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Supporting information

Nickel-catalyzed Chan-Lam cross-coupling: Chemoselective *N*-arylation of 2-aminobenzimidazoles

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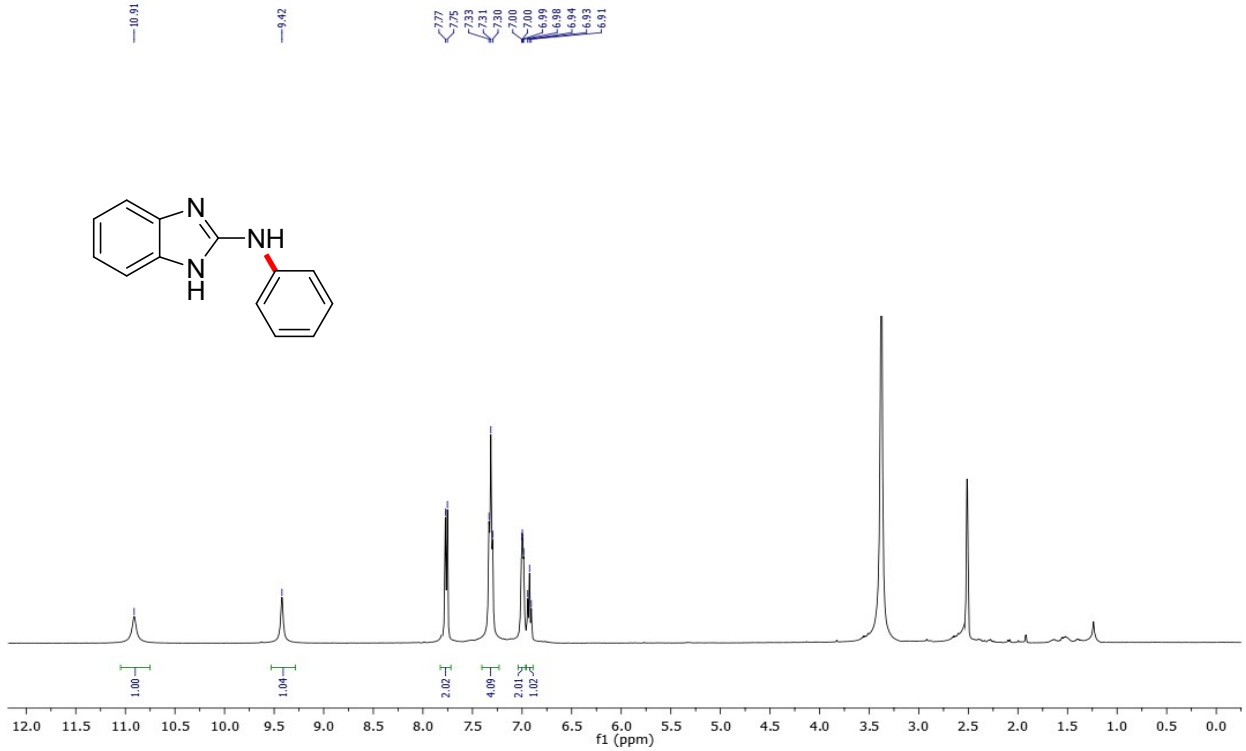
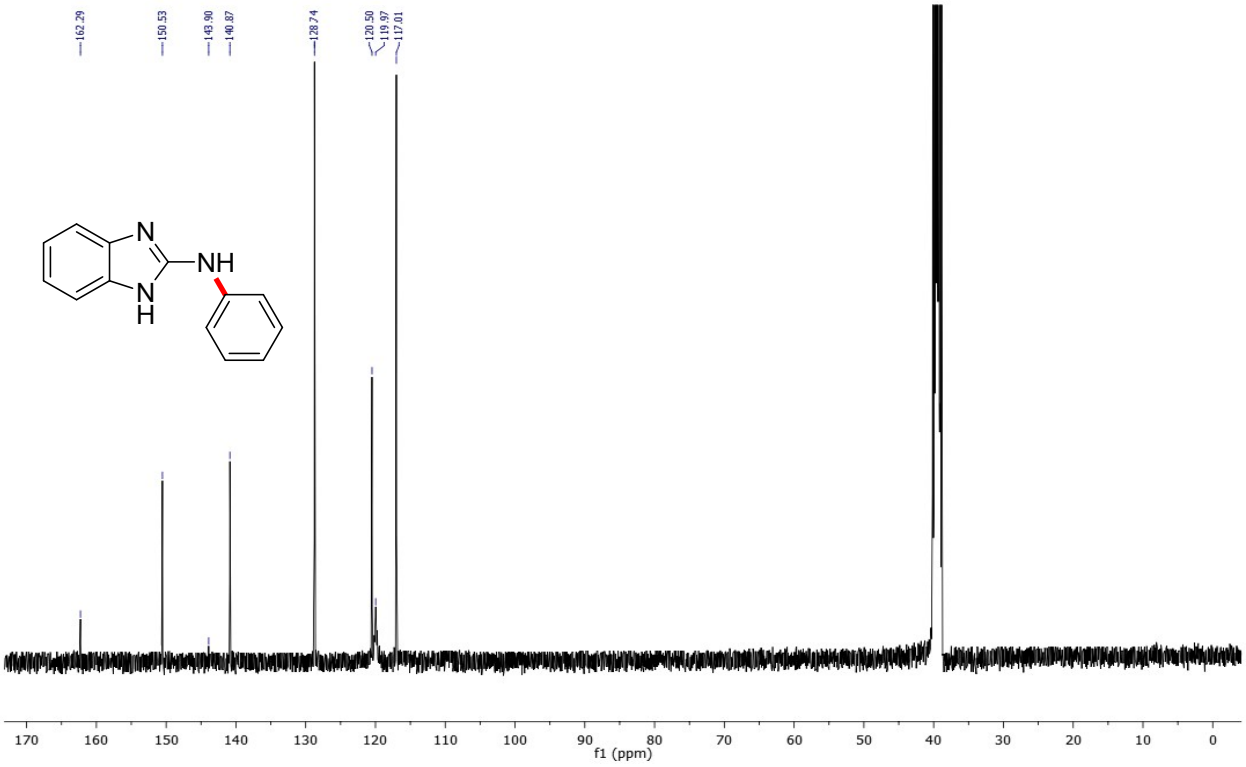
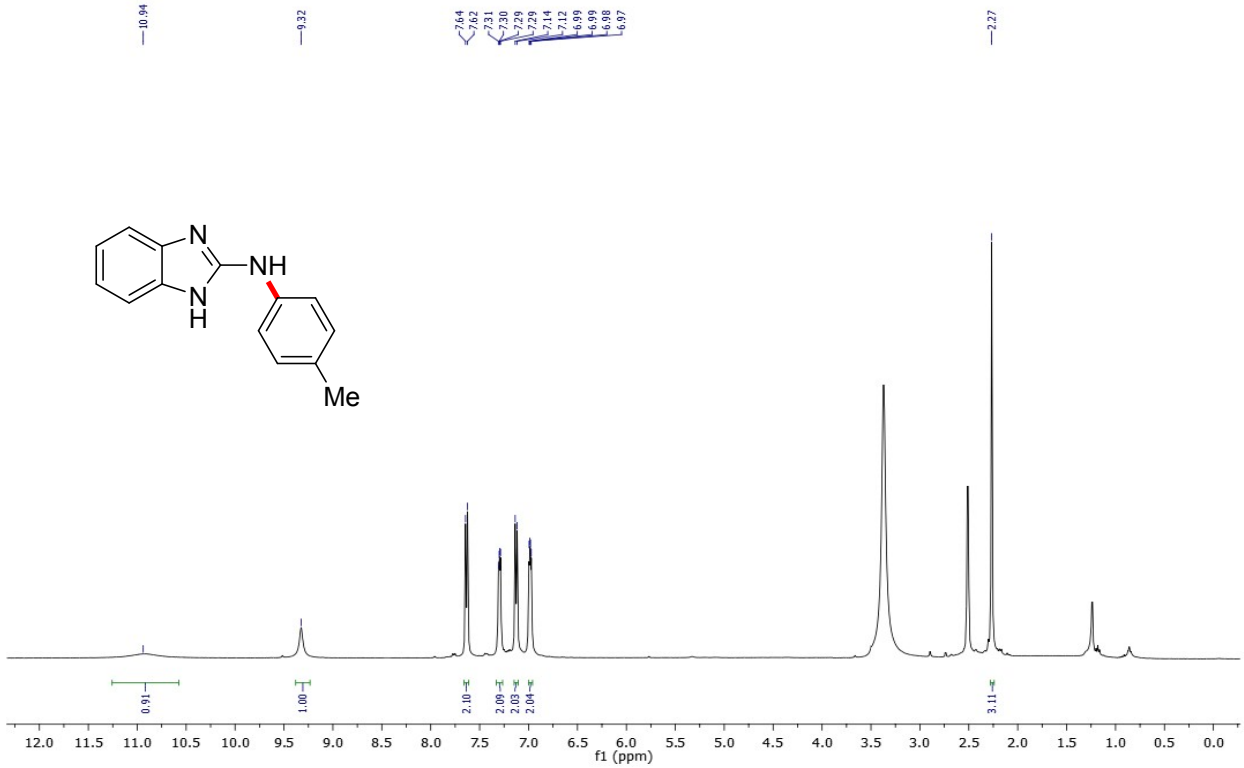
***N*-Phenyl-1*H*-benzo[d]imidazol-2-amine (2a): ^{1}H-NMR**



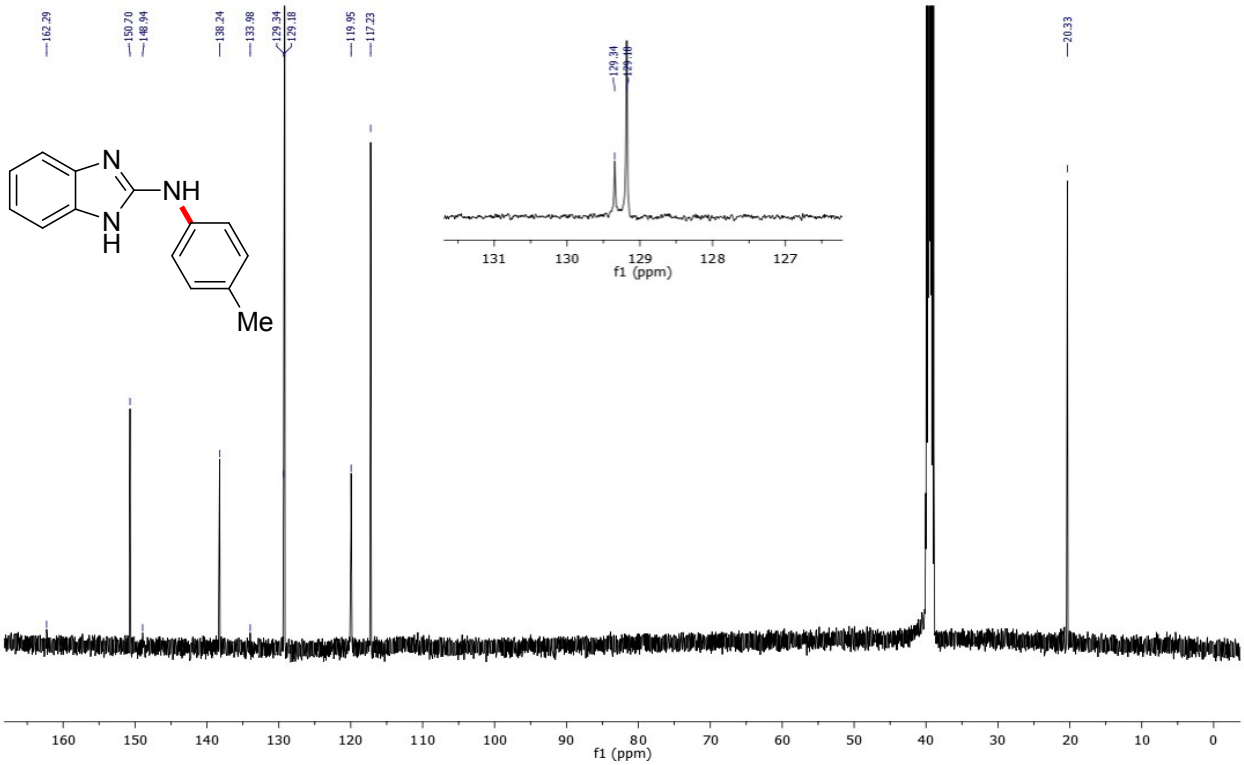
***N*-Phenyl-1*H*-benzo[d]imidazol-2-amine (2a): ^{13}C-NMR**



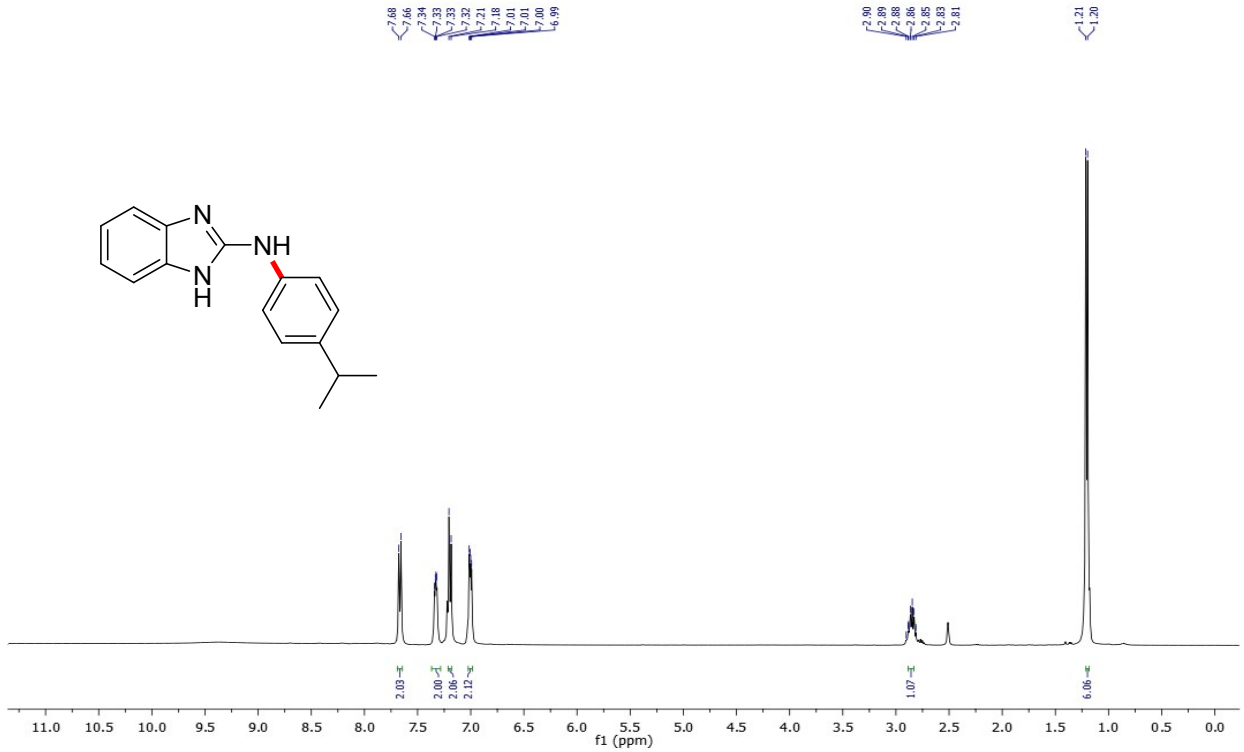
_N_-(_p_-Tolyl)-1_H_-benzo[d]imidazol-2-amine (2b): ^{1}H-NMR



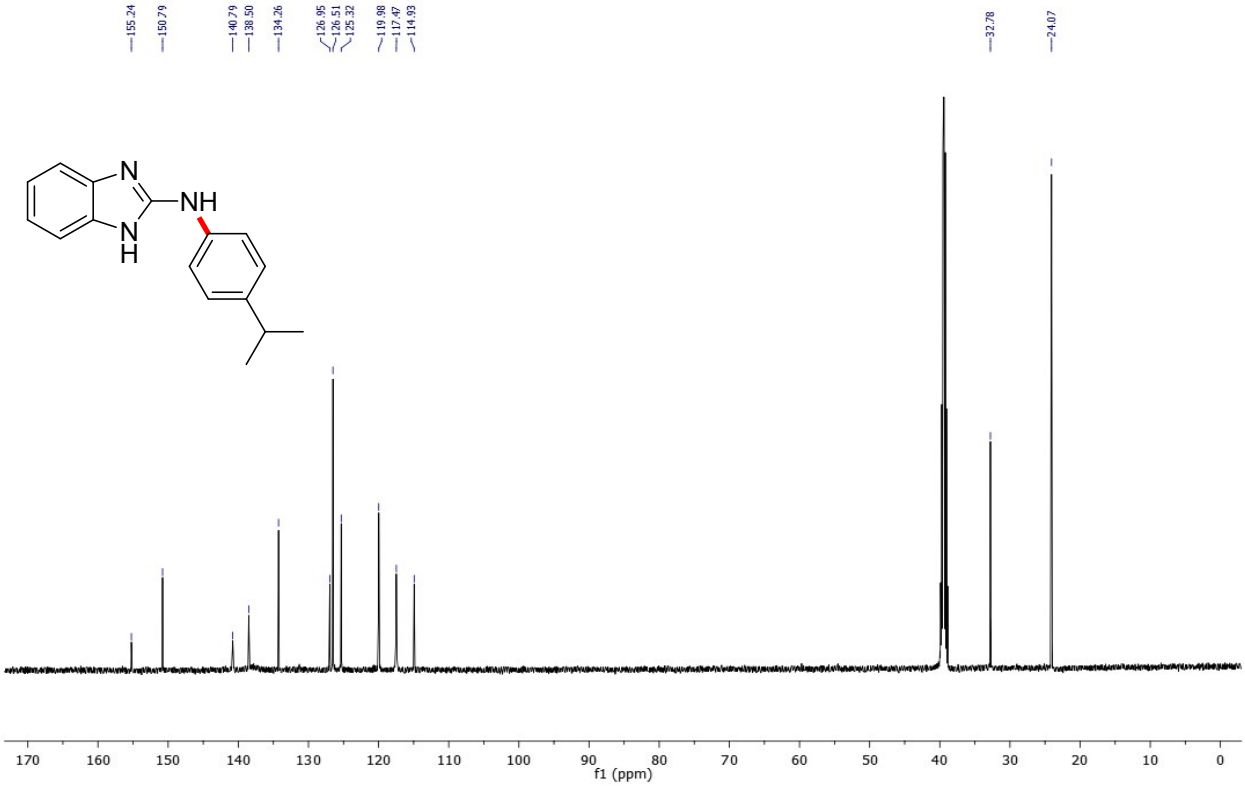
_N_-(_p_-Tolyl)-1_H_-benzo[d]imidazol-2-amine (2b): ^{13}C-NMR



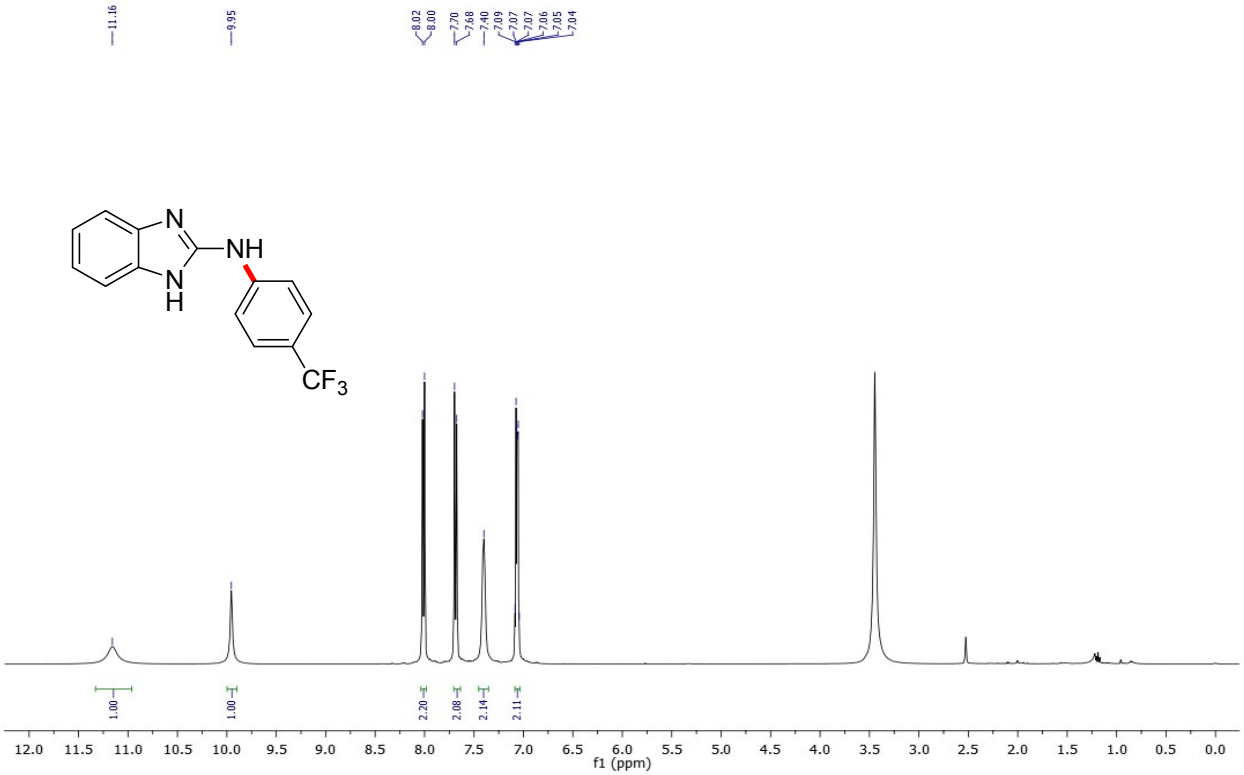
***N*-(4-Isopropylphenyl)-1*H*-benzo[d]imidazol-2-amine (2c): ^{1}H-NMR**



