

ASIAN JOURNAL

OF ORGANIC CHEMISTRY

Supporting Information

Nickel-Catalyzed Cross-Coupling of (Hetero)aryl Chlorides with Aryllithium Compounds

Jian-Long Tao^[a] and Zhong-Xia Wang^{*[a, b]}

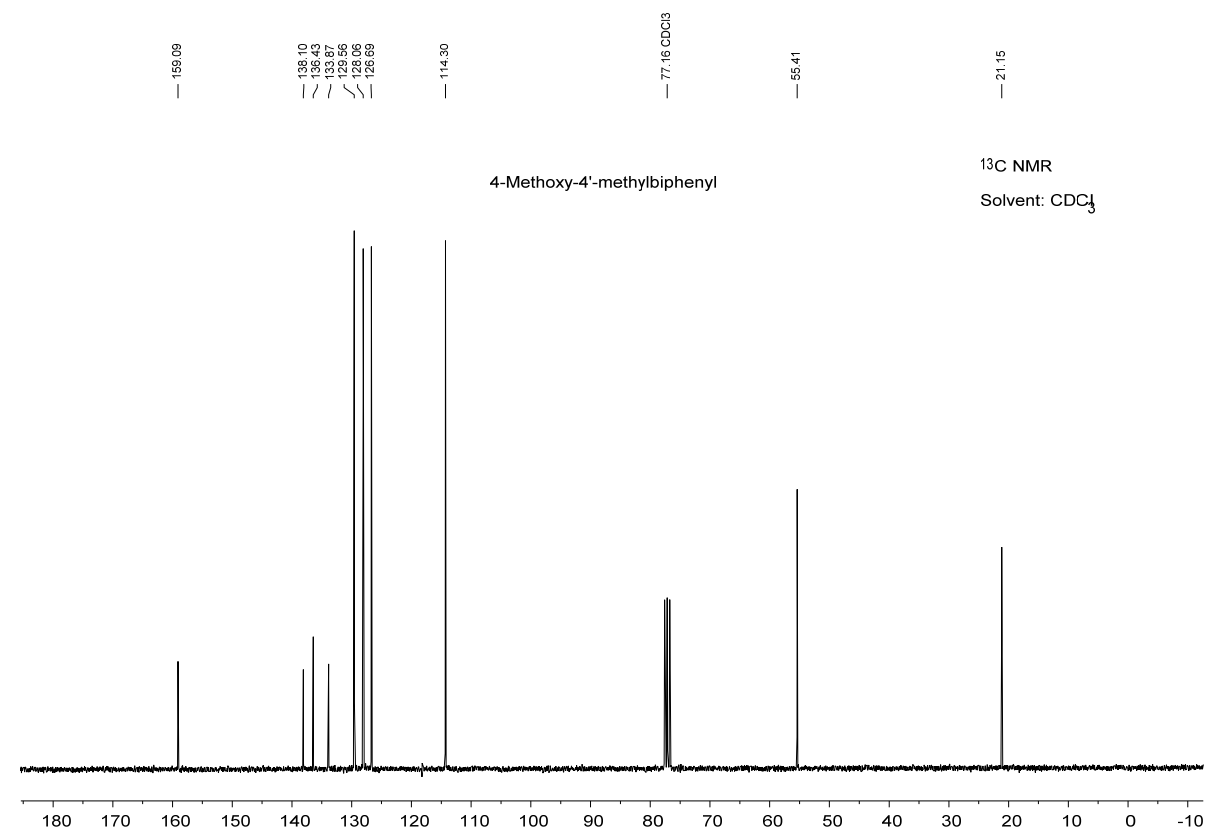
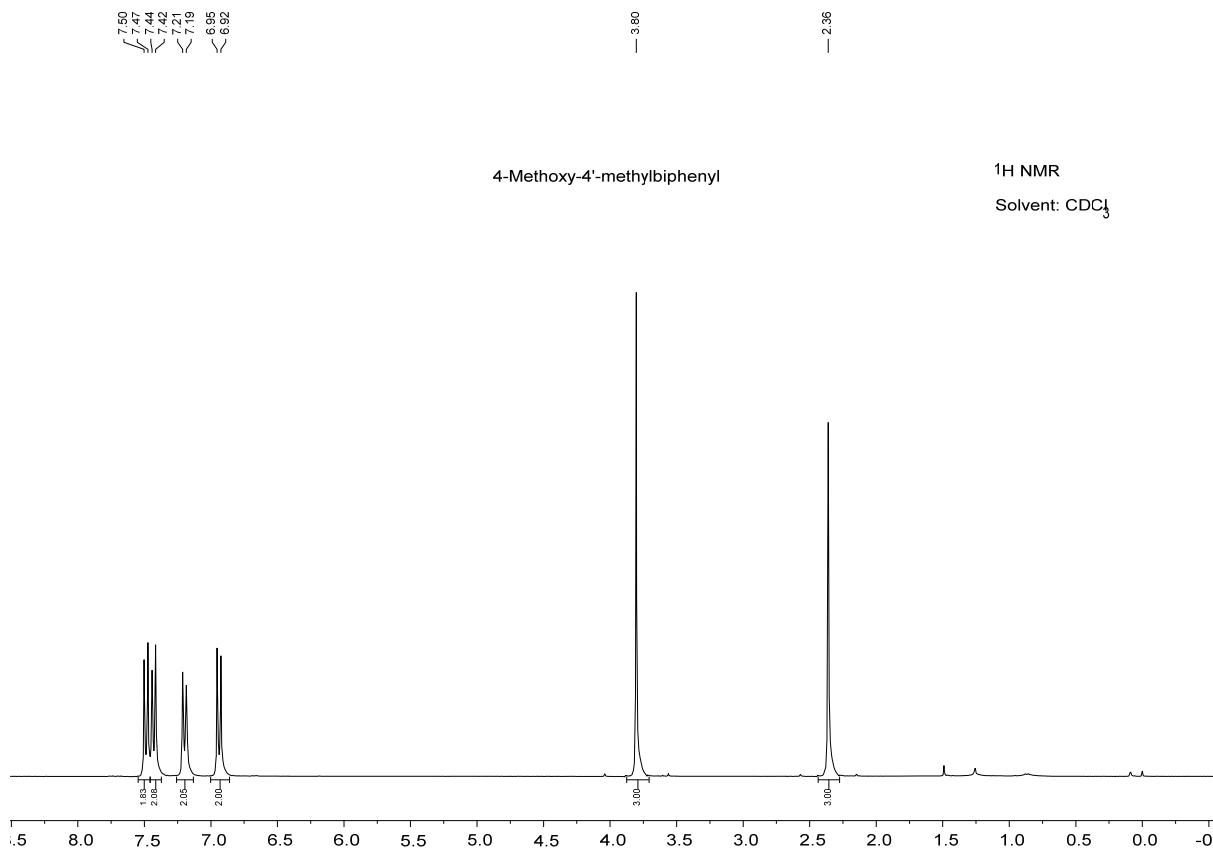
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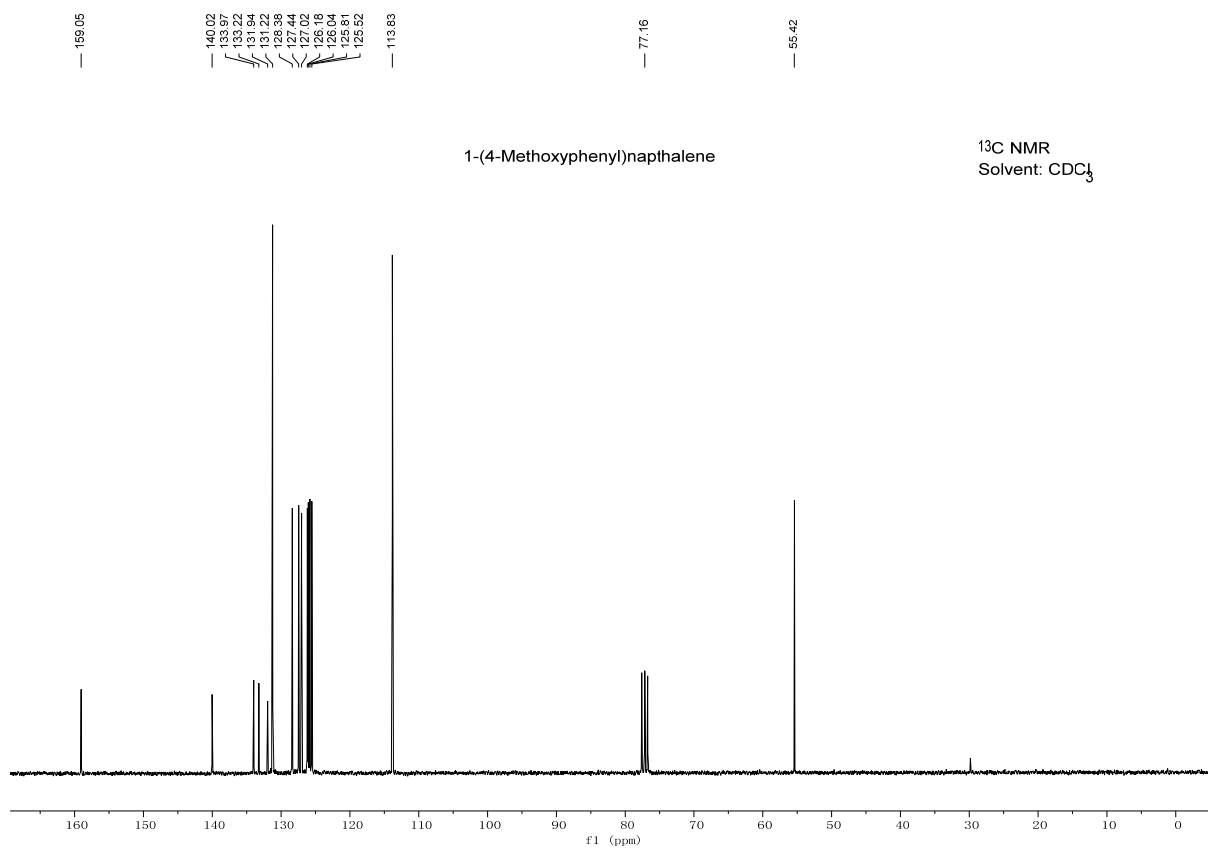
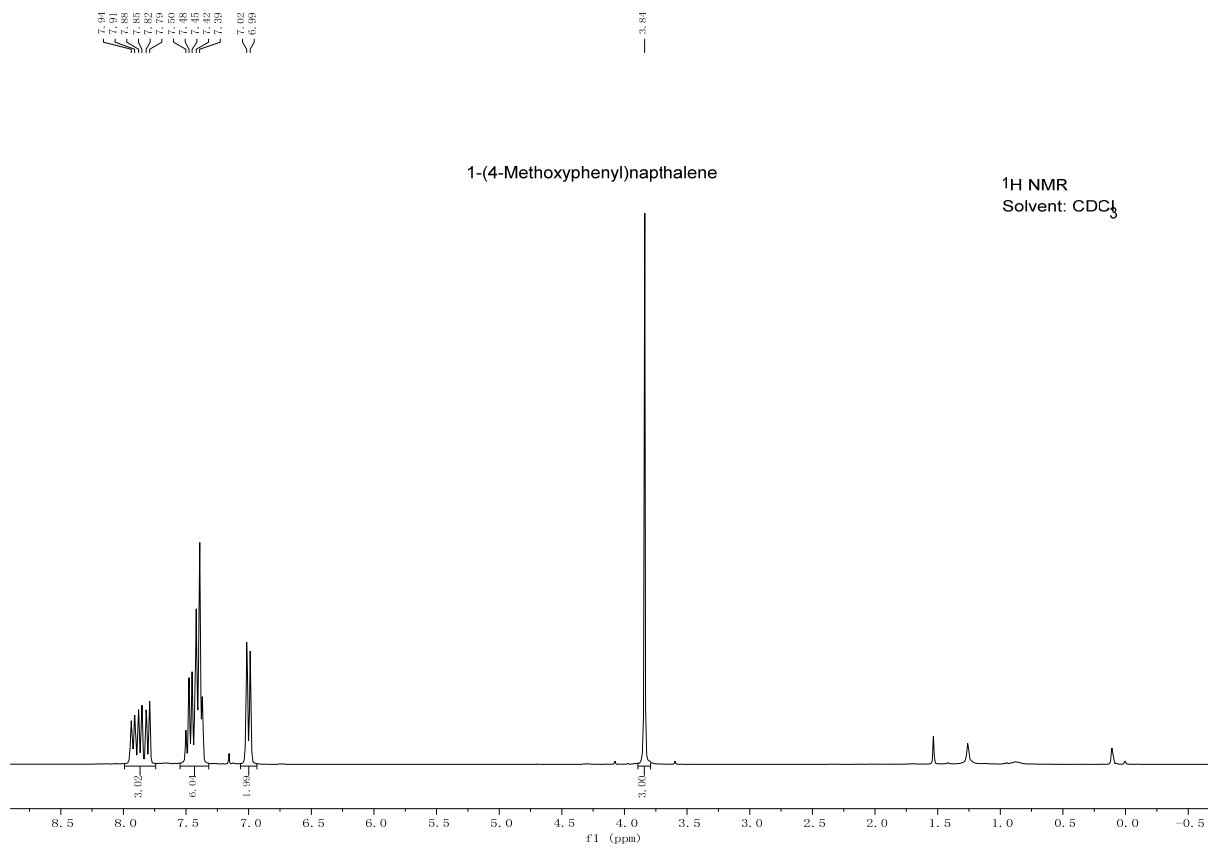
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Copies of NMR spectra for the cross-coupling products

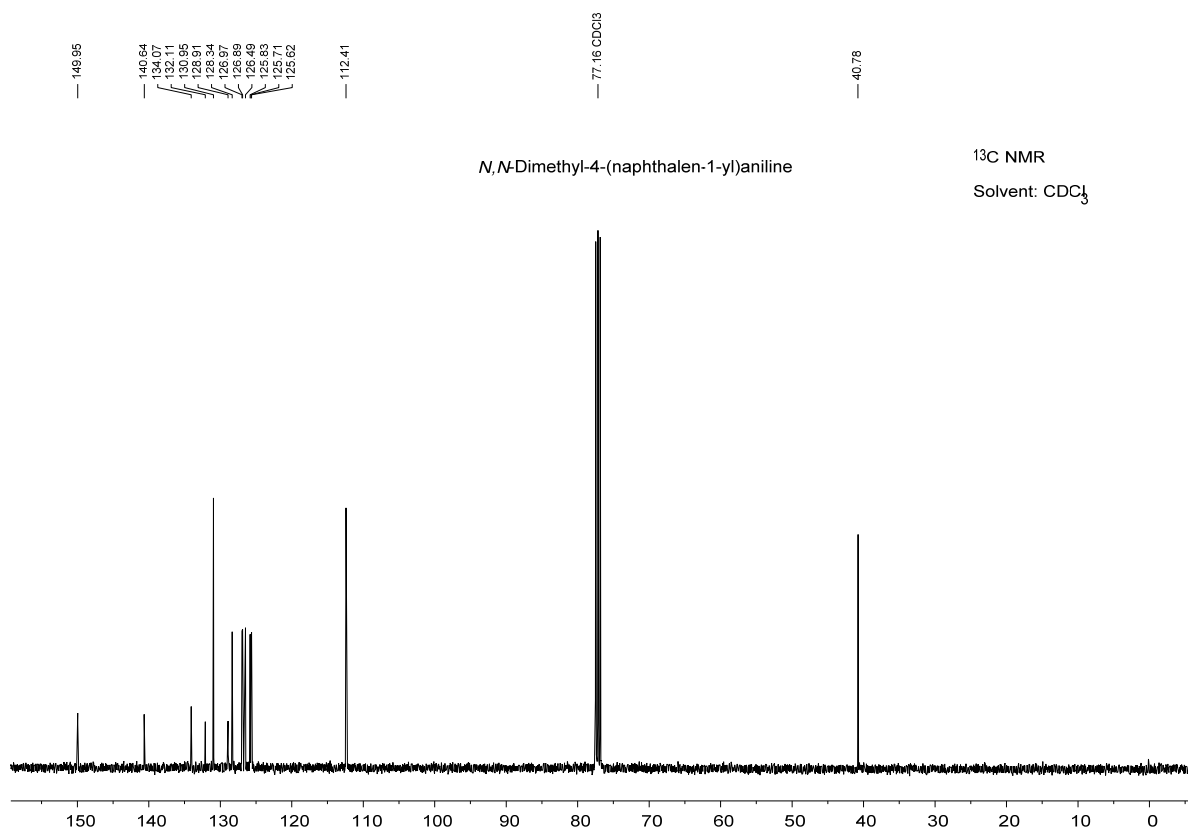
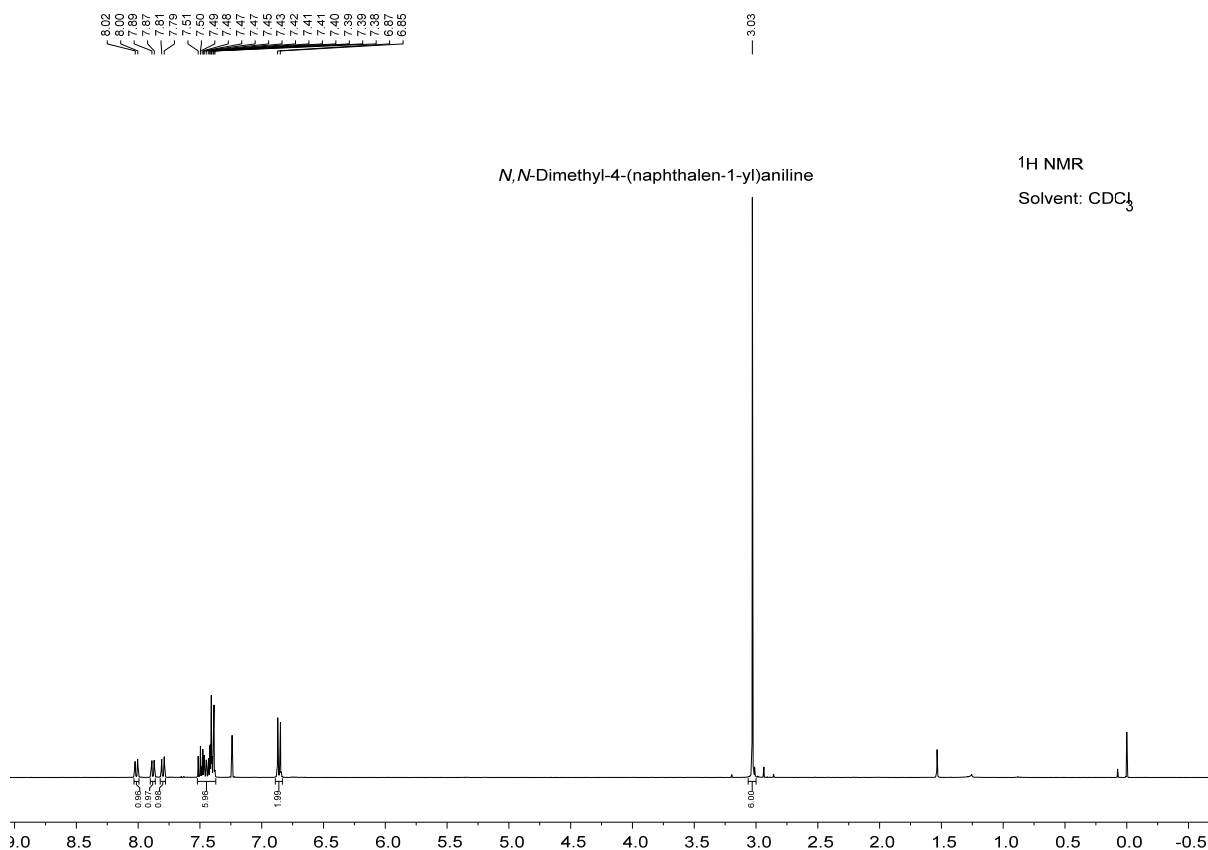
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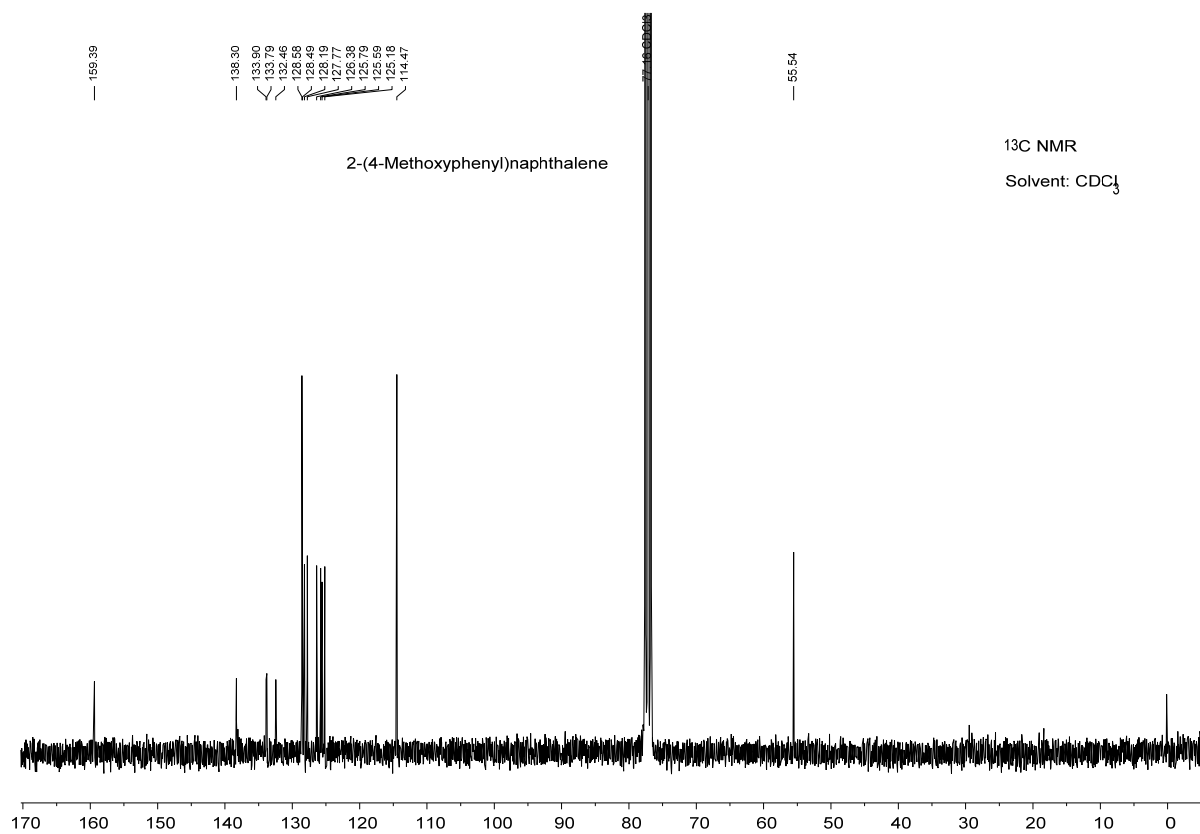
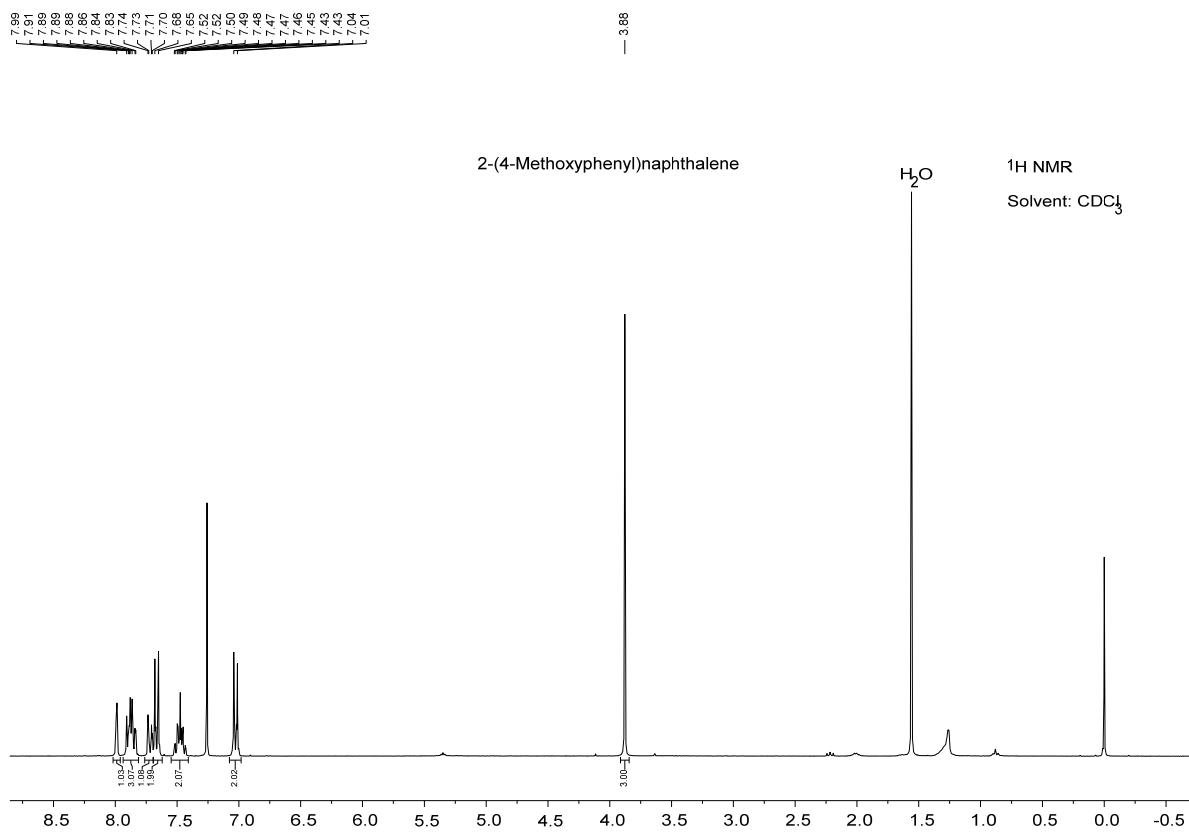
(2) 1-(4-Methoxyphenyl)naphthalene



