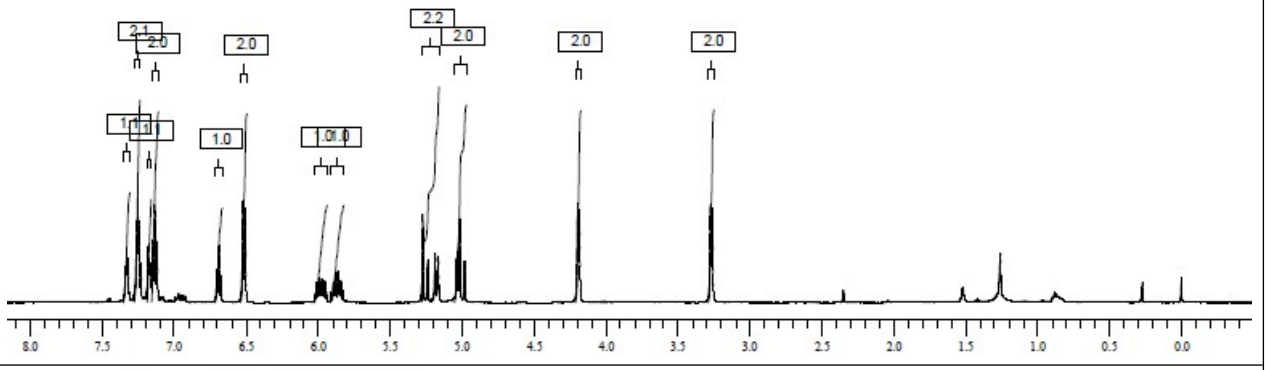
Electronic Supplementary Material (ESI) for Chemical Communications

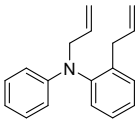
1. Copies of ^{1}H and ^{13}C NMR spectra (3a-3l, 5a-5g and **6a-6g)**.