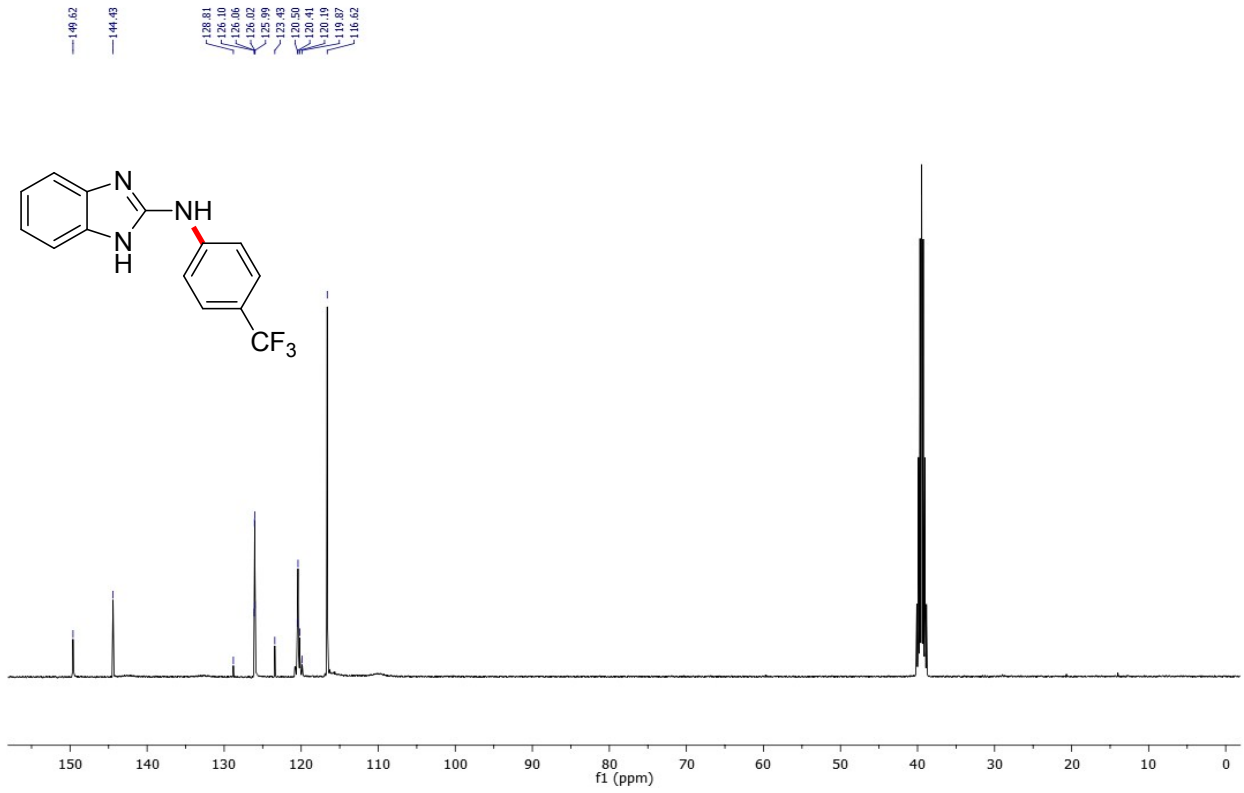
***N*-(4-Isopropylphenyl)-1*H*-benzo[d]imidazol-2-amine (2c): ^{13}C-NMR**



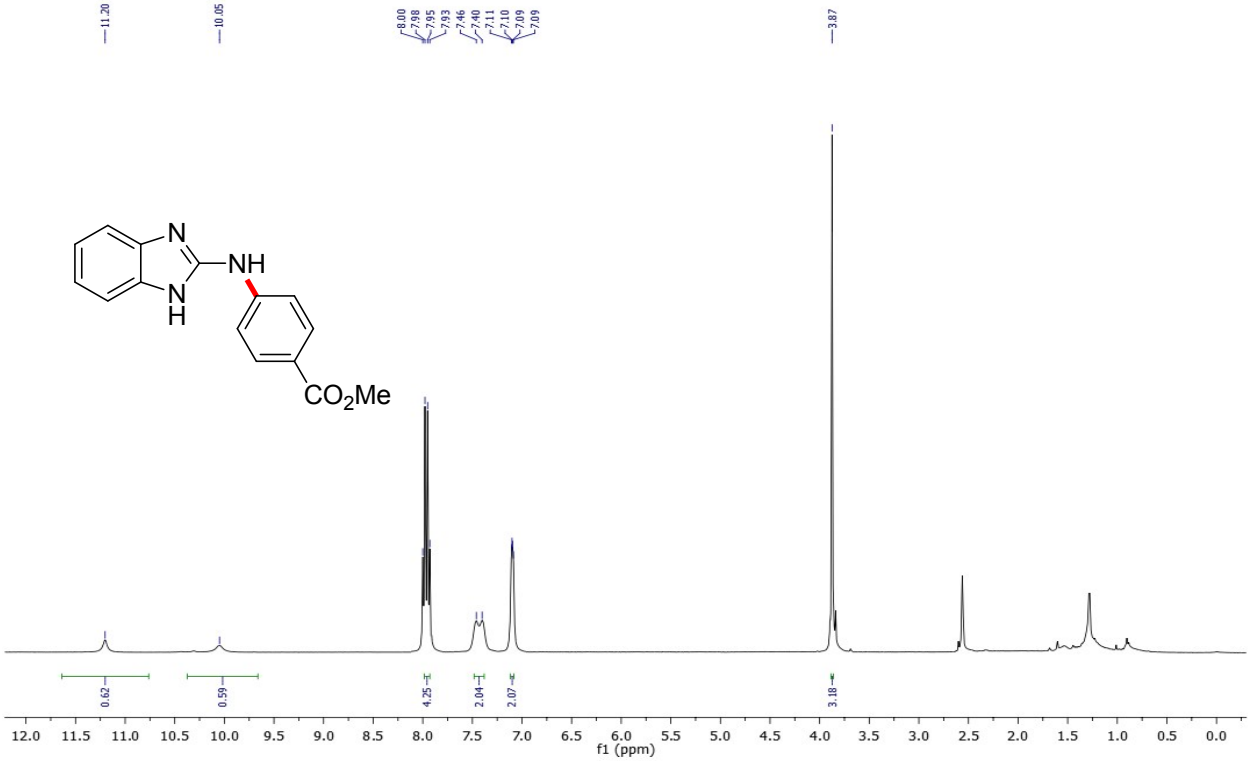
***N*-(4-(Trifluoromethyl)phenyl)-1*H*-benzo[d]imidazol-2-amine (2d): ^{1}H-NMR**



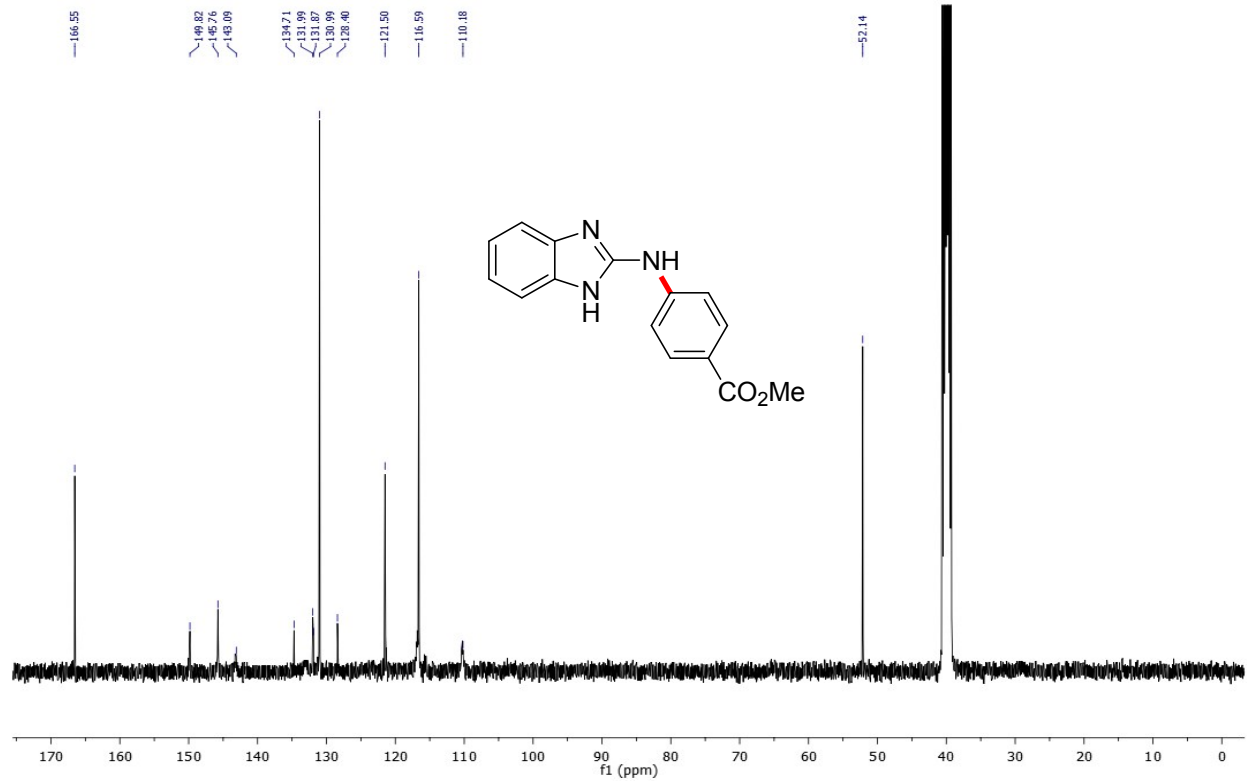
***N*-(4-(Trifluoromethyl)phenyl)-1*H*-benzo[d]imidazol-2-amine (2d): ^{13}C-NMR**



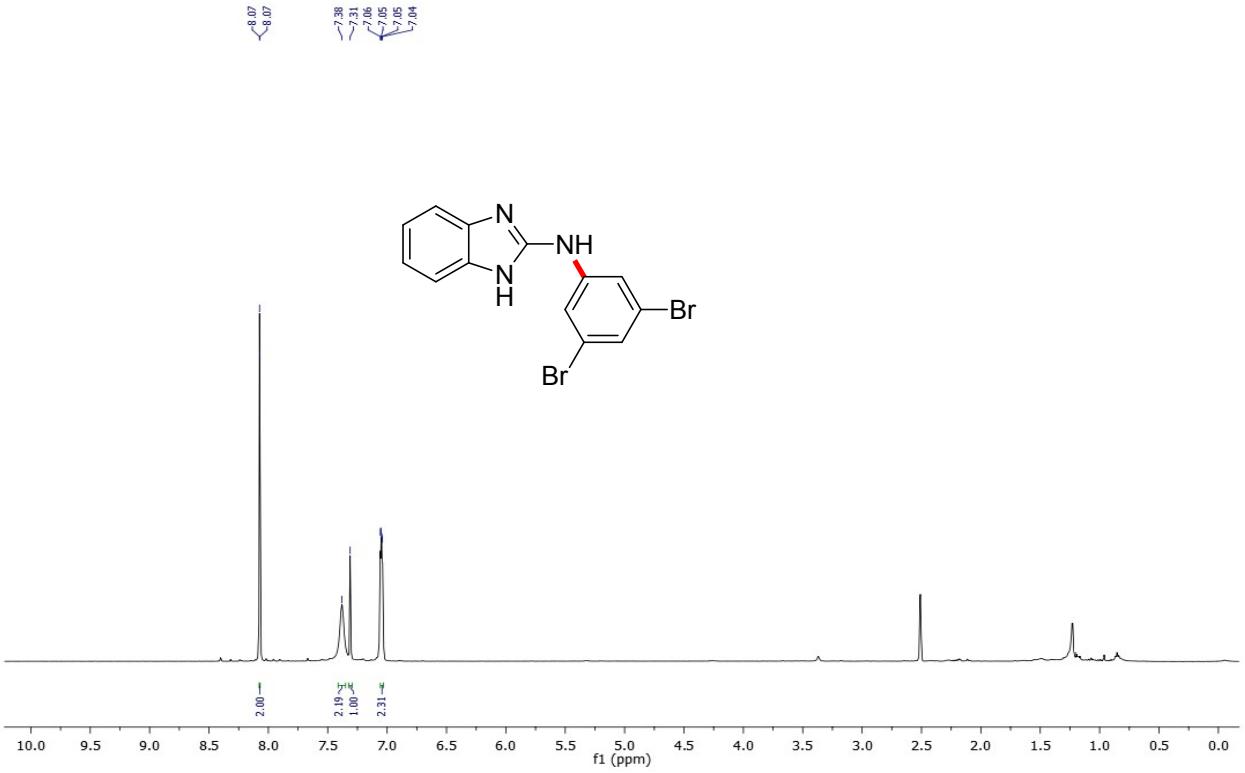
Methyl 4-((1*H*-benzo[d]imidazol-2-yl)amino)benzoate (2e): ^{1}H-NMR



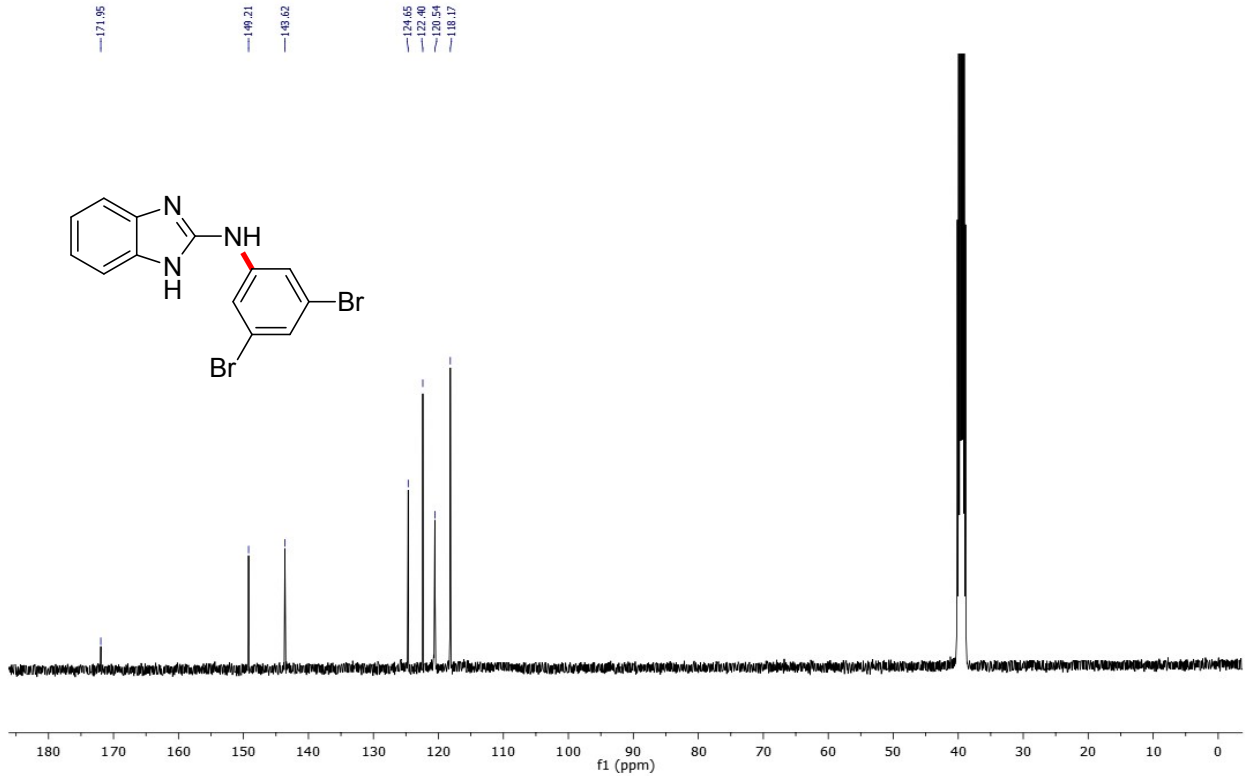
Methyl 4-((1*H*-benzo[d]imidazol-2-yl)amino)benzoate (2e): ^{13}C-NMR



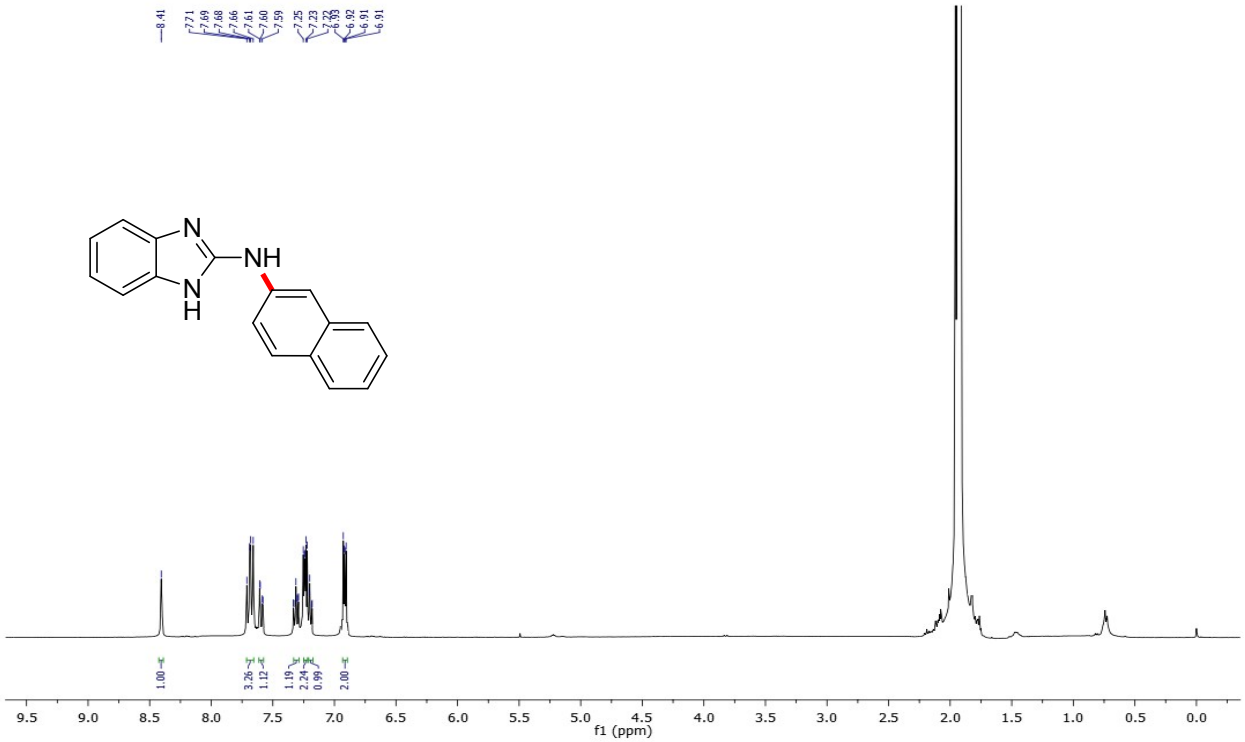
***N*-(3, 5-Dibromophenyl)-1*H*-benzo[d]imidazol-2-amine (2f): ^{1}H-NMR**



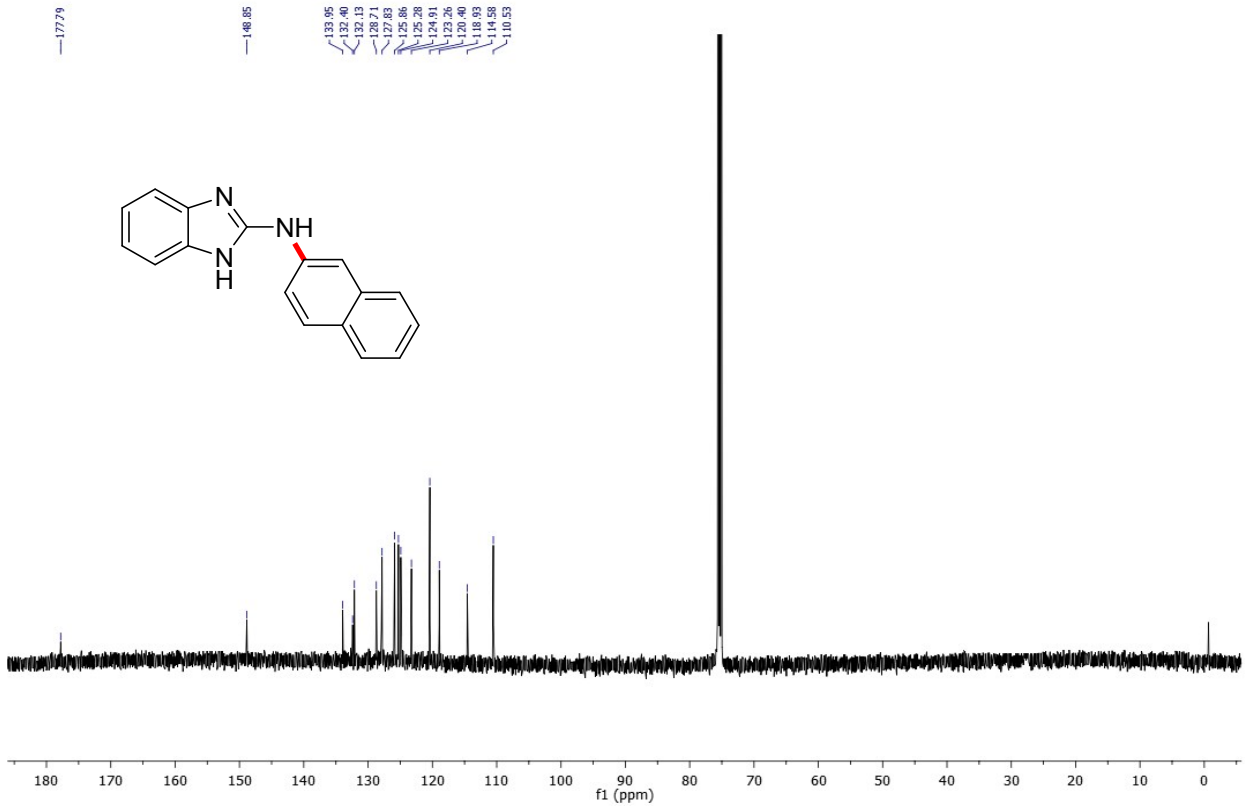
***N*-(3, 5-Dibromophenyl)-1*H*-benzo[d]imidazol-2-amine (2f): ^{13}C-NMR**