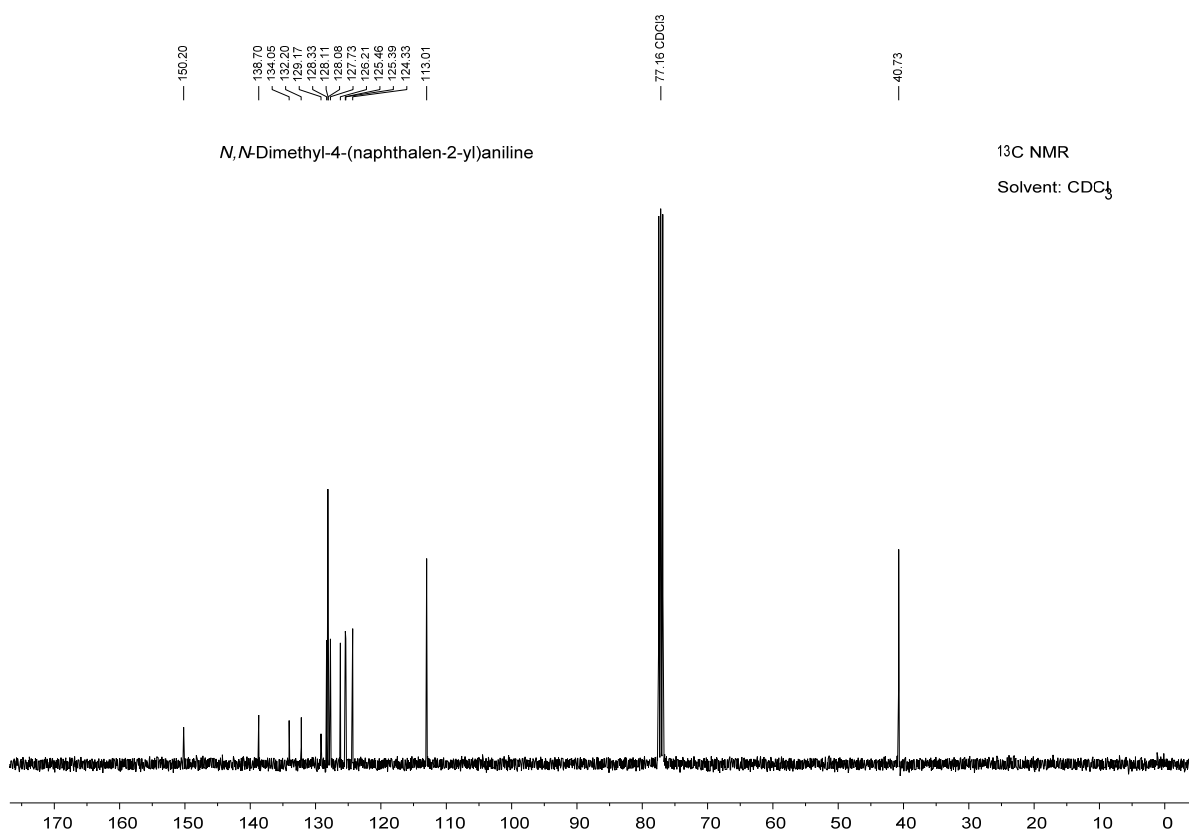
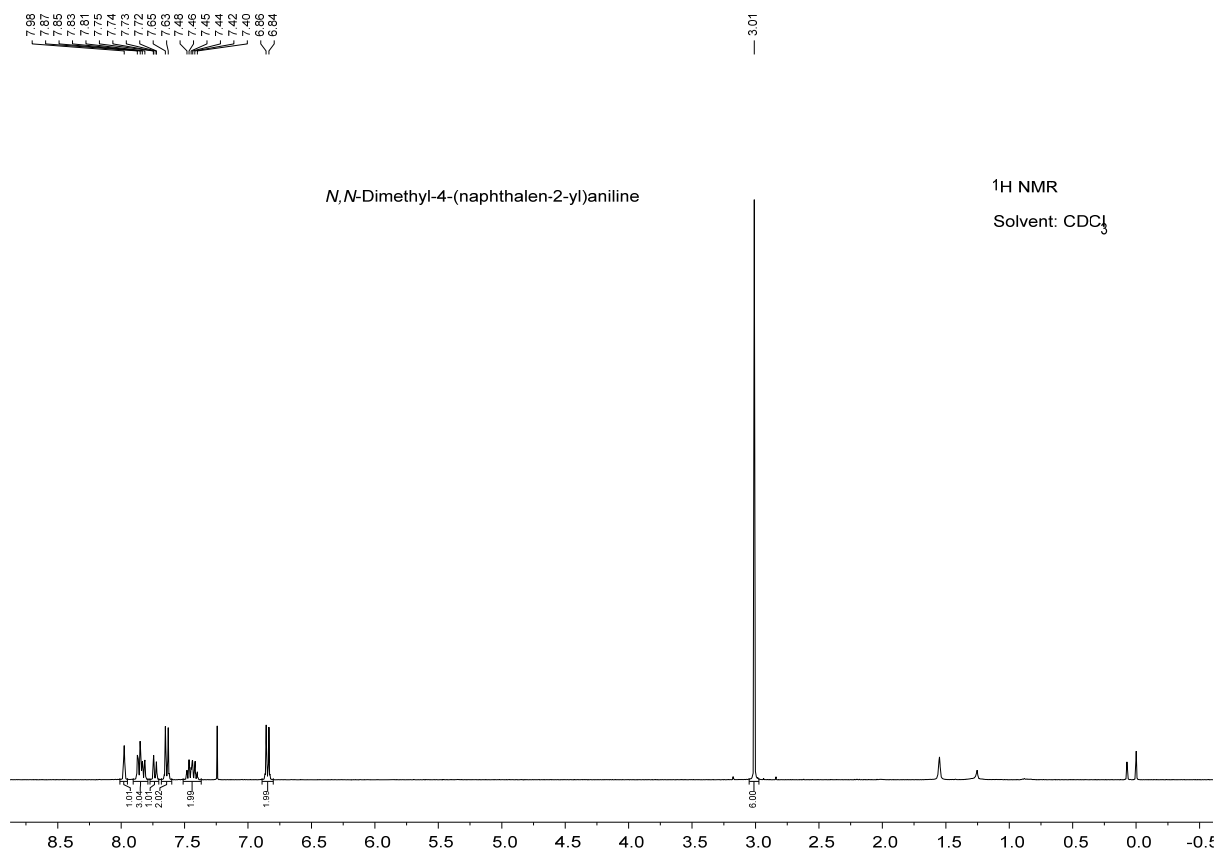
(3) *N,N*-Dimethyl-4-(naphthalen-1-yl)aniline



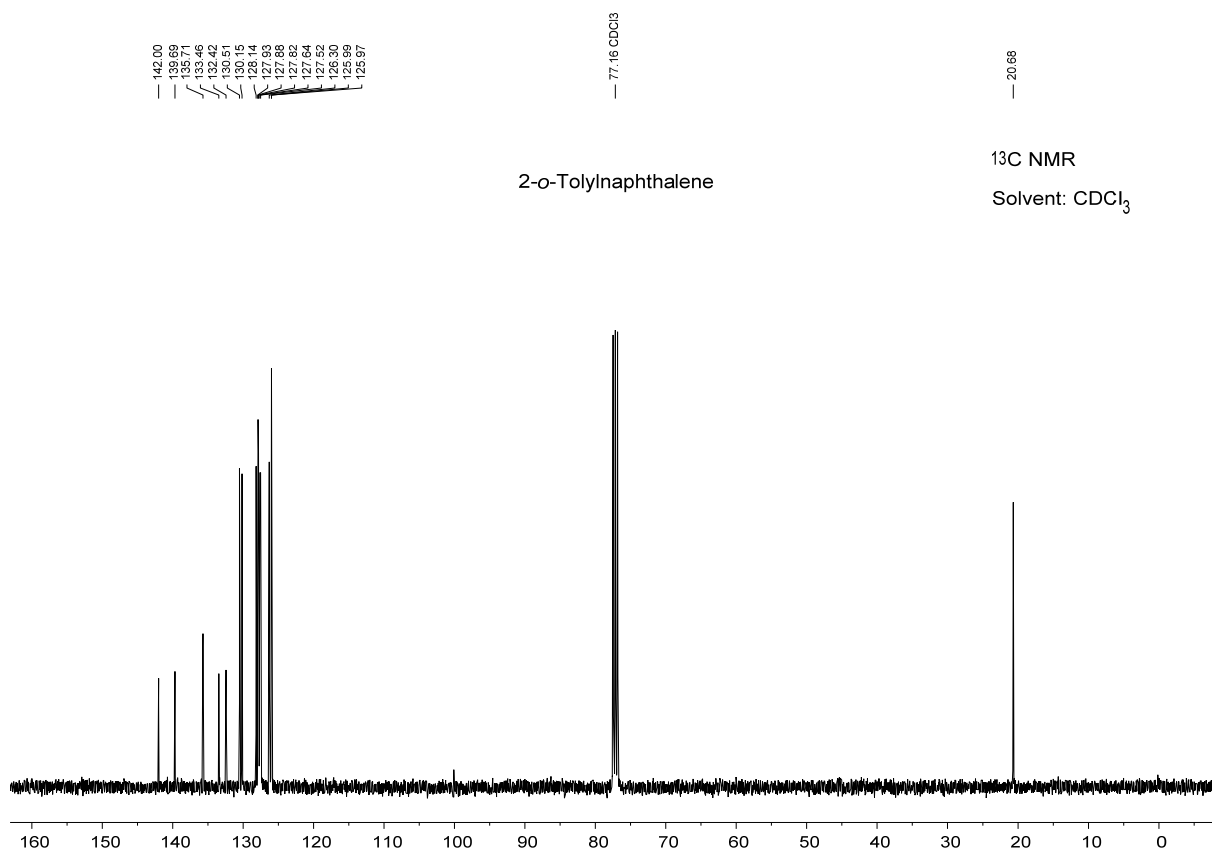
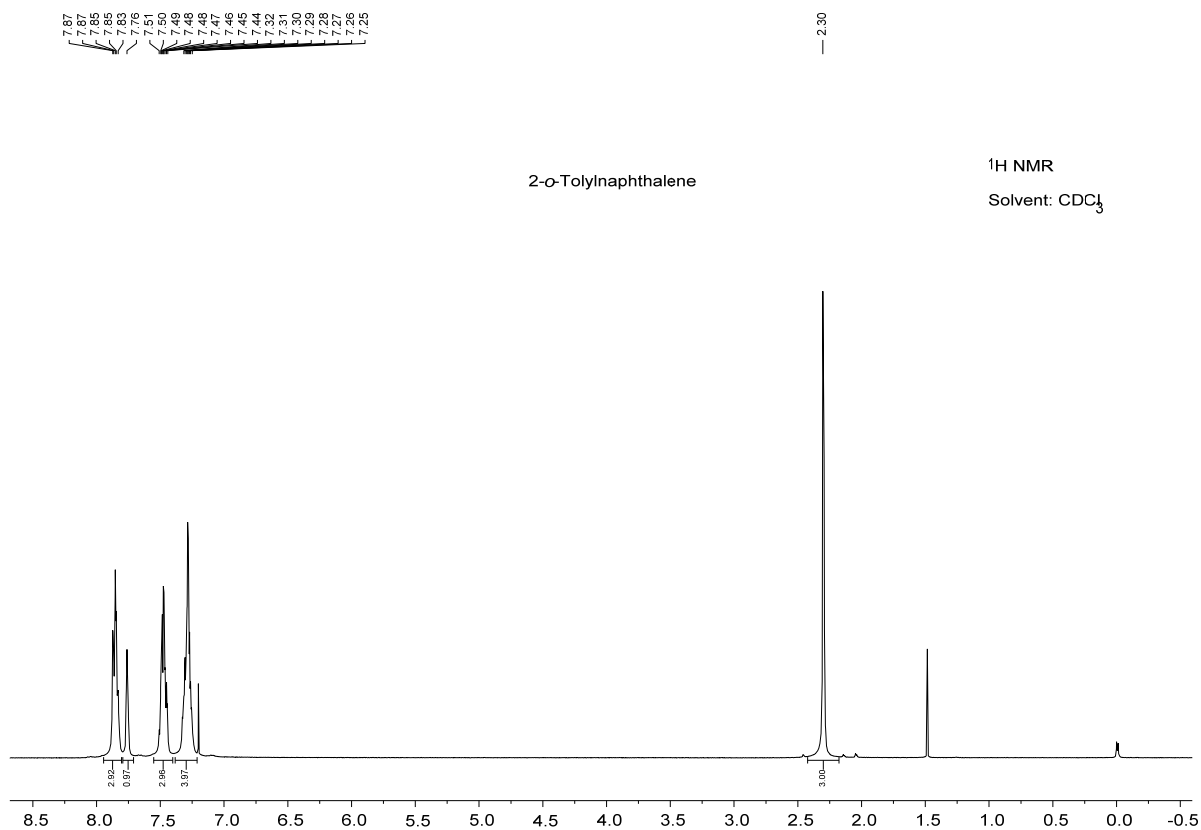
(4) 2-(4-Methoxyphenyl)naphthalene



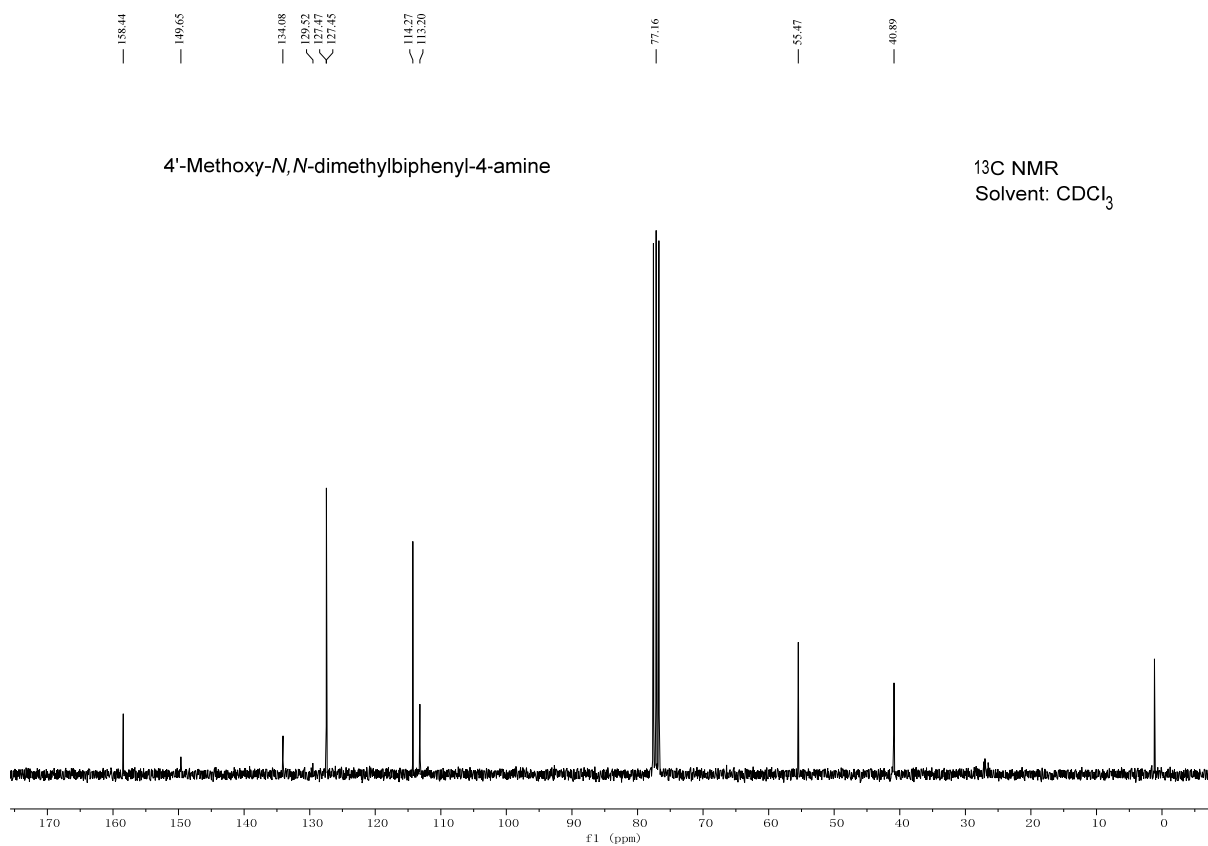
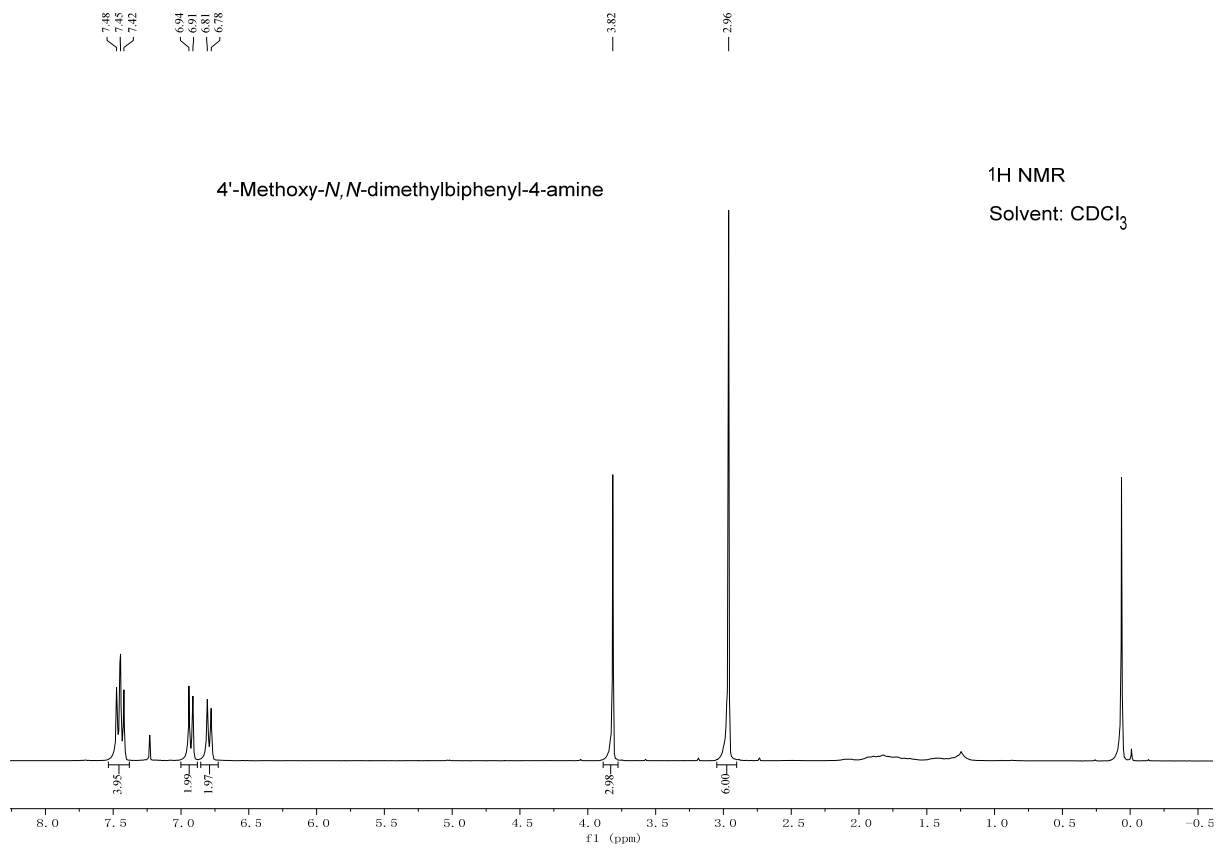
(5) *N,N*-Dimethyl-4-(naphthalen-2-yl)aniline