N,2-Diallyl-*N*-phenylaniline: **3a**

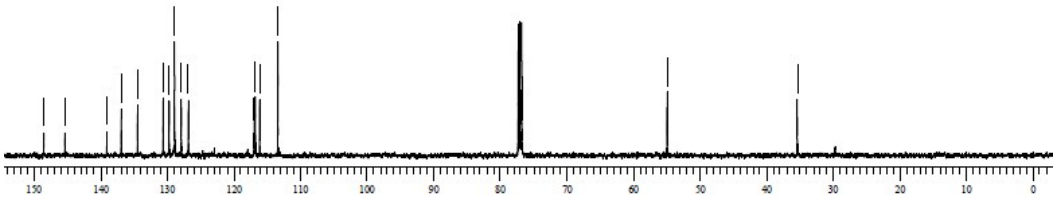


^{1}HNMR, $CDCl_3$, 500 MHz

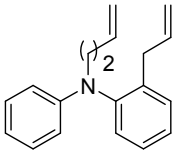




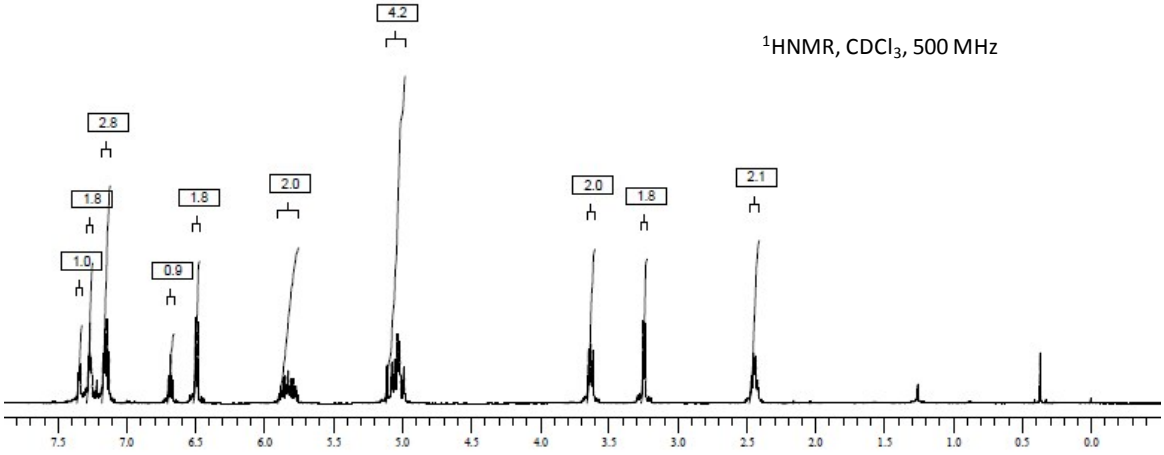
^{13}CNMR, $CDCl_3$, 125 MHz

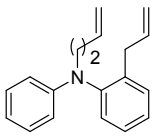


2-Allyl-*N*-(but-3-enyl)-*N*-phenylaniline: **3b**

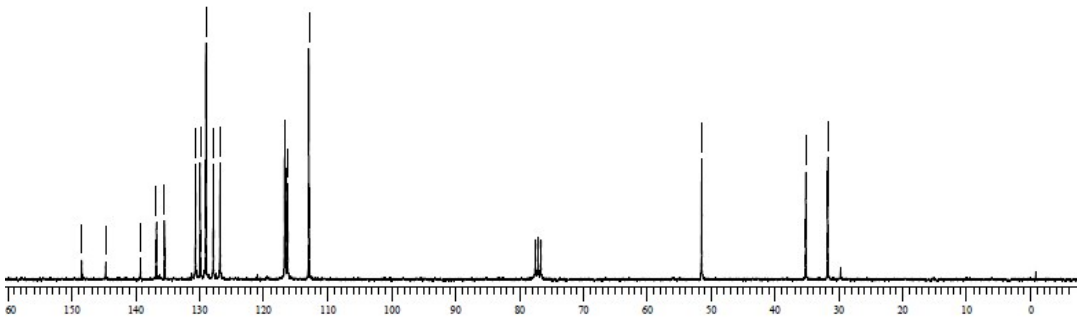


^{1}HNMR, $CDCl_3$, 500 MHz

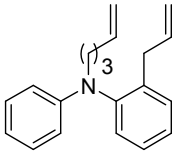




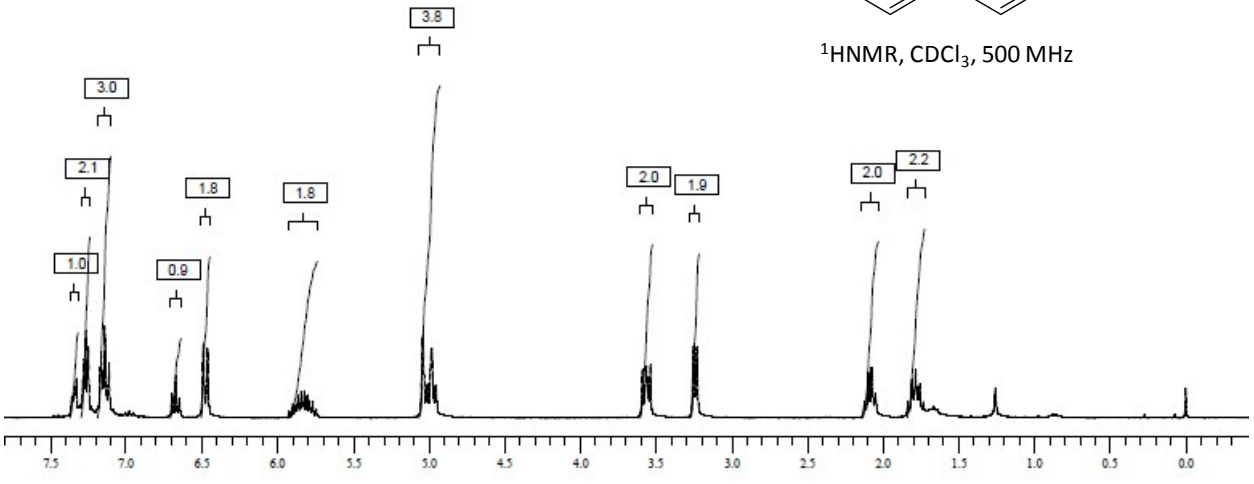
^{13}CNMR, $CDCl_3$, 75 MHz

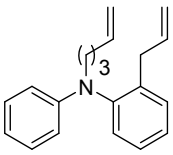


2-Allyl-*N*-(pent-4-enyl)-*N*-phenylaniline: **3c**

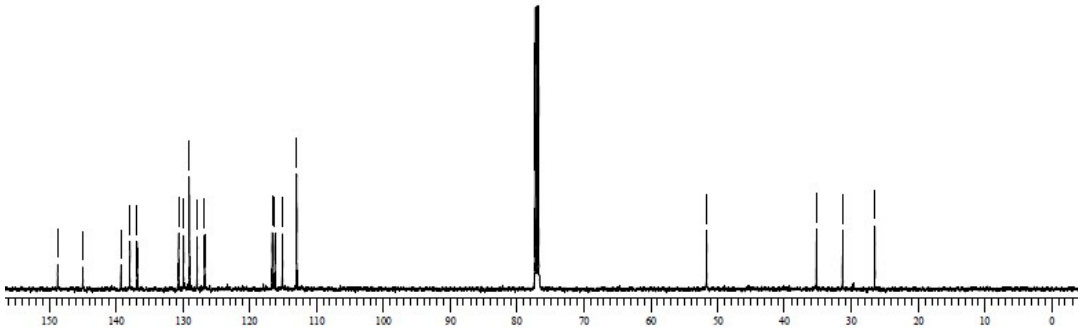


^{1}HNMR, $CDCl_3$, 500 MHz

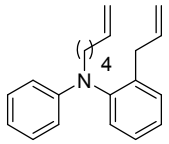




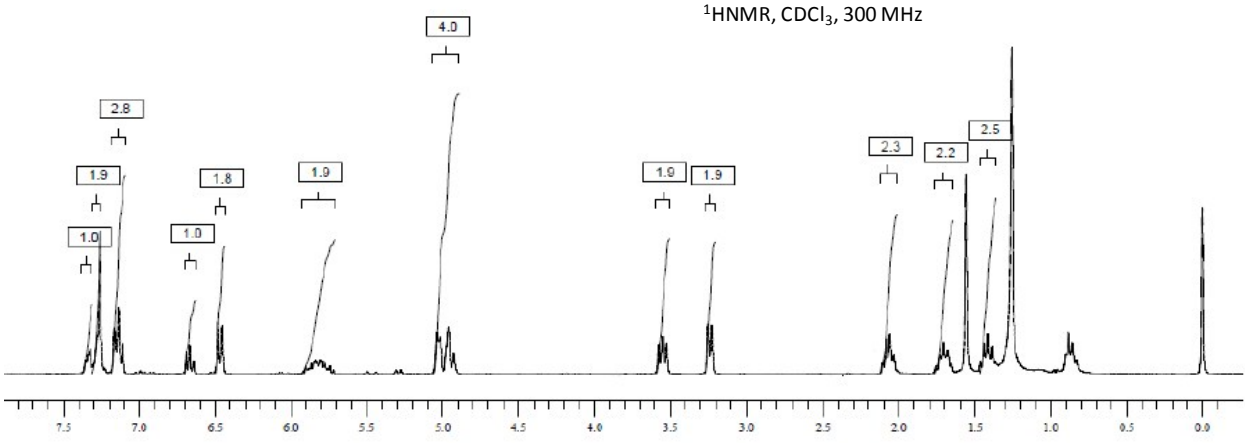
^{13}CNMR, $CDCl_3$, 75 MHz

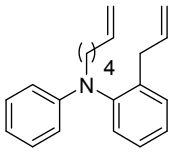


2-Allyl-*N*-(hex-5-enyl)-*N*-phenylbenzenamine: **3d**

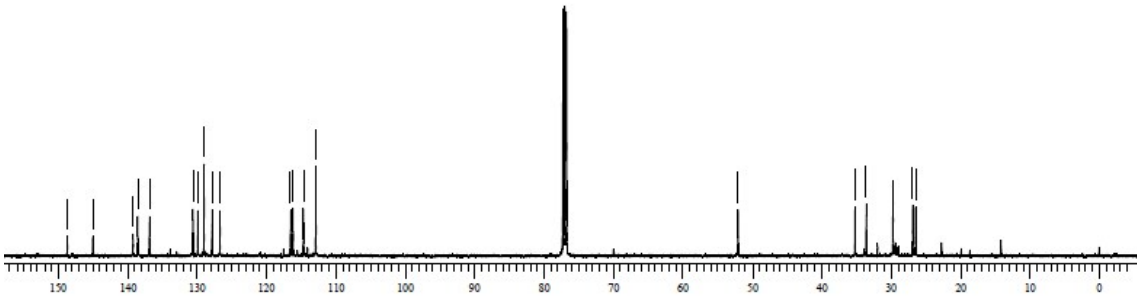


^{1}HNMR, $CDCl_3$, 300 MHz

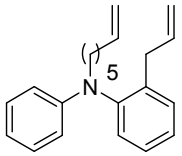




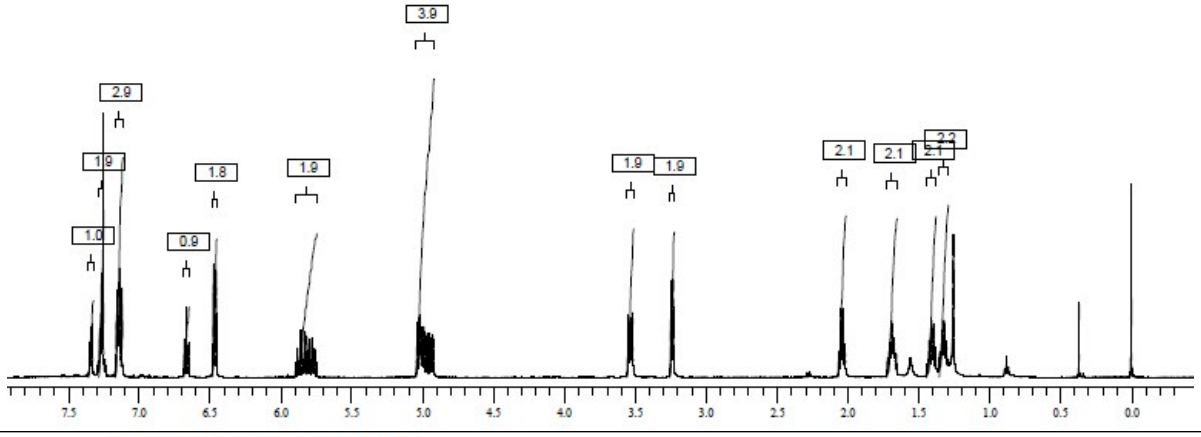
^{13}CNMR, $CDCl_3$, 125 MHz

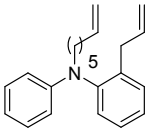


2-Allyl-*N*-(hept-6-enyl)-*N*-phenylbenzenamine: **3e**

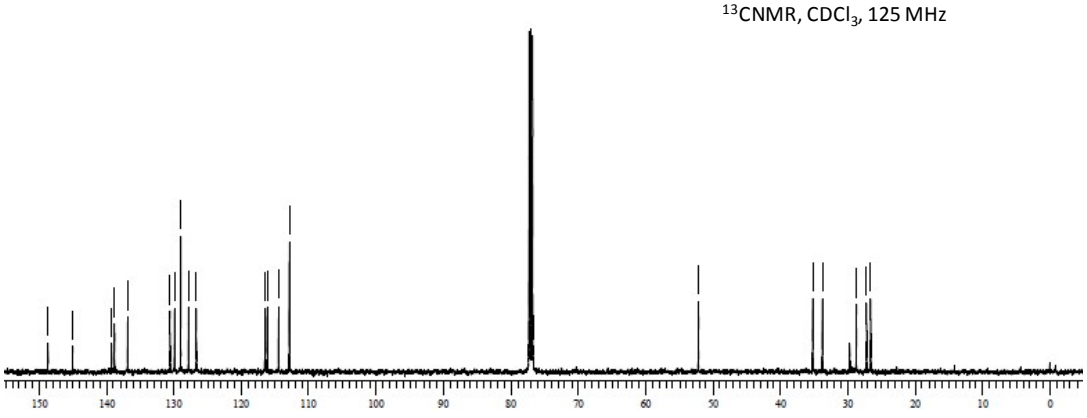


^{1}HNMR, $CDCl_3$, 500 MHz

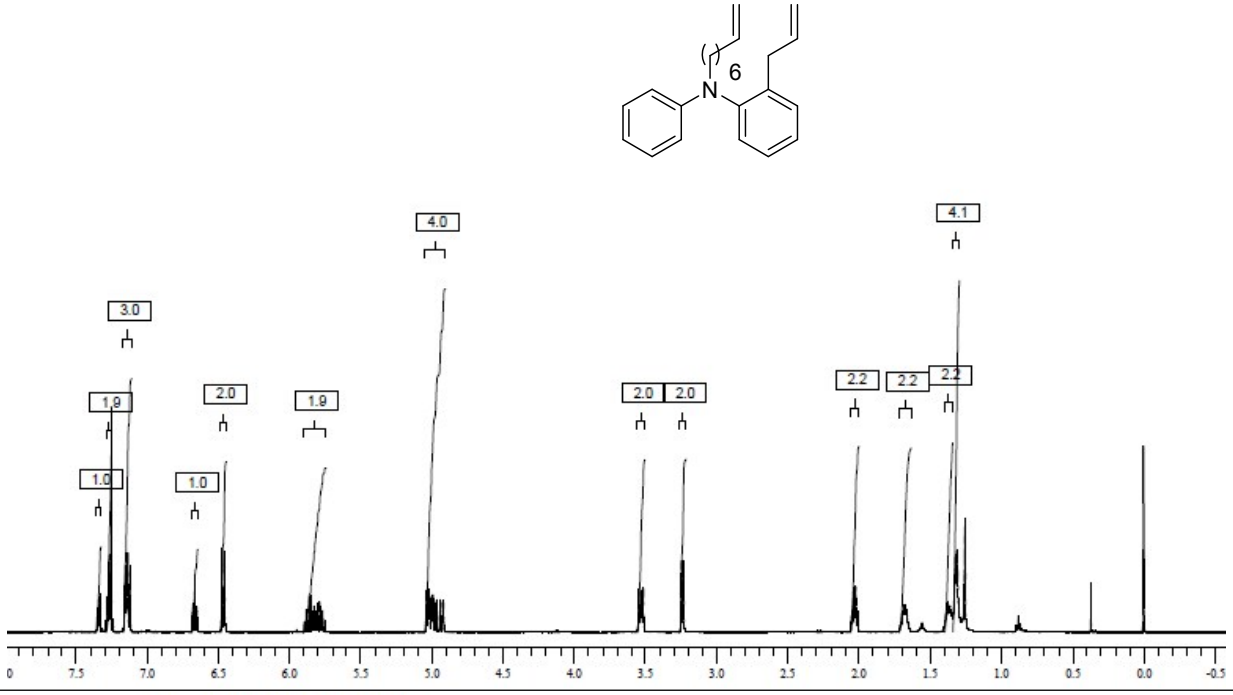


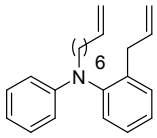


^{13}CNMR, $CDCl_3$, 125 MHz