***N*-(Naphthalen-2-yl)-1*H*-benzo[d]imidazol-2-amine (2g): ^{1}H-NMR**



***N*-(Naphthalen-2-yl)-1*H*-benzo[d]imidazol-2-amine (2g): ^{13}C-NMR**



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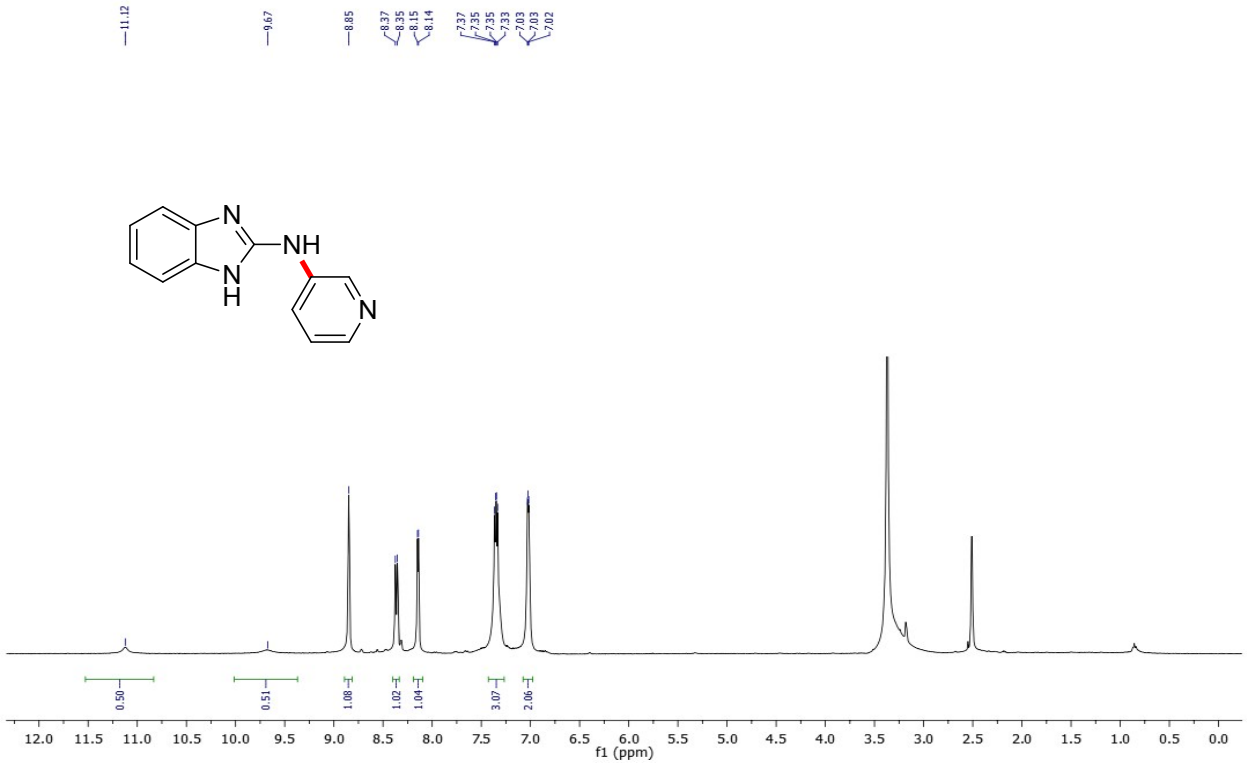
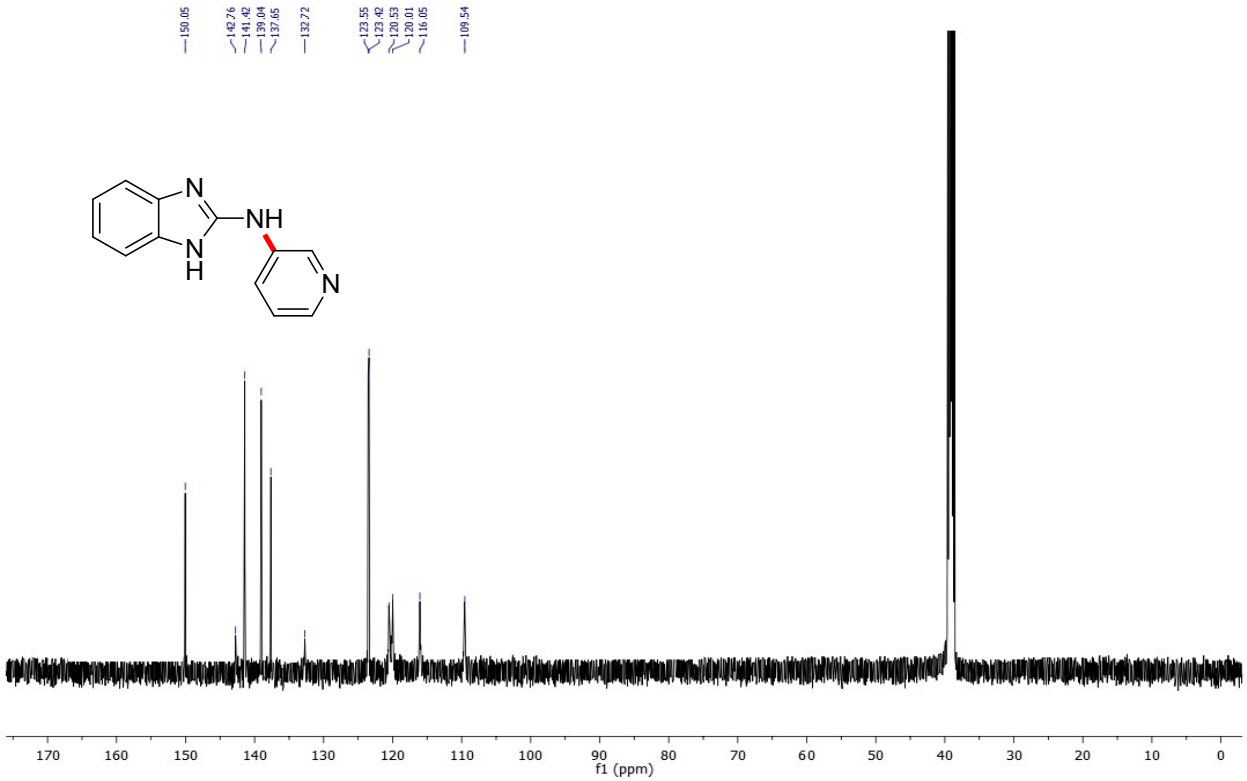
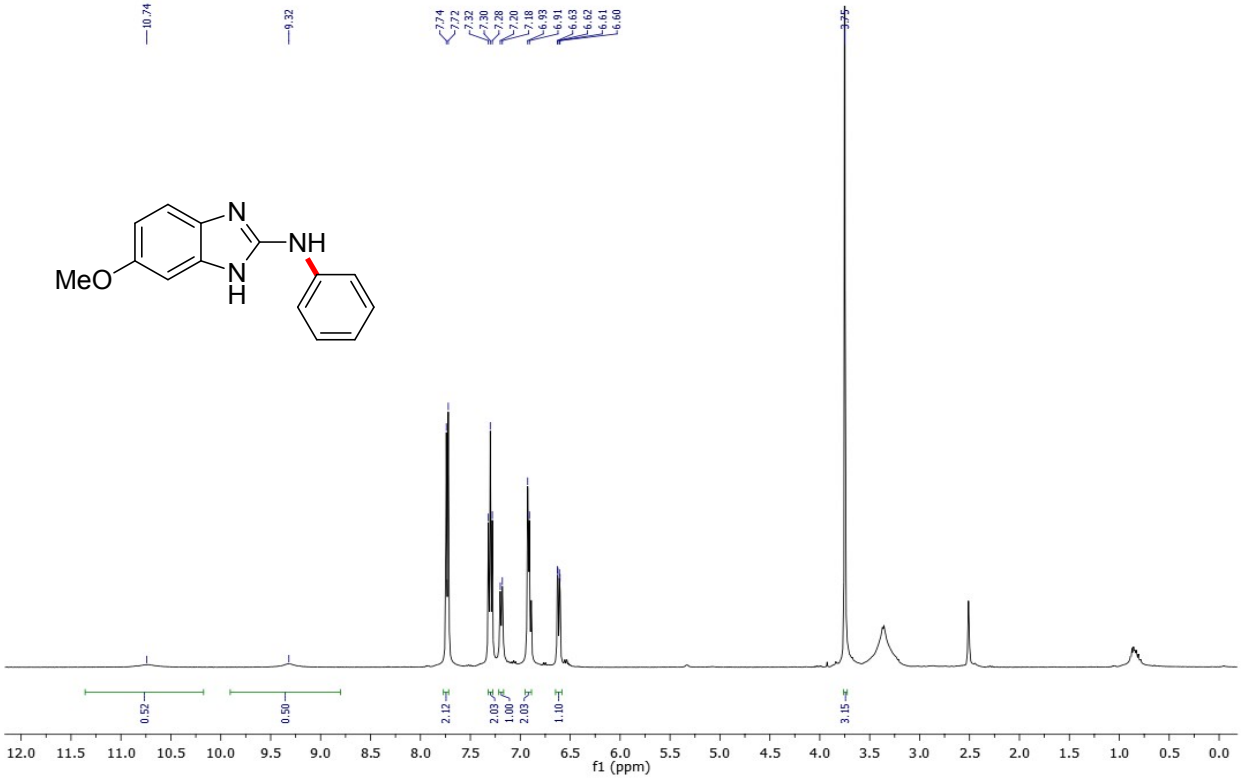


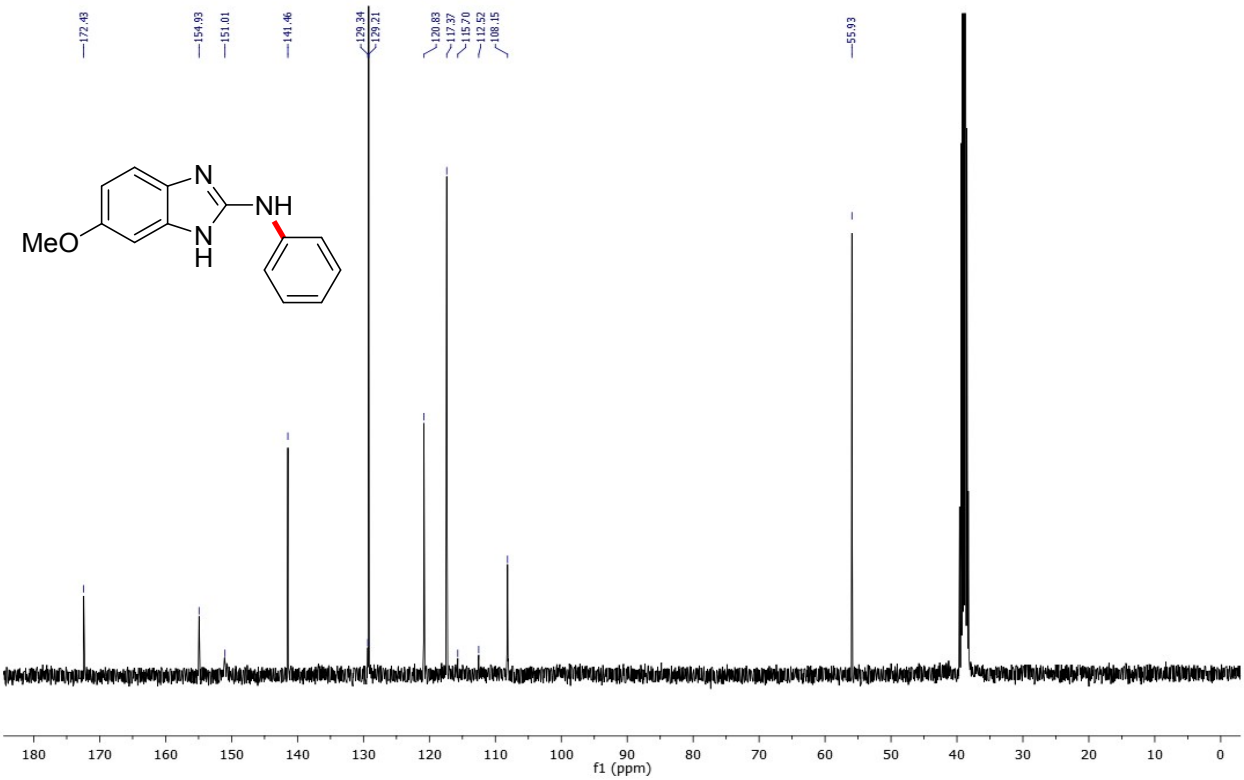
***N*-(Pyridin-3-yl)-1*H*-benzo[d]imidazol-2-amine (2h): ^{13}C-NMR**



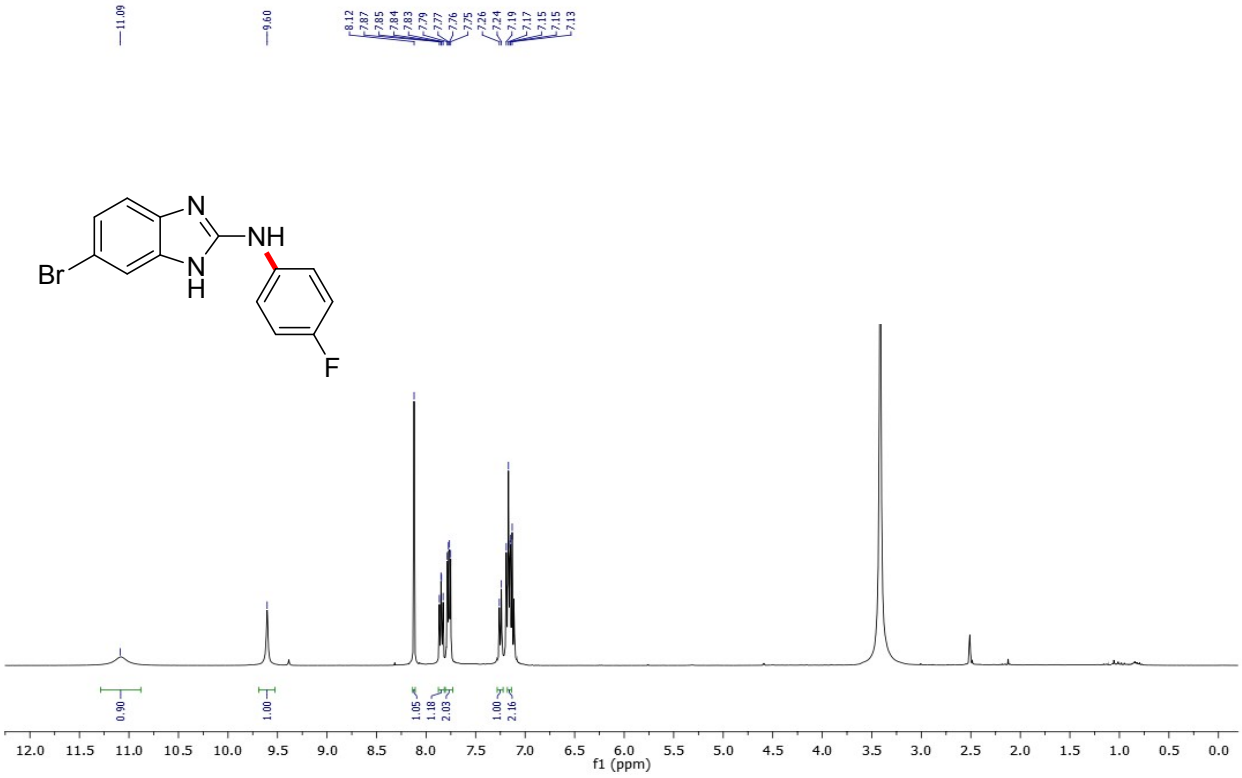
6-Methoxy-*N*-phenyl-1*H*-benzo[d]imidazol-2-amine (2i): ^{1}H-NMR



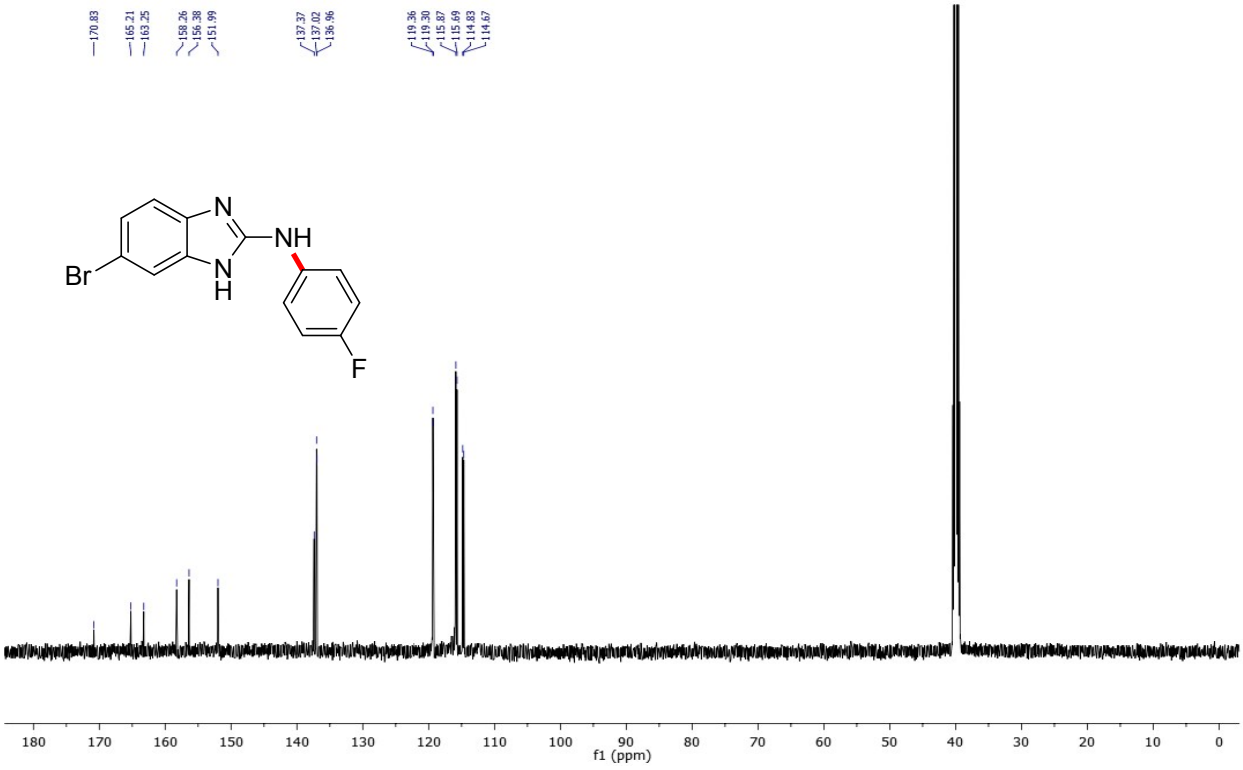
6-Methoxy-*N*-phenyl-1*H*-benzo[d]imidazol-2-amine (2i): ^{13}C-NMR