(6) 2-*o*-Tolynaphthalene



(7) 4'-Methoxy-*N,N*-dimethylbiphenyl-4-amine



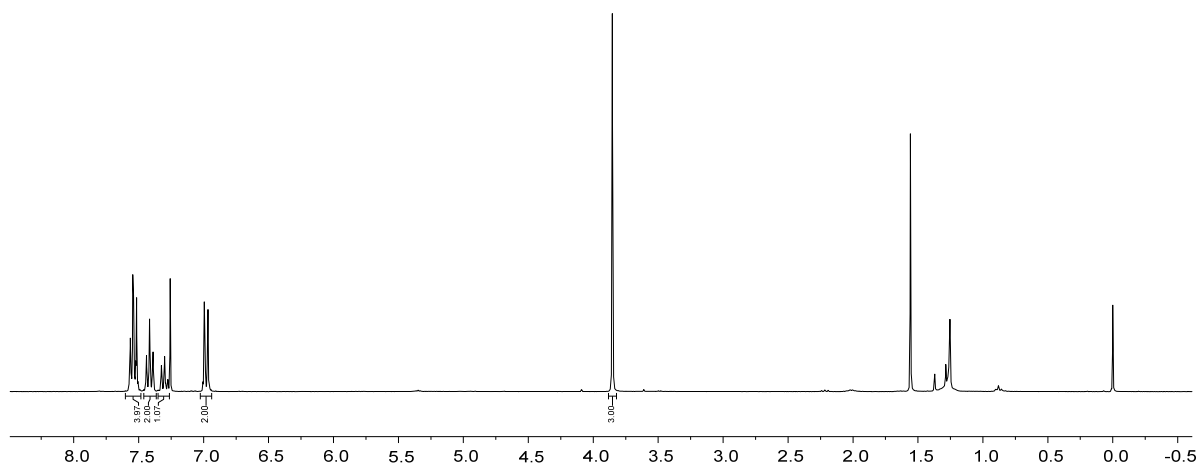
(8) 4-Methoxybiphenyl

7.67
7.66
7.65
7.55
7.54
7.52
7.52
7.42
7.42
7.32
7.32
6.99
6.97

3.85

4-Methoxybiphenyl

¹H NMR
Solvent: CDCl₃



159.29

140.98

133.93

128.86

128.30

126.88

126.80

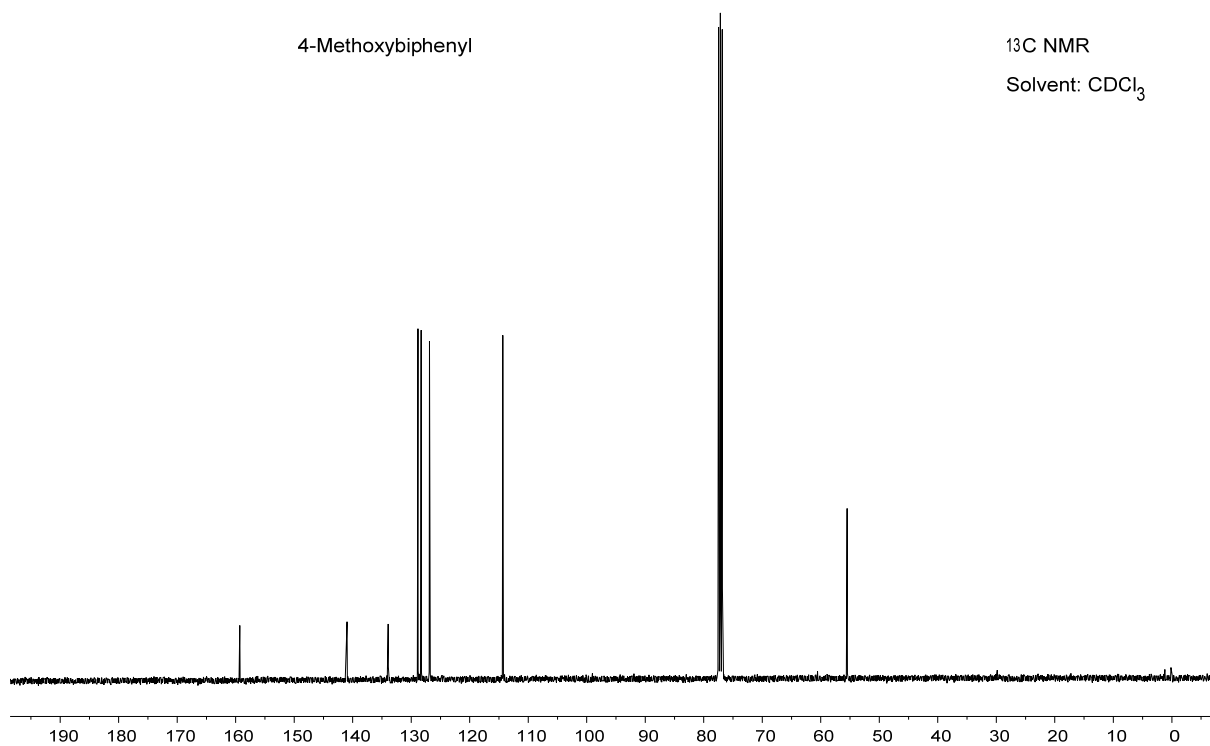
114.35

77.16

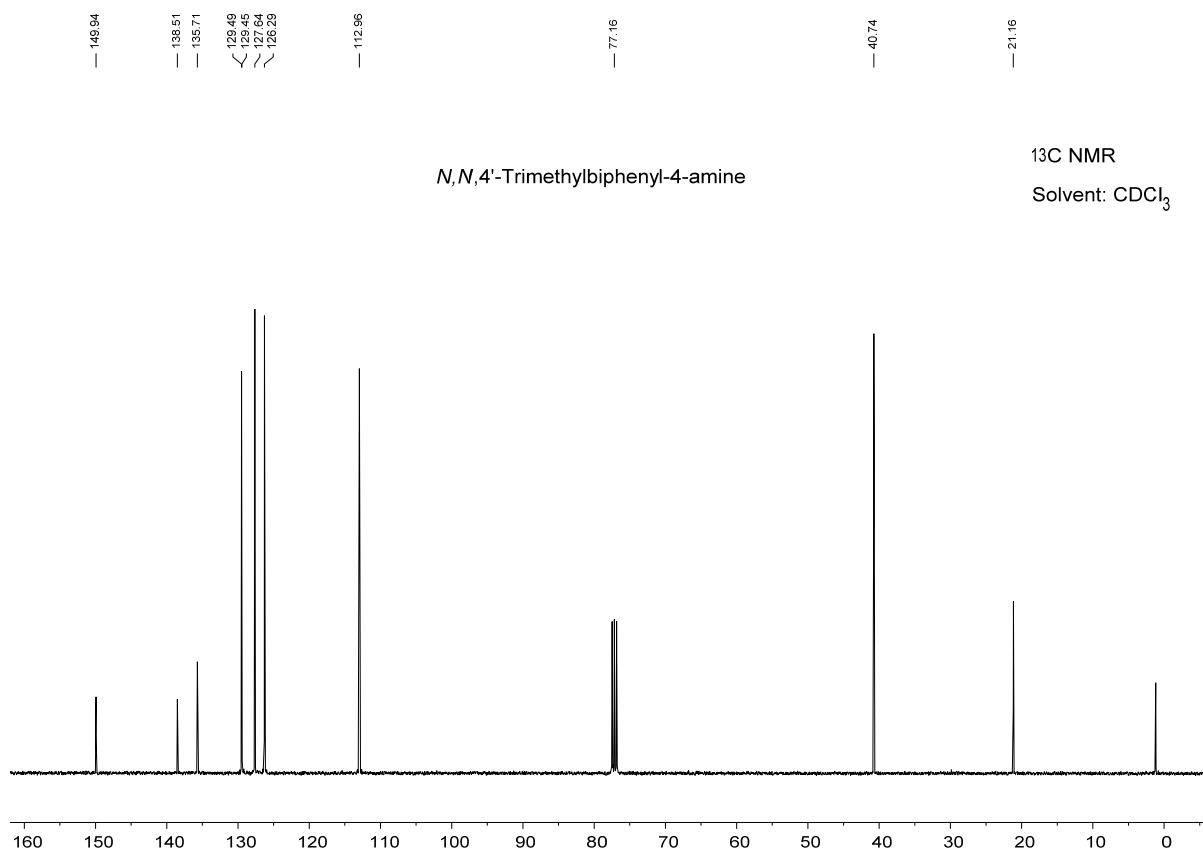
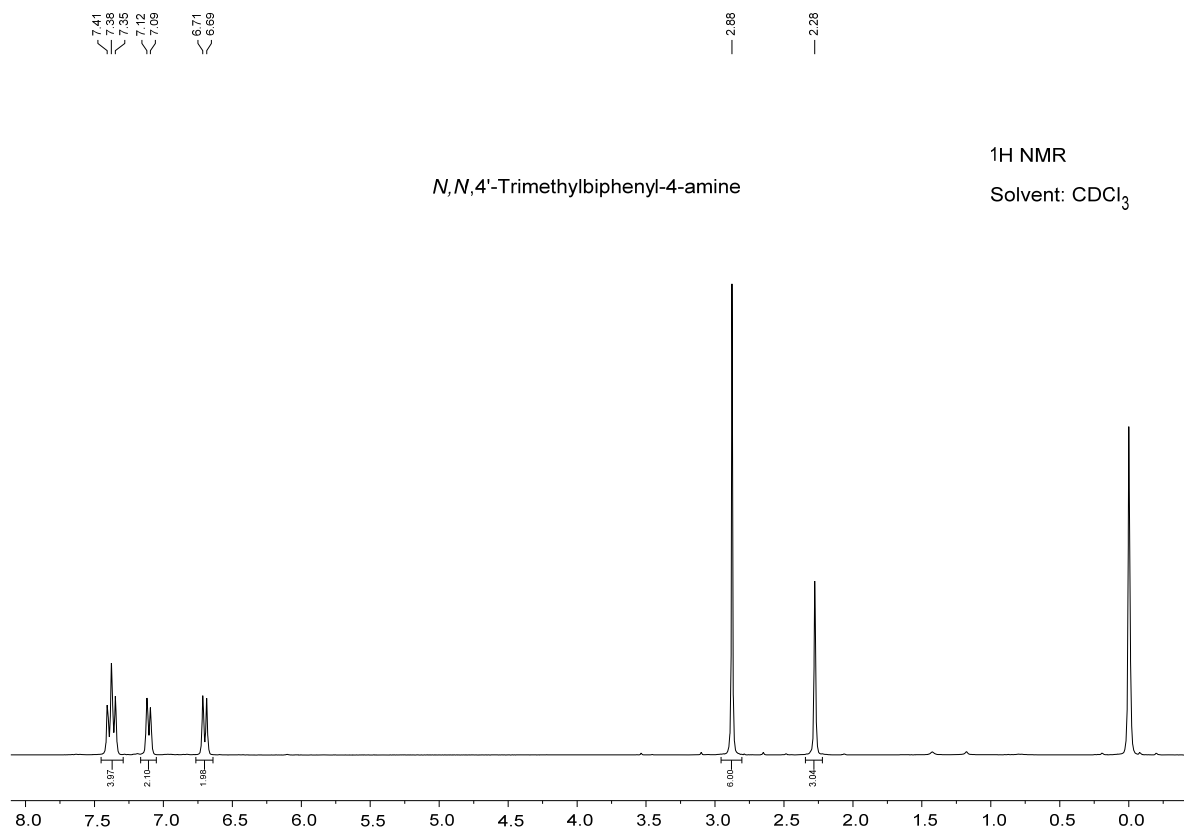
55.49

4-Methoxybiphenyl

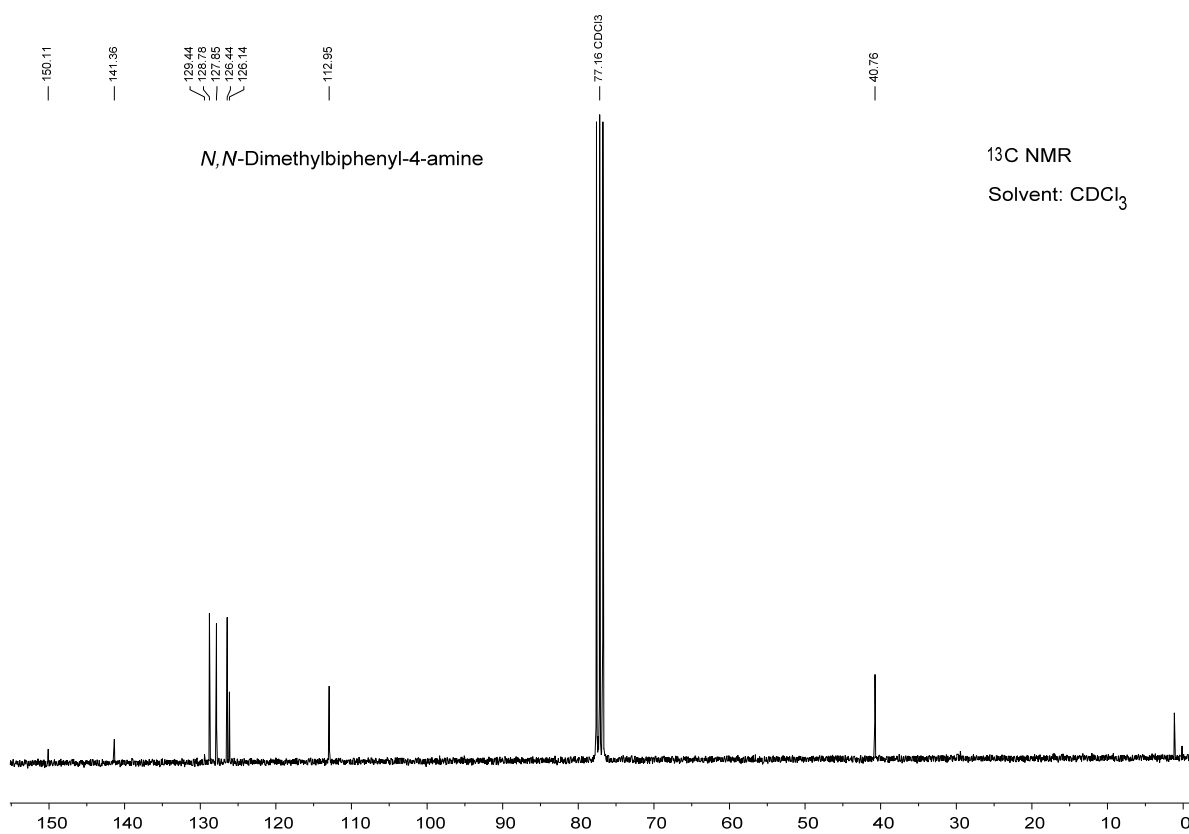
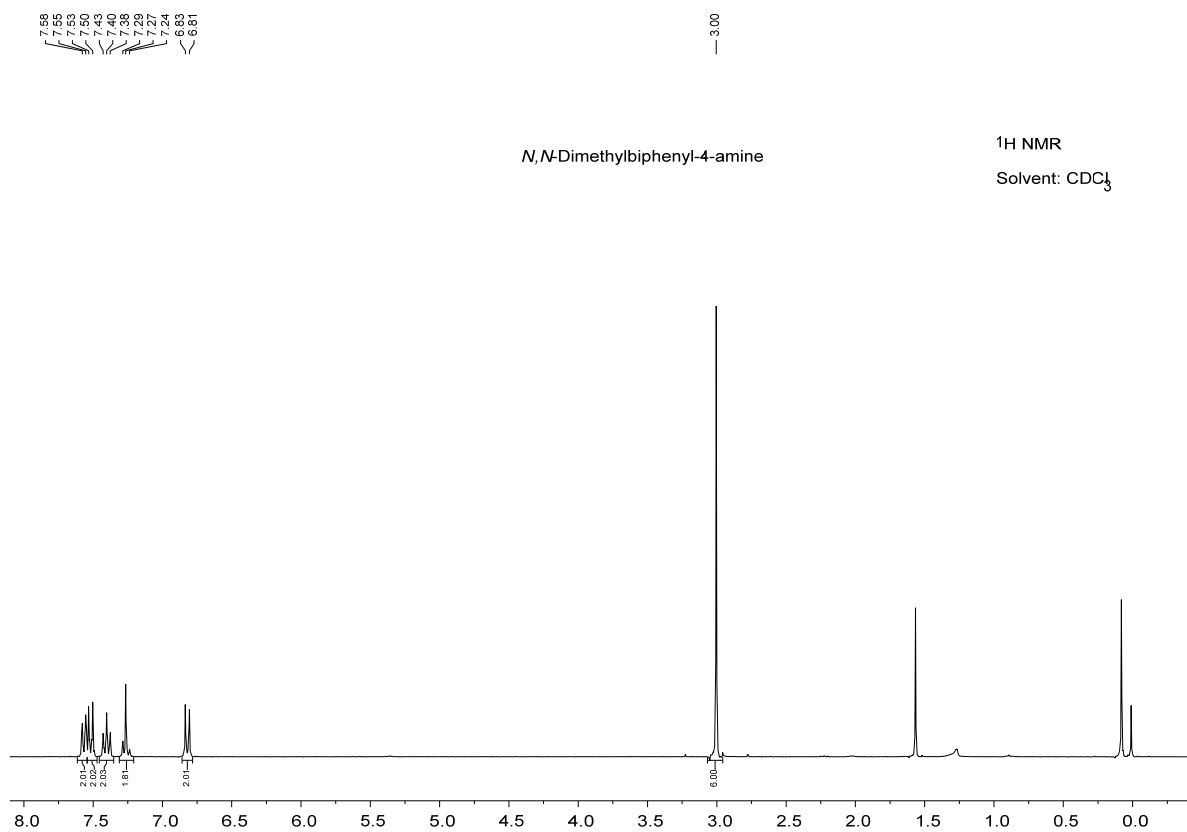
¹³C NMR
Solvent: CDCl₃



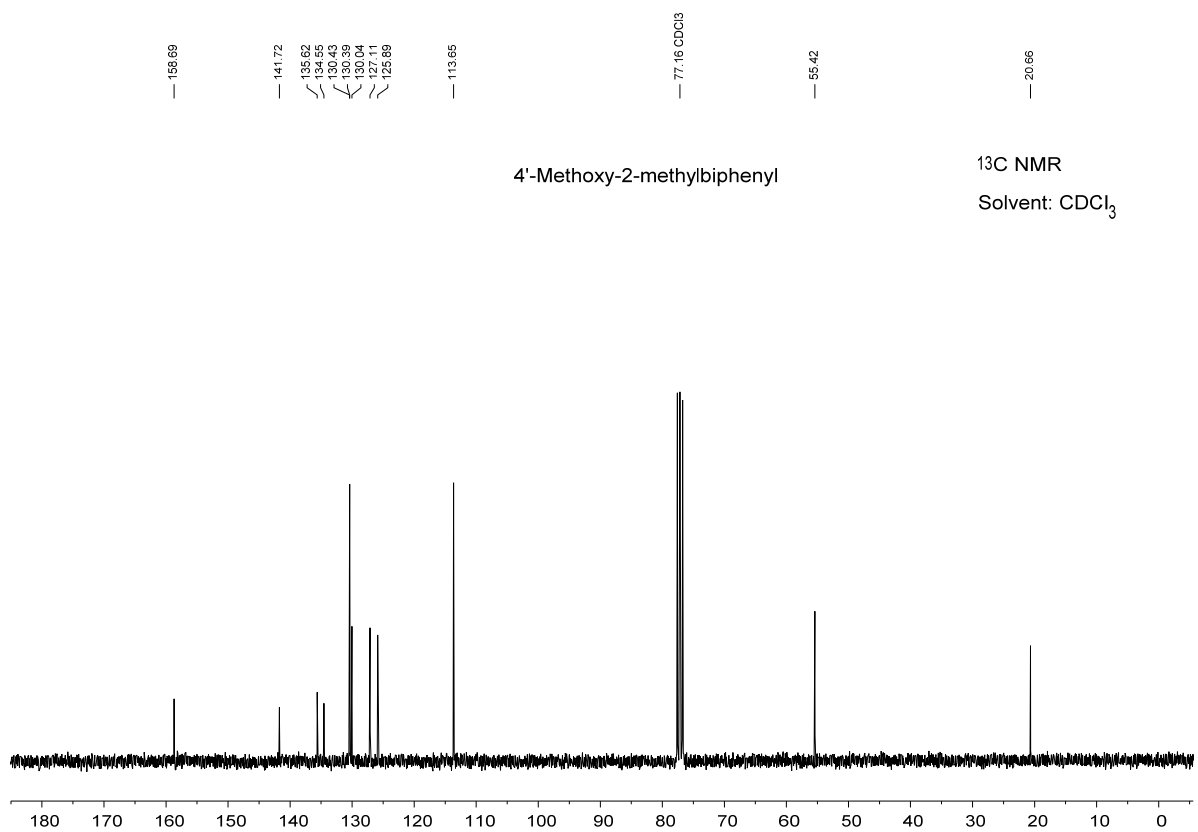
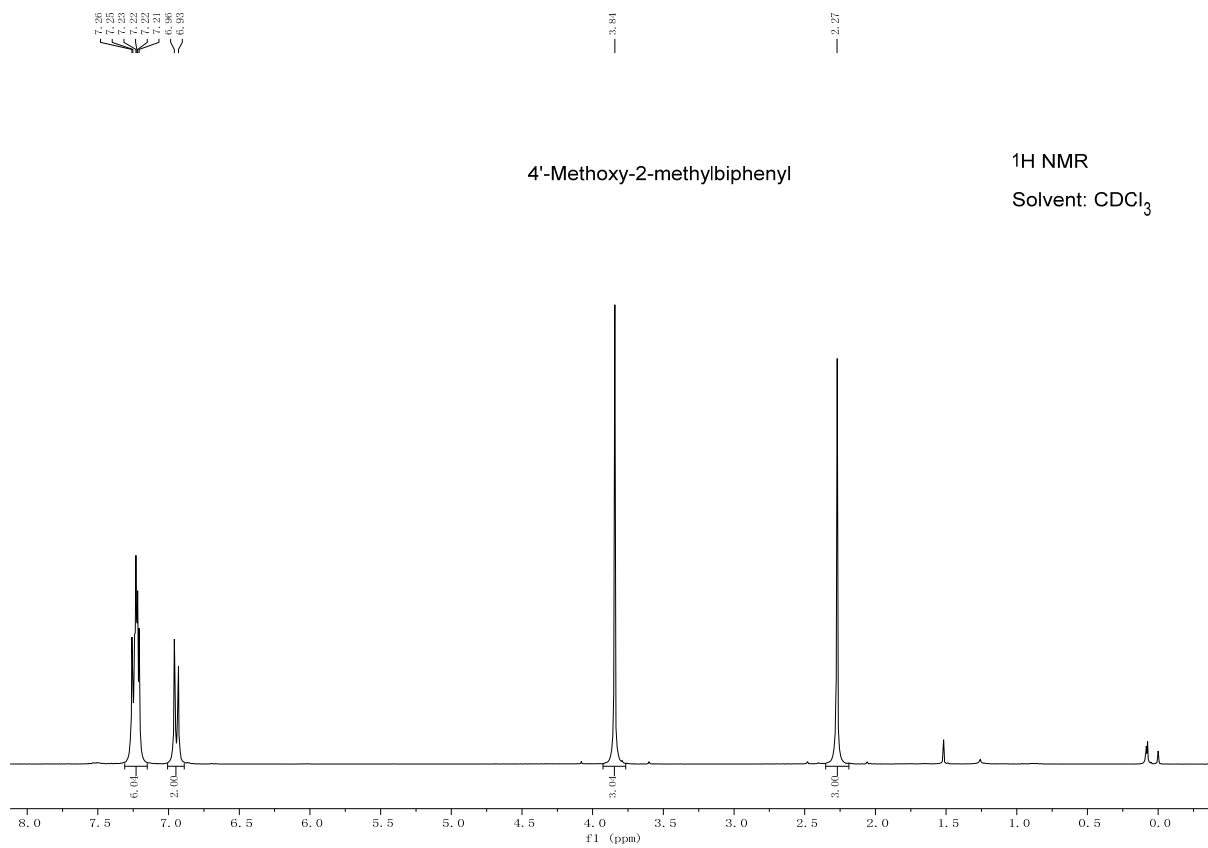
(9) *N,N,4'*-Trimethylbiphenyl-4-amine