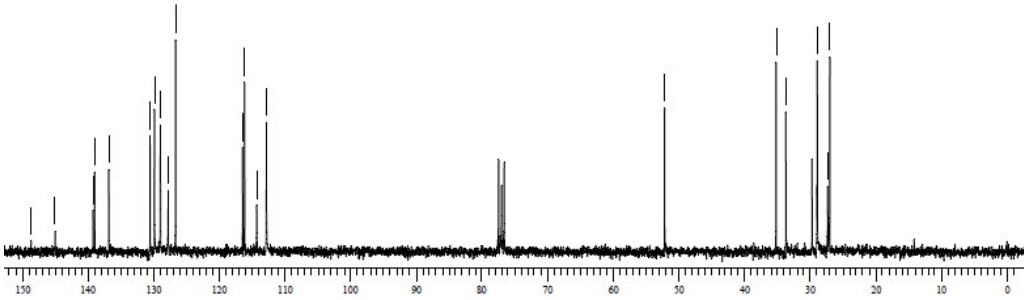


2-Allyl-*N*-(oct-7-enyl)-*N*-phenylbenzenamine: **3f**

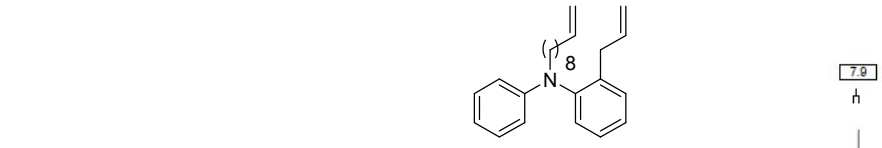




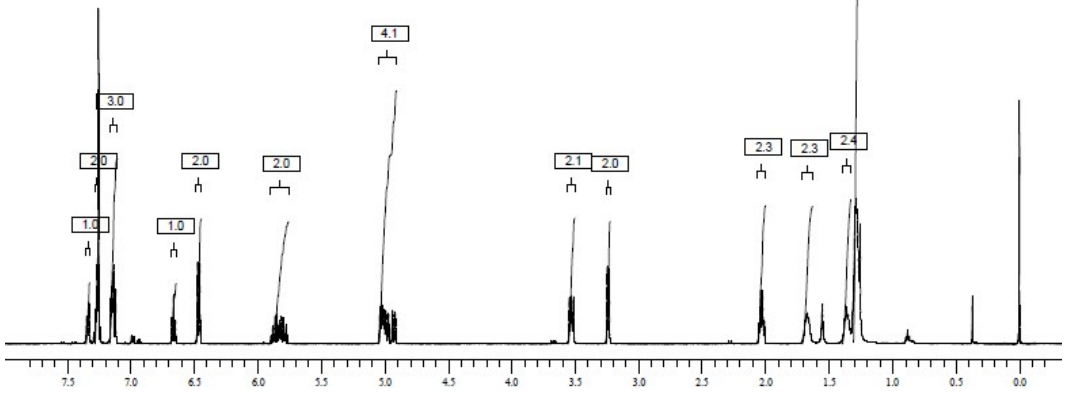
^{13}CNMR, $CDCl_3$, 75 MHz

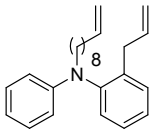


2-Allyl-*N*-(dec-9-enyl)-*N*-phenylbenzenamine: **3g**

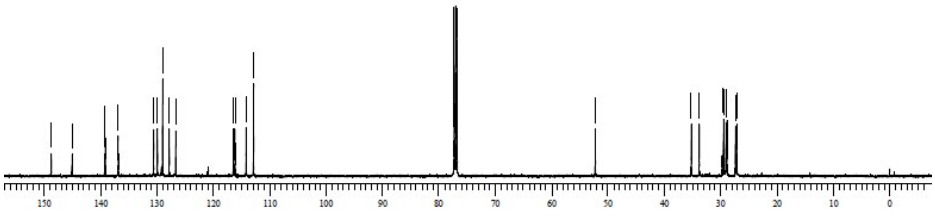


^{1}HNMR, $CDCl_3$, 500 MHz

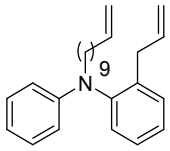




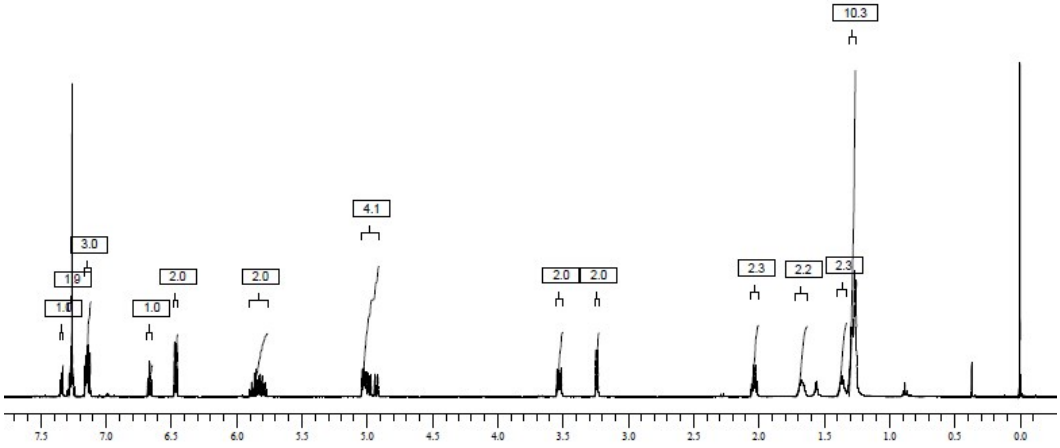
^{13}CNMR, $CDCl_3$, 125 MHz

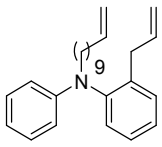


2-Allyl-*N*-phenyl-*N*-(undec-10-enyl)benzenamine: **3h**

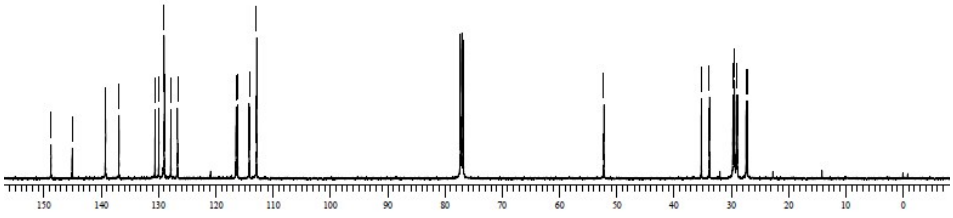


^{1}HNMR, $CDCl_3$, 500 MHz

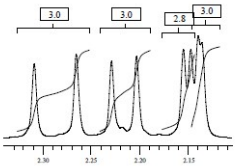


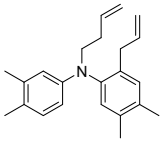


^{13}CNMR, $CDCl_3$, 125 MHz

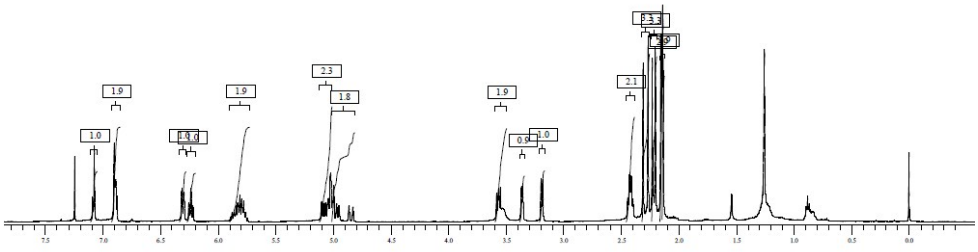


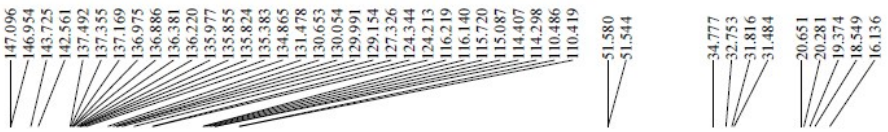
2-Allyl-*N*-(but-3-enyl)-*N*-(3,4-dimethylphenyl)-4,5-dimethylbenzenamine: **3i**

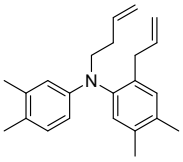




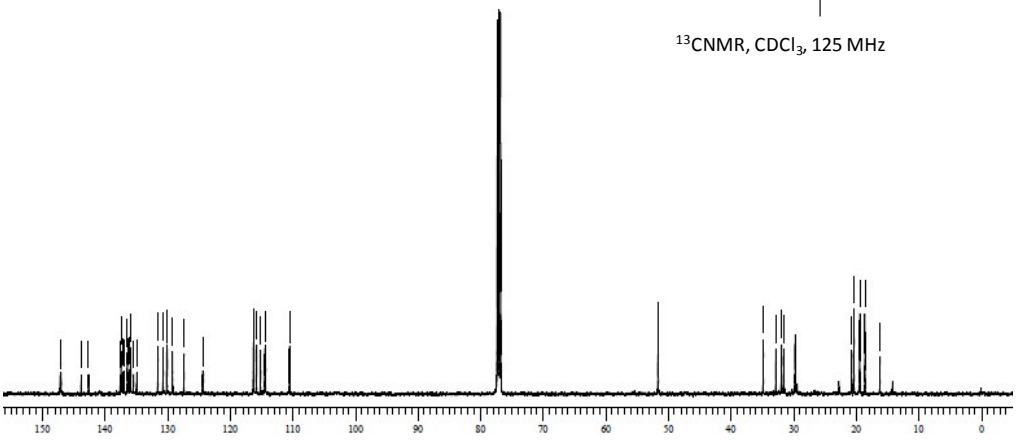
^{1}HNMR, $CDCl_3$, 500 MHz



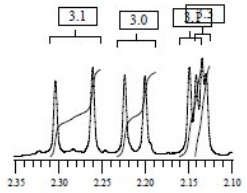


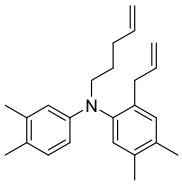


^{13}CNMR, $CDCl_3$, 125 MHz

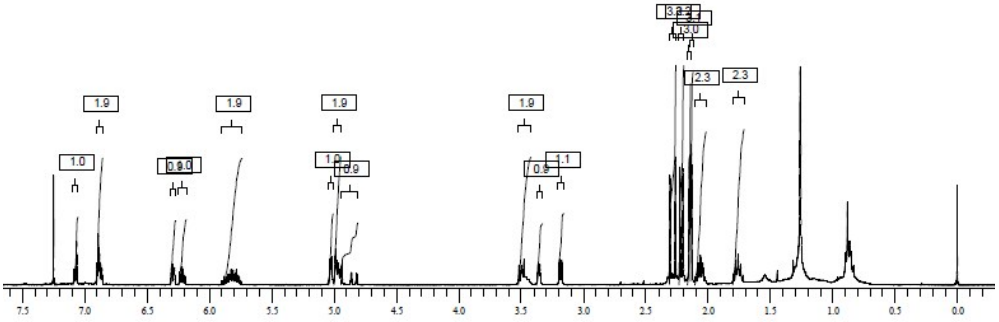


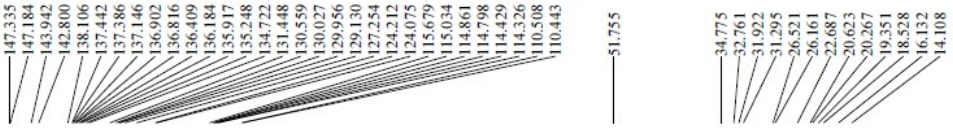
2-Allyl-*N*-(3,4-dimethylphenyl)-4,5-dimethyl-*N*-(pent-4-enyl)benzenamine: **3j**