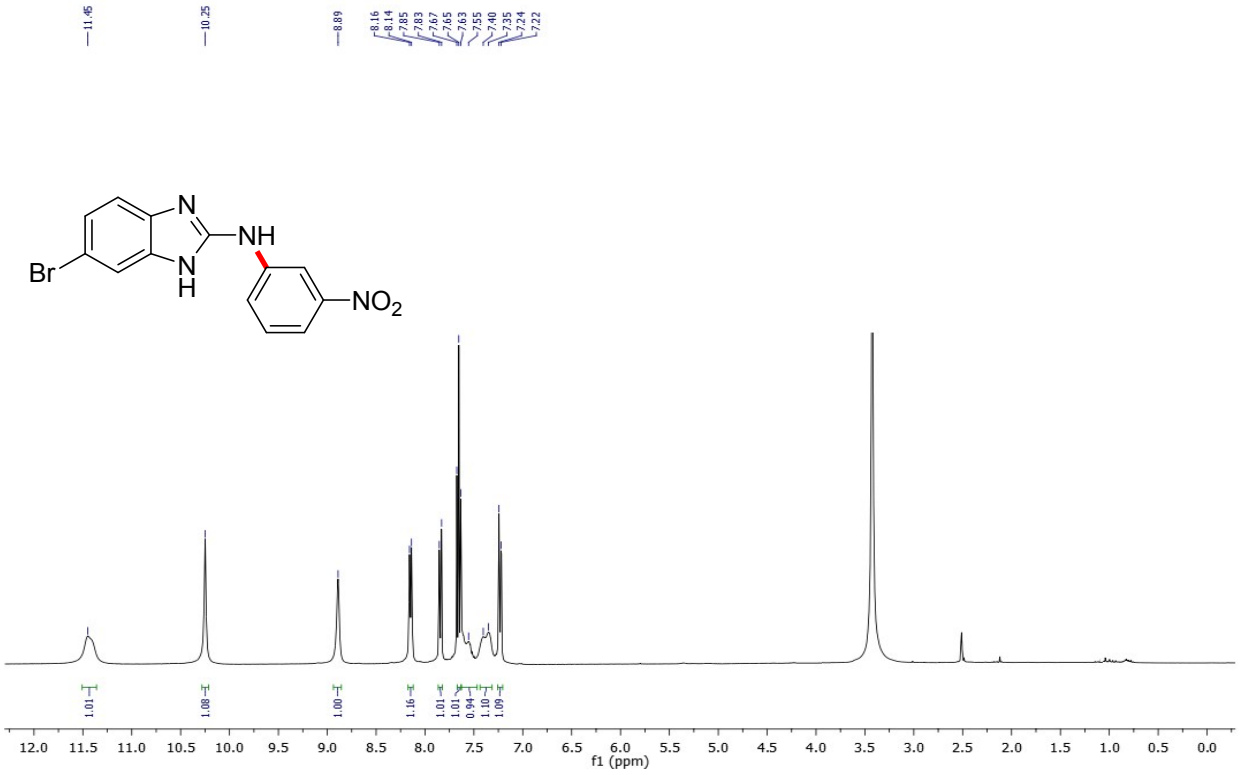
6-Bromo-*N*-(4-fluorophenyl)-1*H*-benzo[d]imidazol-2-amine (2j): ^{1}H-NMR



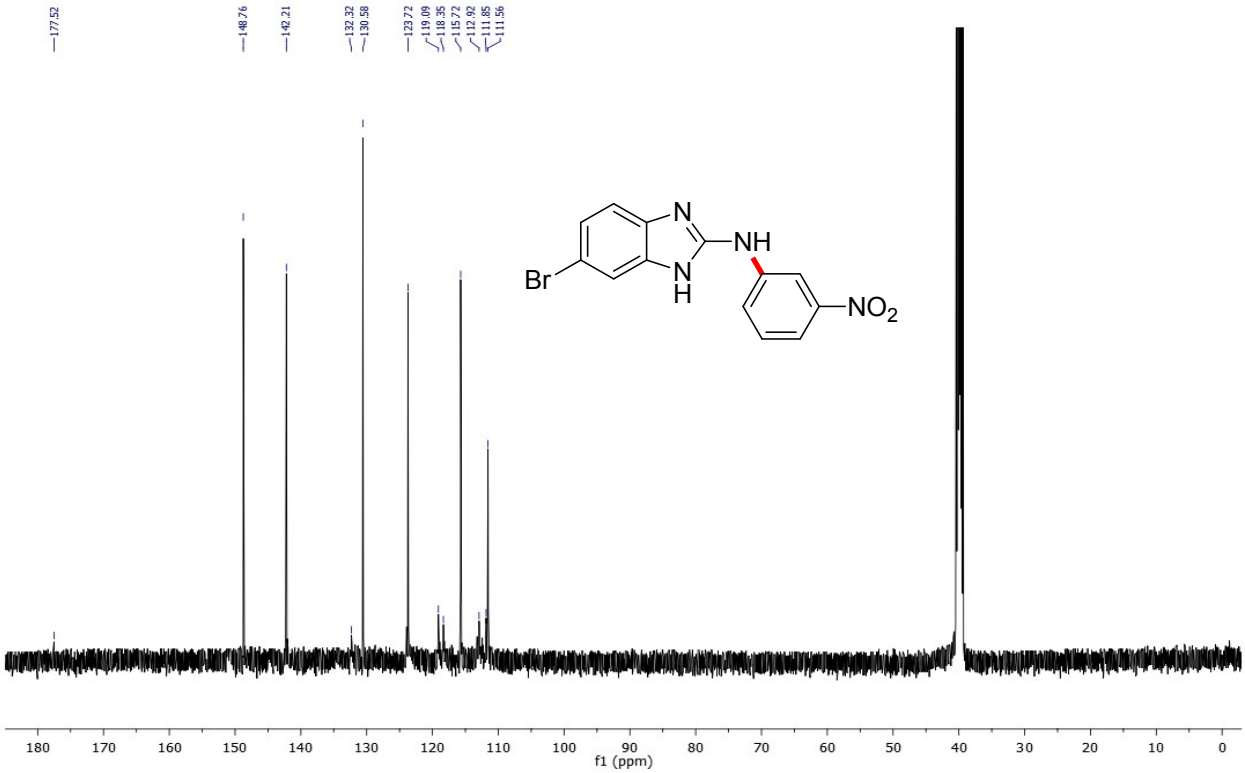
6-Bromo-*N*-(4-fluorophenyl)-1*H*-benzo[d]imidazol-2-amine (2j): ^{13}C-NMR



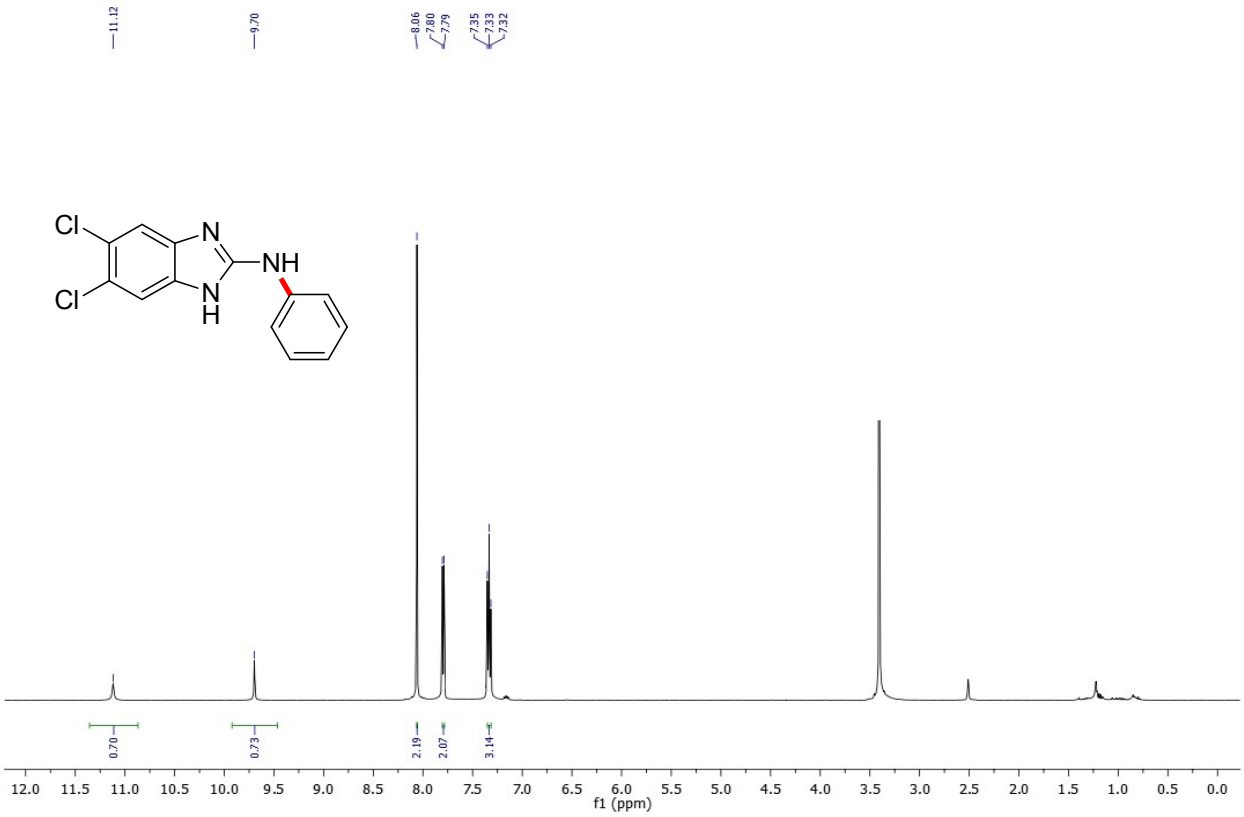
6-Bromo-*N*-(3-nitrophenyl)-1*H*-benzo[d]imidazol-2-amine (2k): ^{1}H-NMR



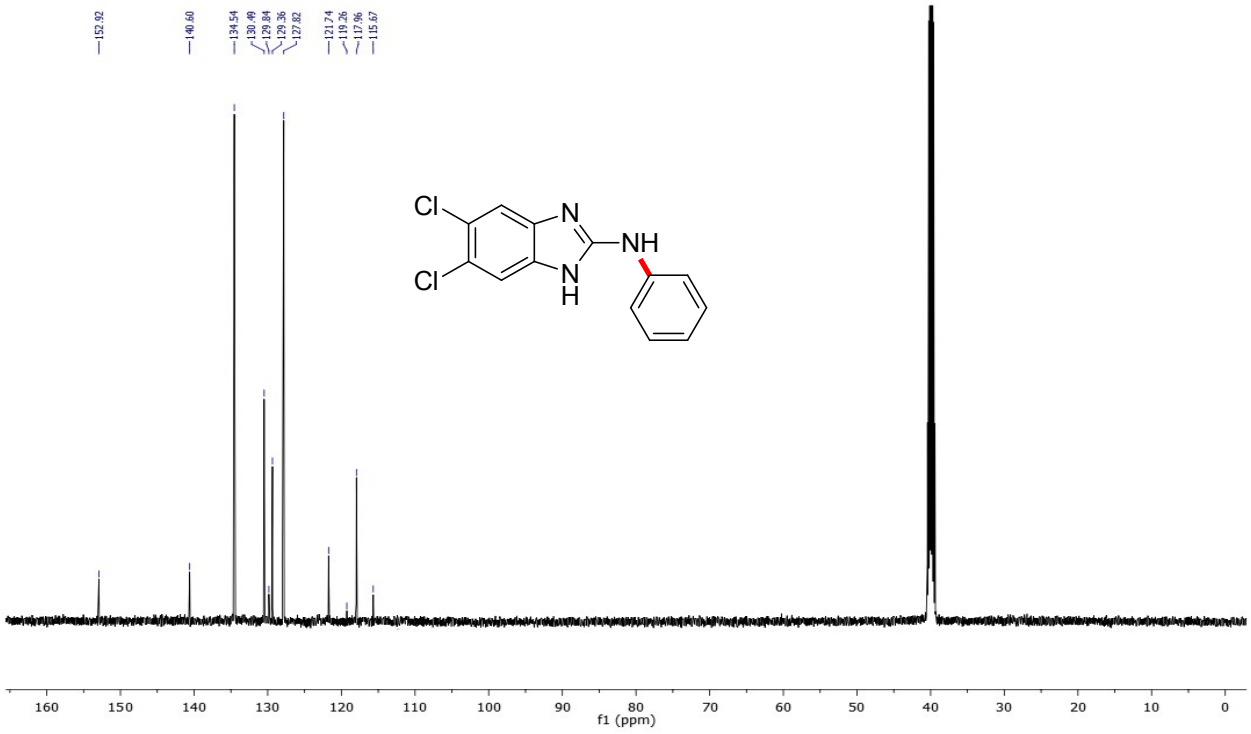
6-Bromo-*N*-(3-nitrophenyl)-1*H*-benzo[d]imidazol-2-amine (2k): ^{13}C-NMR



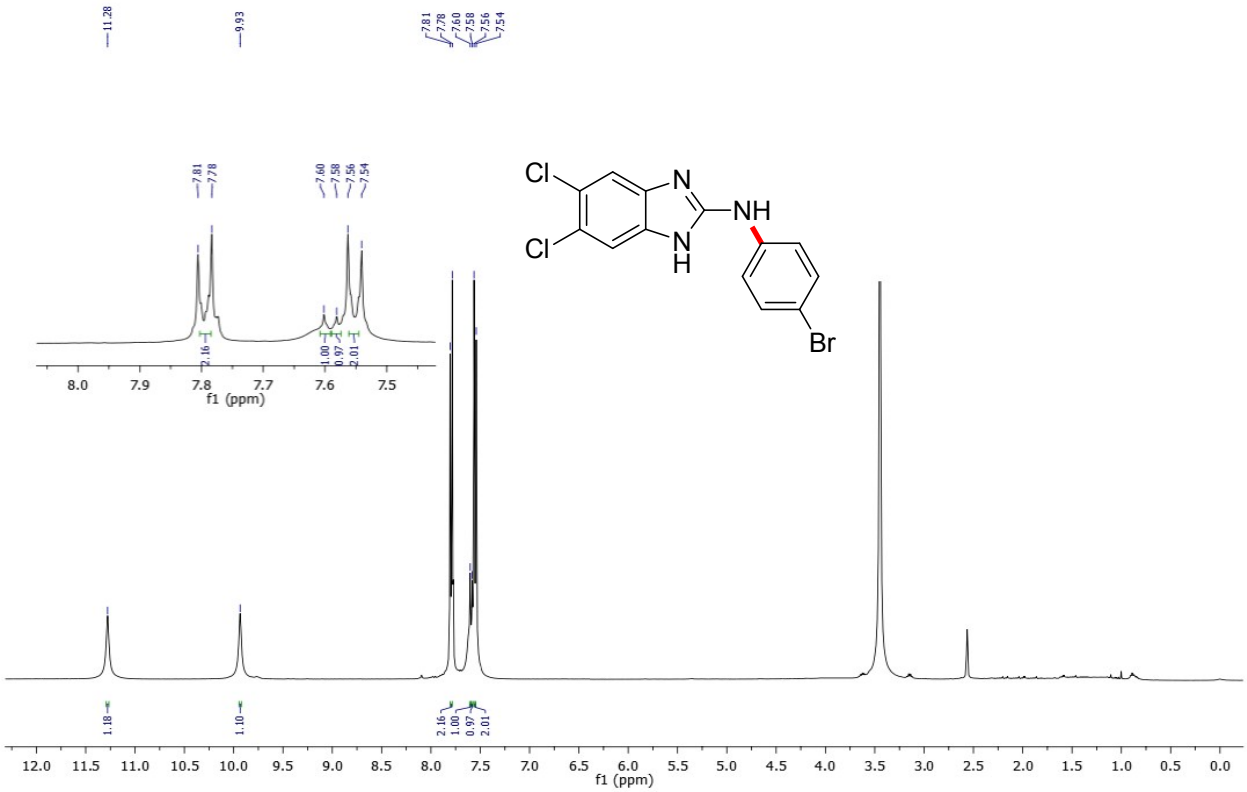
5, 6-Dichloro-*N*-phenyl-1*H*-benzo[d]imidazol-2-amine (2l): ^{1}H-NMR



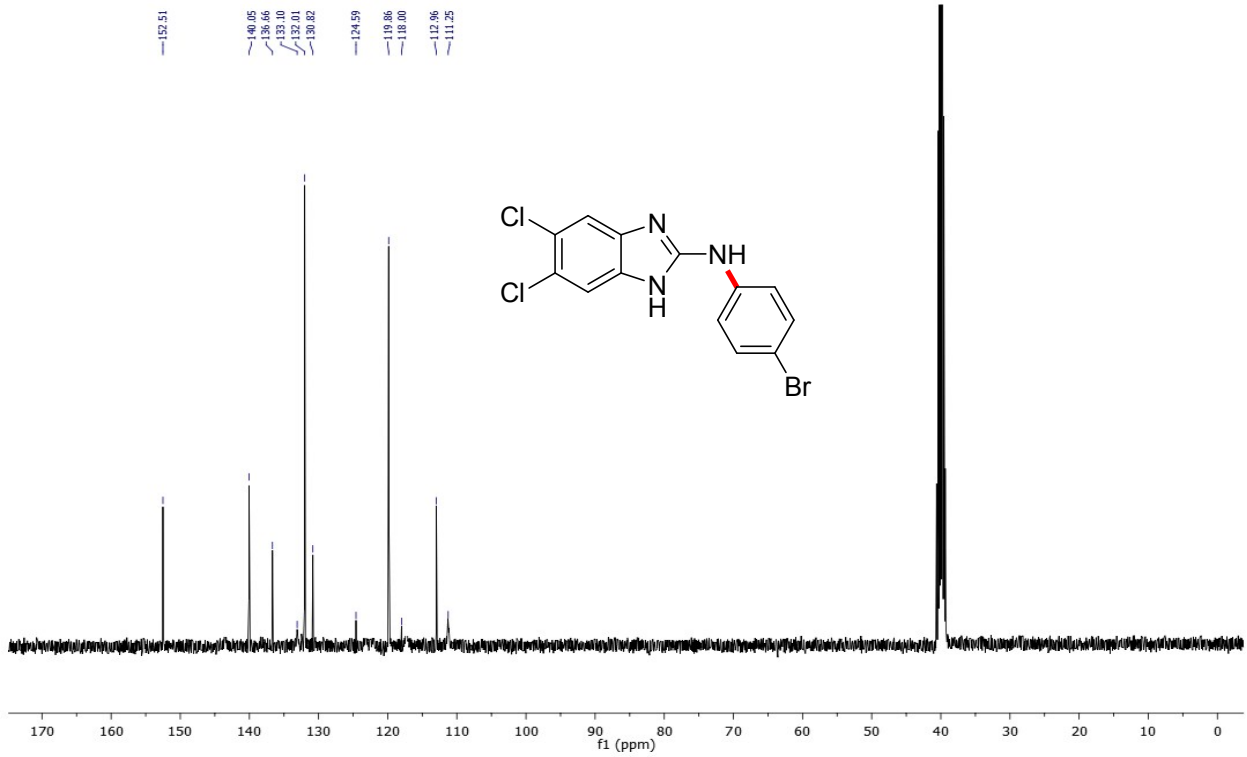
5, 6-Dichloro-*N*-phenyl-1*H*-benzo[d]imidazol-2-amine (2l): ^{13}C-NMR



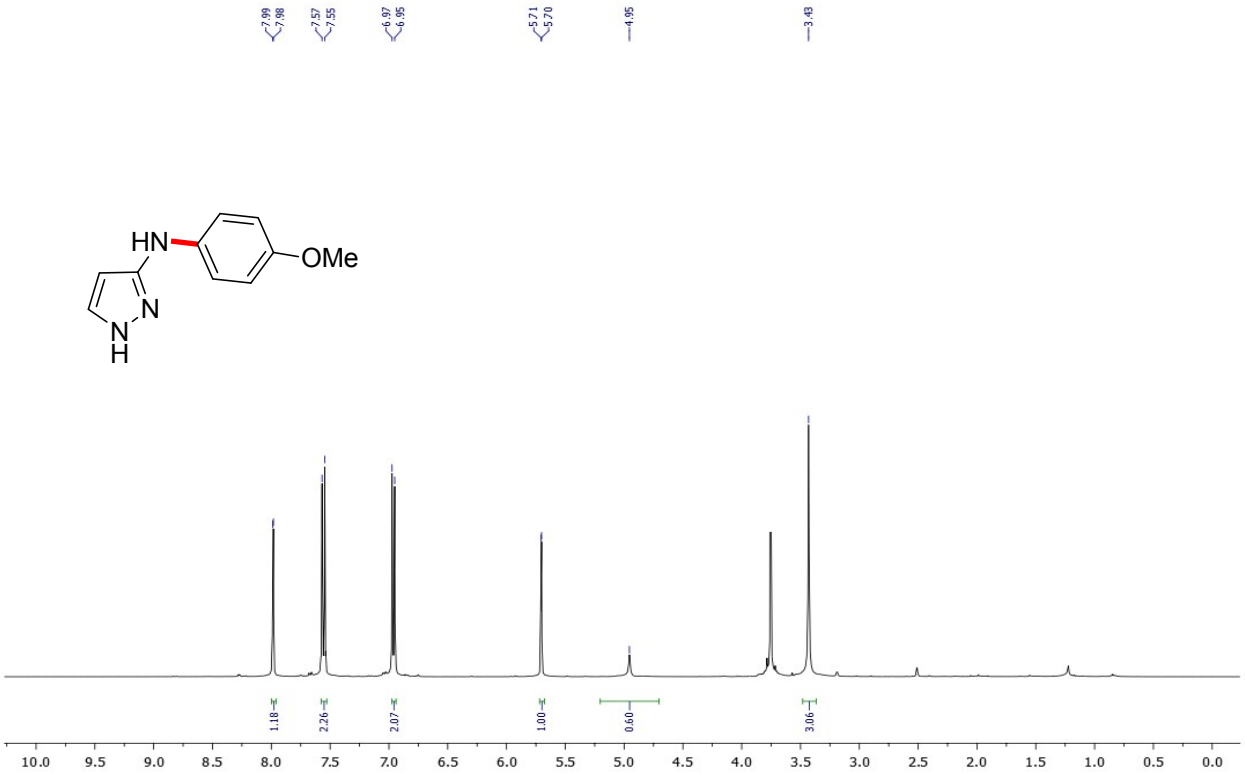
_N_-(4-Bromophenyl)-5, 6-dichloro-1_H_-benzo[d]imidazol-2-amine (2m): ^{1}H-NMR