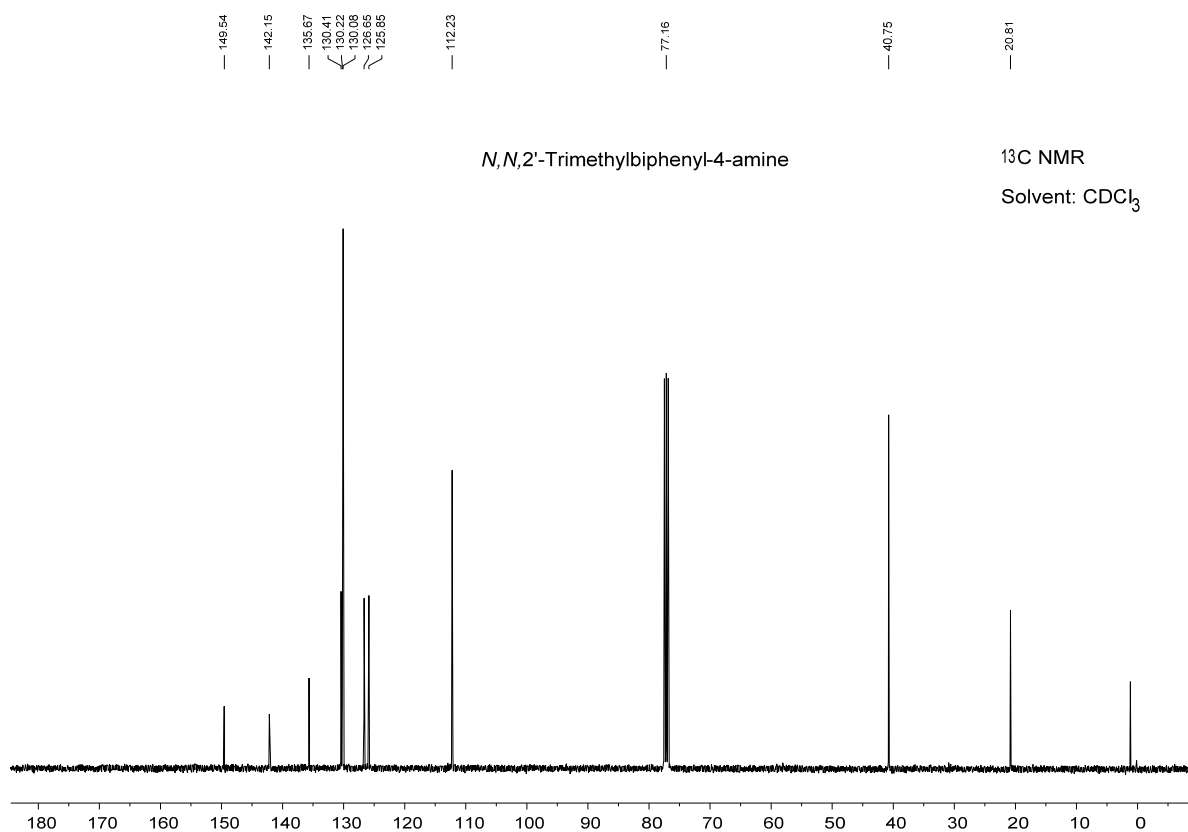
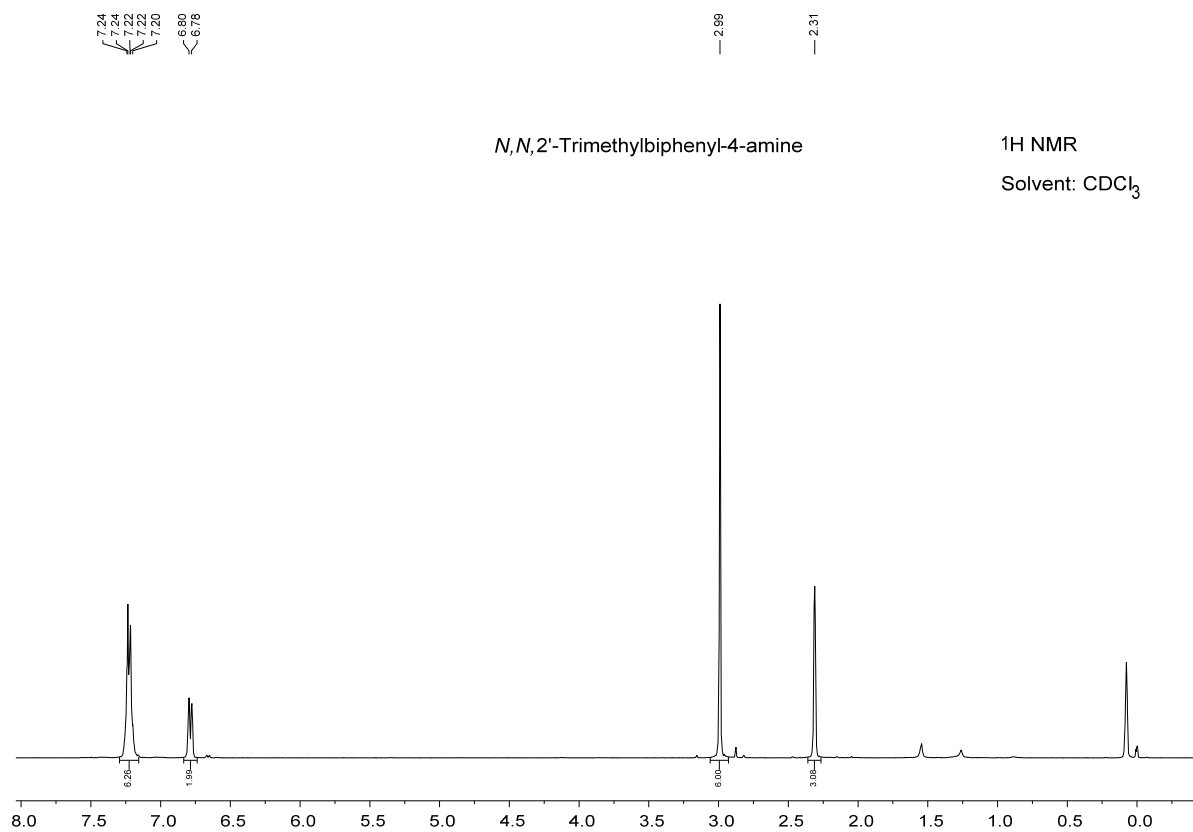
(10) *N,N*-Dimethylbiphenyl-4-amine



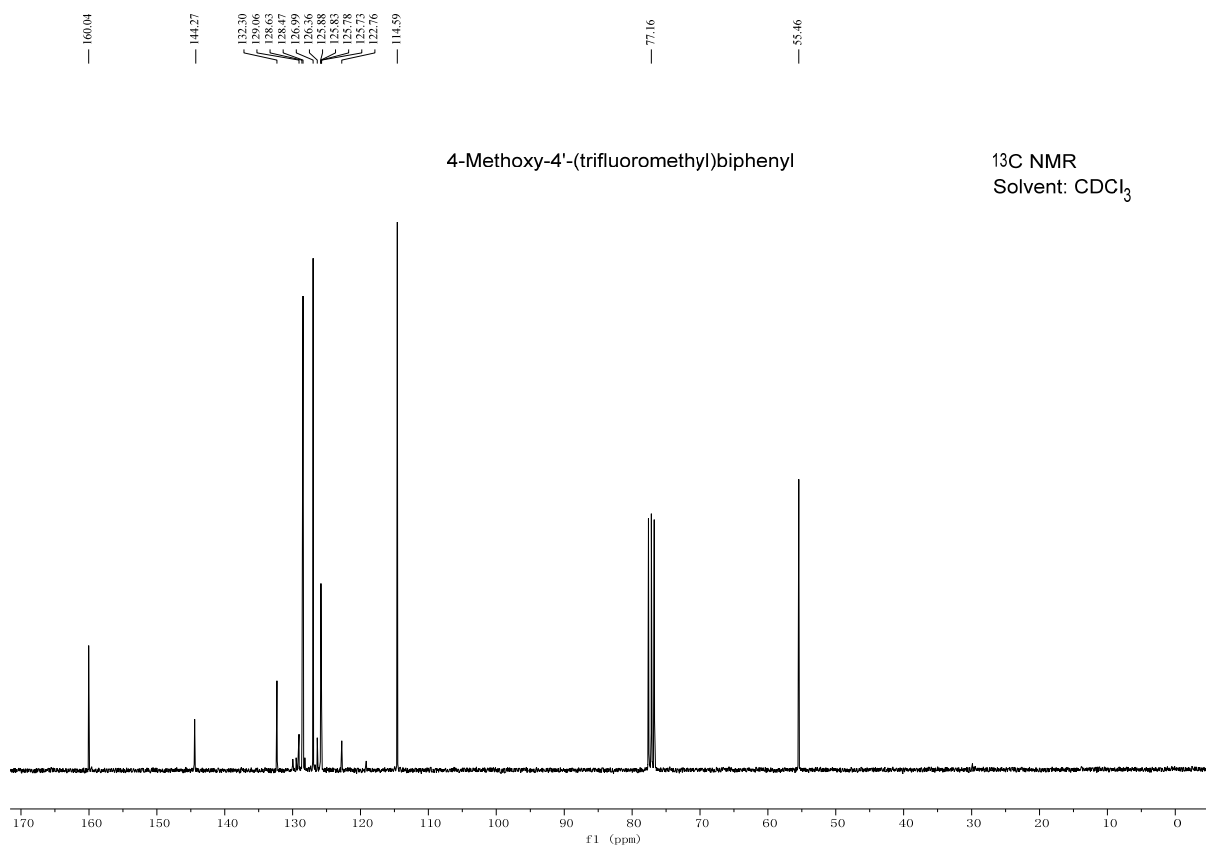
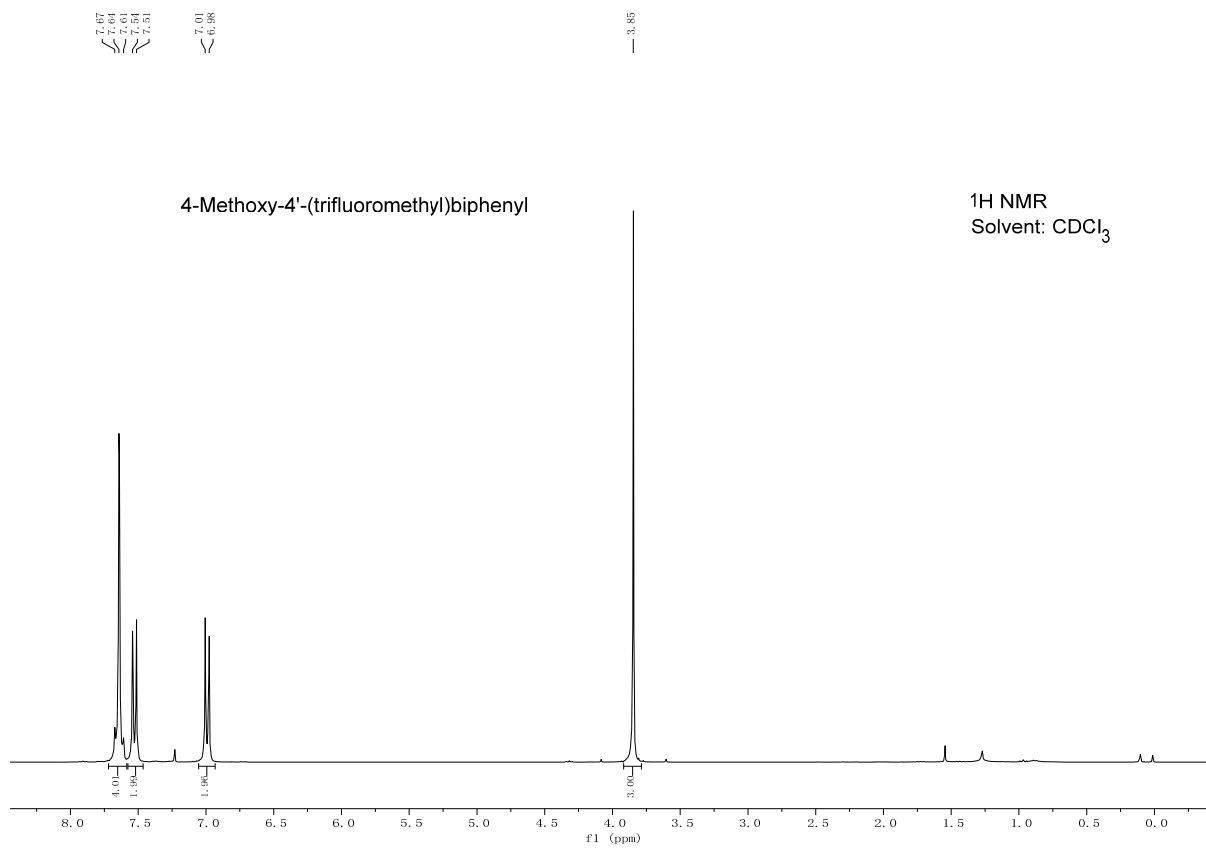
(11) 4'-Methoxy-2-methylbiphenyl



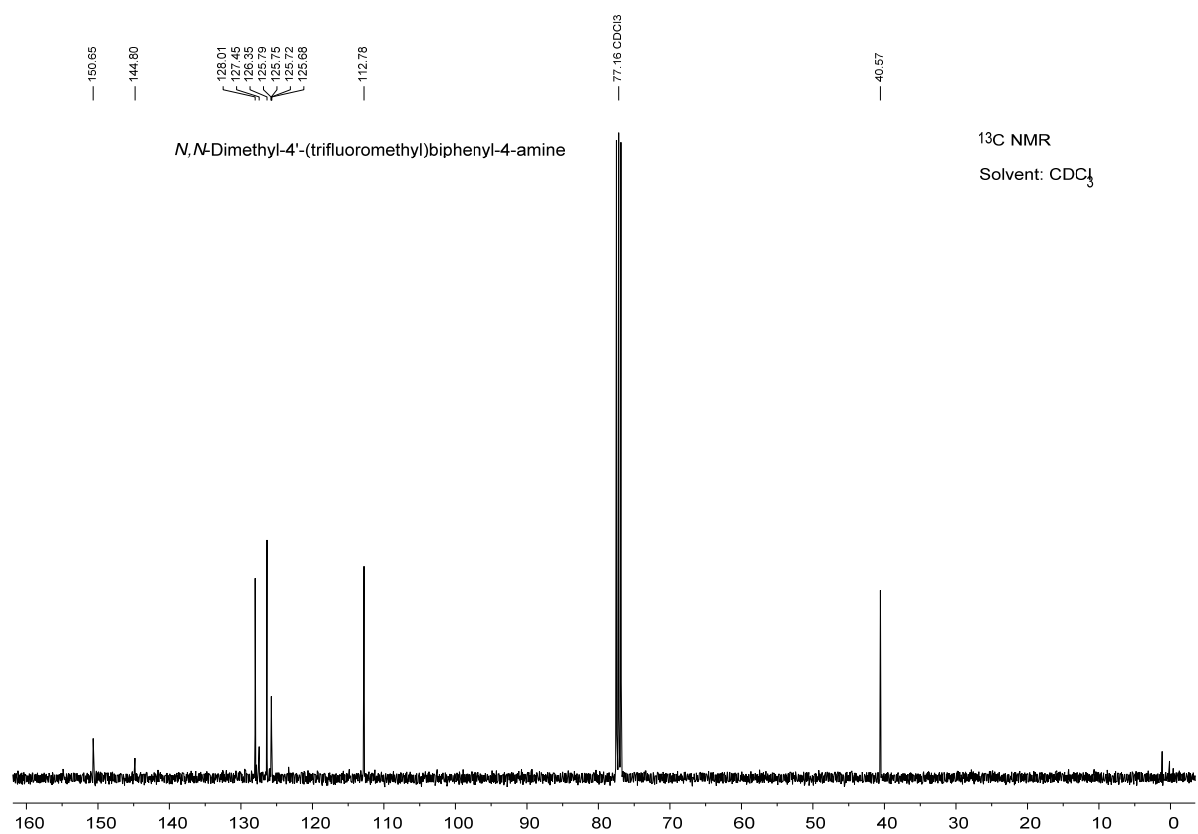
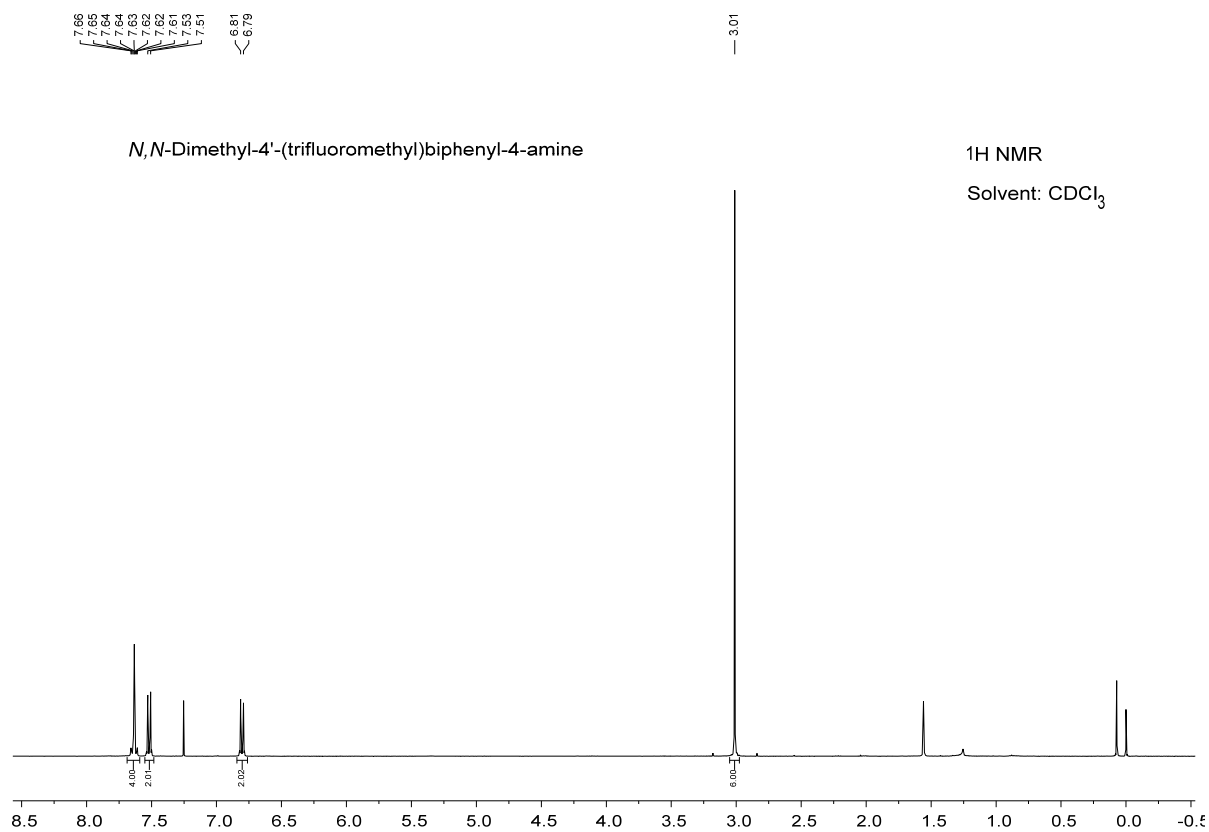
(12) *N,N,2'*-Trimethylbiphenyl-4-amine



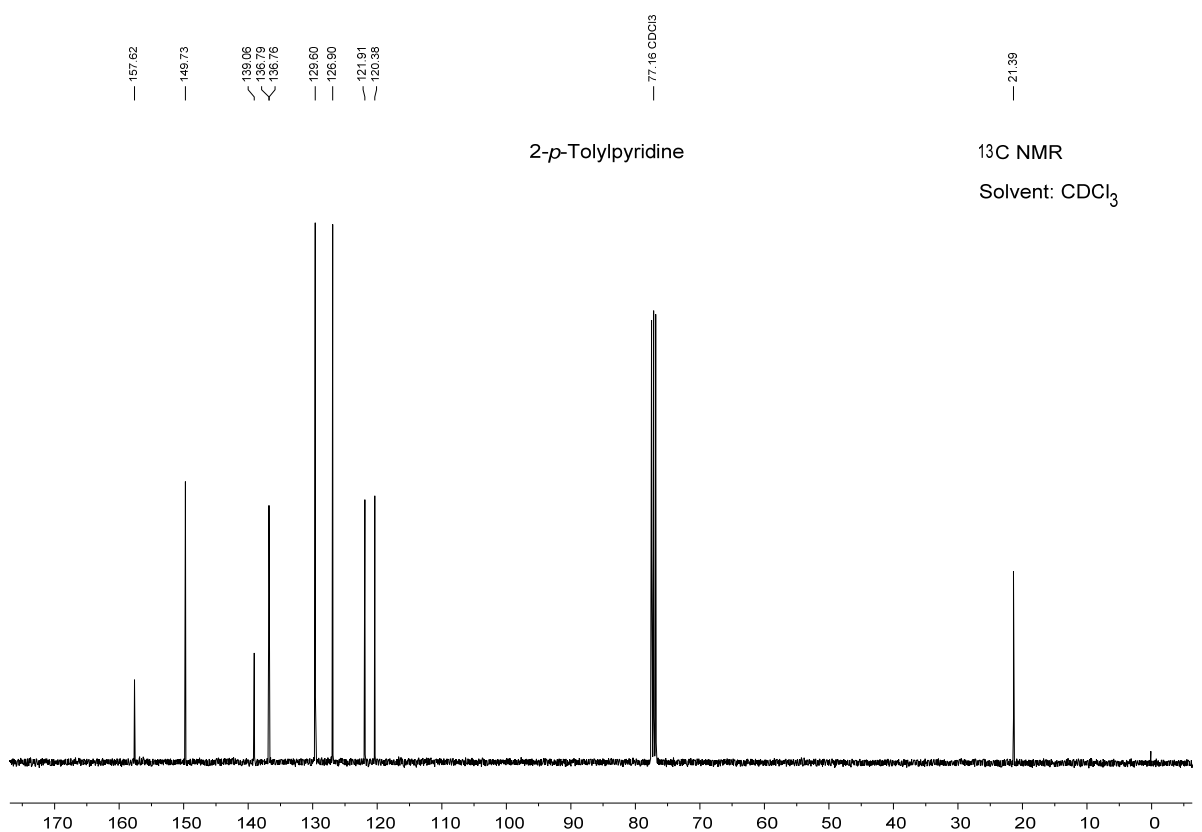
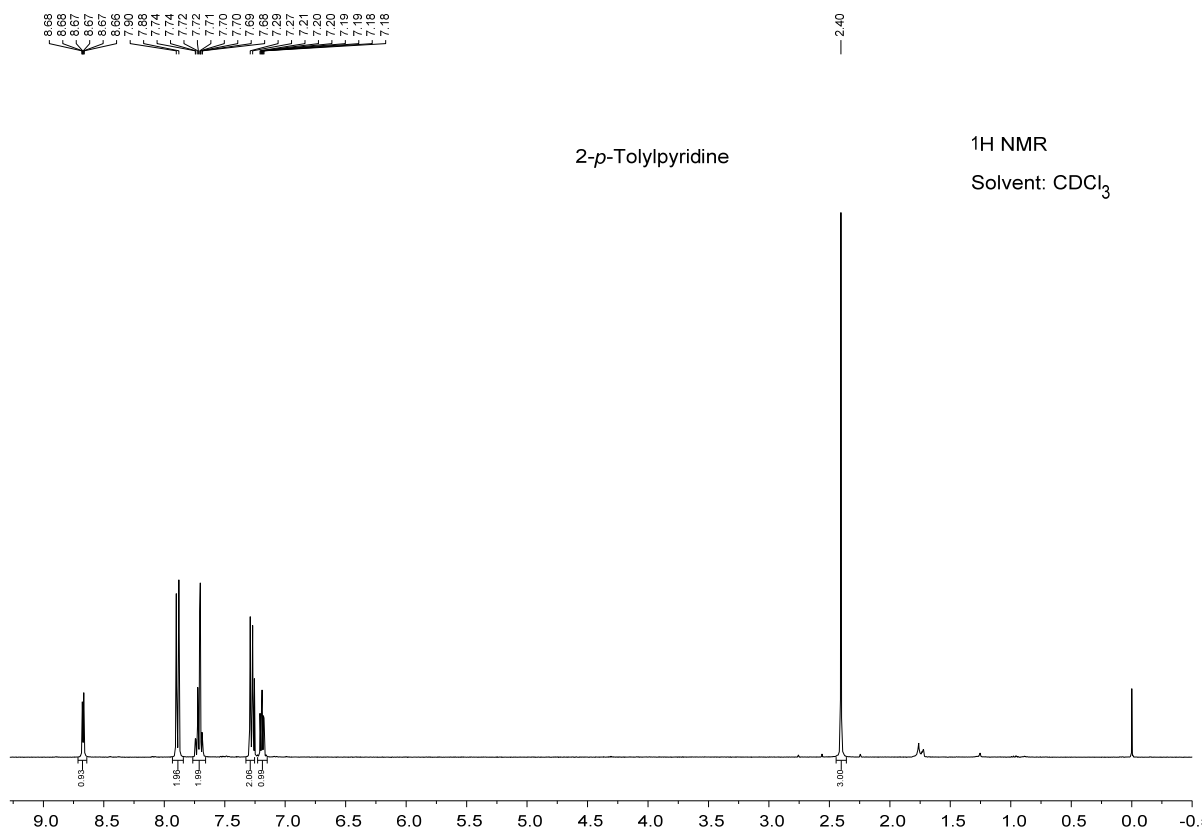
(13) 4-Methoxy-4'-(trifluoromethyl)biphenyl