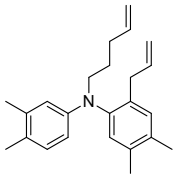




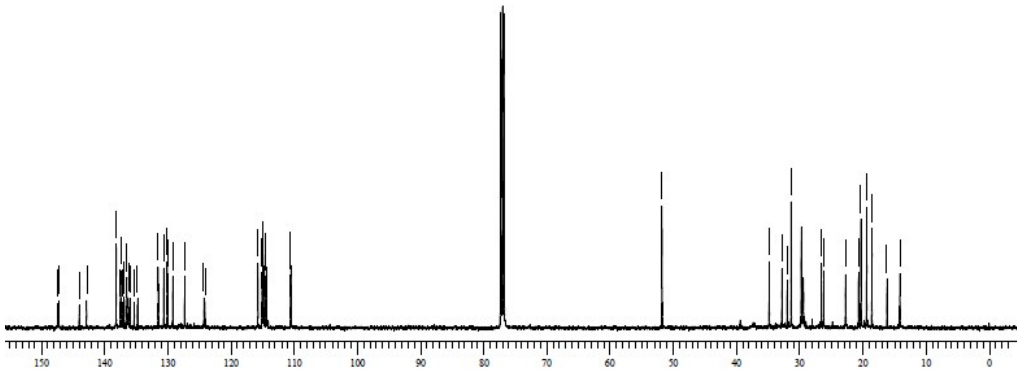
^{1}HNMR, $CDCl_3$, 400 MHz



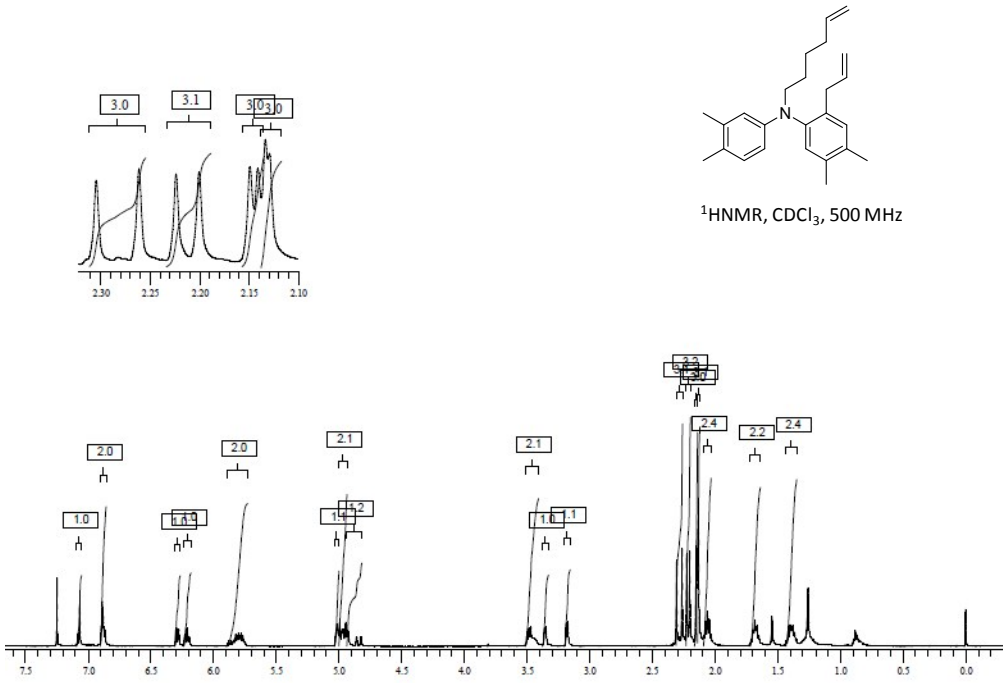




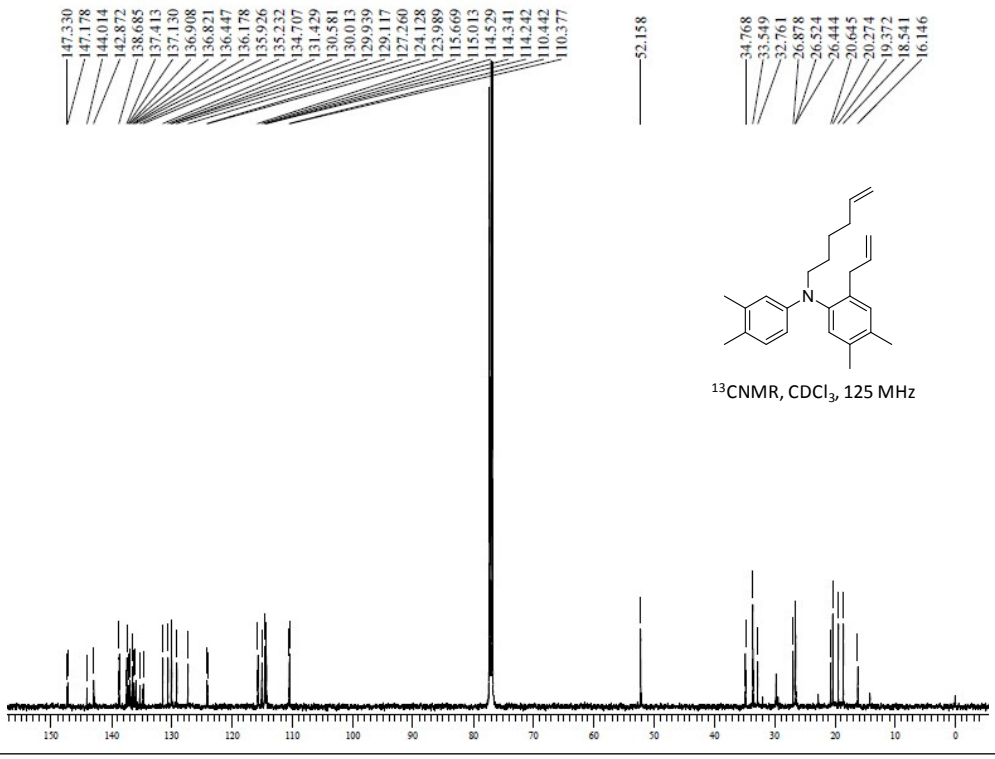
^{13}CNMR, $CDCl_3$, 125 MHz



2-Allyl-*N*-(3,4-dimethylphenyl)-*N*-(hex-5-enyl)-4,5-dimethylbenzenamine: **3k**