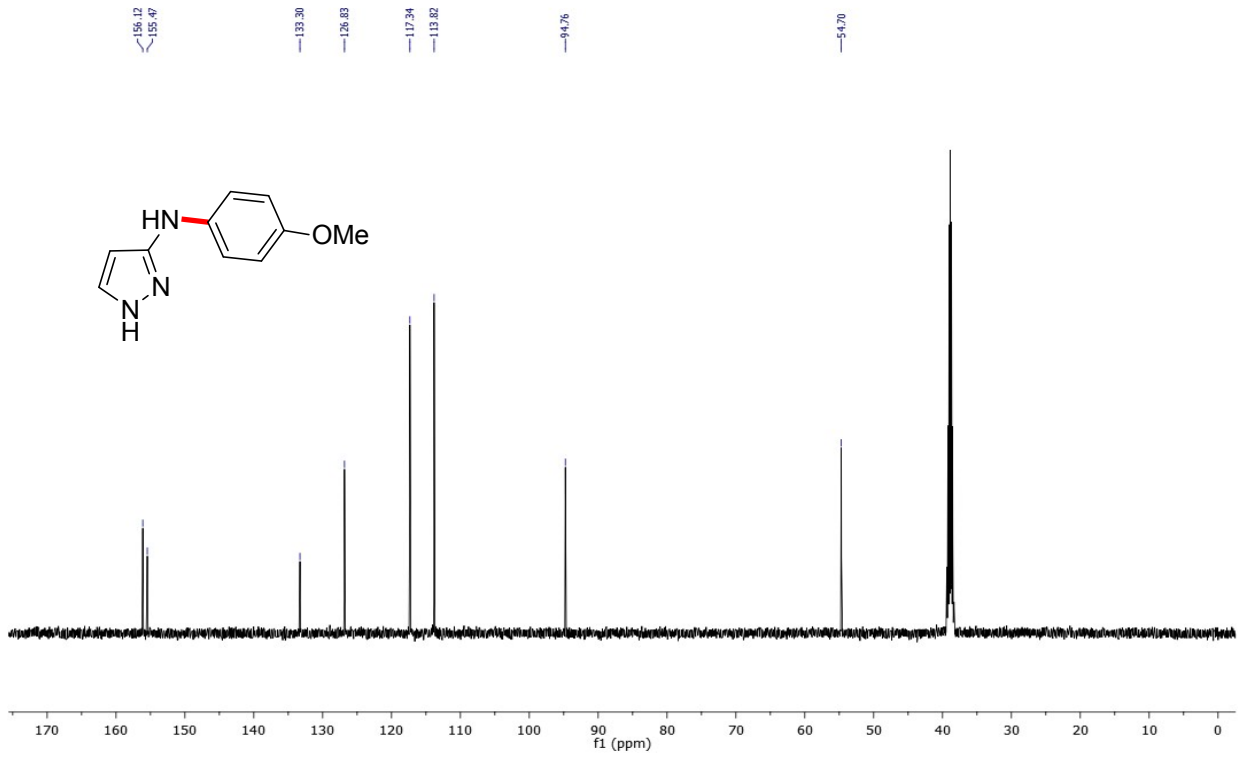
_N_-(4-Bromophenyl)-5, 6-dichloro-1_H_-benzo[d]imidazol-2-amine (2m): ^{13}C-NMR



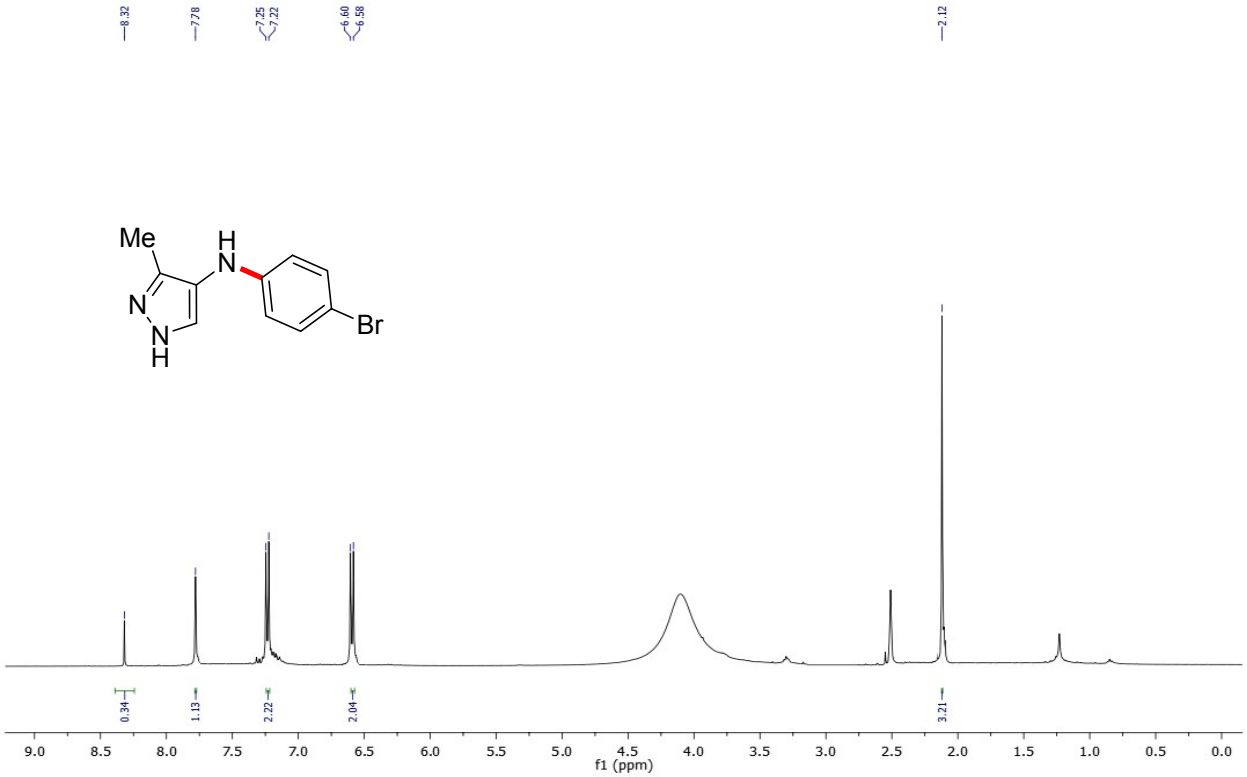
***N*-(4-Methoxyphenyl)-1*H*-pyrazol-3-amine (2n): ^{1}H-NMR**



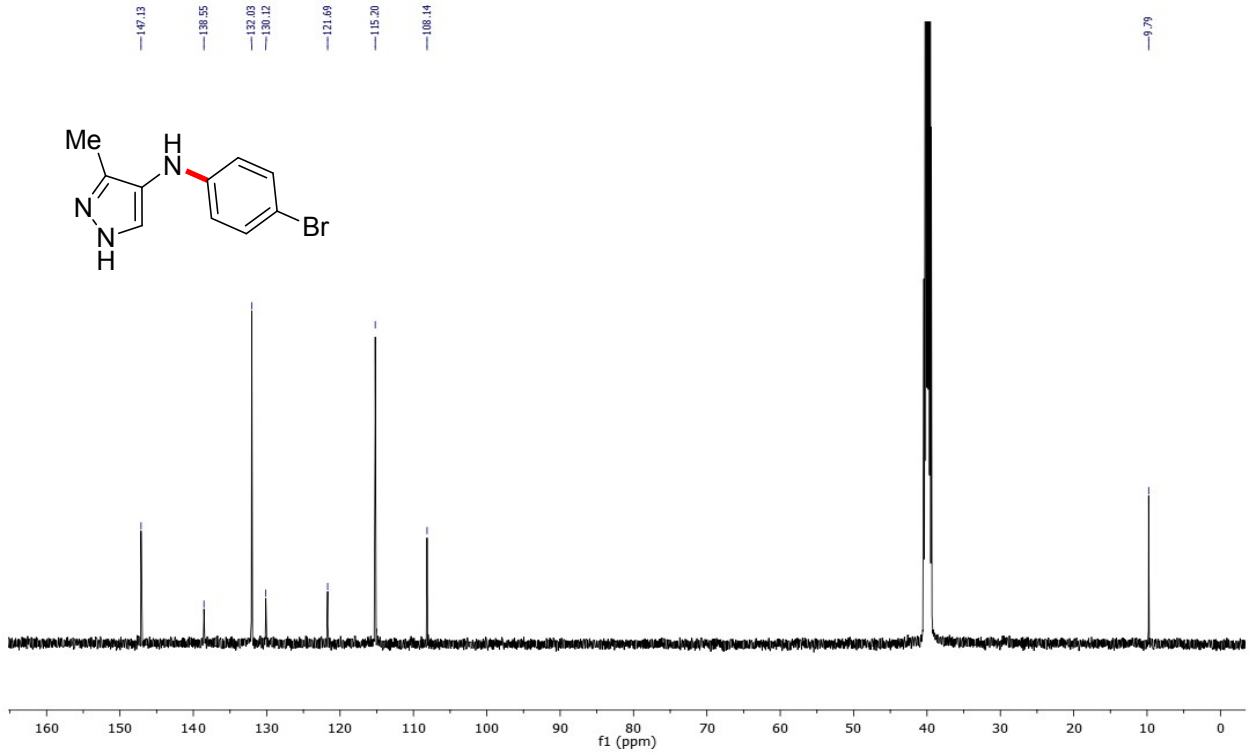
***N*-(4-Methoxyphenyl)-1*H*-pyrazol-3-amine (2n): ^{13}C-NMR**



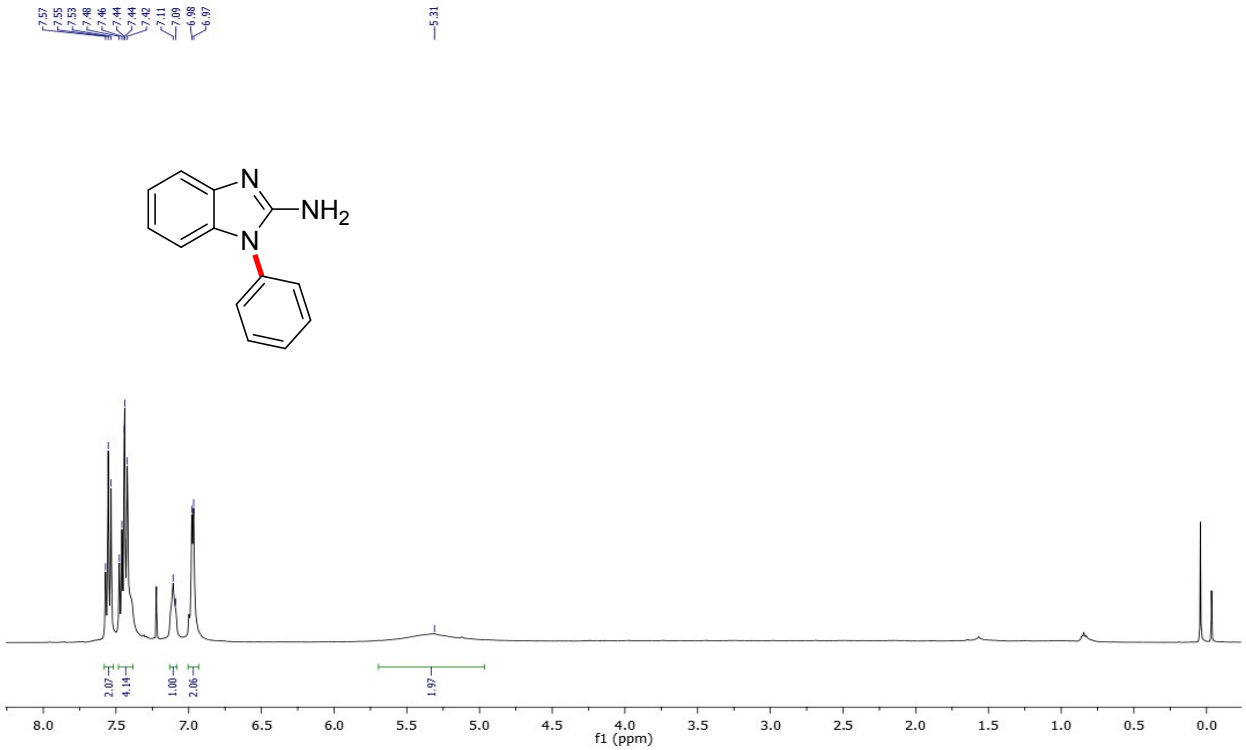
***N*-(4-Bromophenyl)-3-methyl-1*H*-pyrazol-4-amine (2o): ^{1}H-NMR**



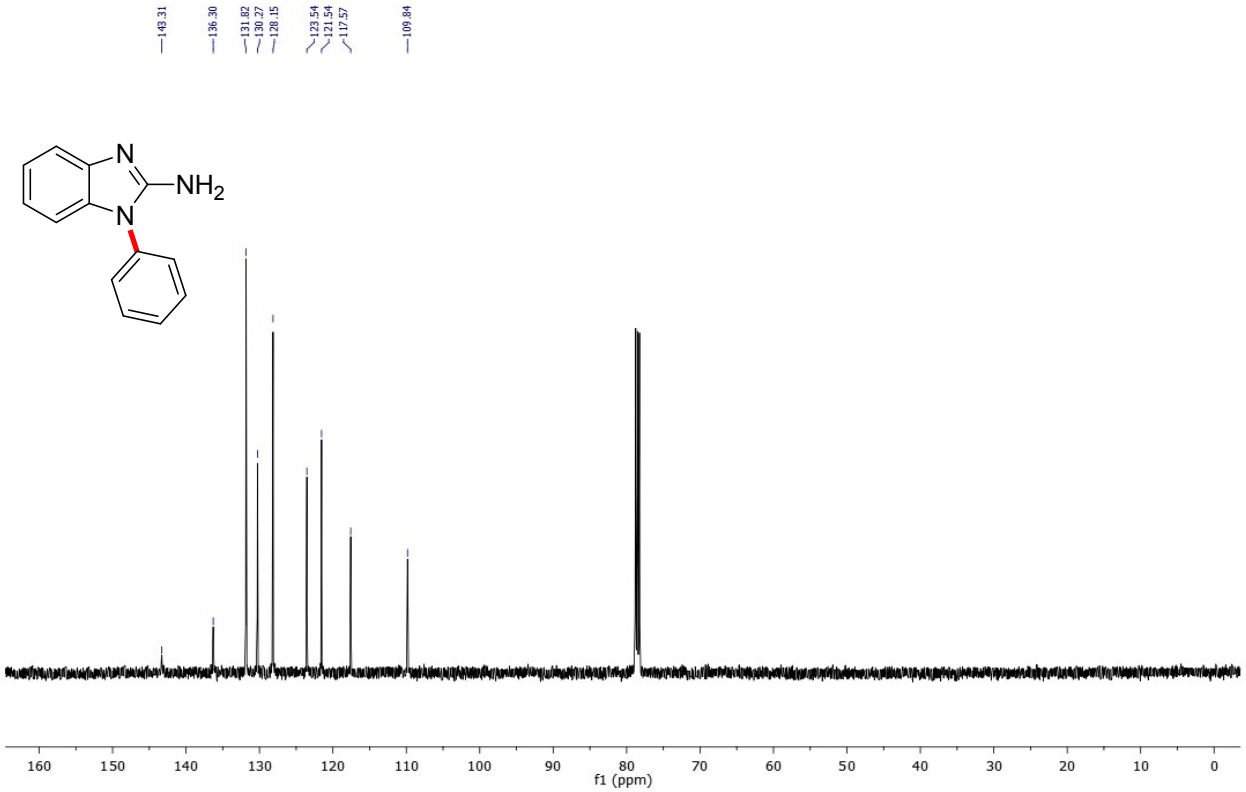
***N*-(4-Bromophenyl)-3-methyl-1*H*-pyrazol-4-amine (2o): ^{13}C-NMR**



1-Phenyl-1*H*-benzo[d]imidazol-2-amine (3a): ^{1}H-NMR



1-Phenyl-1*H*-benzo[d]imidazol-2-amine (3a): ^{13}C-NMR



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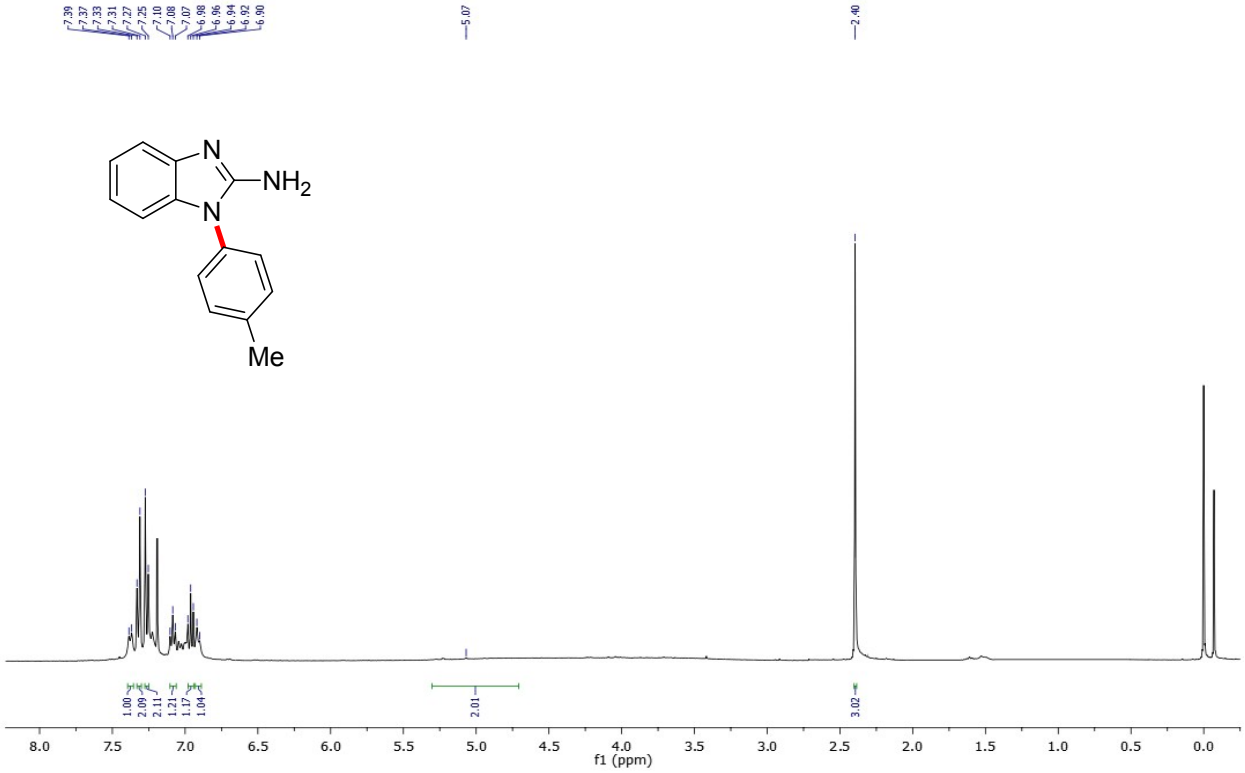
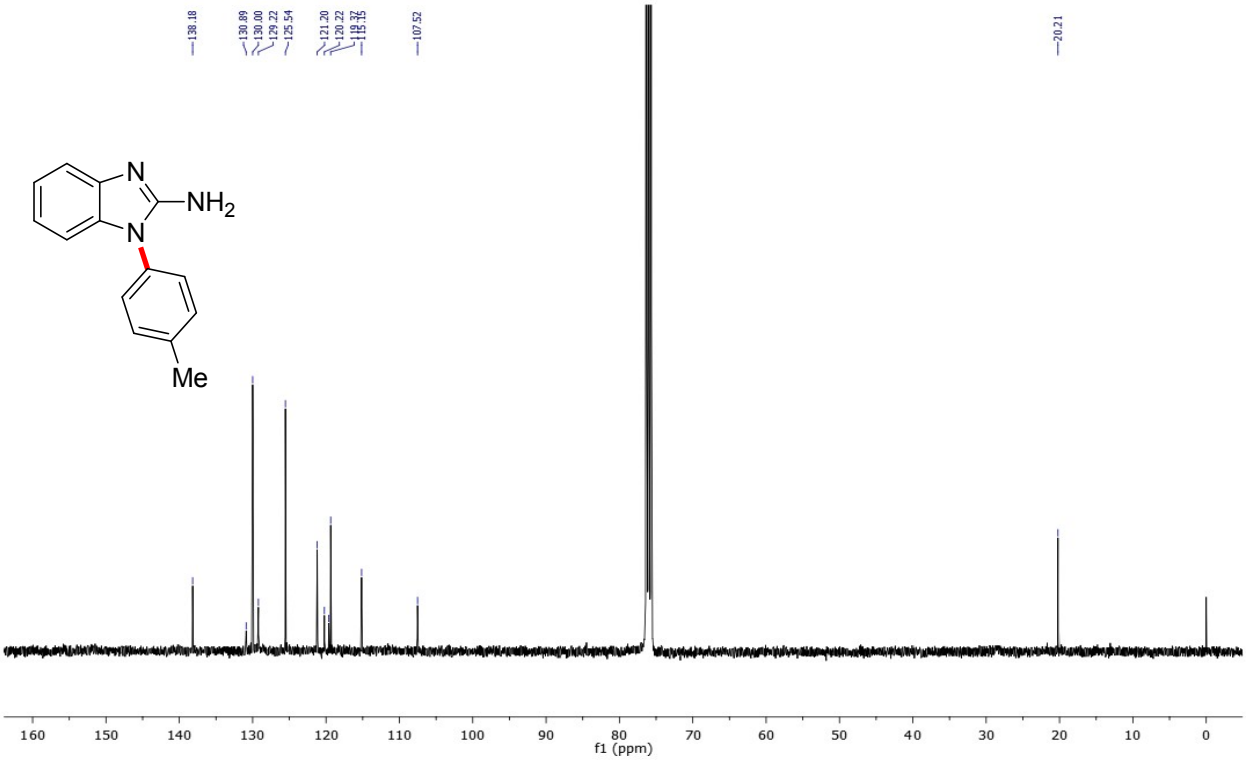
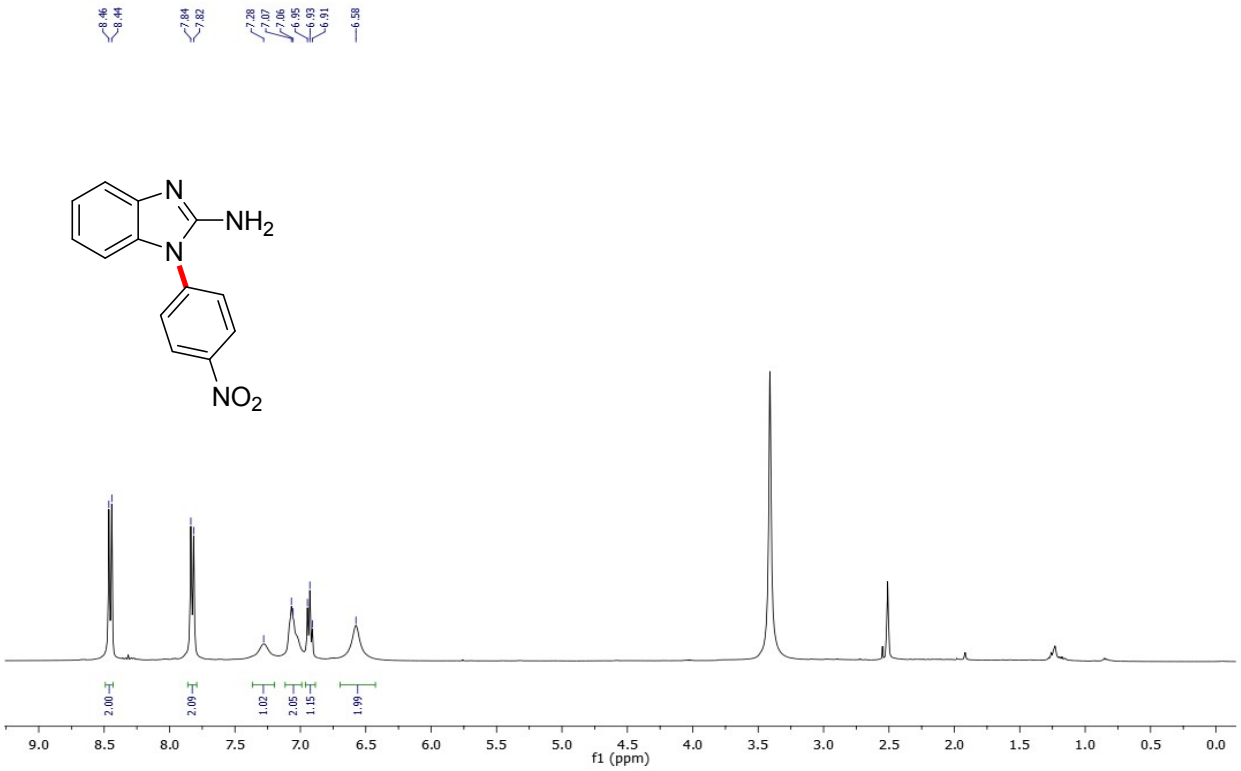