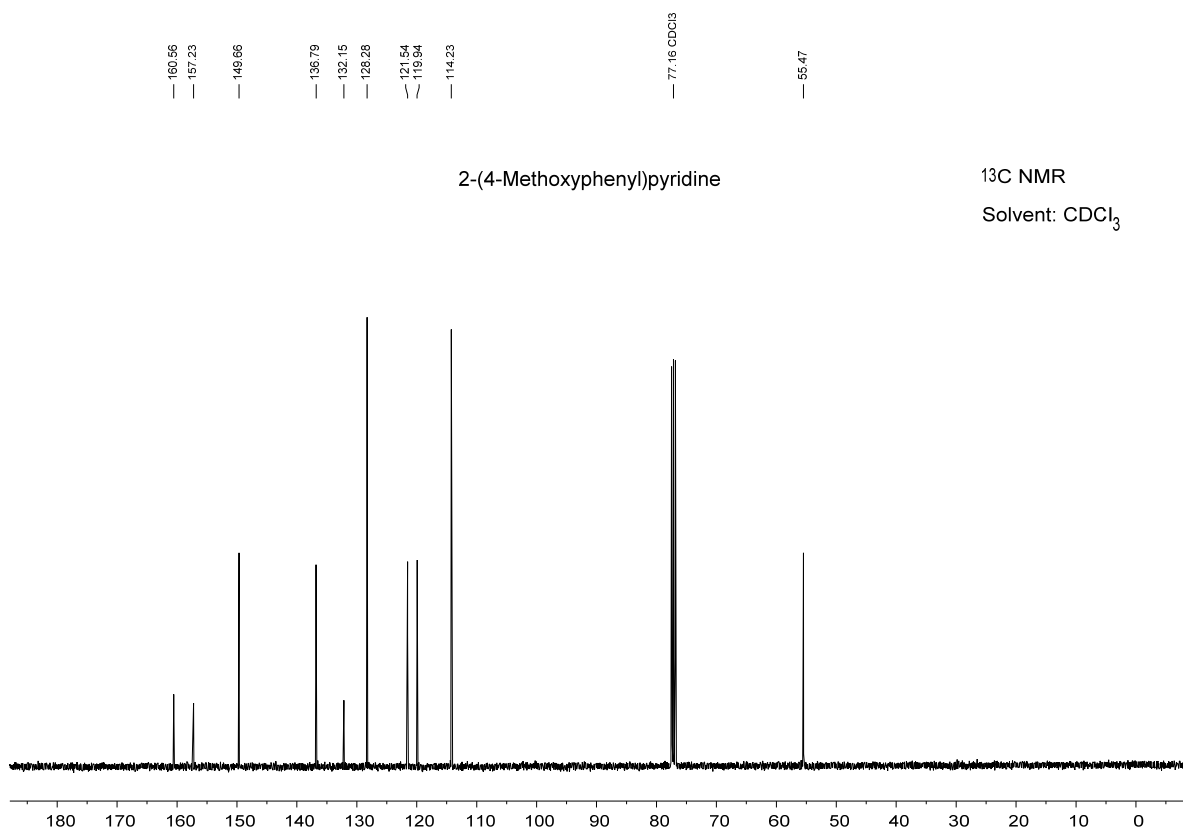
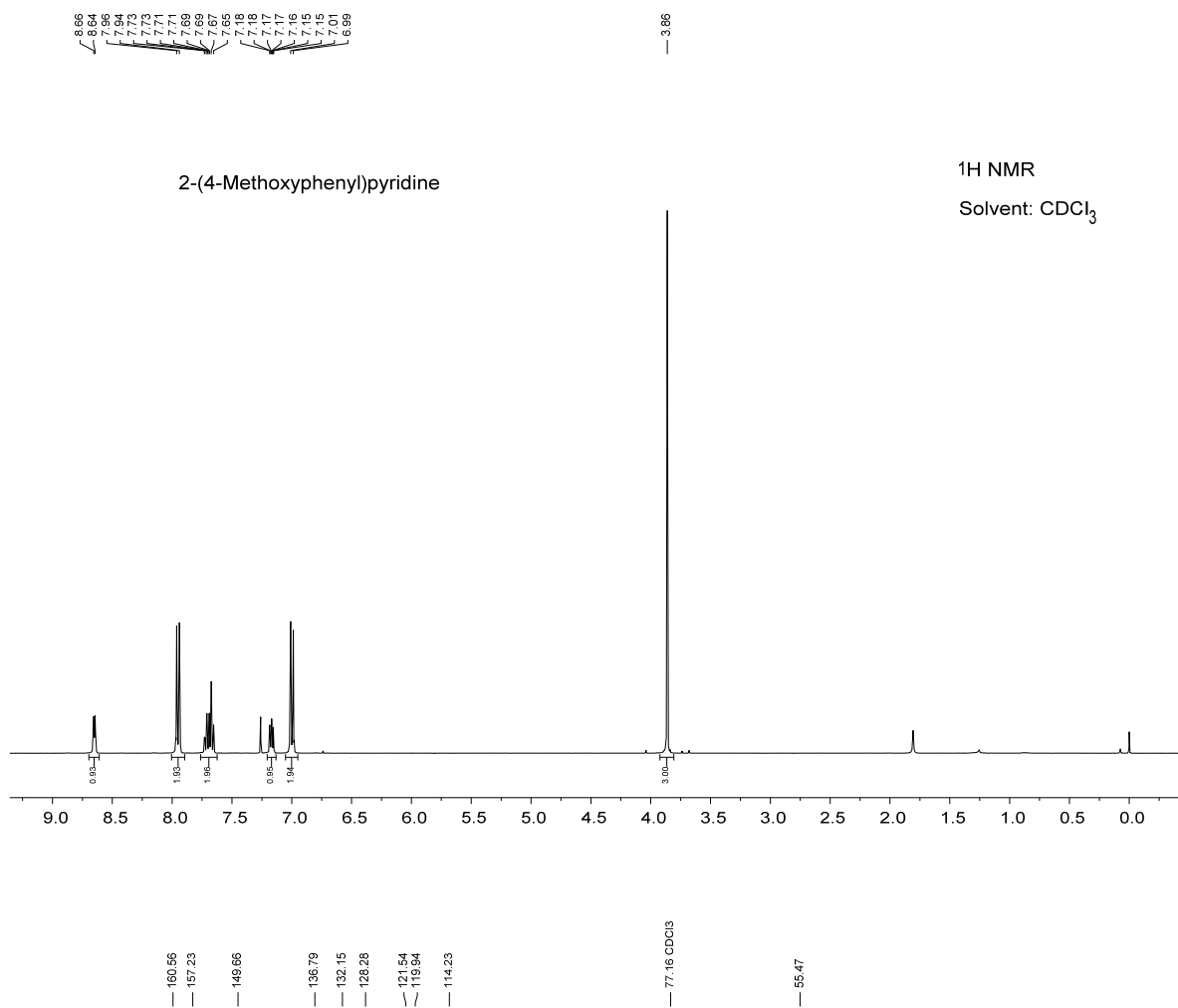
(14) *N,N*-Dimethyl-4'-(trifluoromethyl)biphenyl-4-amine



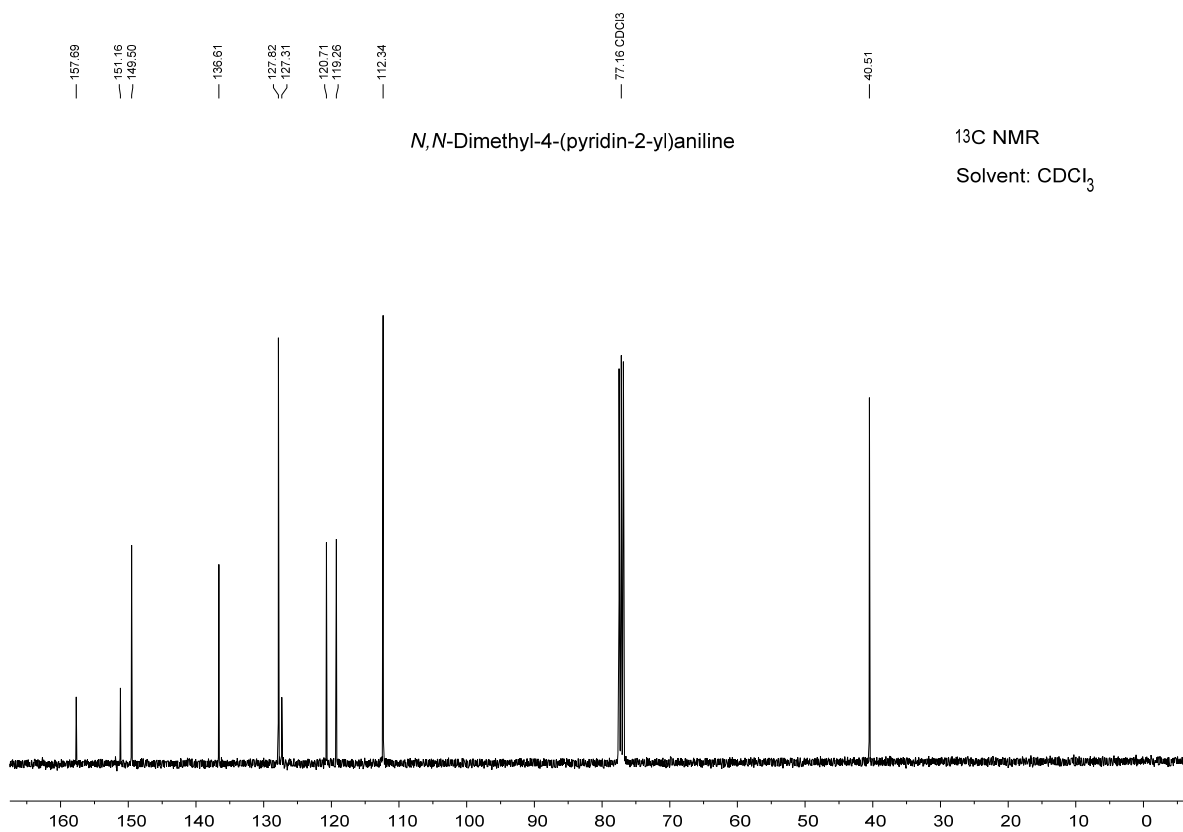
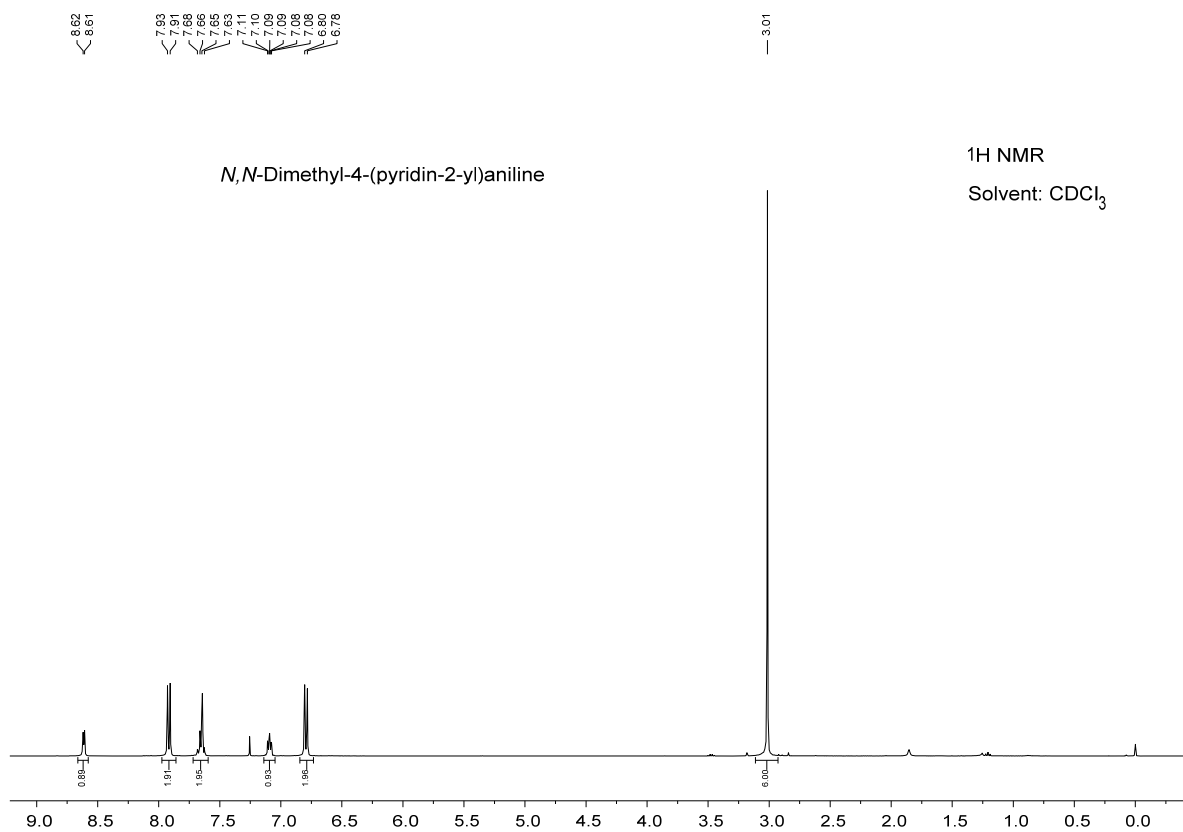
(15) 2-*p*-Tolylpyridine



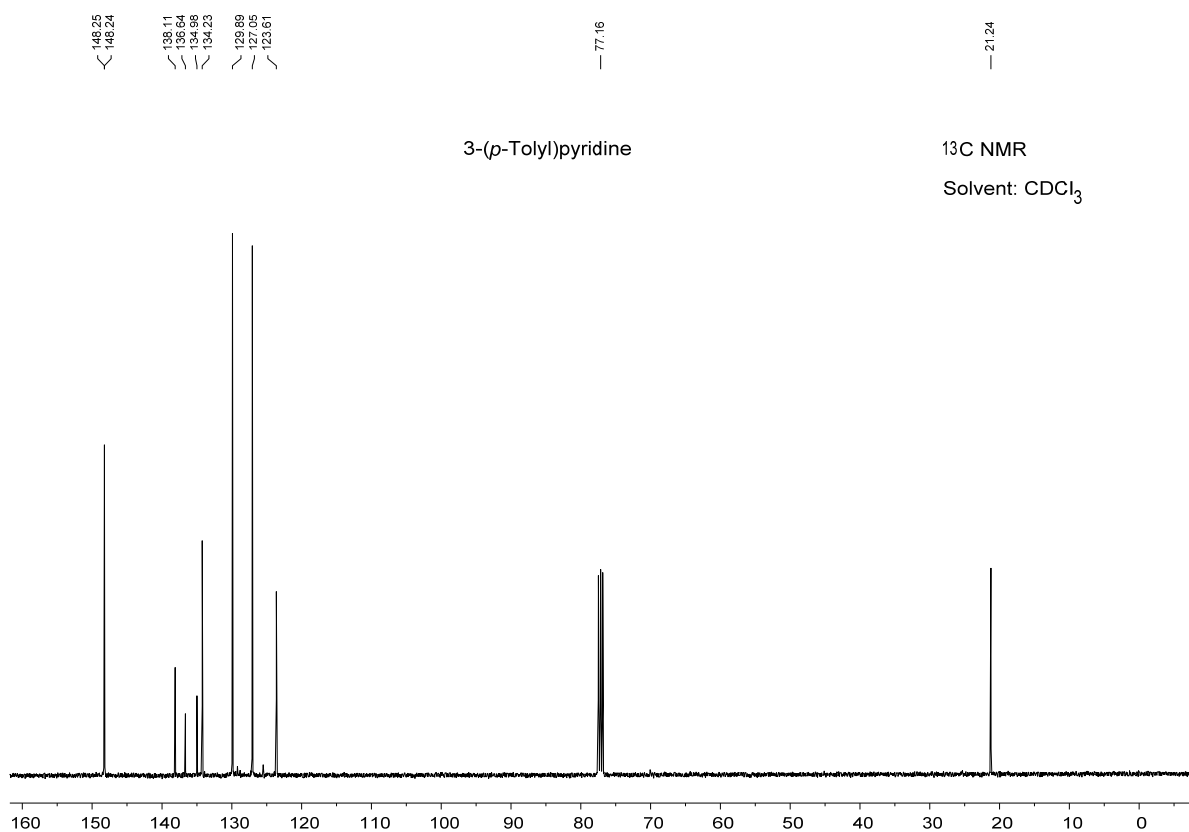
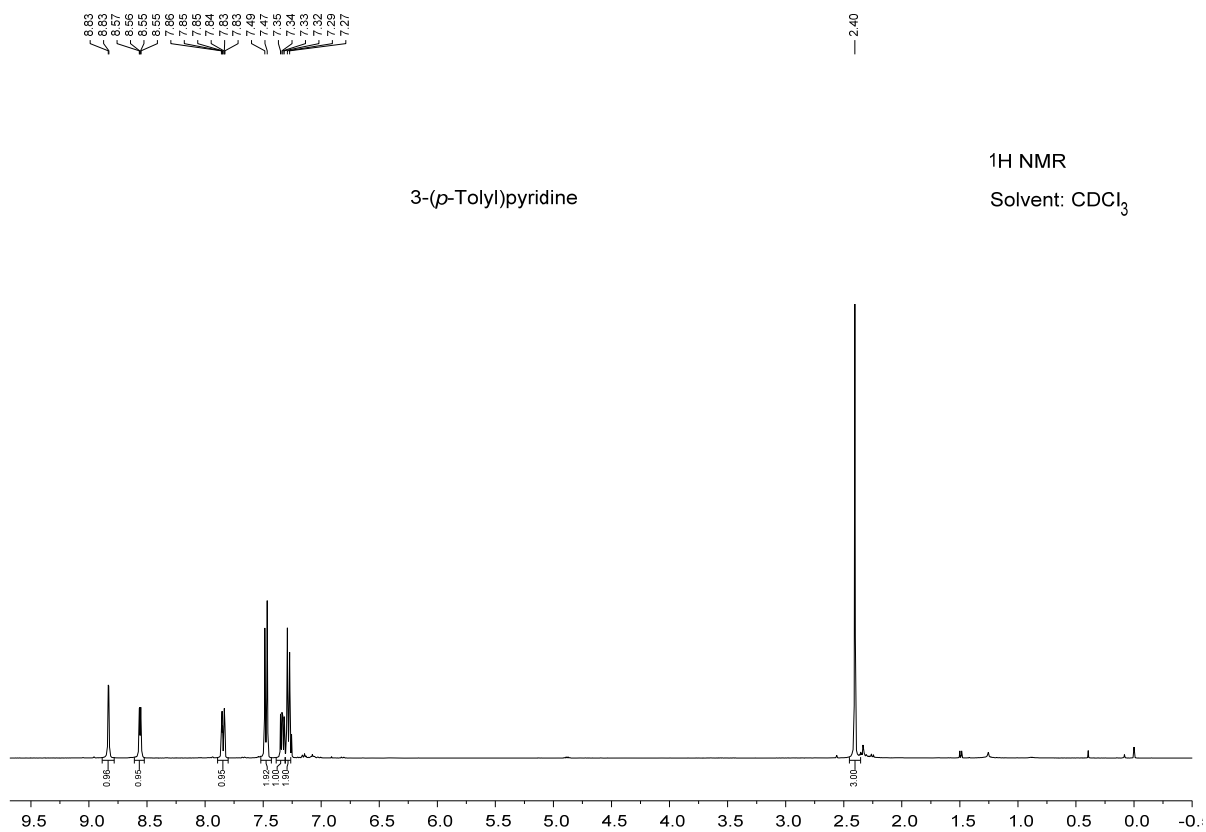
(16) 2-(4-Methoxyphenyl)pyridine