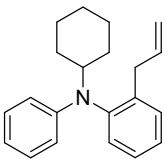


^{1}HNMR, $CDCl_3$, 500 MHz

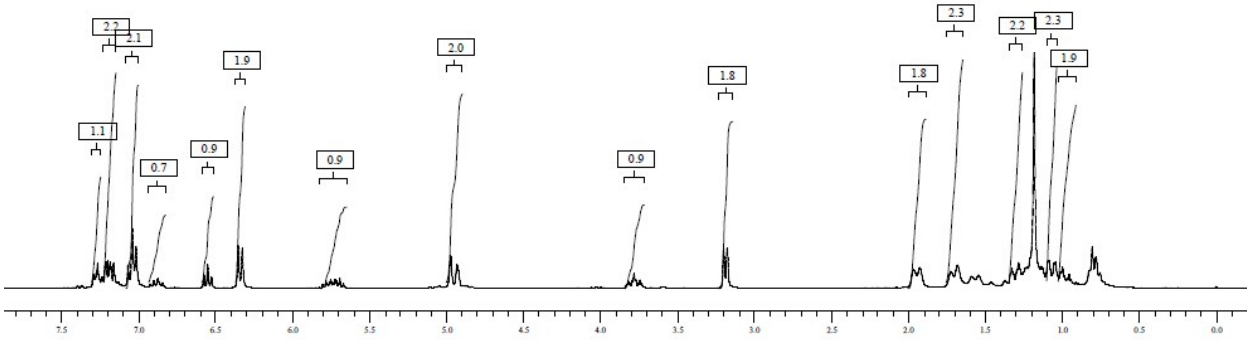


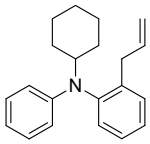
^{13}CNMR, $CDCl_3$, 125 MHz

2-Allyl-*N*-cyclohexyl-*N*-phenylaniline: **3l**



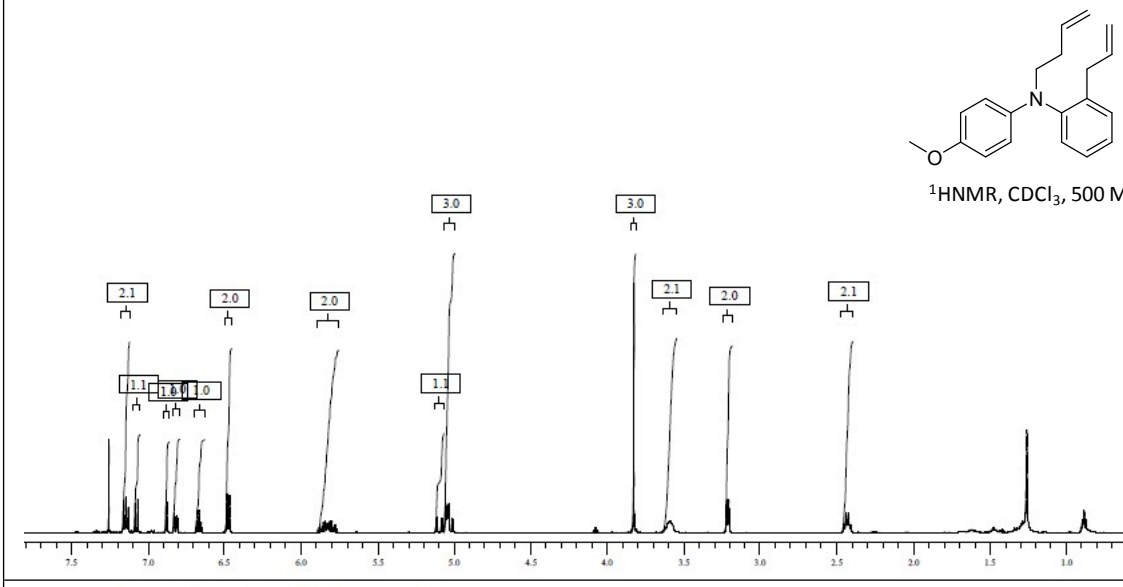
^{1}HNMR, $CDCl_3$, 300 MHz



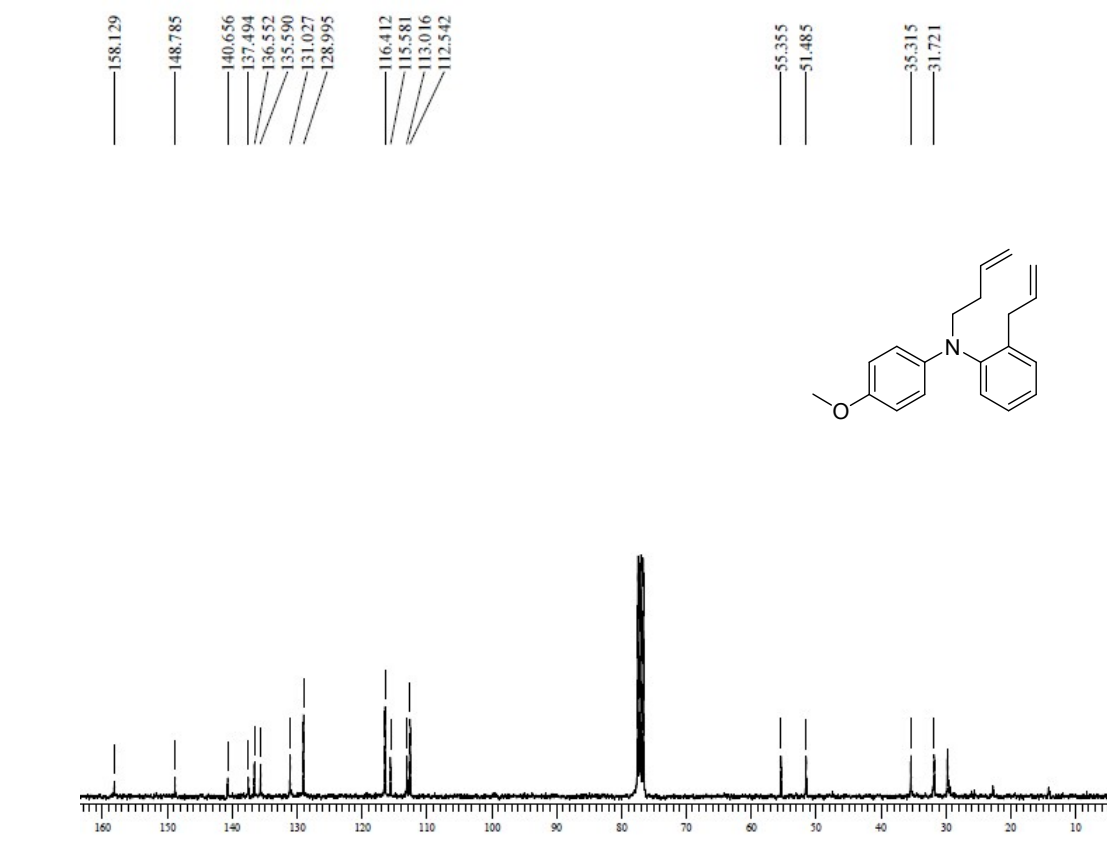


^{13}CNMR, $CDCl_3$, 75 MHz

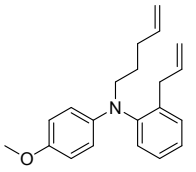
2-Allyl-*N*-(but-3-enyl)-*N*-(4-methoxyphenyl)aniline: **5a**



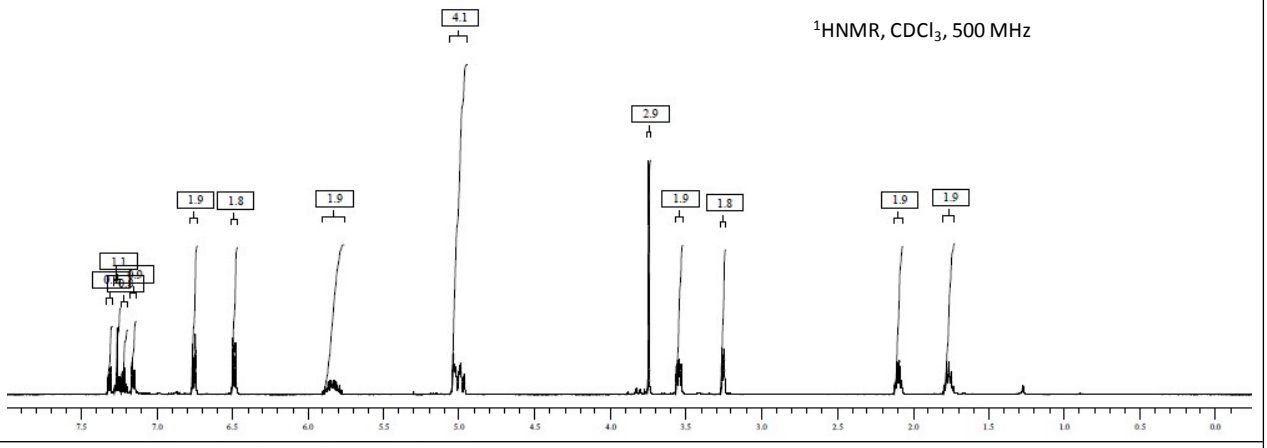
^{1}HNMR, $CDCl_3$, 500 MHz

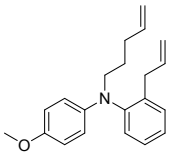


2-Allyl-*N*-(4-methoxyphenyl)-*N*-(pent-4-en-1-yl)aniline: **5b**

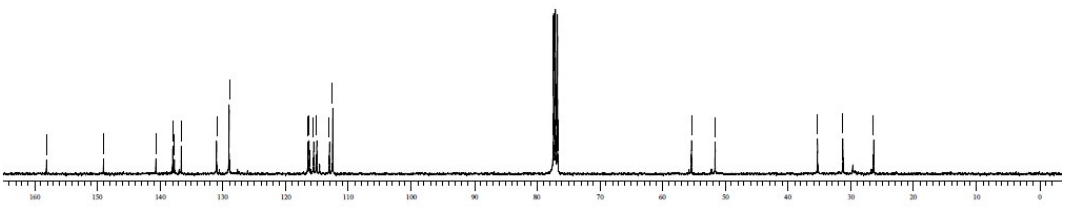


^{1}HNMR, $CDCl_3$, 500 MHz

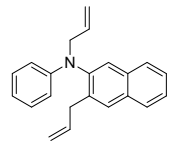




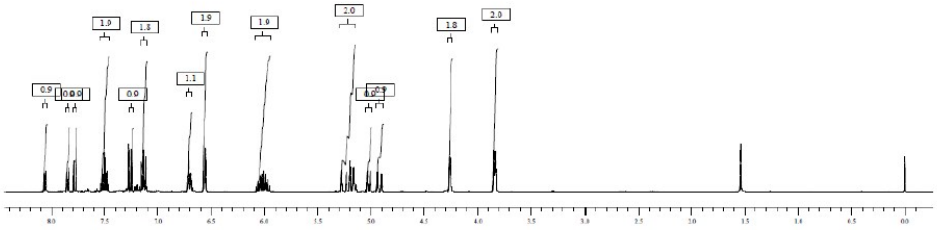
^{13}CNMR, $CDCl_3$, 100 MHz

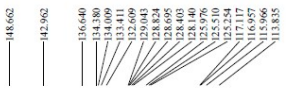


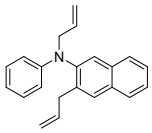
N,3-Diallyl-*N*-phenylnaphthalen-2-amine: **5c**