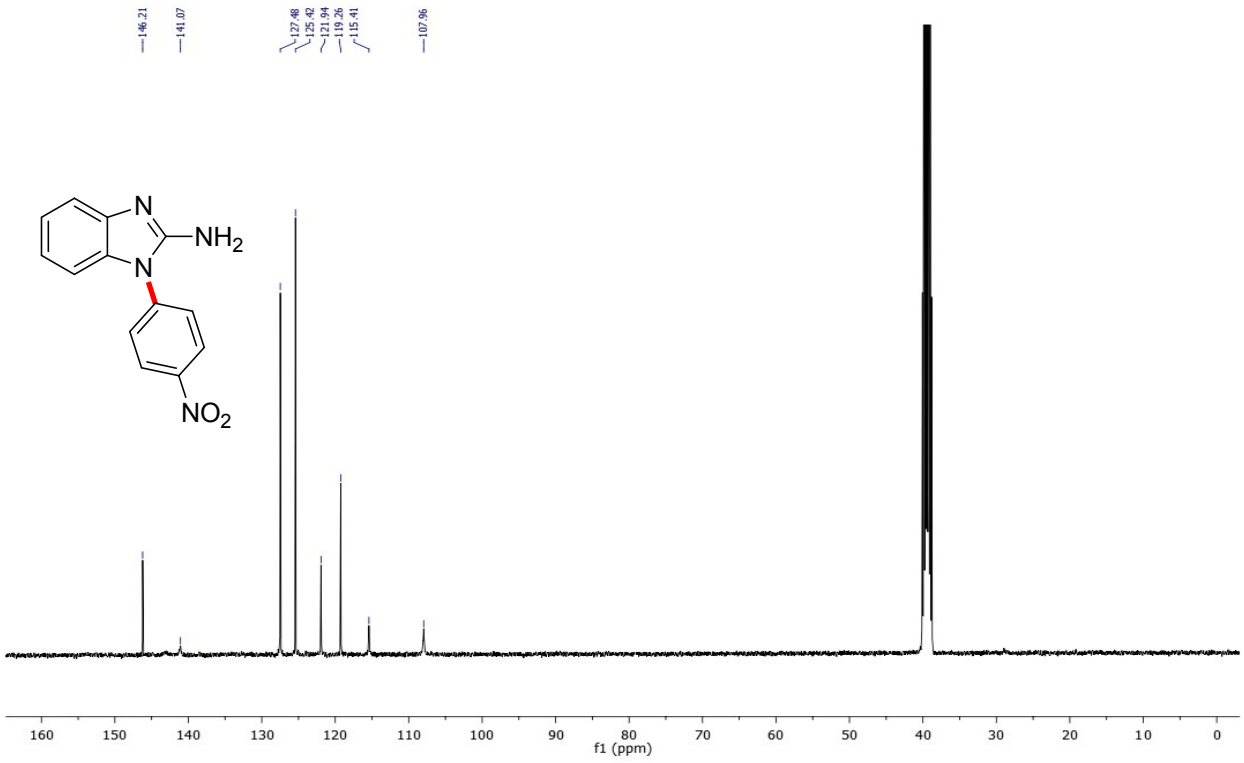
1-(*p*-Tolyl)-1*H*-benzo[d]imidazol-2-amine (3b): ^{13}C-NMR



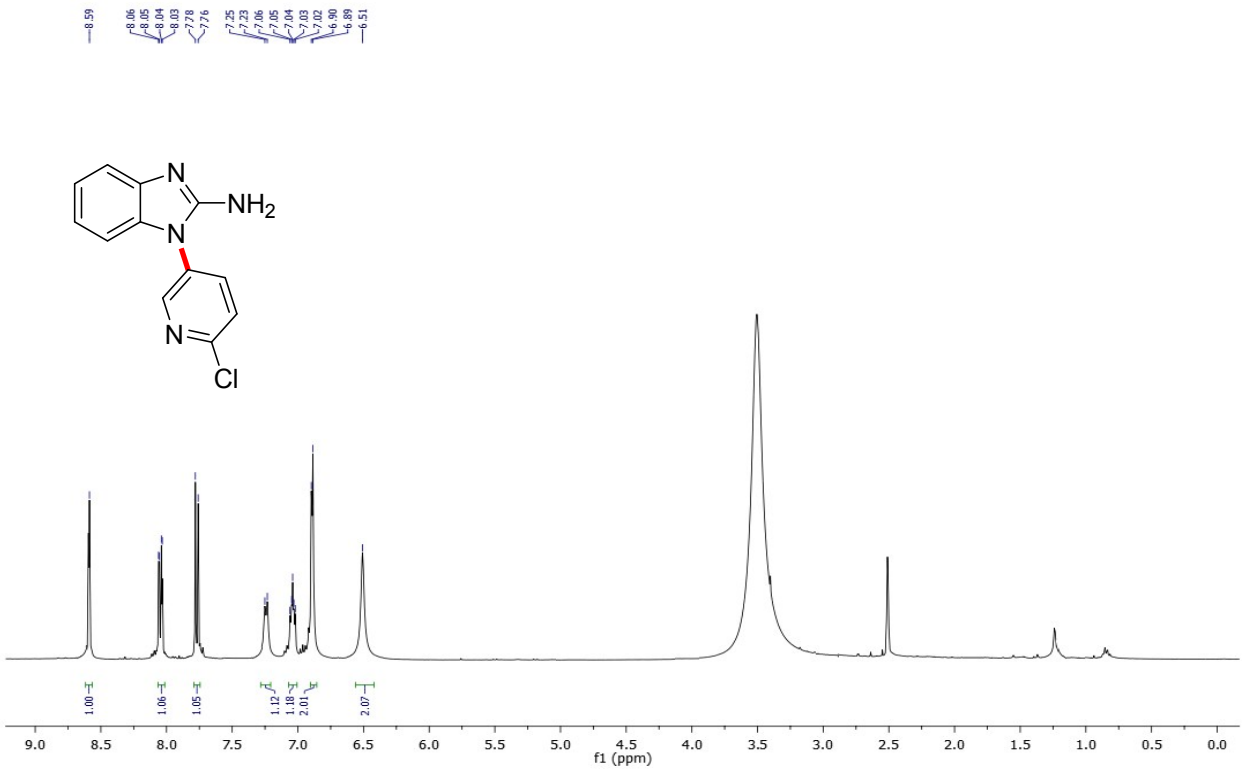
1-(4-Nitrophenyl)-1*H*-benzo[d]imidazol-2-amine (3c): ^{1}H-NMR



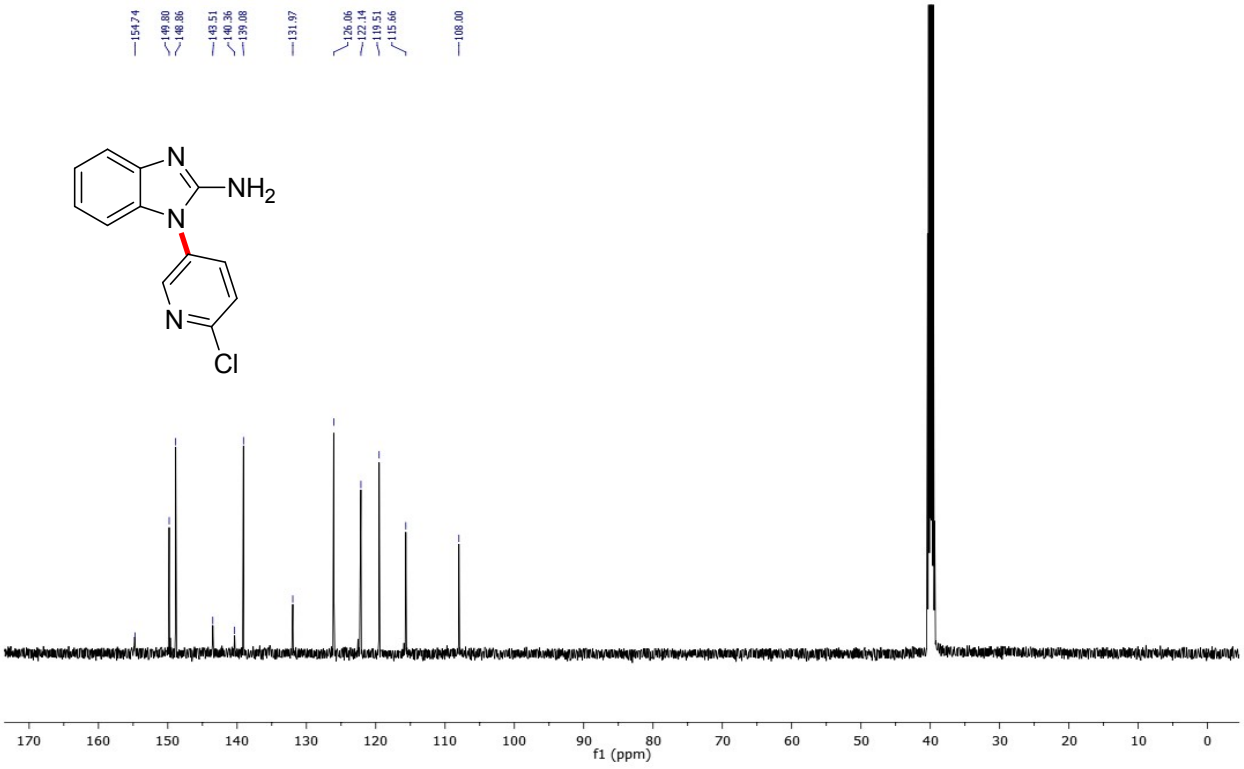
1-(4-Nitrophenyl)-1*H*-benzo[d]imidazol-2-amine (3c): ^{13}C-NMR



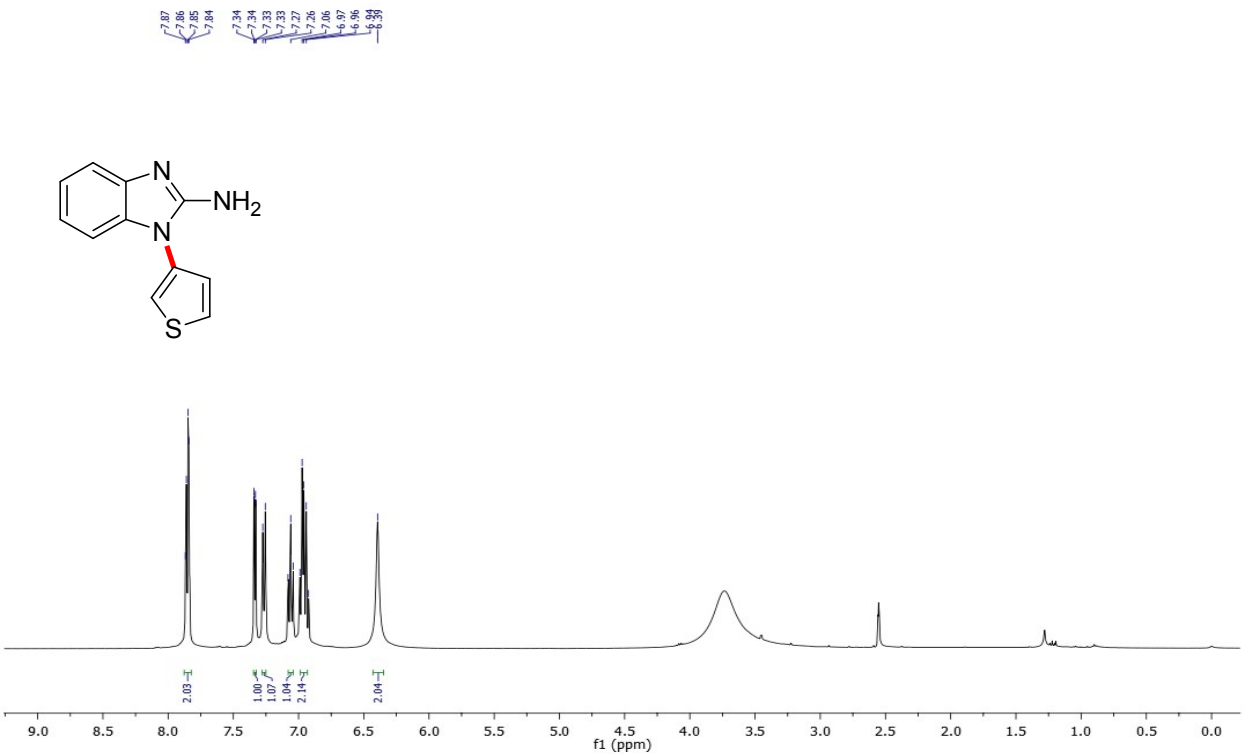
1-(6-Chloropyridin-3-yl)-1*H*-benzo[d]imidazol-2-amine (3d): ^{1}H-NMR



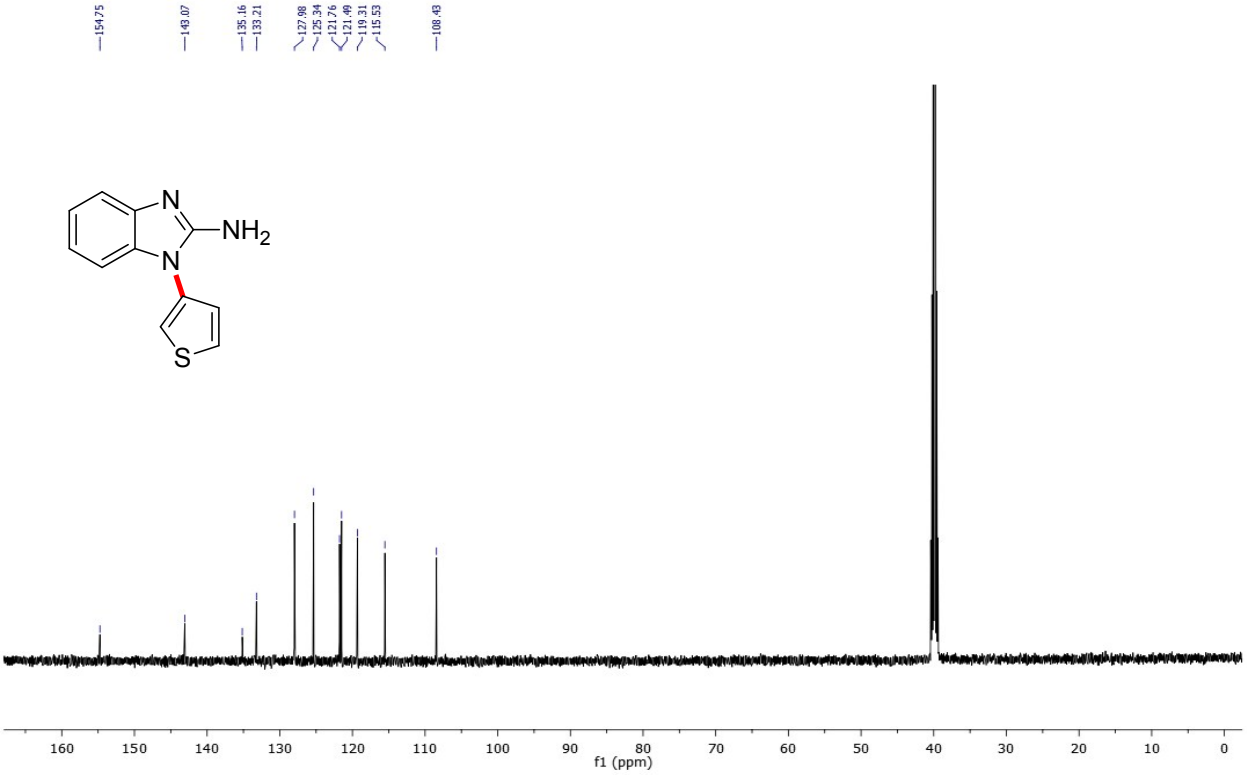
1-(6-Chloropyridin-3-yl)-1*H*-benzo[d]imidazol-2-amine (3d): ^{13}C-NMR



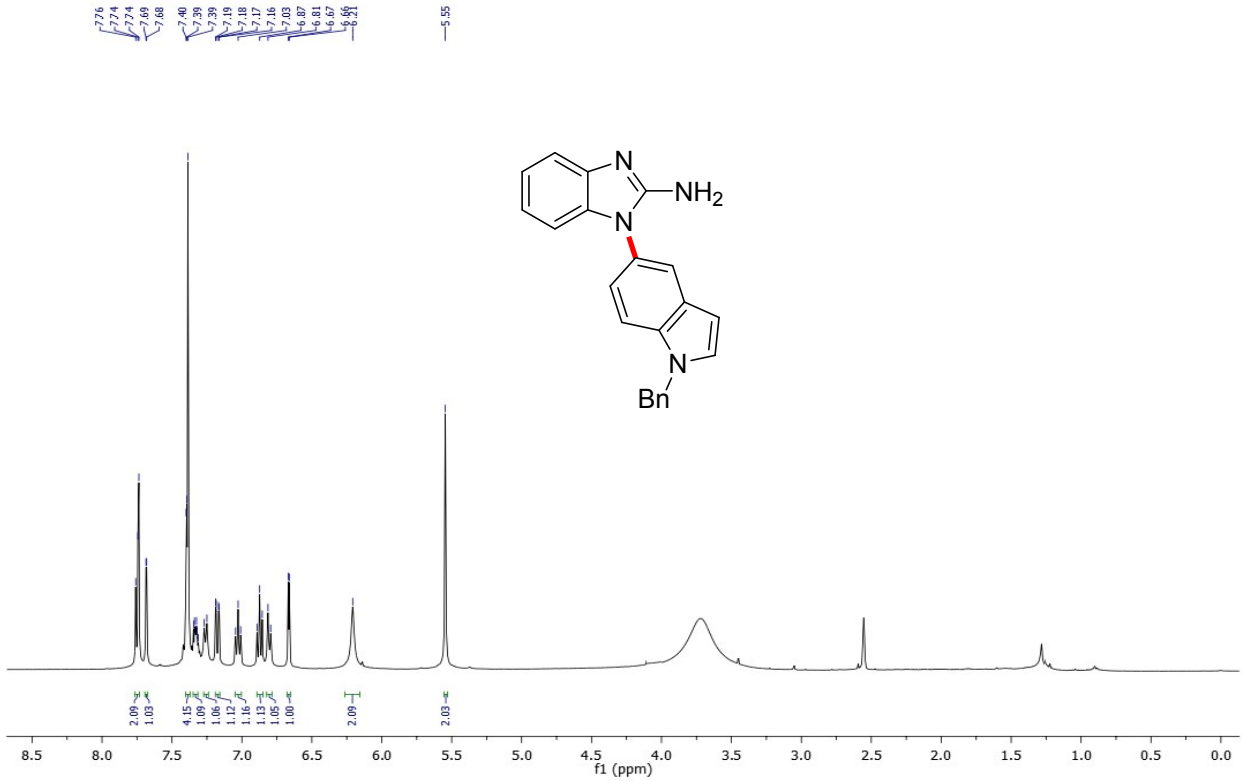
1-(Thiophen-3-yl)-1*H*-benzo[d]imidazol-2-amine (3e): ^{1}H-NMR