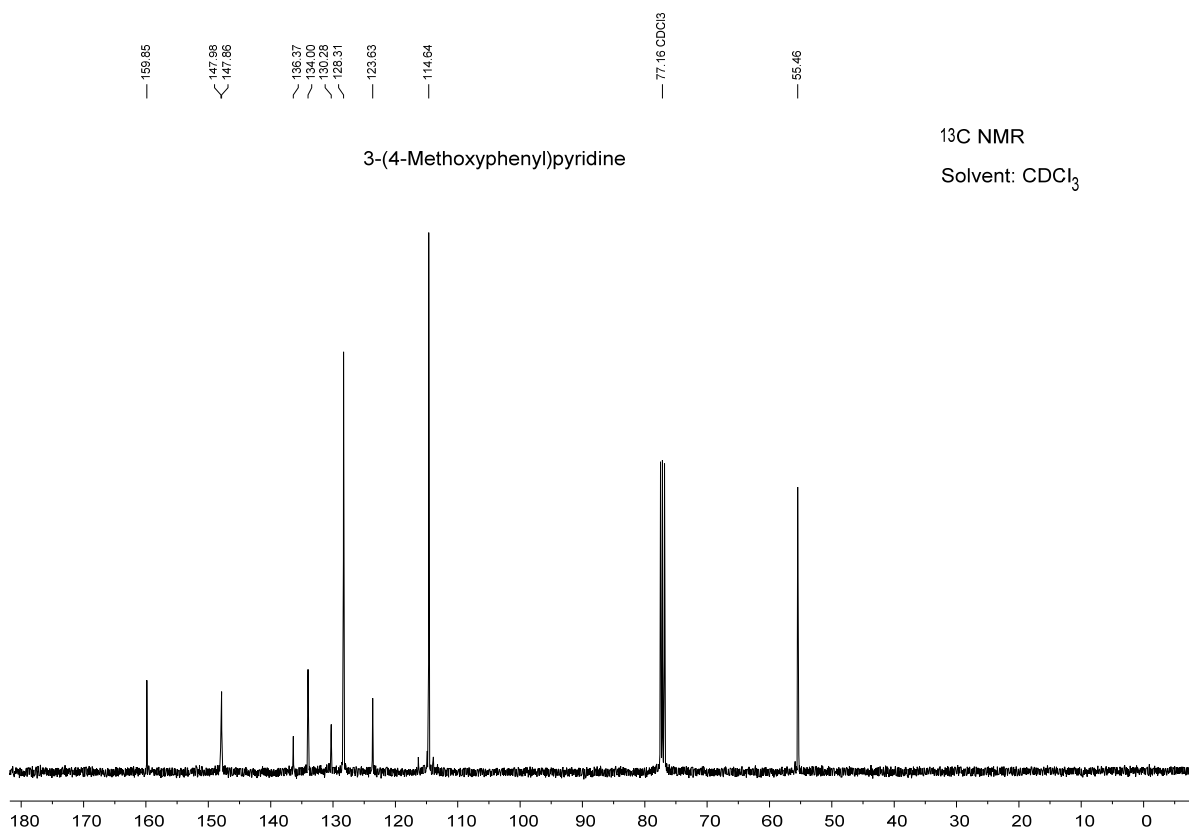
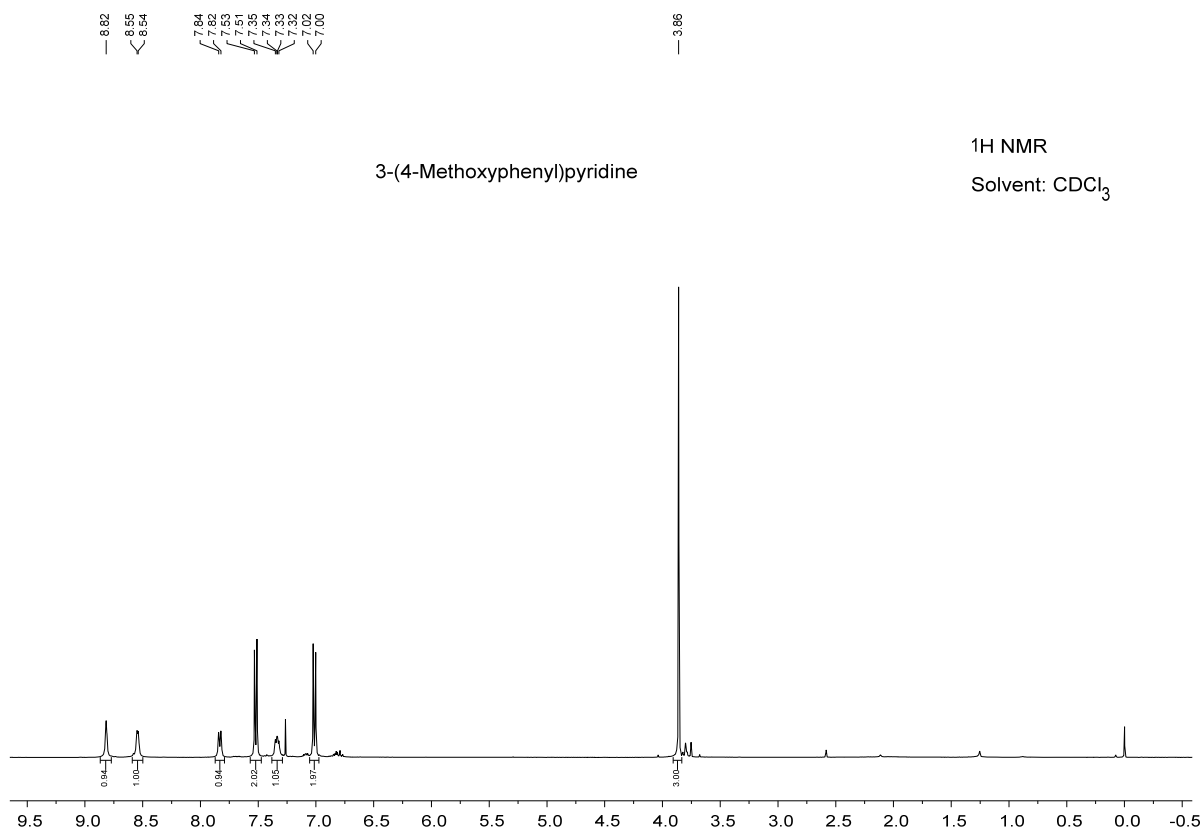
(17) *N,N*-Dimethyl-4-(pyridin-2-yl)aniline



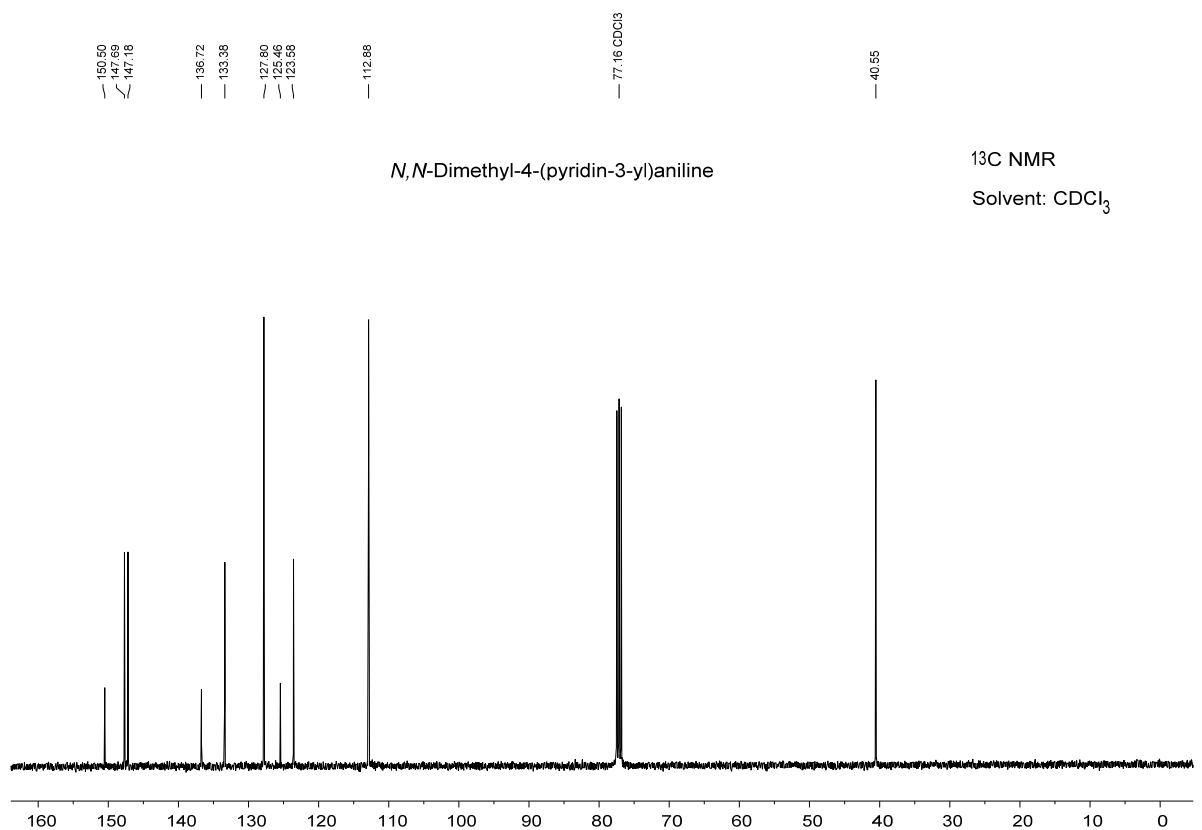
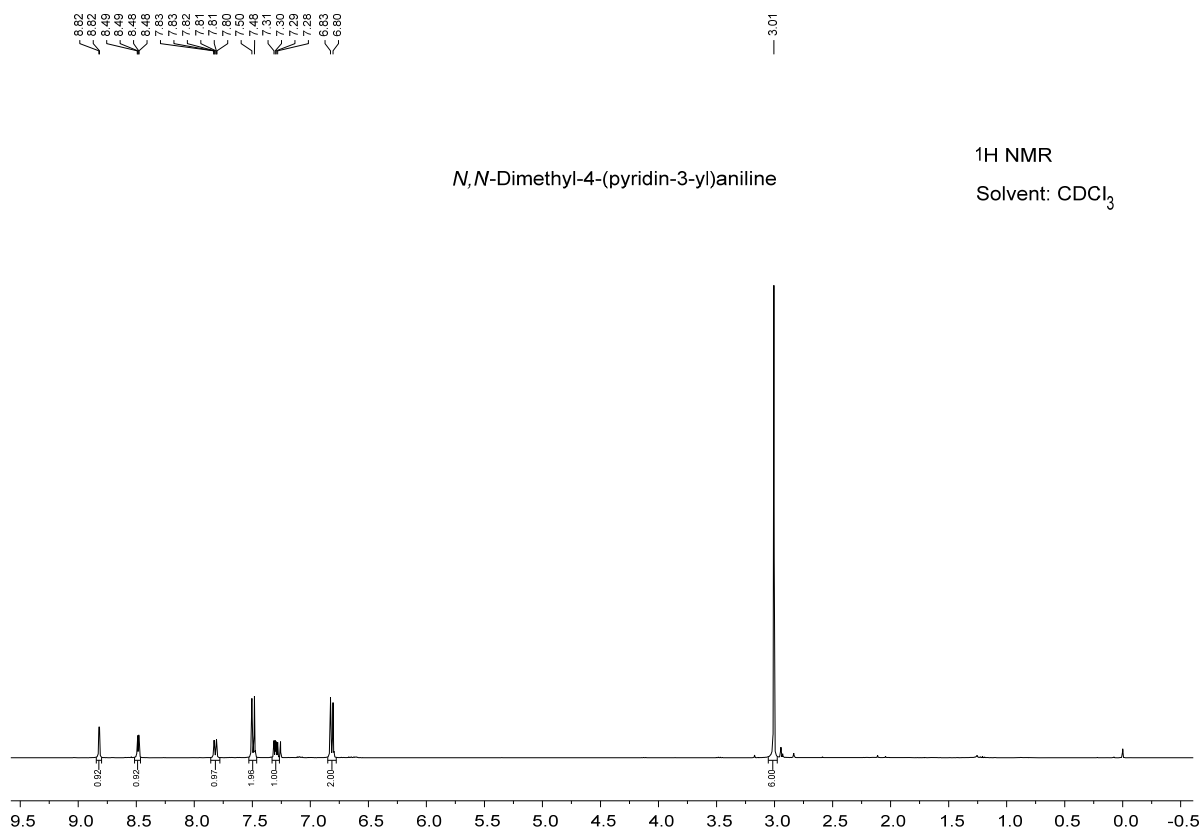
(18) 3-(*p*-Tolyl)pyridine



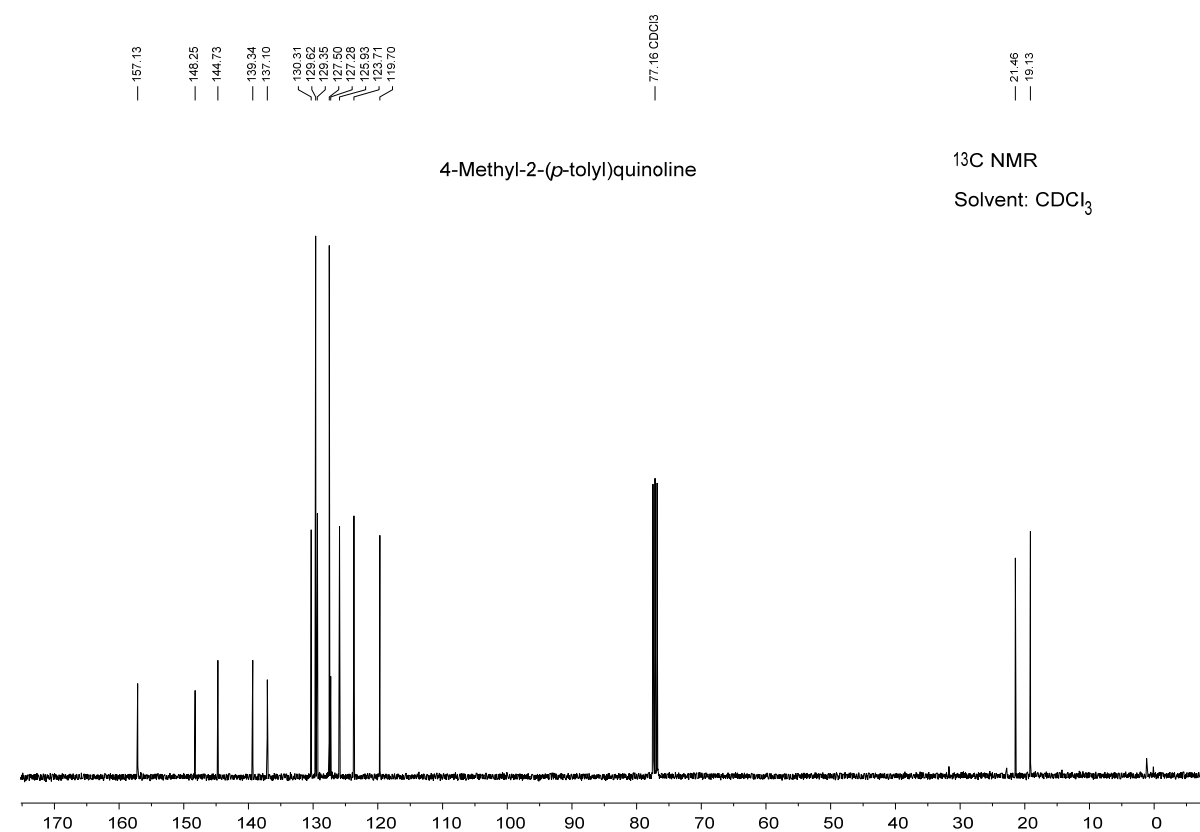
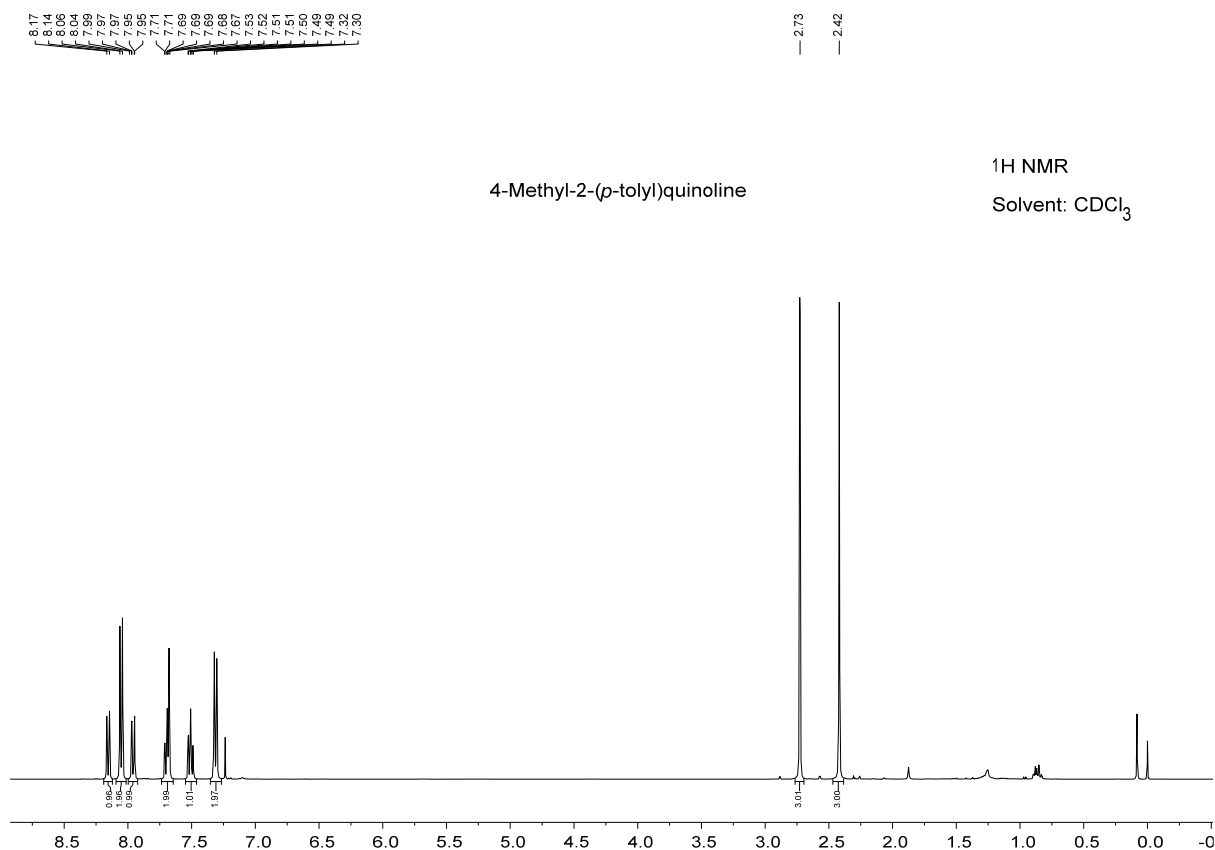
(19) 3-(4-Methoxyphenyl)pyridine



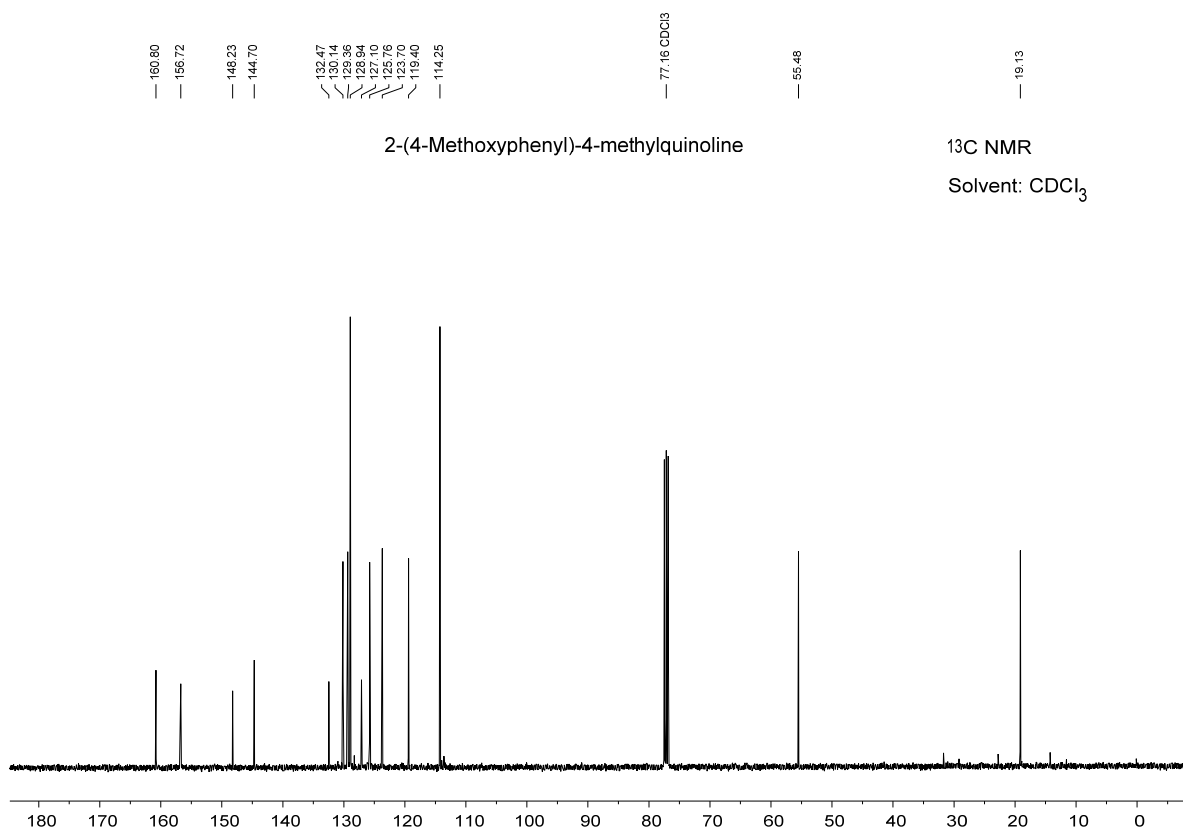
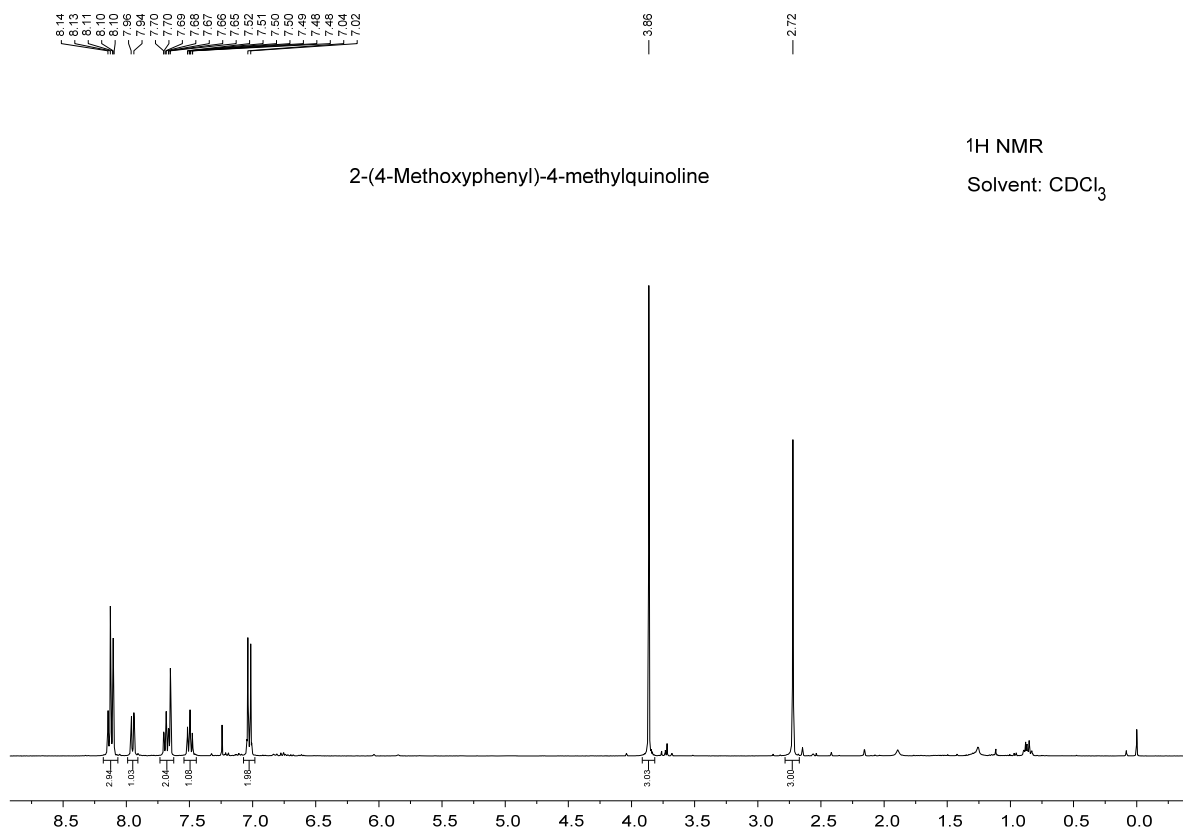
(20) *N,N*-Dimethyl-4-(pyridin-3-yl)aniline