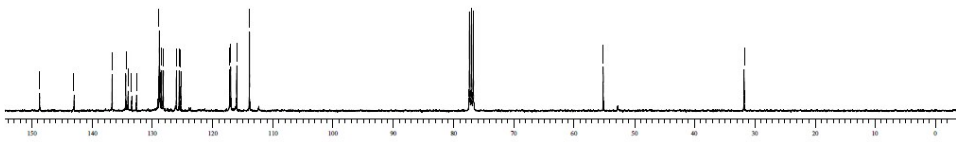
^{1}HNMR, $CDCl_3$, 400 MHz



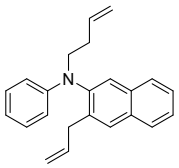




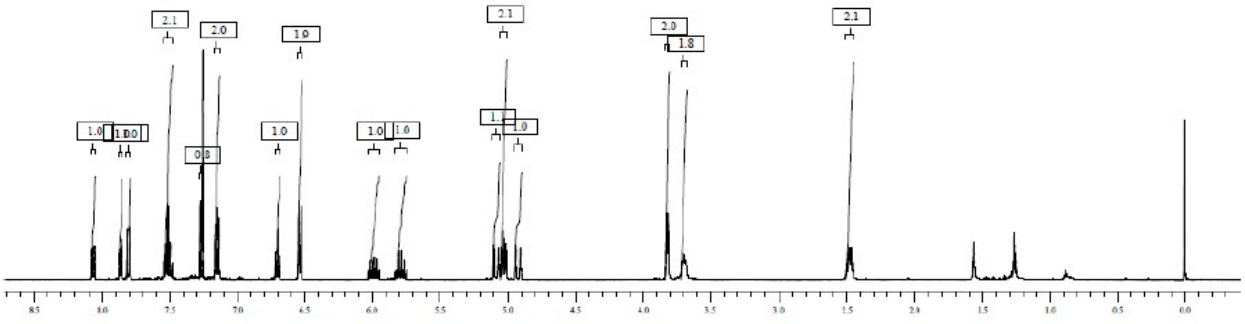
^{13}CNMR, $CDCl_3$, 100 MHz

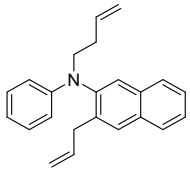


3-Allyl-*N*-(but-3-enyl)-*N*-phenylnaphthalen-2-amine: **5d**

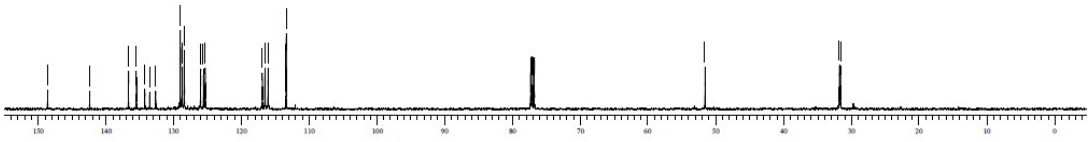


^{1}HNMR, $CDCl_3$, 500 MHz

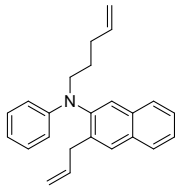




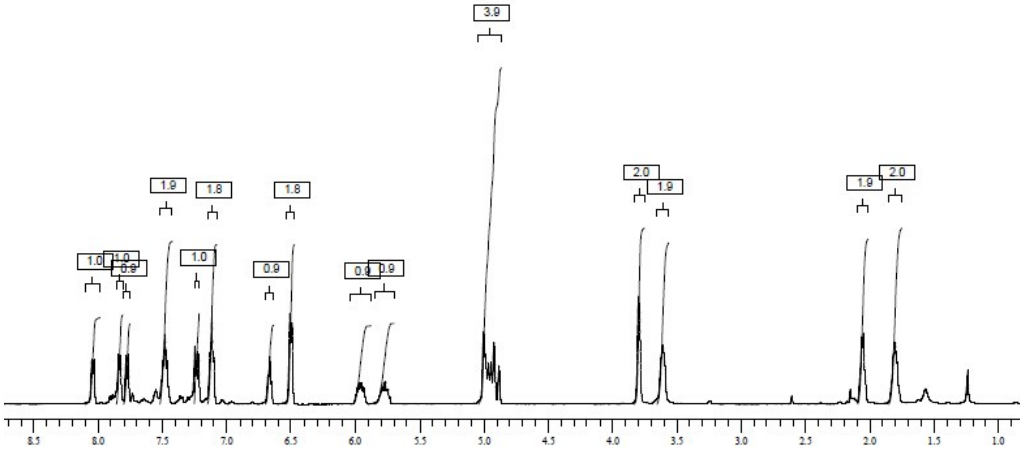
^{13}CNMR, $CDCl_3$, 125 MHz

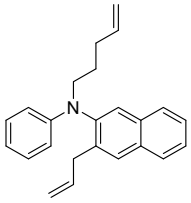


3-Allyl-*N*-(pent-4-enyl)-*N*-phenylnaphthalen-2-amine: **5e**

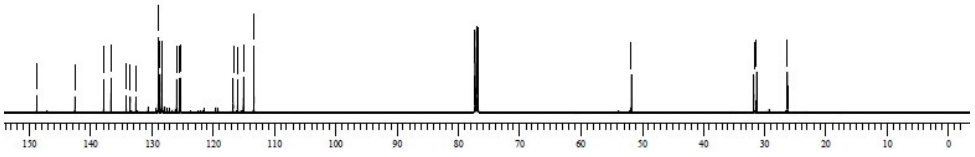


^{1}HNMR, $CDCl_3$, 500 MHz

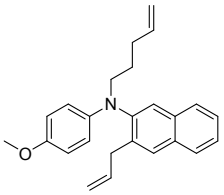




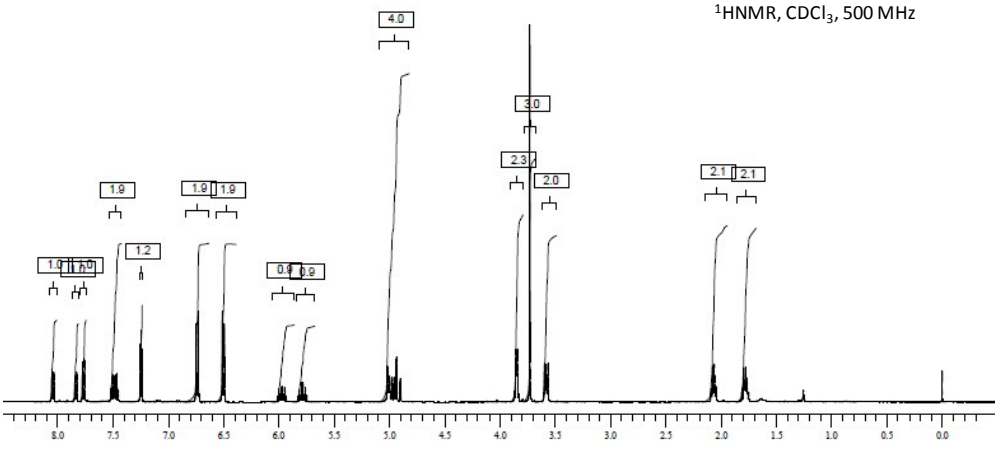
^{13}CNMR, $CDCl_3$, 125 MHz

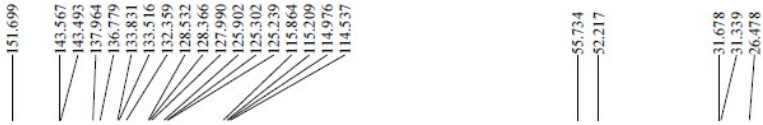


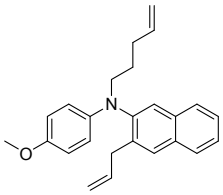
3-Allyl-*N*-(4-methoxyphenyl)-*N*-(pent-4-enyl)naphthalen-2-amine: **5f**