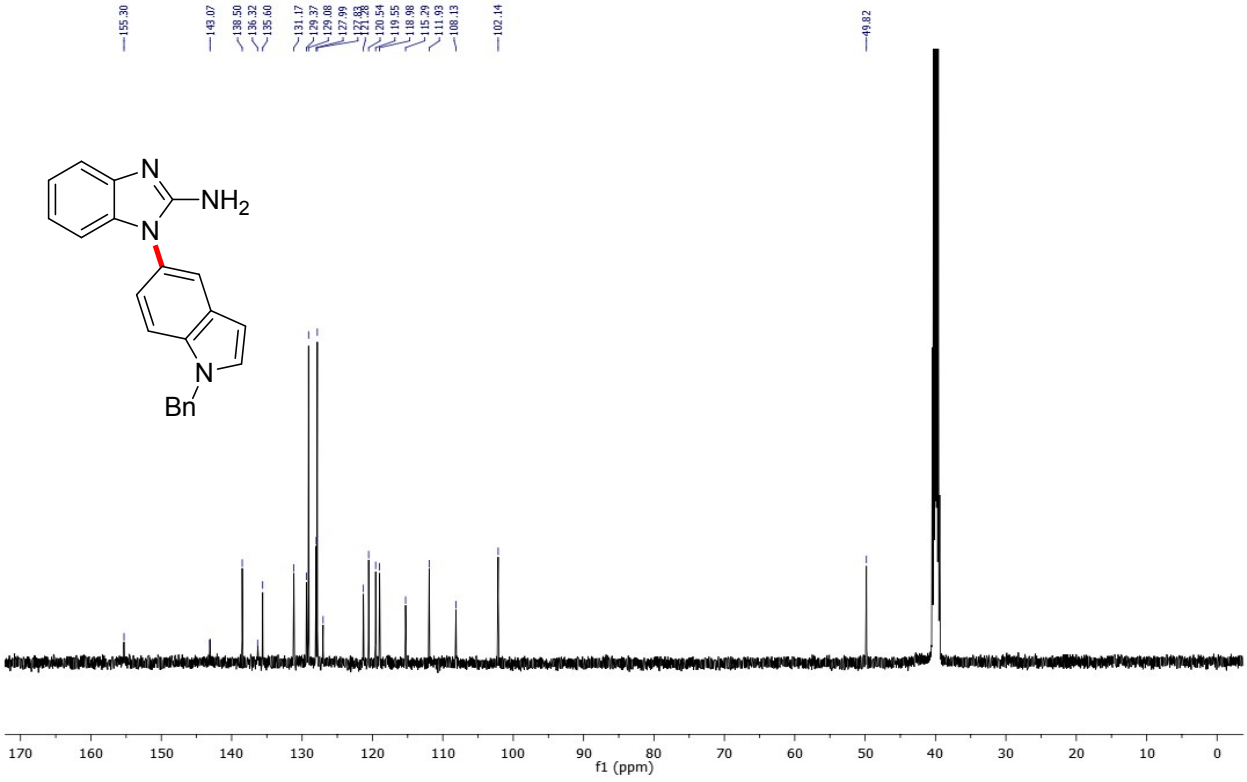
1-(Thiophen-3-yl)-1*H*-benzo[d]imidazol-2-amine (3e): ^{13}C-NMR



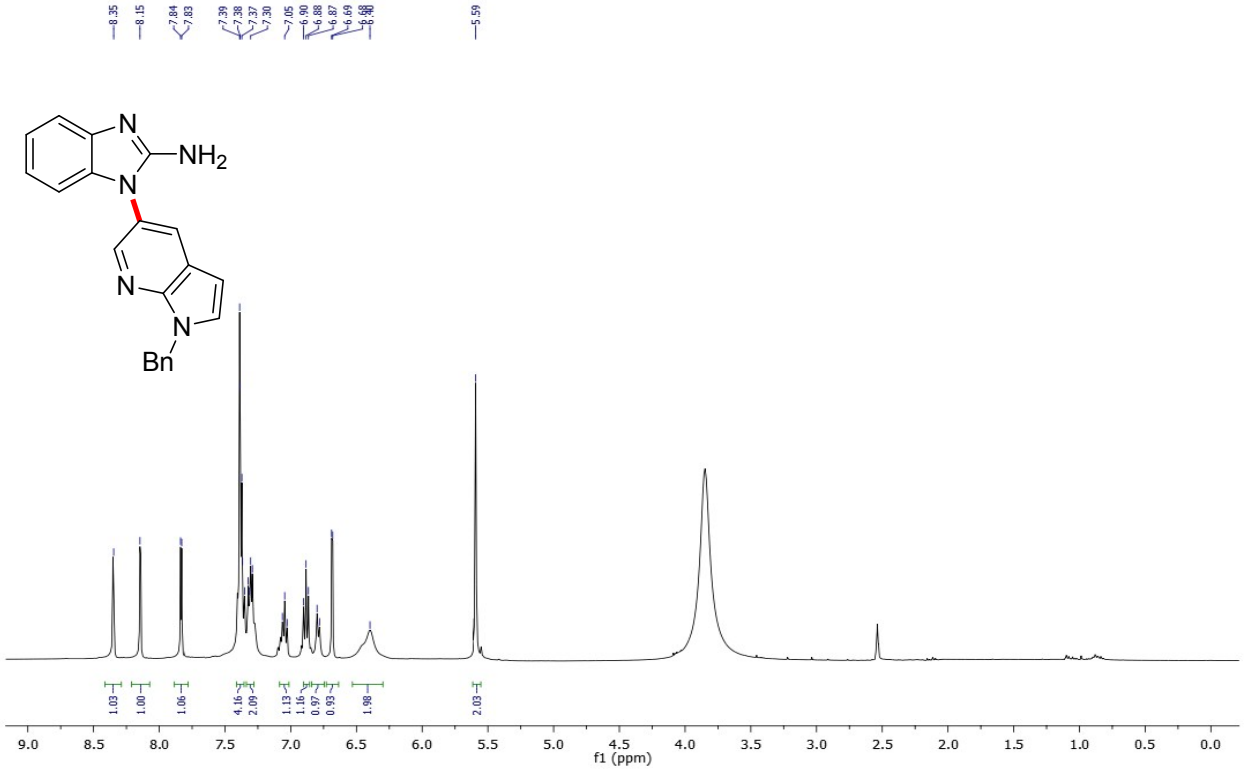
1-(1-Benzyl-1*H*-indol-5-yl)-1*H*-benzo[d]imidazol-2-amine (3f): ^{1}H-NMR



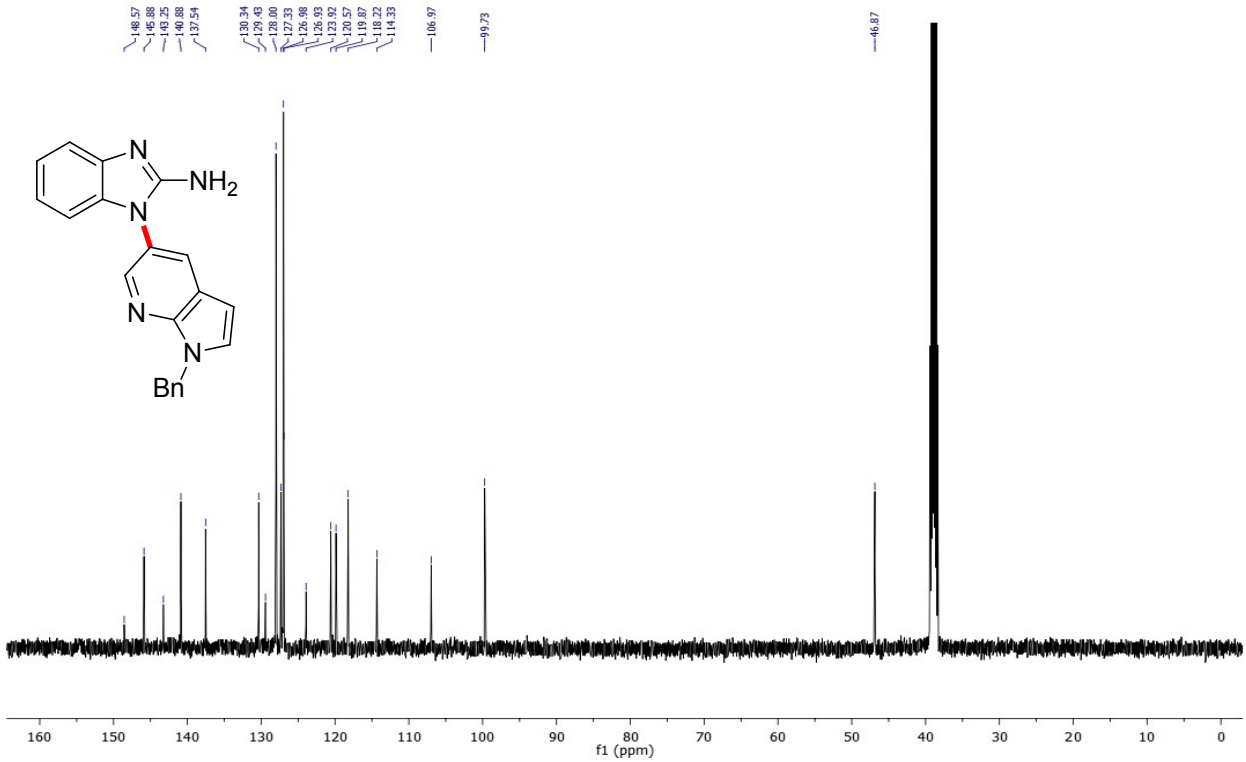
1-(1-Benzyl-1*H*-indol-5-yl)-1*H*-benzo[d]imidazol-2-amine (3f): ^{13}C-NMR



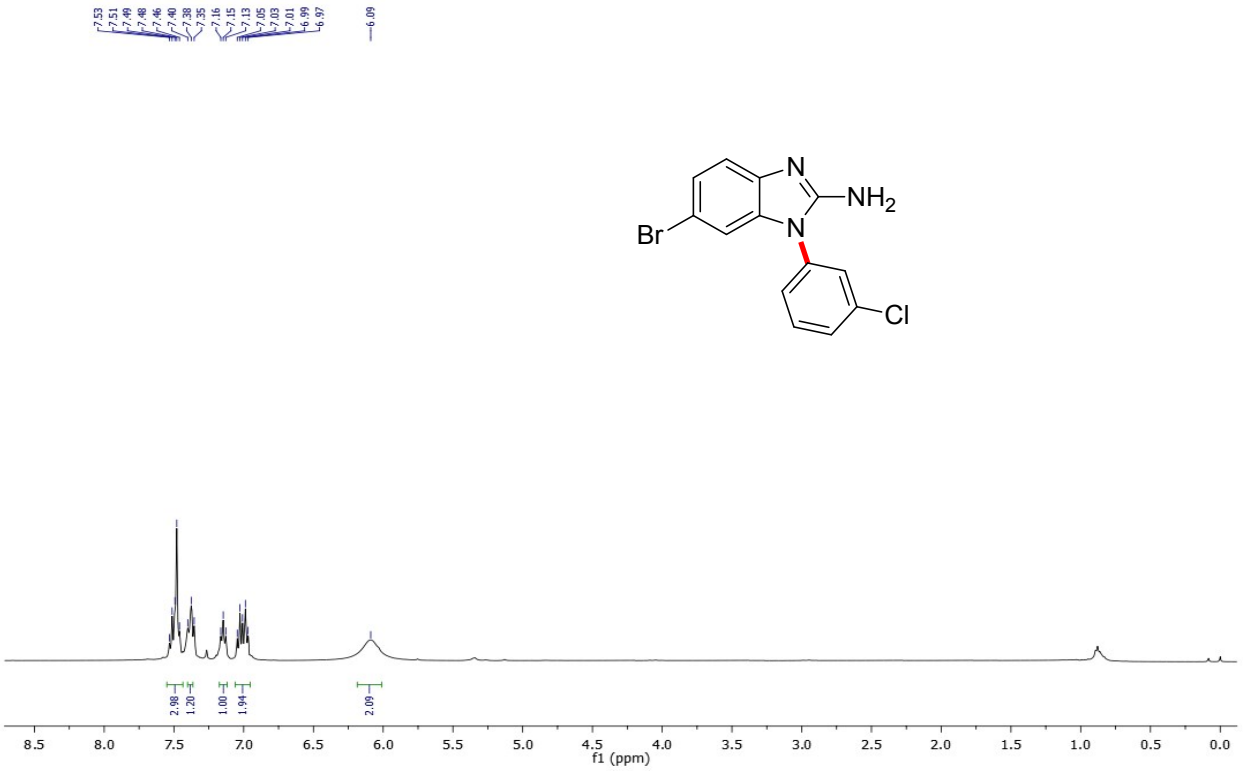
1-(1-Benzyl-1*H*-pyrrolo [2, 3-b] pyridin-5-yl)-1*H*-benzo[d]imidazol-2-amine (3g): ^{1}H-NMR



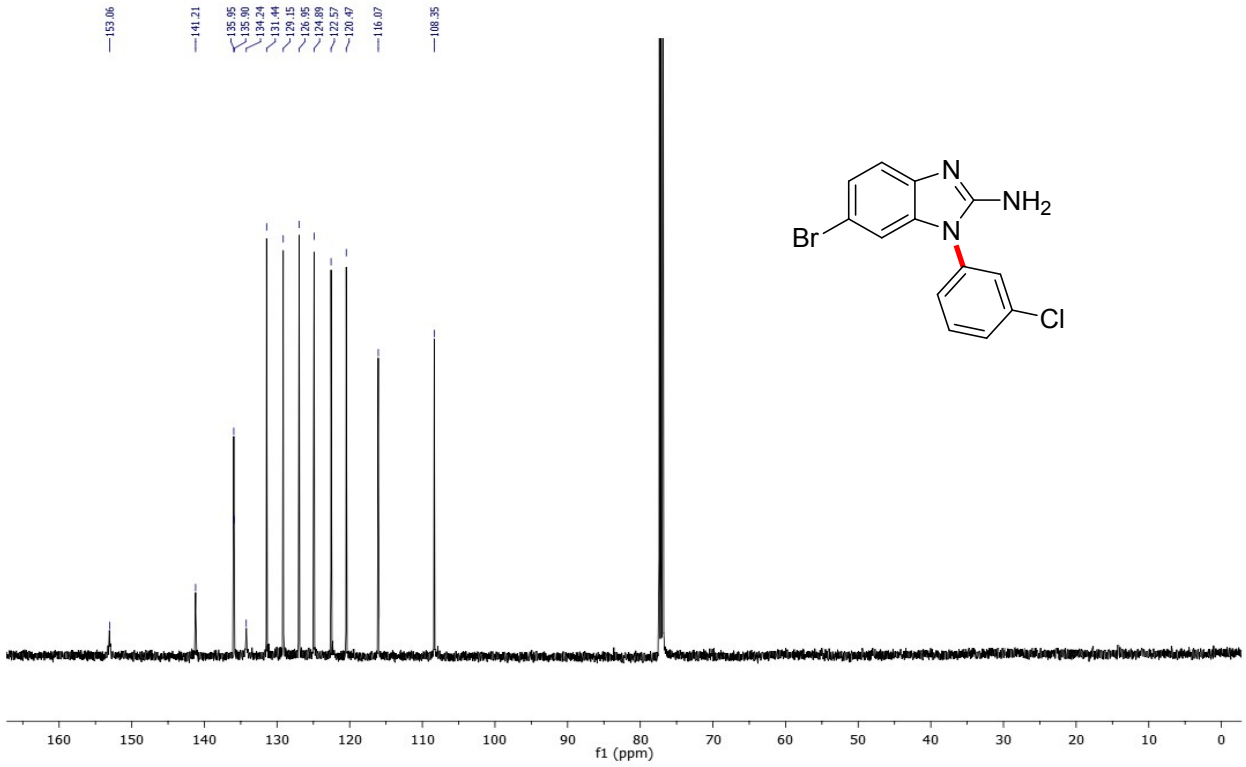
1-(1-Benzyl-1*H*-pyrrolo [2, 3-b] pyridin-5-yl)-1*H*-benzo[d]imidazol-2-amine (3g): ^{13}C-NMR



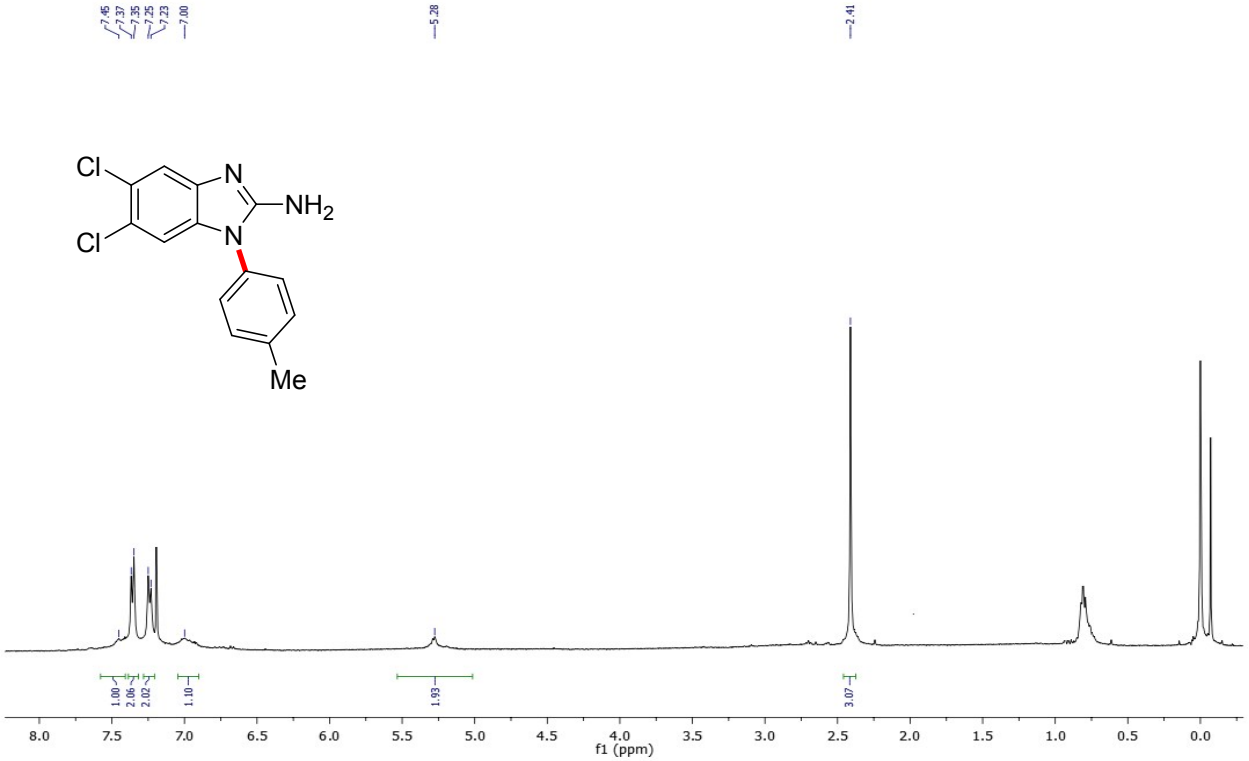
6-Bromo-1-(3-chlorophenyl)-1H-benzo[d]imidazol-2-amine (3h): ^{1}H-NMR