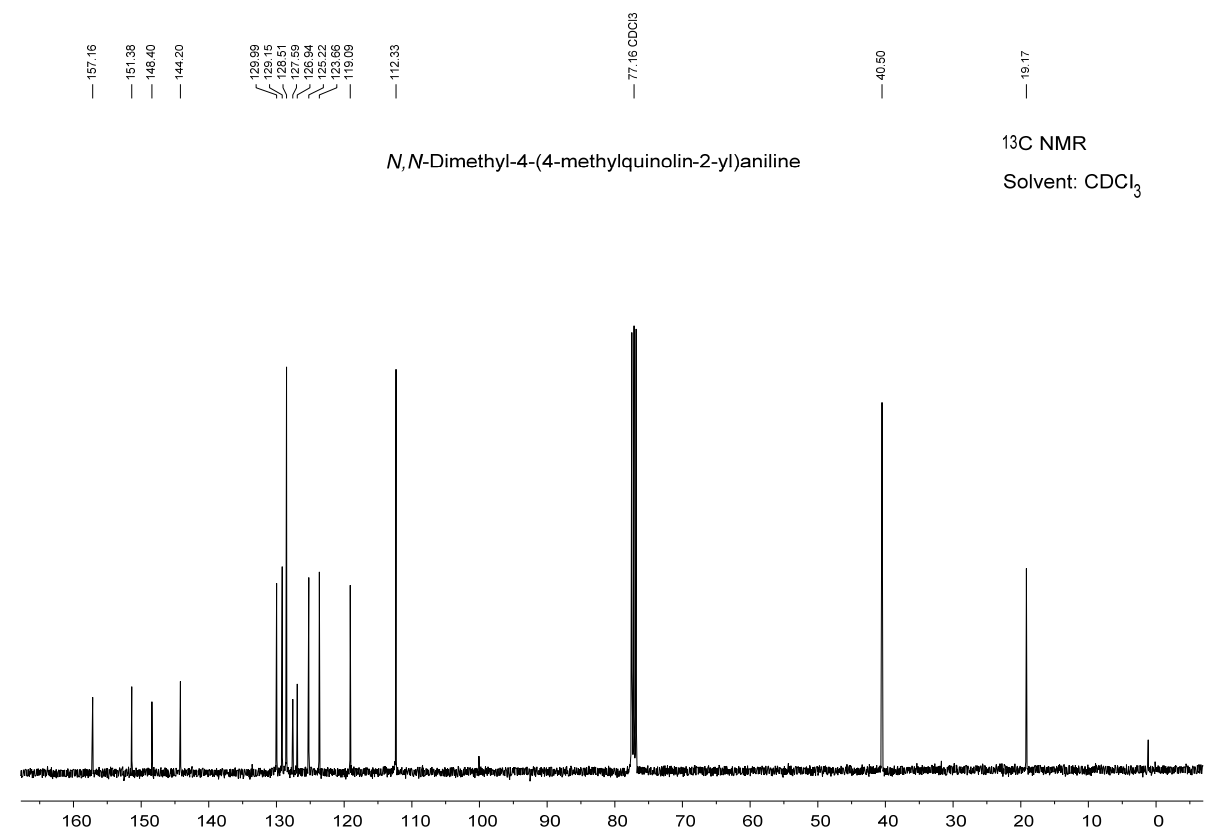
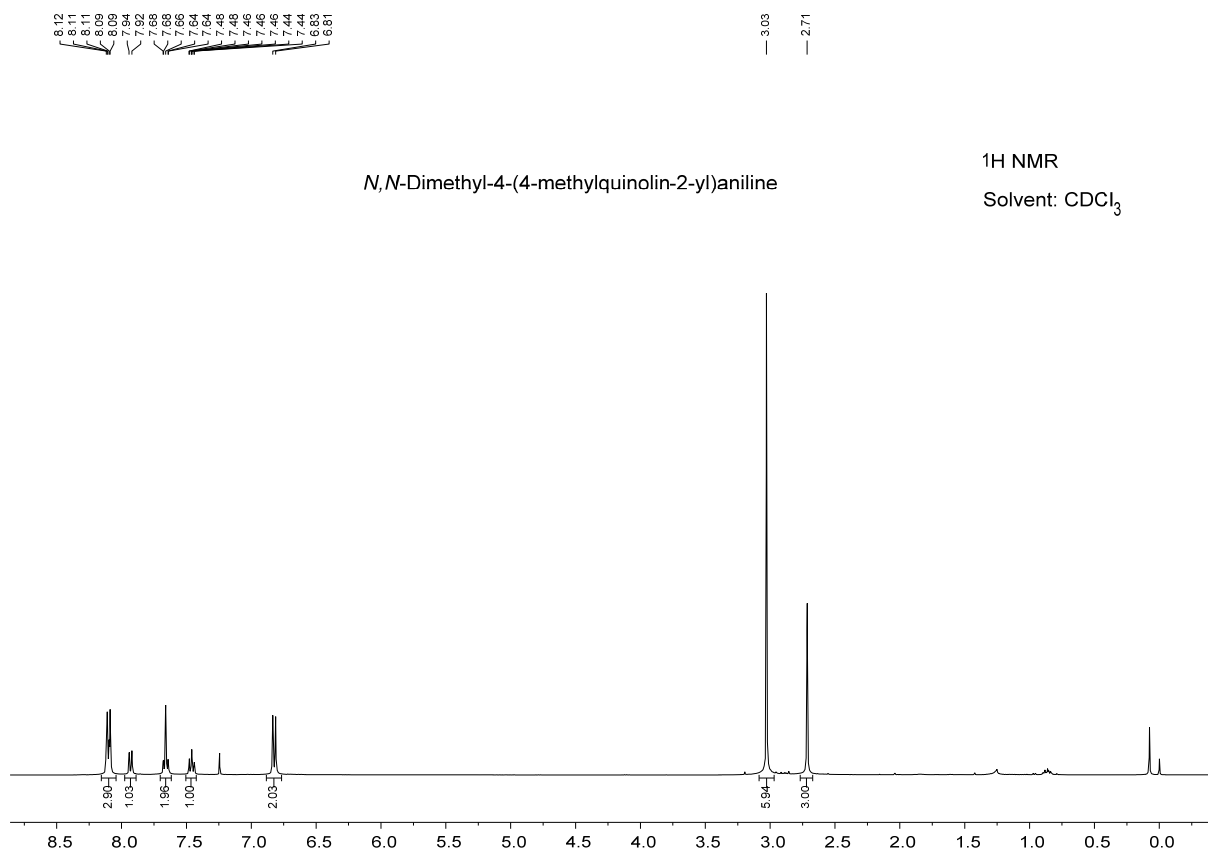
(21) 4-Methyl-2-(p-tolyl)quinoline



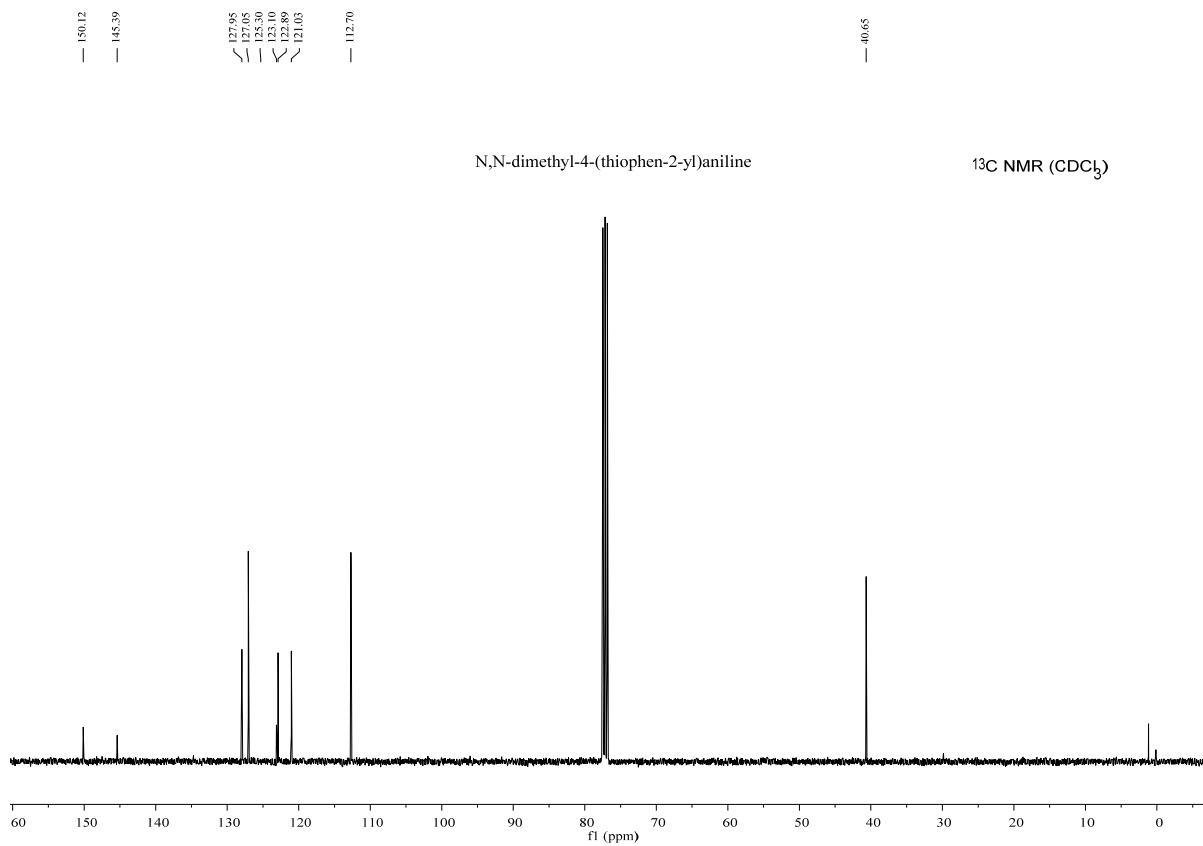
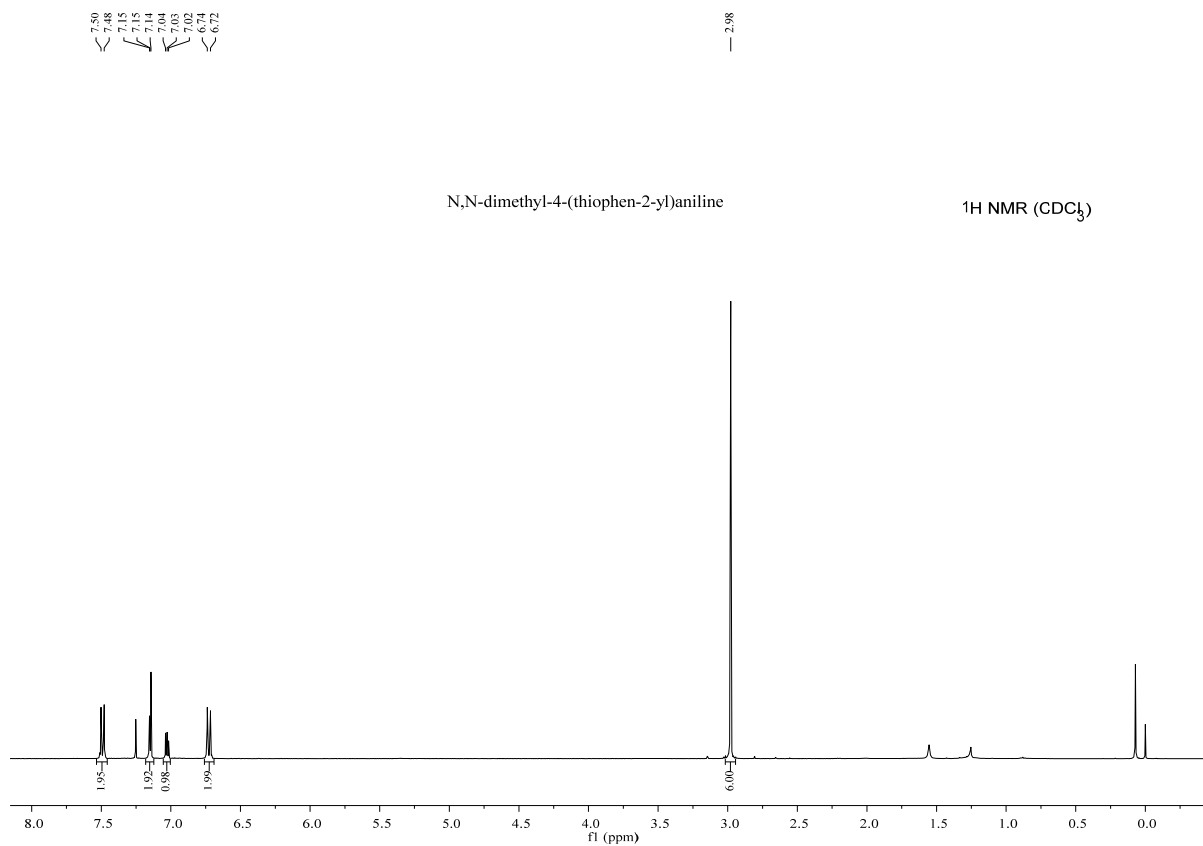
(22) 2-(4-Methoxyphenyl)-4-methylquinoline



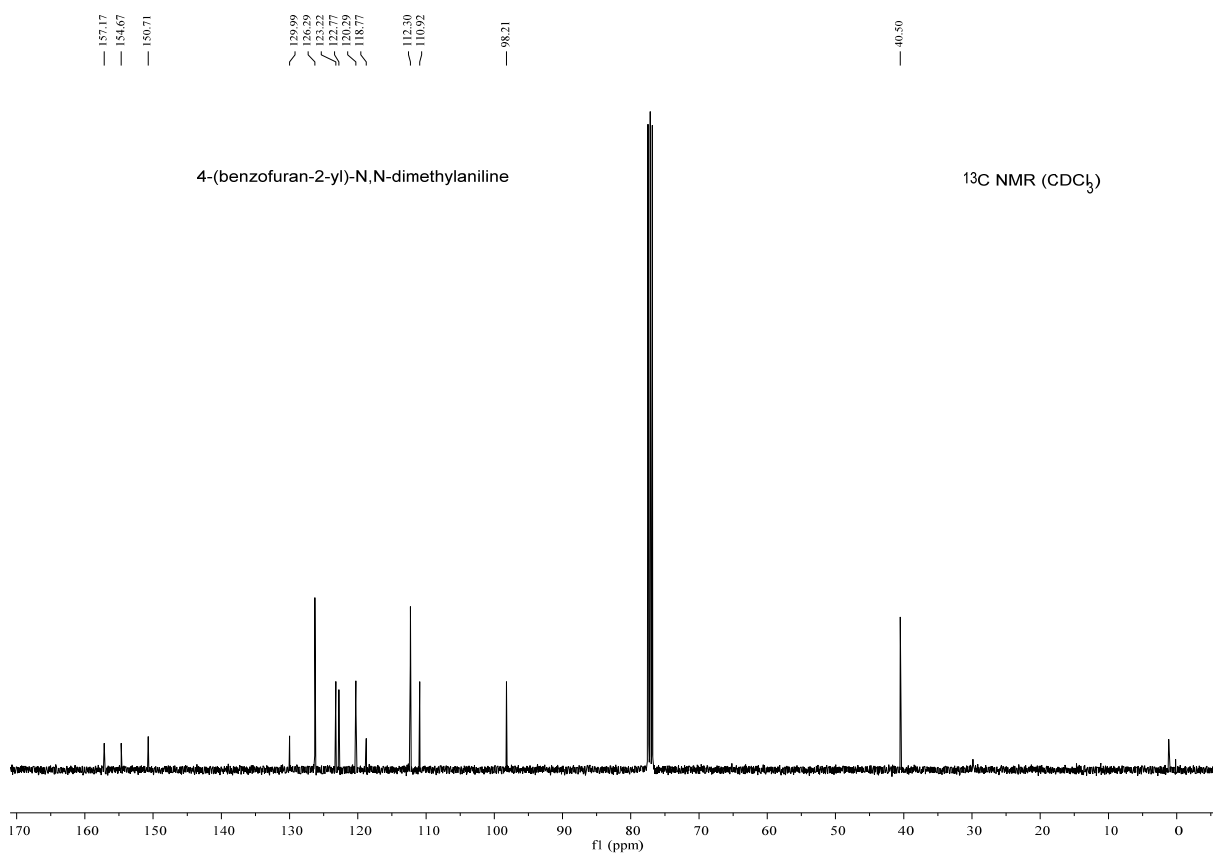
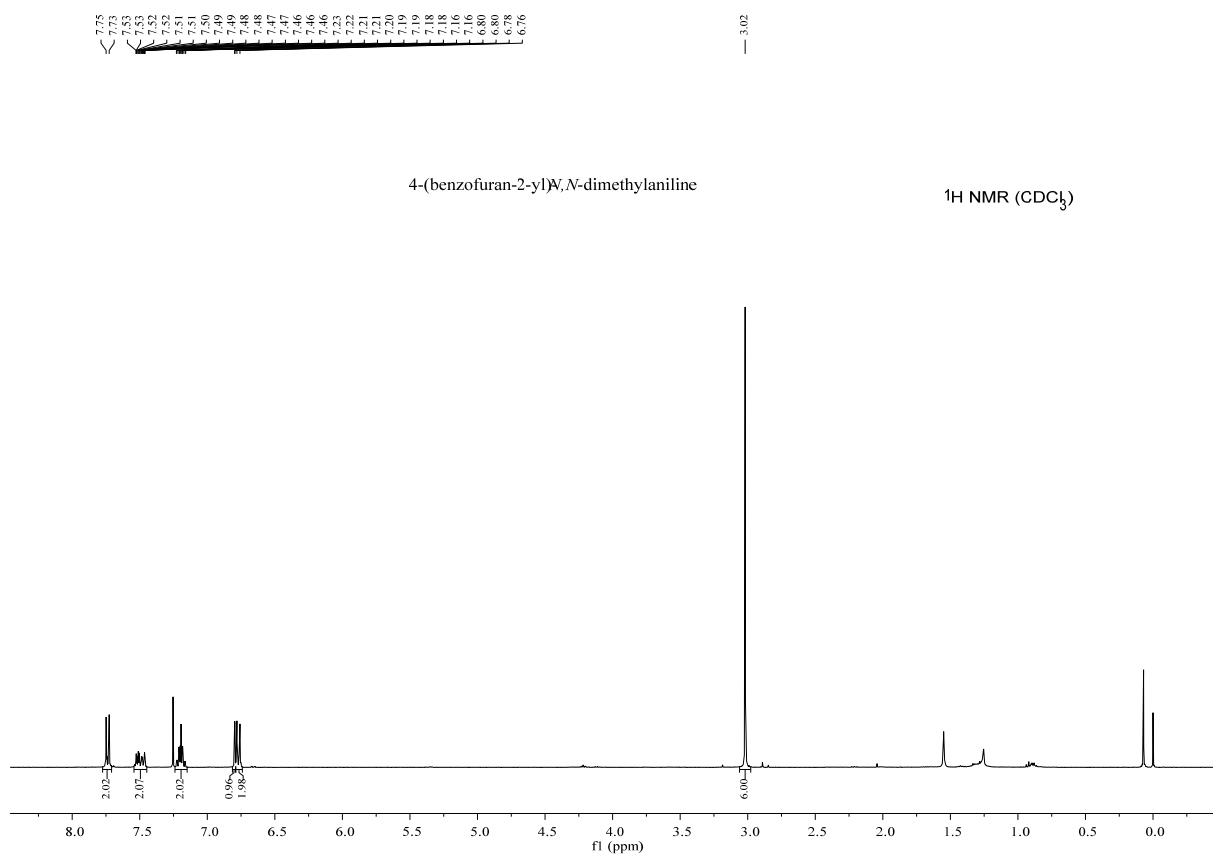
(23) *N,N*-Dimethyl-4-(4-methylquinolin-2-yl)aniline