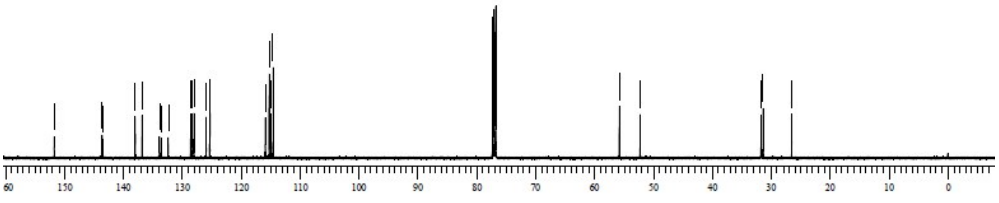
^{1}HNMR, $CDCl_3$, 500 MHz



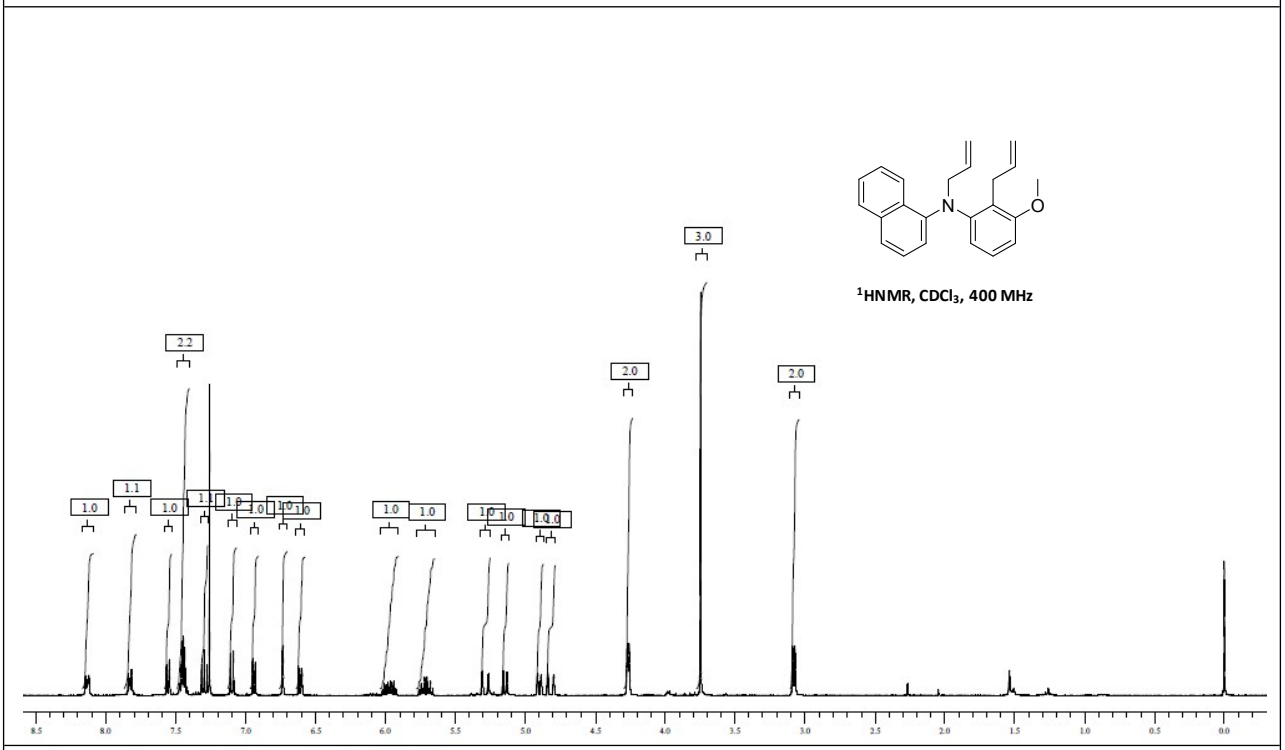




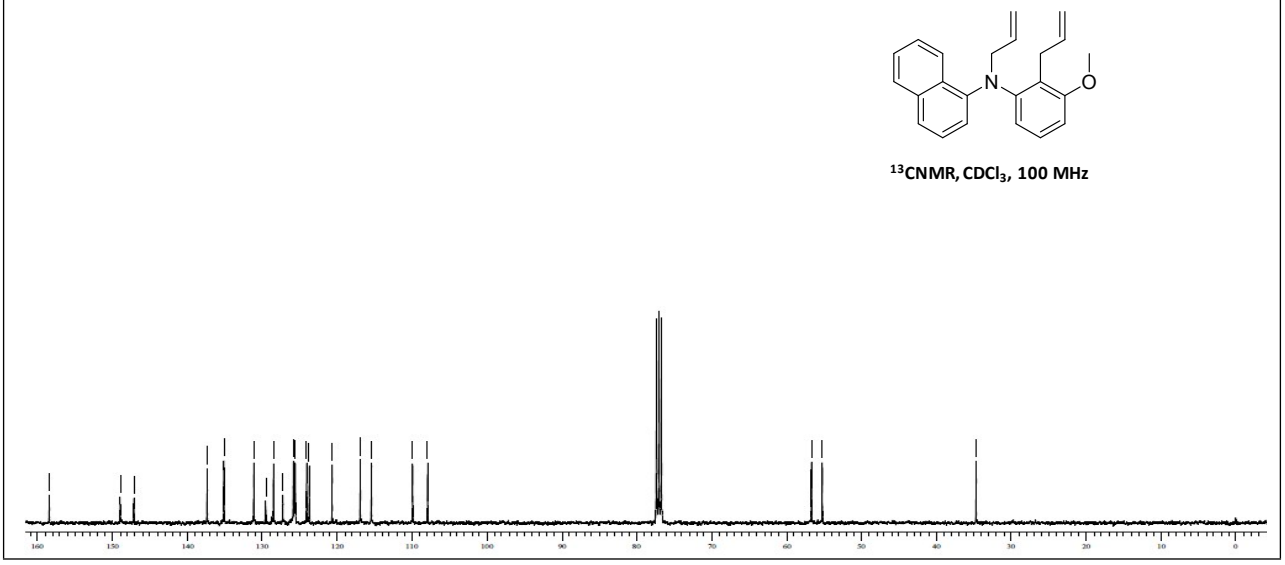
^{13}CNMR, $CDCl_3$, 125 MHz



N-Allyl-*N*-(2-allyl-3-methoxyphenyl)naphthalen-1-amine: **5g**

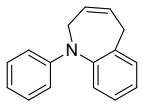


^{1}HNMR, $CDCl_3$, 400 MHz

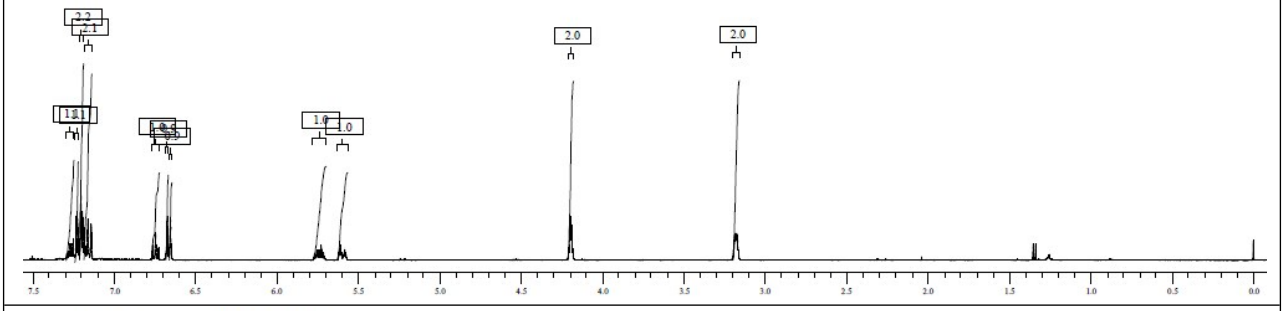


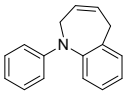
^{13}CNMR, $CDCl_3$, 100 MHz

1-Phenyl-2,5-dihydro-1*H*-benzo[*b*]azepine: **6a**

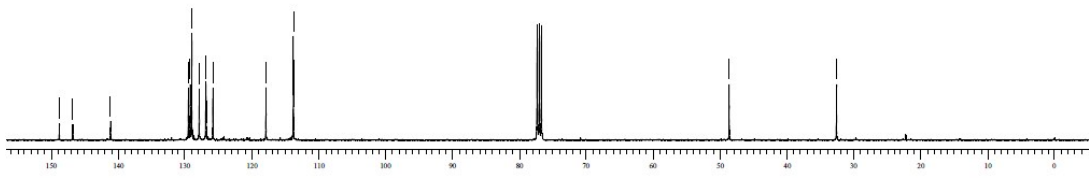


^{1}HNMR, $CDCl_3$, 400 MHz

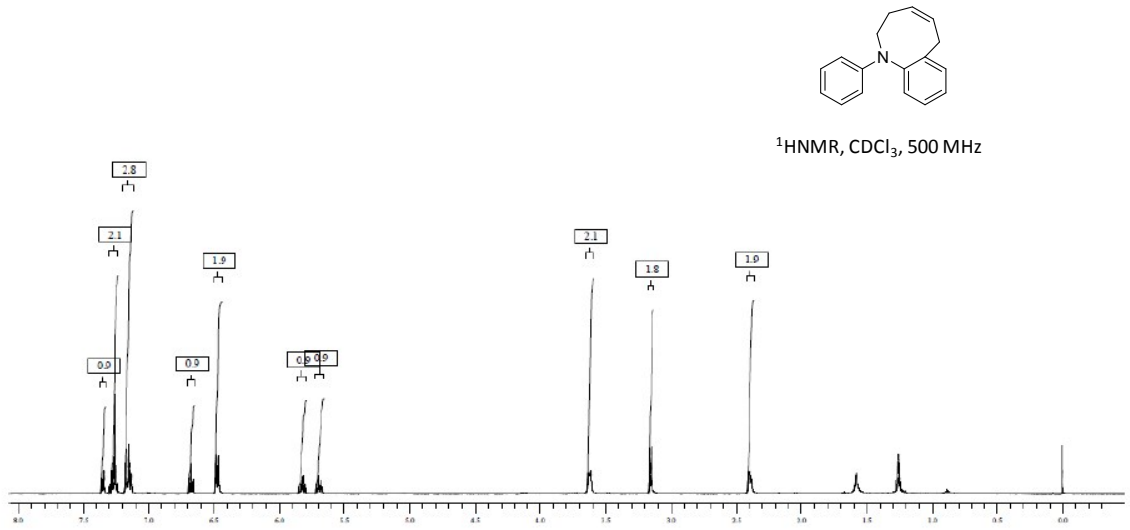




^{13}C NMR, $CDCl_3$, 100 MHz

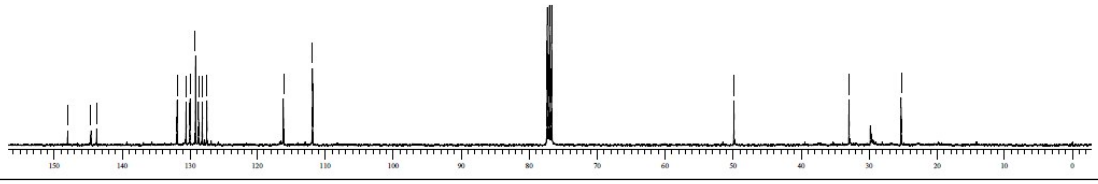


(*Z*)-1-Phenyl-1,2,3,6-tetrahydrobenzo[*b*]azocine: **6b**

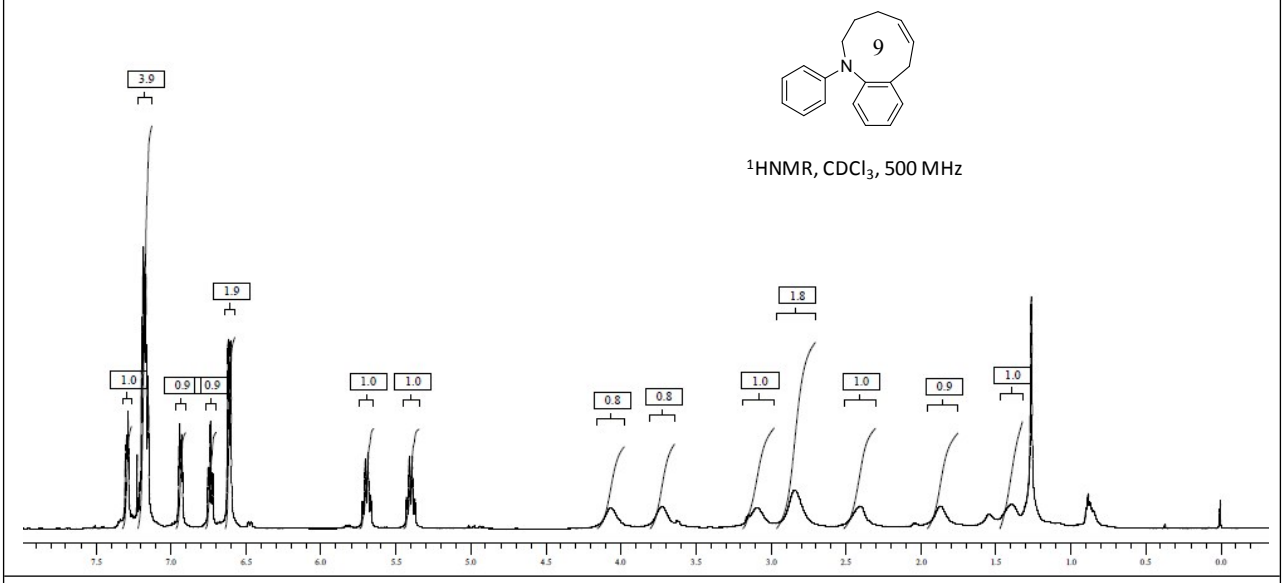


^{1}HNMR, $CDCl_3$, 500 MHz

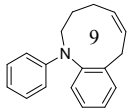
^{13}CNMR, $CDCl_3$, 100 MHz



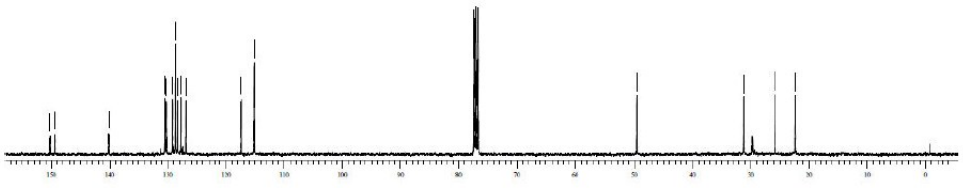
(*Z*)-1-Phenyl-2,3,4,7-tetrahydro-1*H*-benzo[*b*]azonine: **6c**