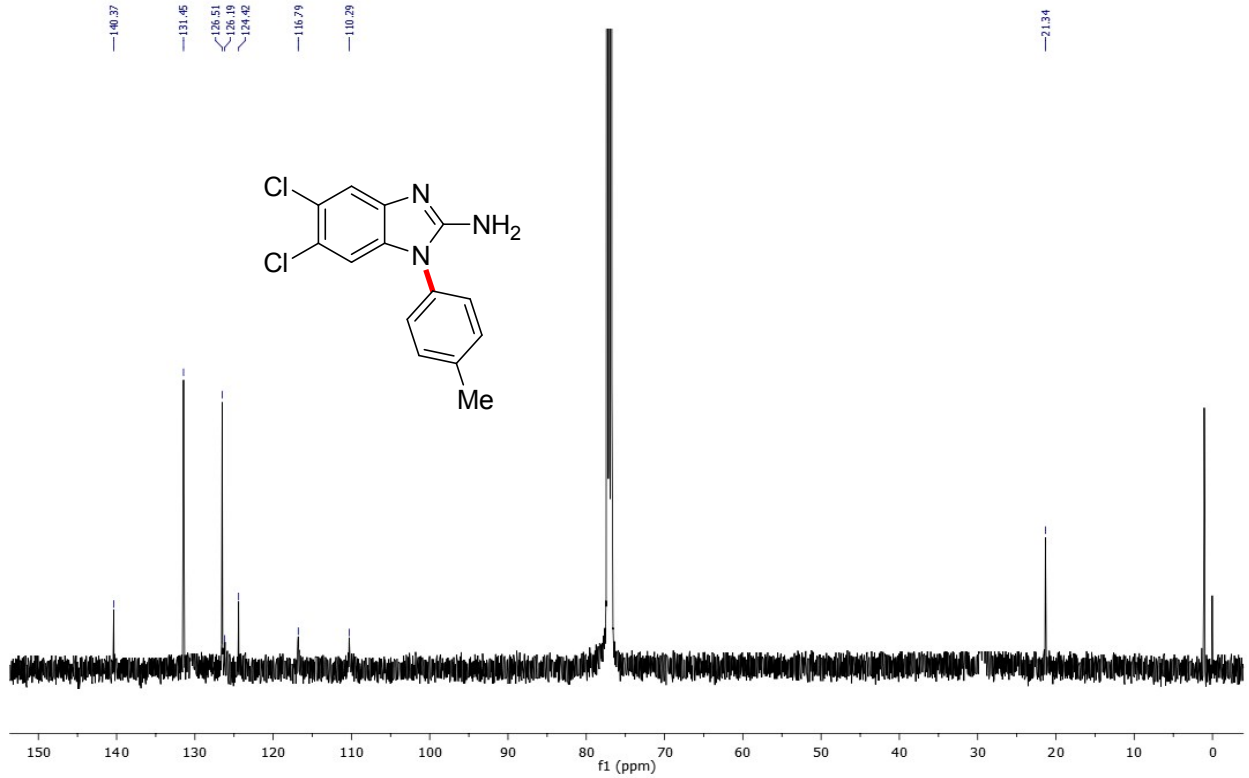
6-Bromo-1-(3-chlorophenyl)-1H-benzo[d]imidazol-2-amine (3h): ^{13}C-NMR



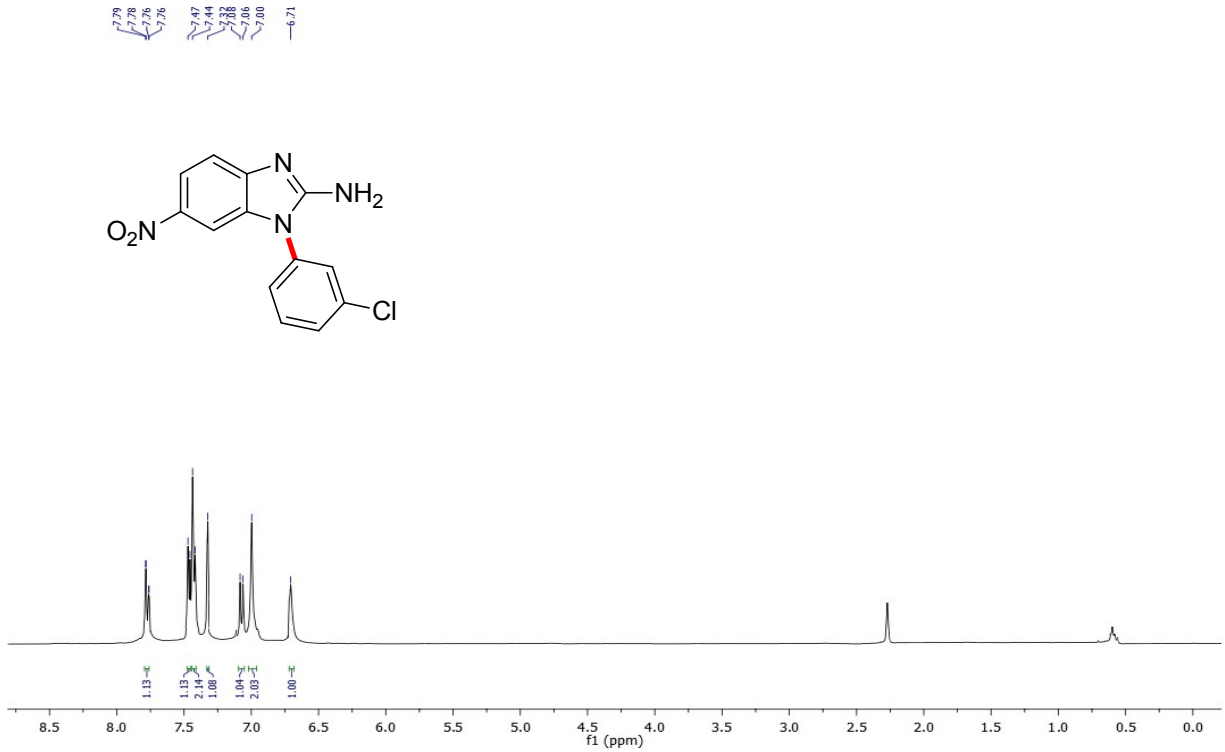
5, 6-Dichloro-1-(*p*-tolyl)-1*H*-benzo[d]imidazol-2-amine (3i): ^{1}H-NMR



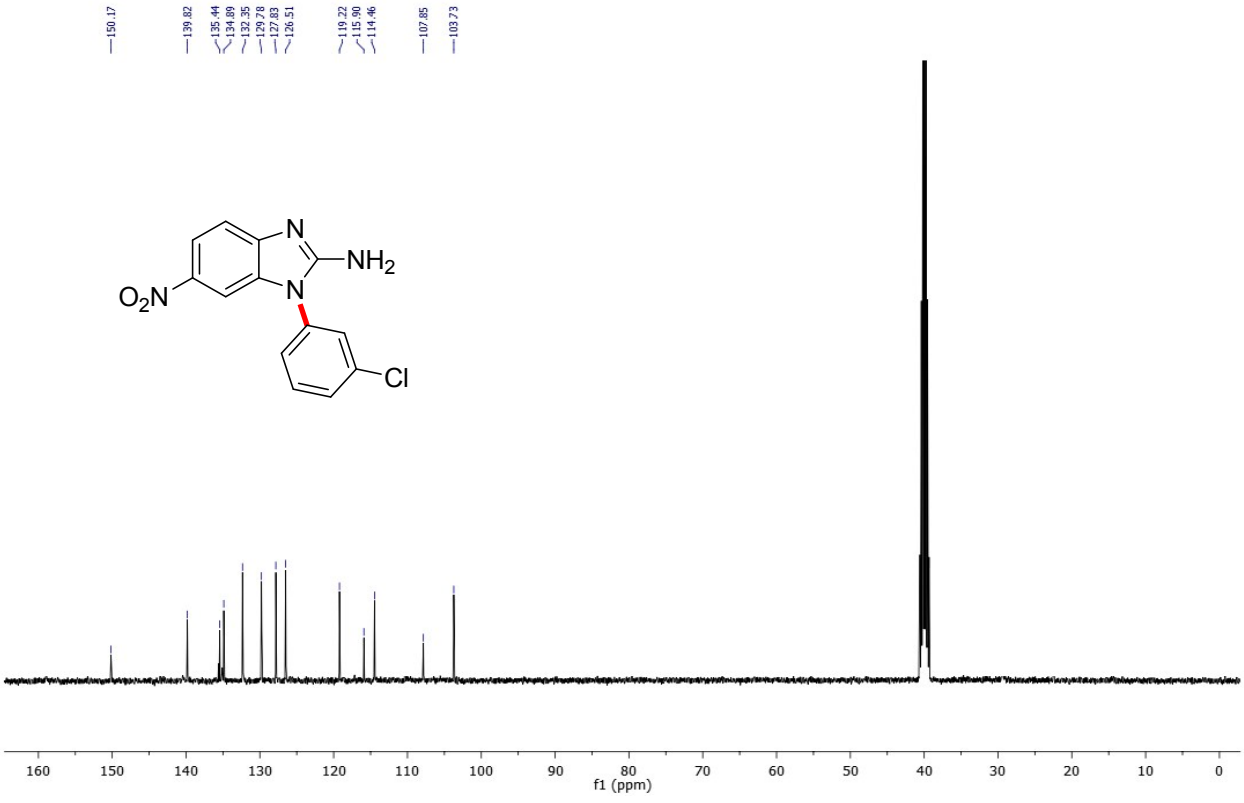
5, 6-Dichloro-1-(*p*-tolyl)-1*H*-benzo[d]imidazol-2-amine (3i): ^{13}C-NMR



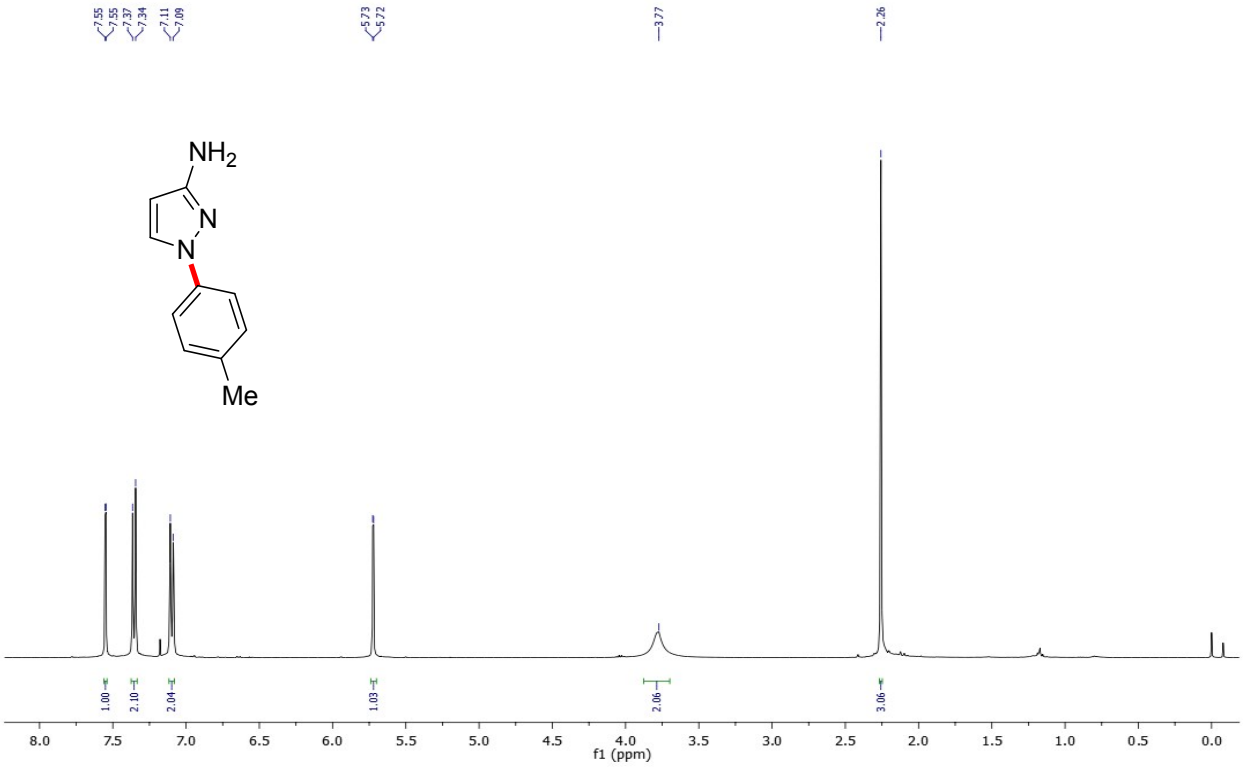
1-(3-Chlorophenyl)-6-nitro-1*H*-benzo[*d*]imidazol-2-amine (3j): ^{1}H-NMR



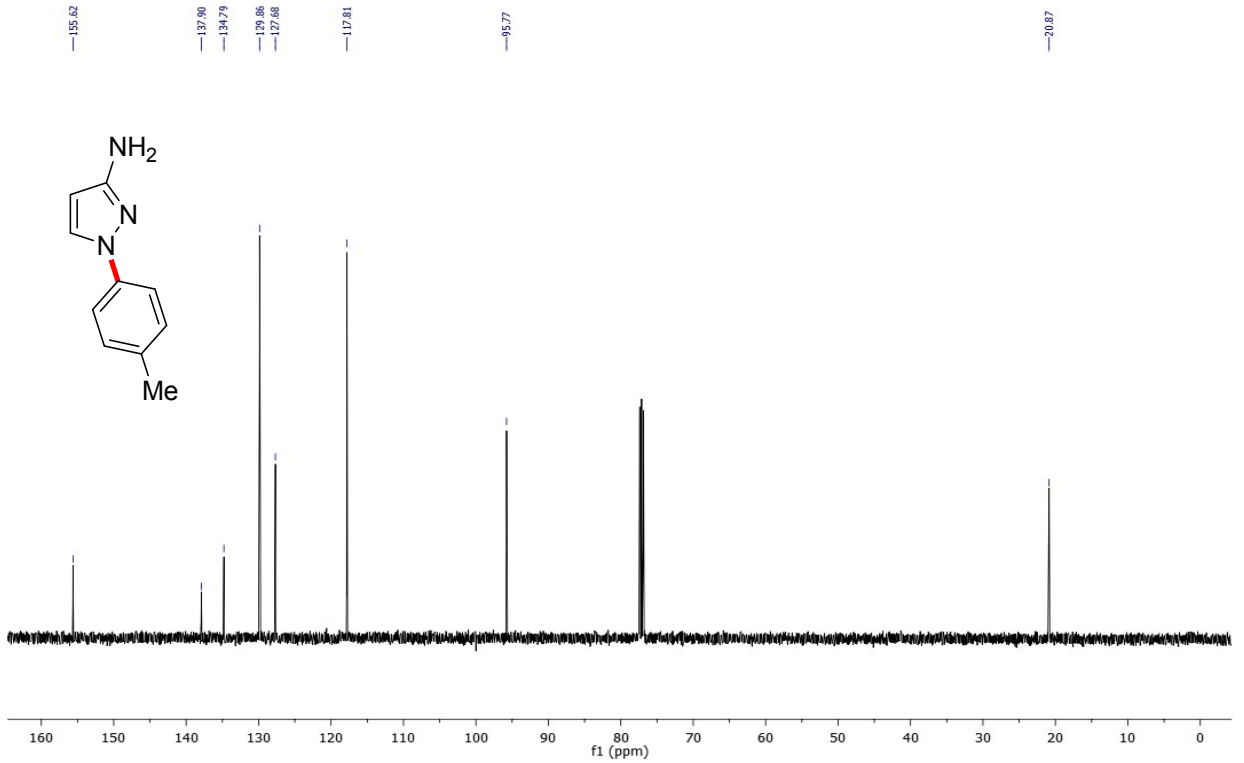
1-(3-Chlorophenyl)-6-nitro-1*H*-benzo[*d*]imidazol-2-amine (3j): ^{13}C-NMR



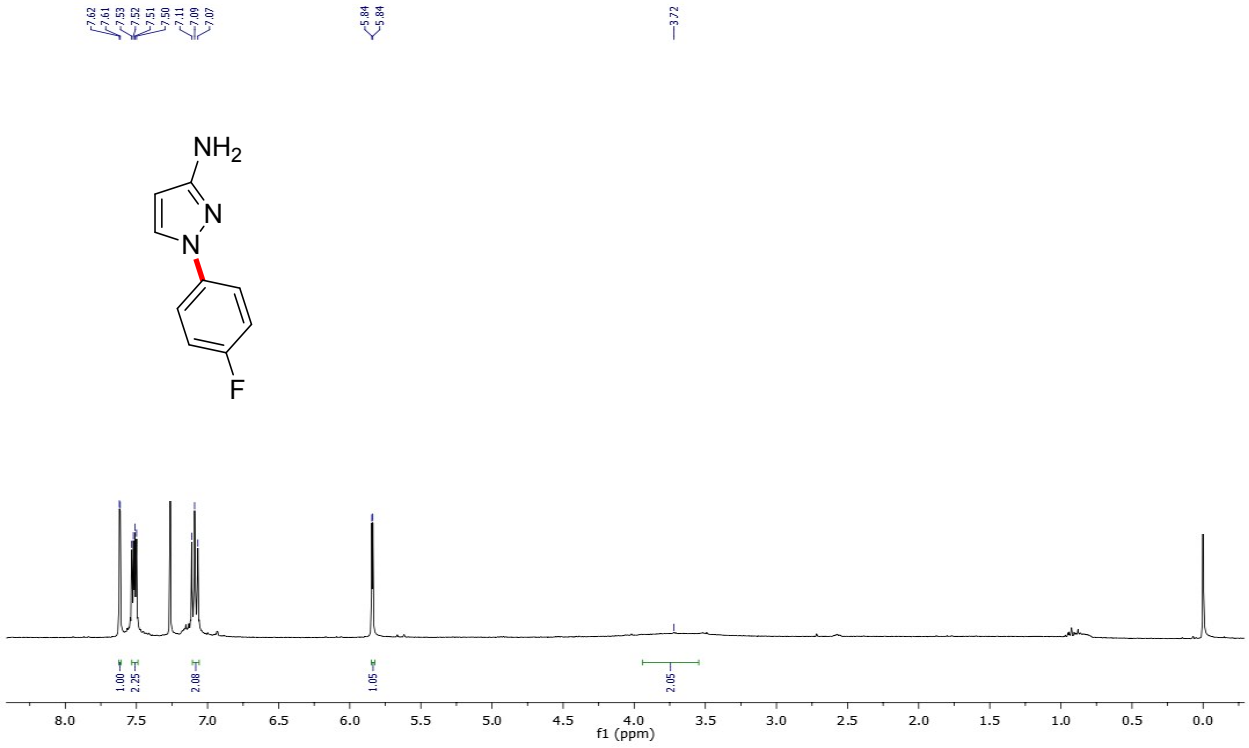
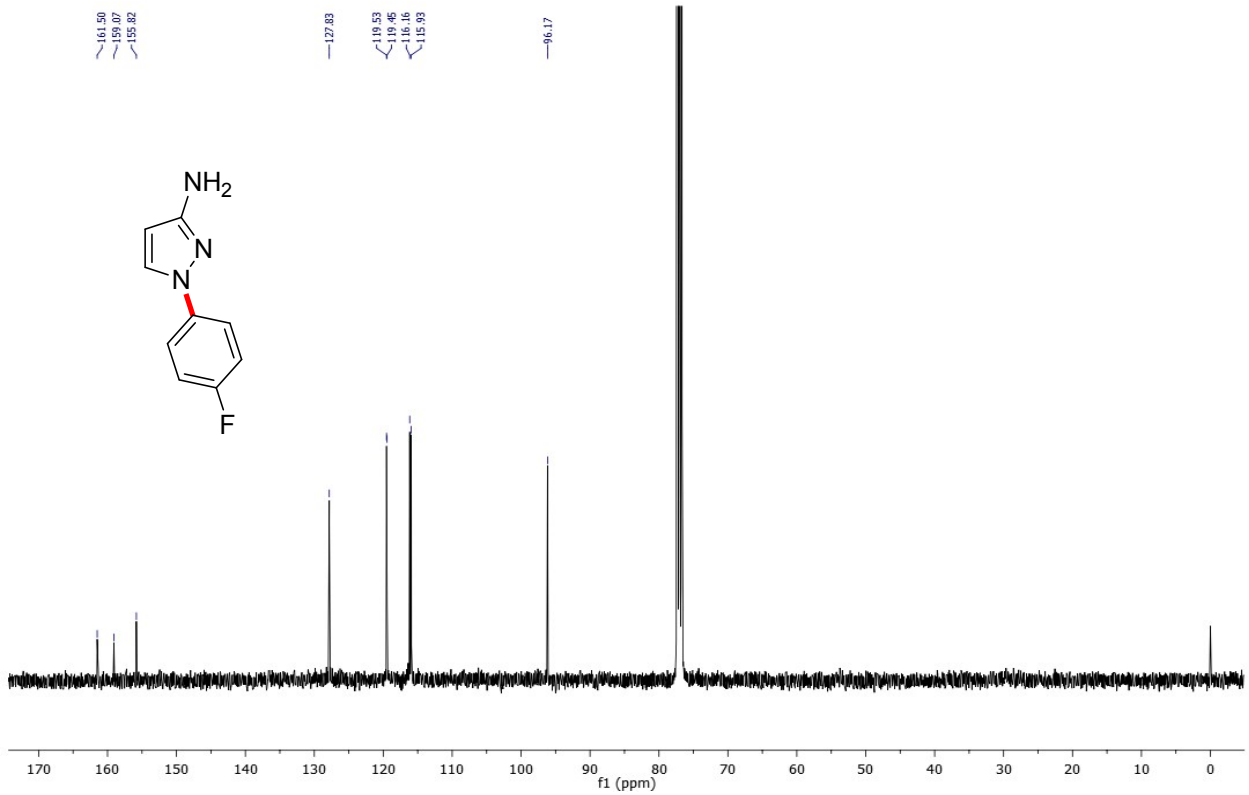
1-(*p*-Tolyl)-1*H*-pyrazol-3-amine (3k): ^{1}H-NMR



1-(*p*-Tolyl)-1*H*-pyrazol-3-amine (3k): ^{13}C-NMR



1-(4-Fluorophenyl)-1*H*-pyrazol-3-amine (3l): ^{1}H-NMR



1-(4-Fluorophenyl)-1*H*-pyrazol-3-amine (3l): ^{13}C-NMR