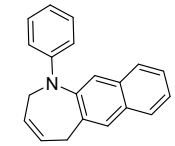
^{1}HNMR, $CDCl_3$, 500 MHz



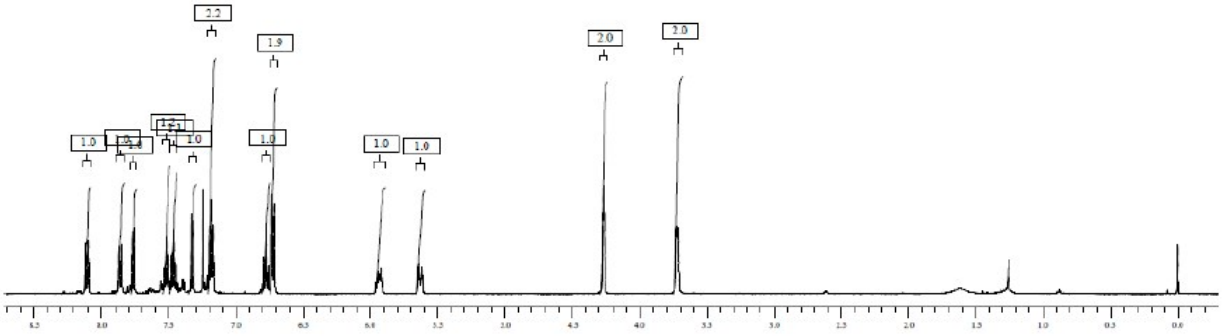
^{13}CNMR, $CDCl_3$, 100 MHz

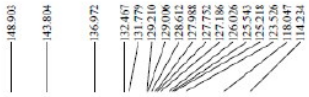


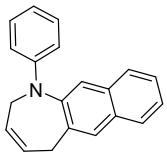
1-Phenyl-2,5-dihydro-1*H*-naphtho[2,3-*b*]azepine: **6d**



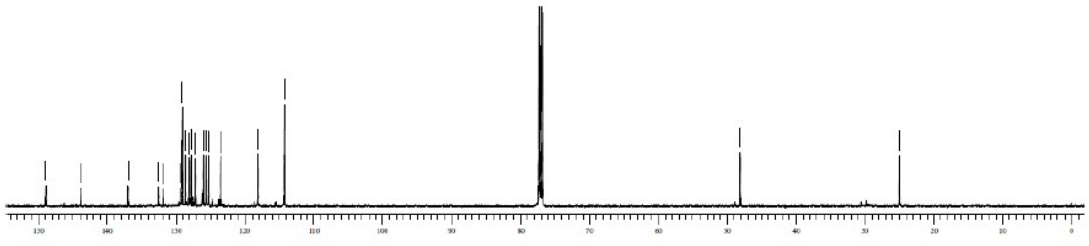
^{1}HNMR, $CDCl_3$, 500 MHz



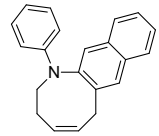




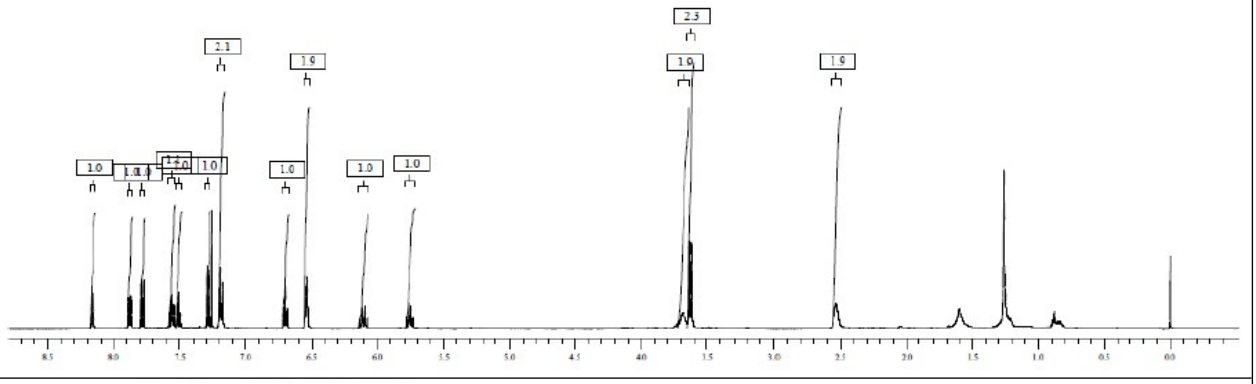
^{13}CNMR, $CDCl_3$, 125 MHz

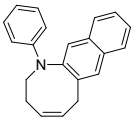


(*Z*)-1-Phenyl-1,2,3,6-tetrahydronaphtho[2,3-*b*]azocine: **6e**

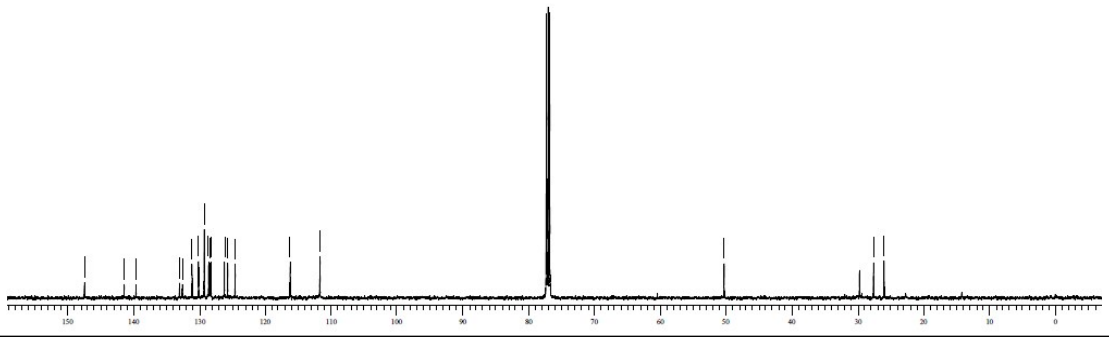


^{1}HNMR, $CDCl_3$, 500 MHz

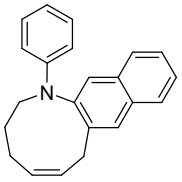




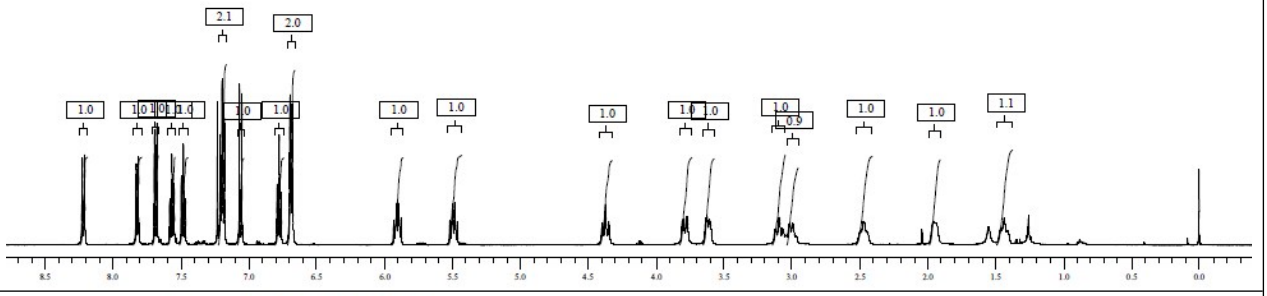
^{13}CNMR, $CDCl_3$, 125 MHz

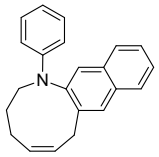


(*Z*)-1-Phenyl-2,3,4,7-tetrahydro-1*H*-naphtho[2,3-*b*]azonine: **6f**

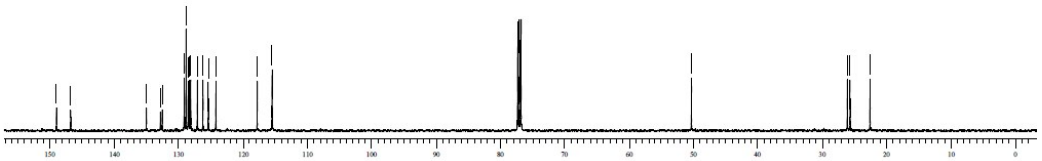


^{1}HNMR, $CDCl_3$, 500 MHz

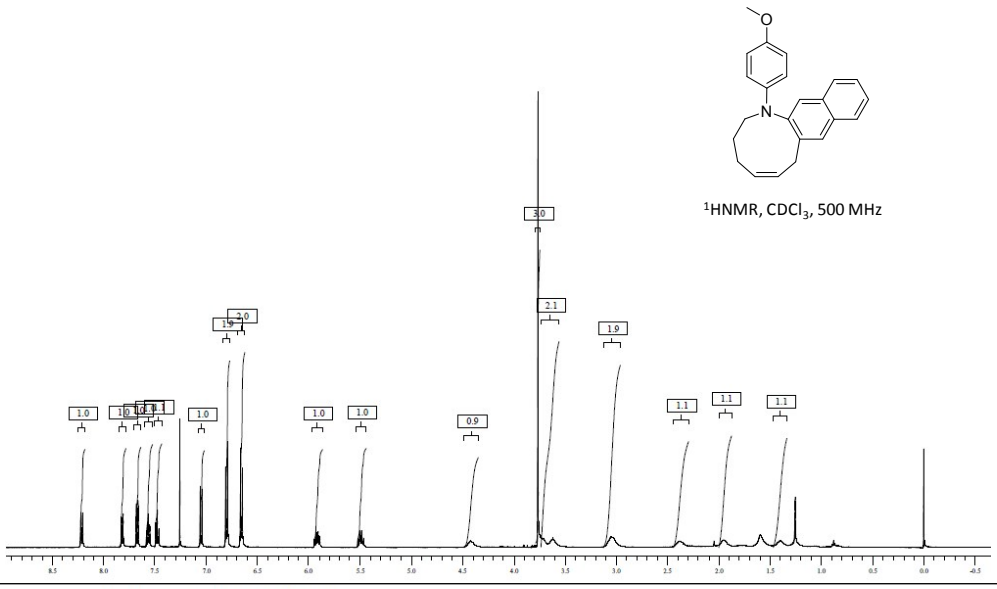




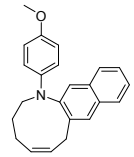
^{13}CNMR, $CDCl_3$, 125 MHz



(*Z*)-1-(4-Methoxyphenyl)-2,3,4,7-tetrahydro-1*H*-naphtho[2,3-*b*]azonine: **6g**



^{1}HNMR, $CDCl_3$, 500 MHz



^{13}CNMR, $CDCl_3$, 125 MHz