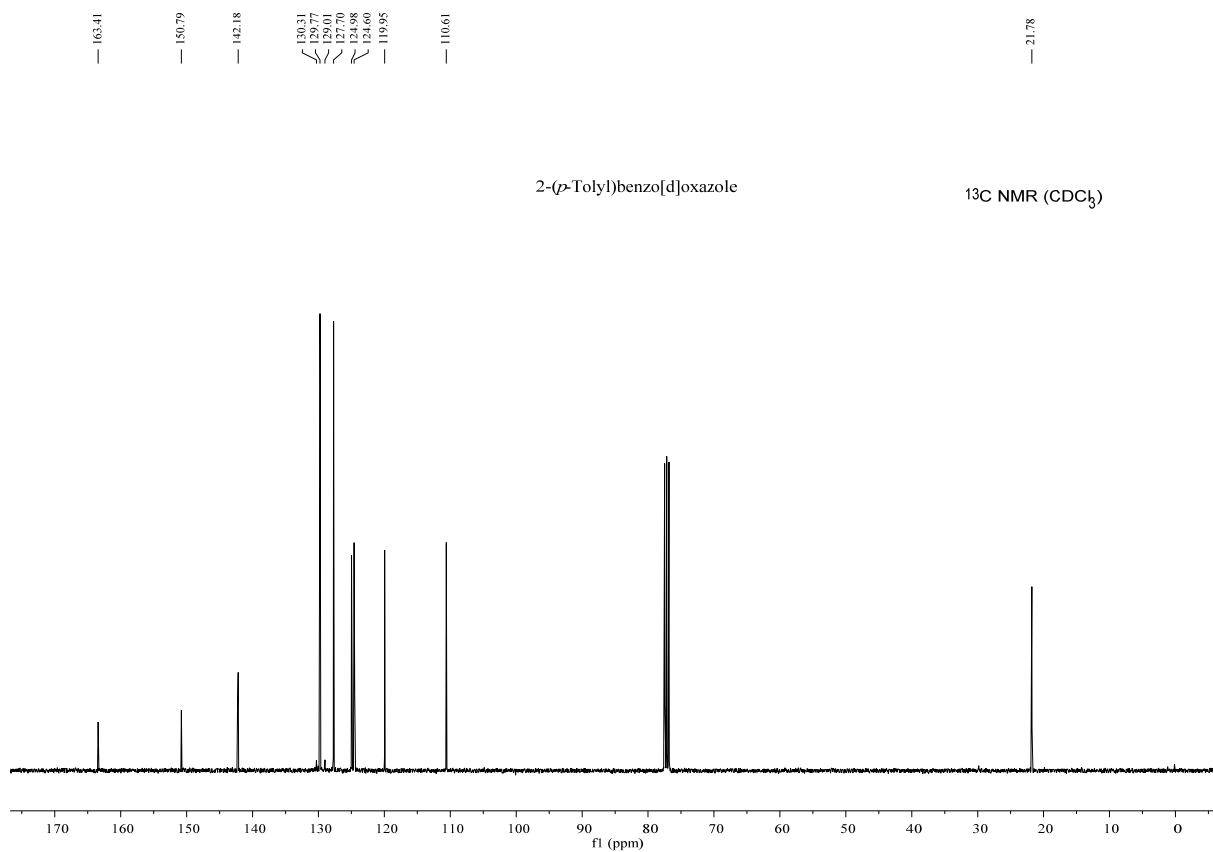
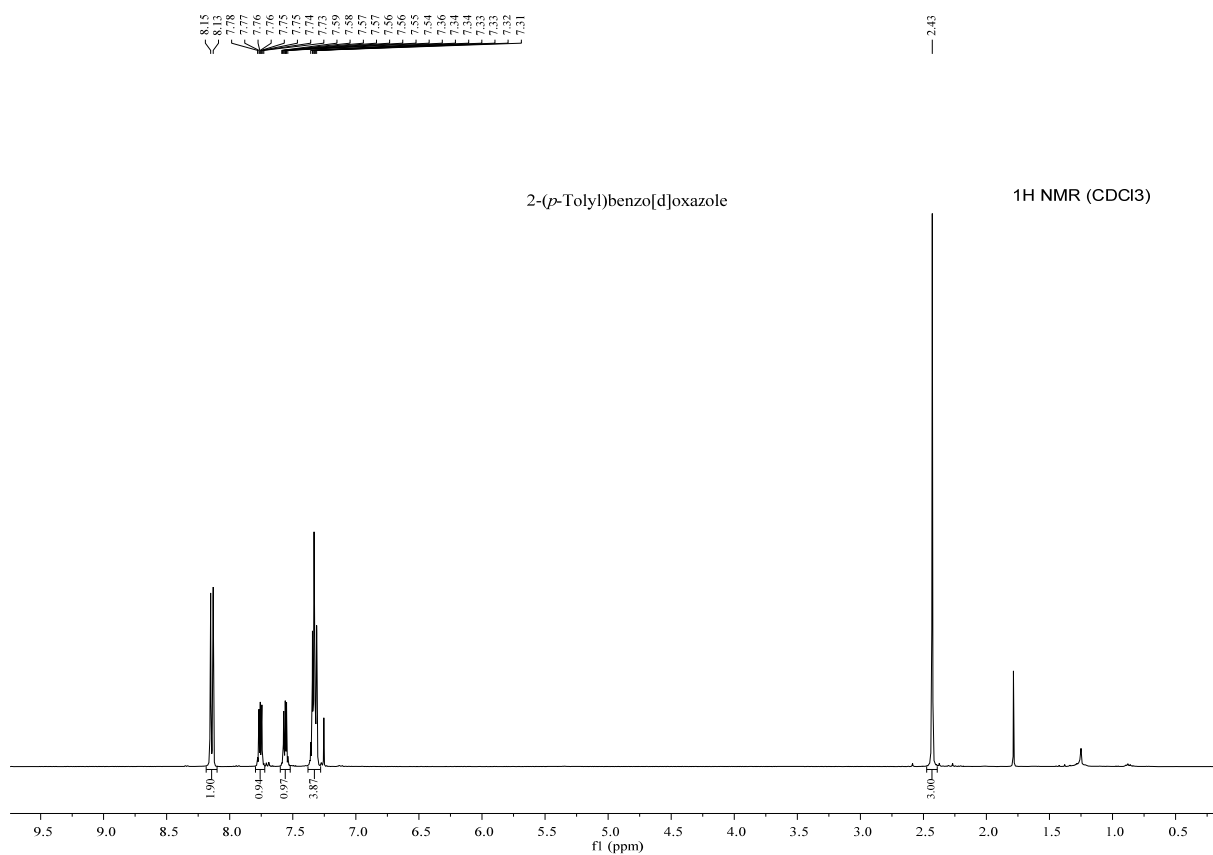
(24) *N,N*-dimethyl-4-(thiophen-2-yl)aniline



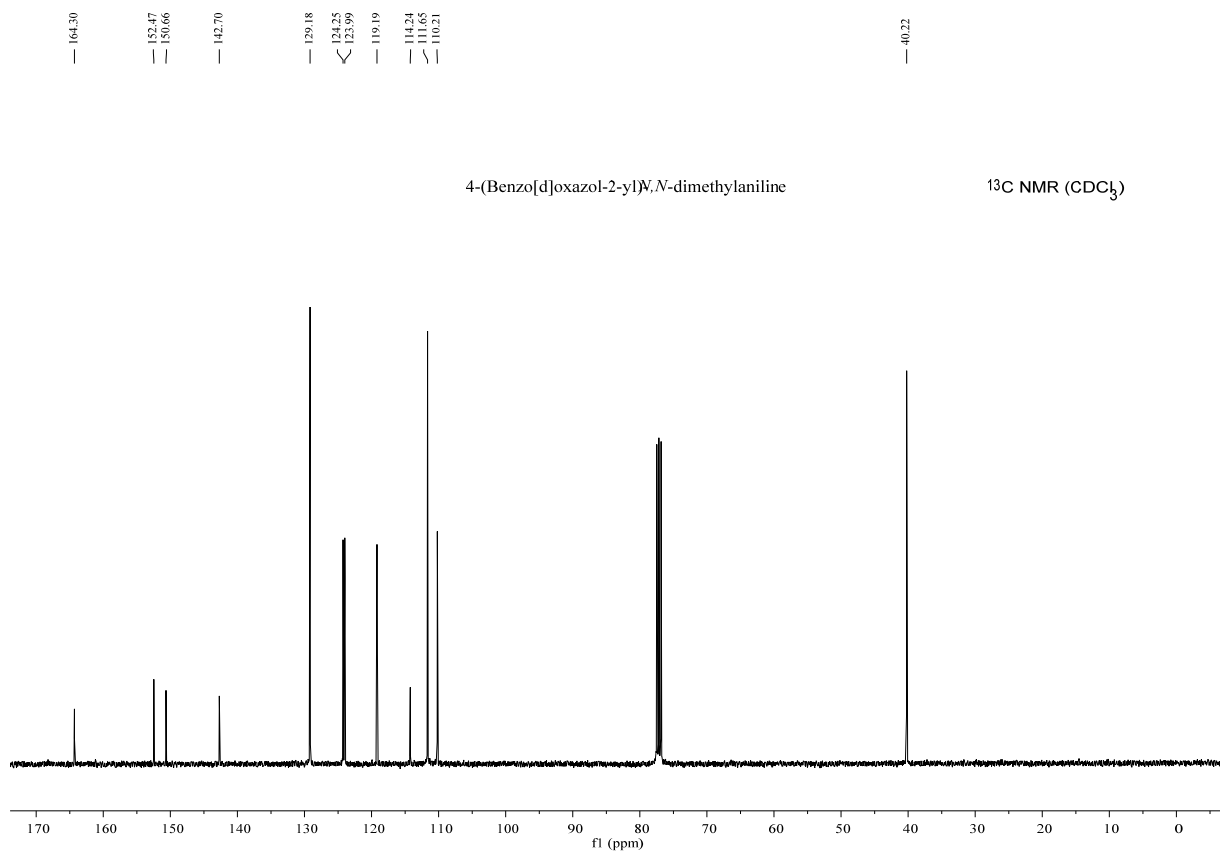
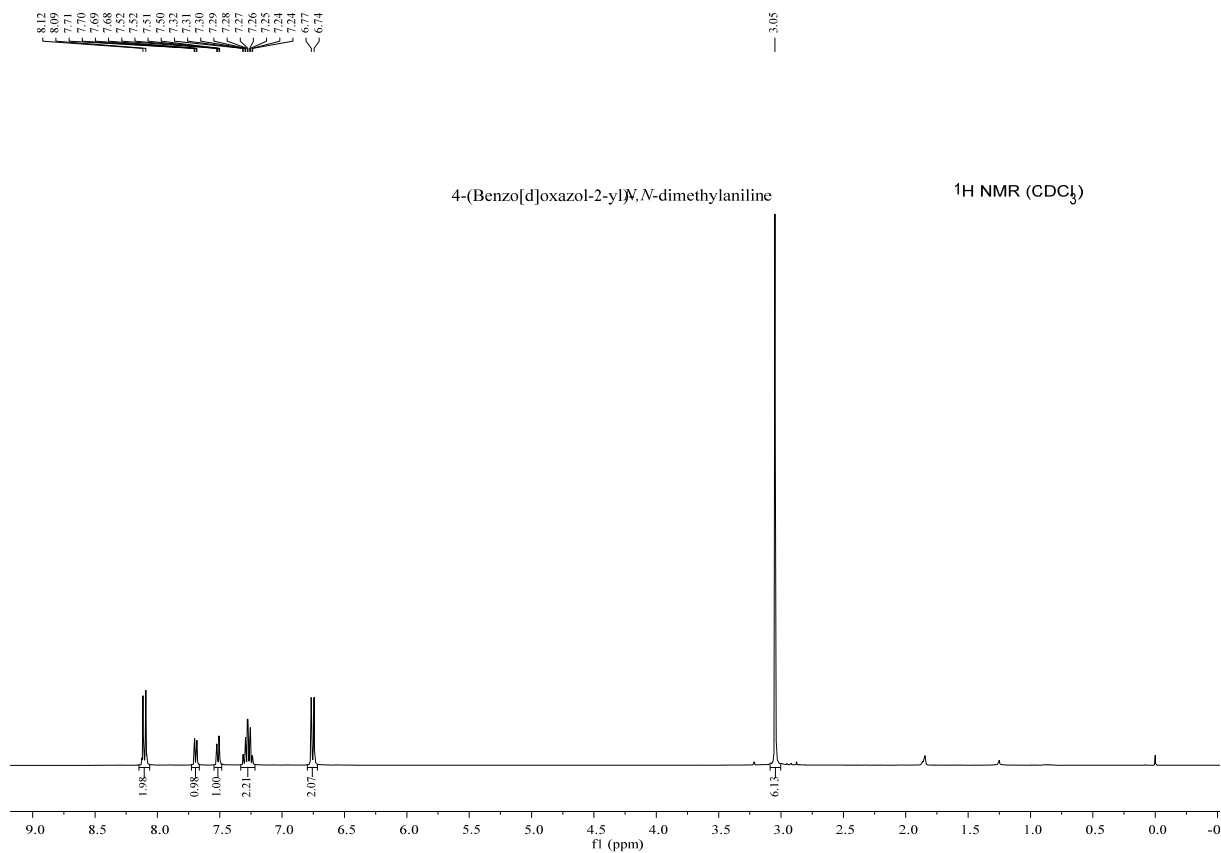
(25) 4-(benzofuran-2-yl)-*N,N*-dimethylaniline



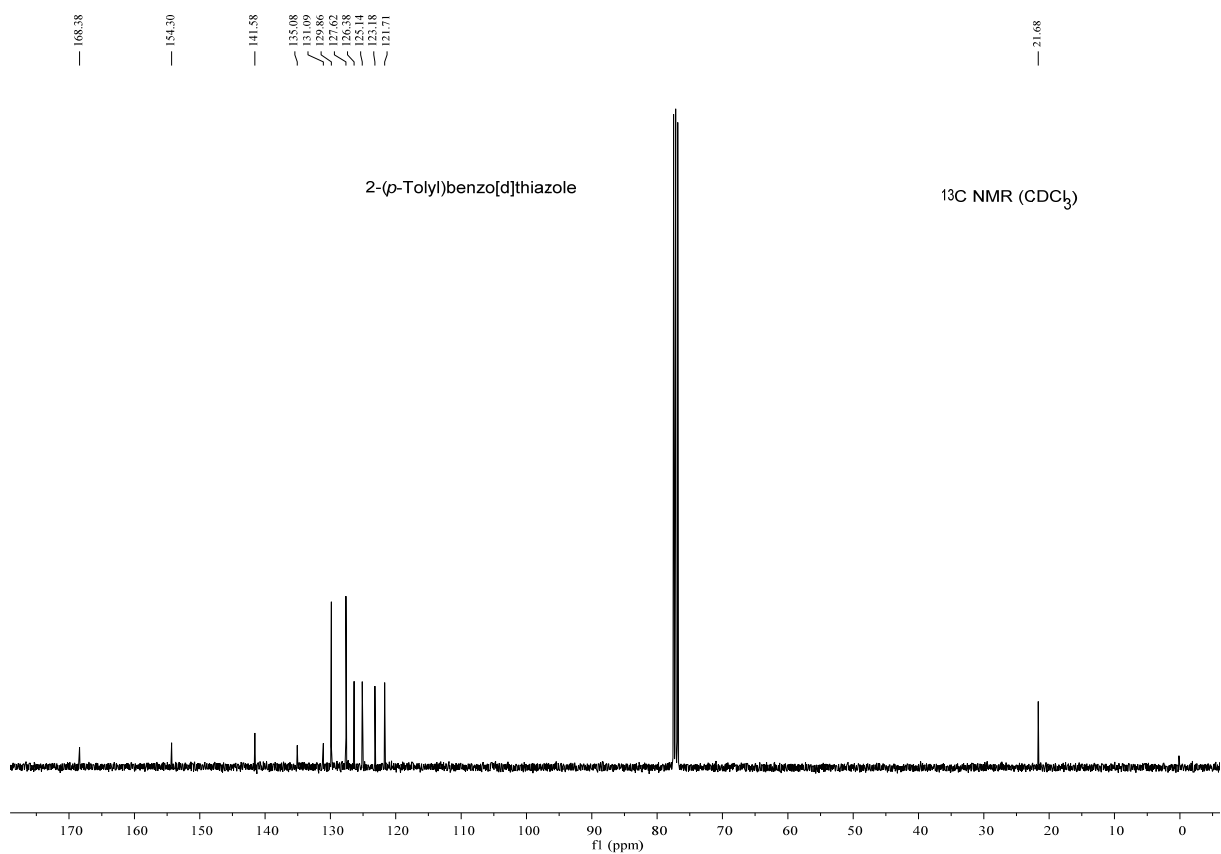
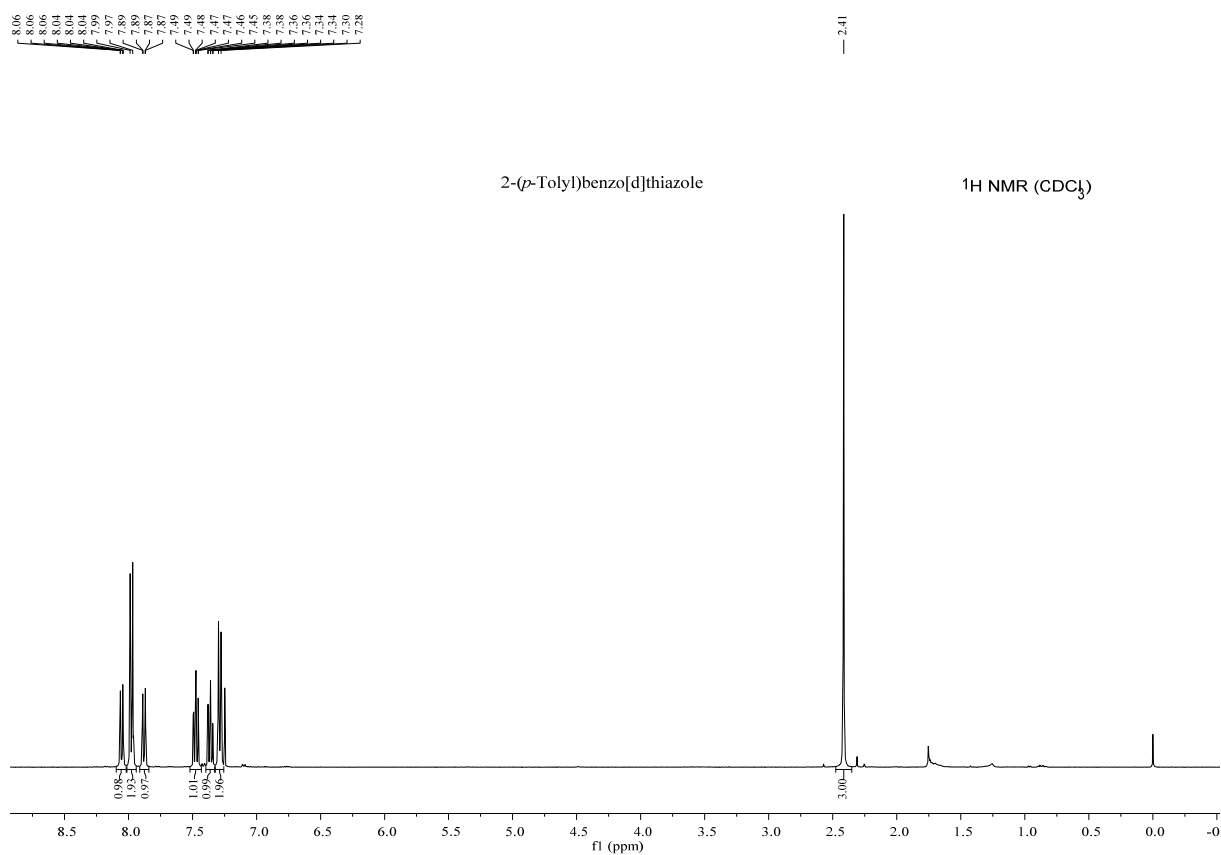
(26) 2-(*p*-Tolyl)benzo[*d*]oxazole



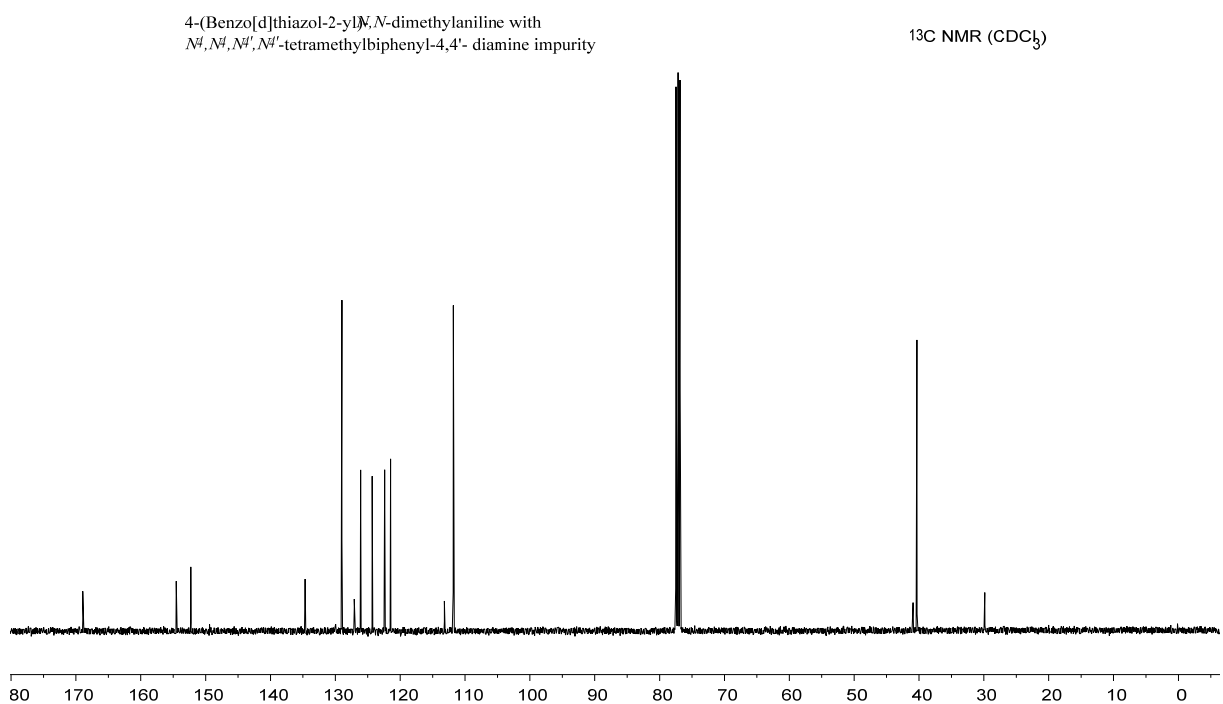
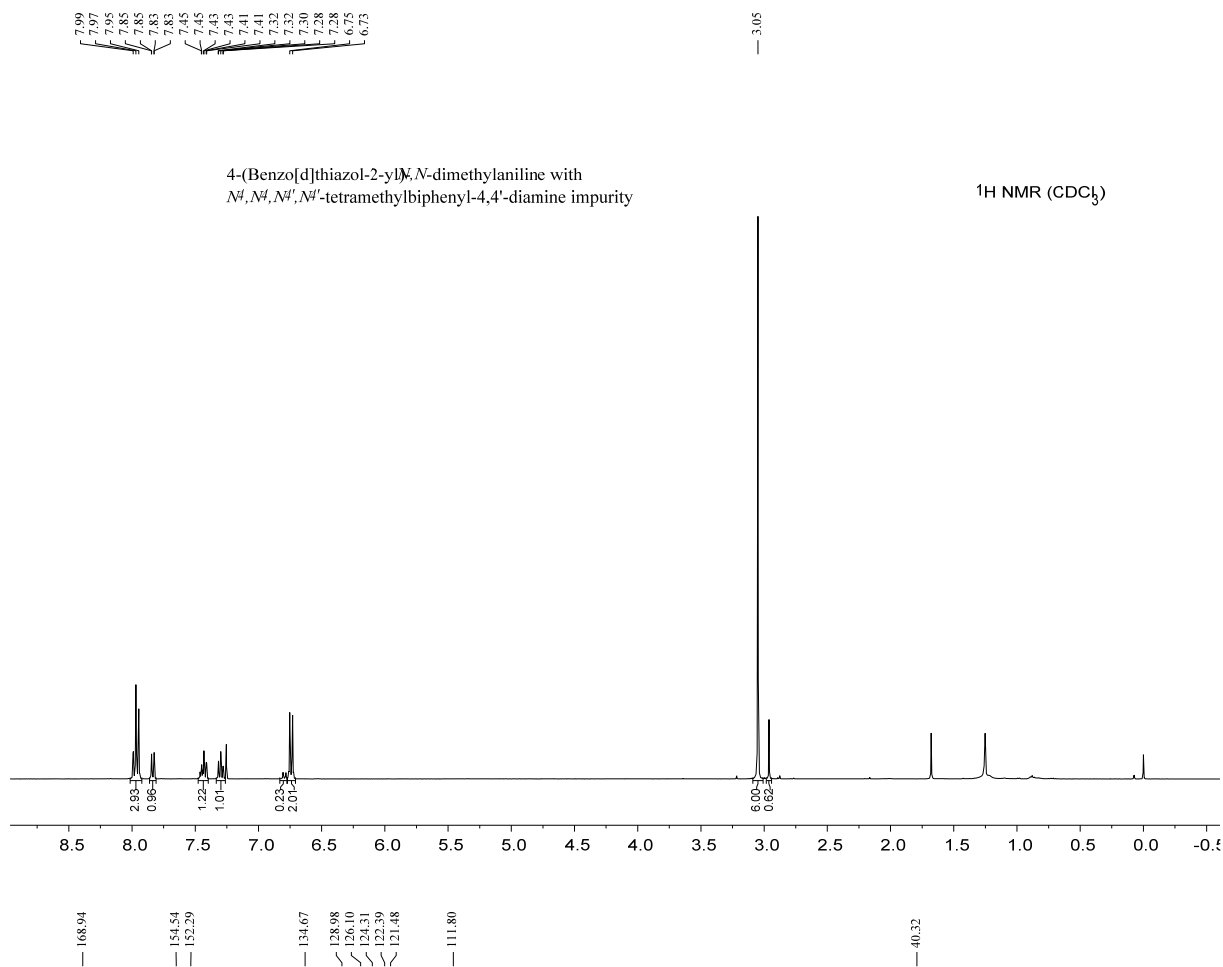
(27) 4-(Benzo[d]oxazol-2-yl)-*N,N*-dimethylaniline



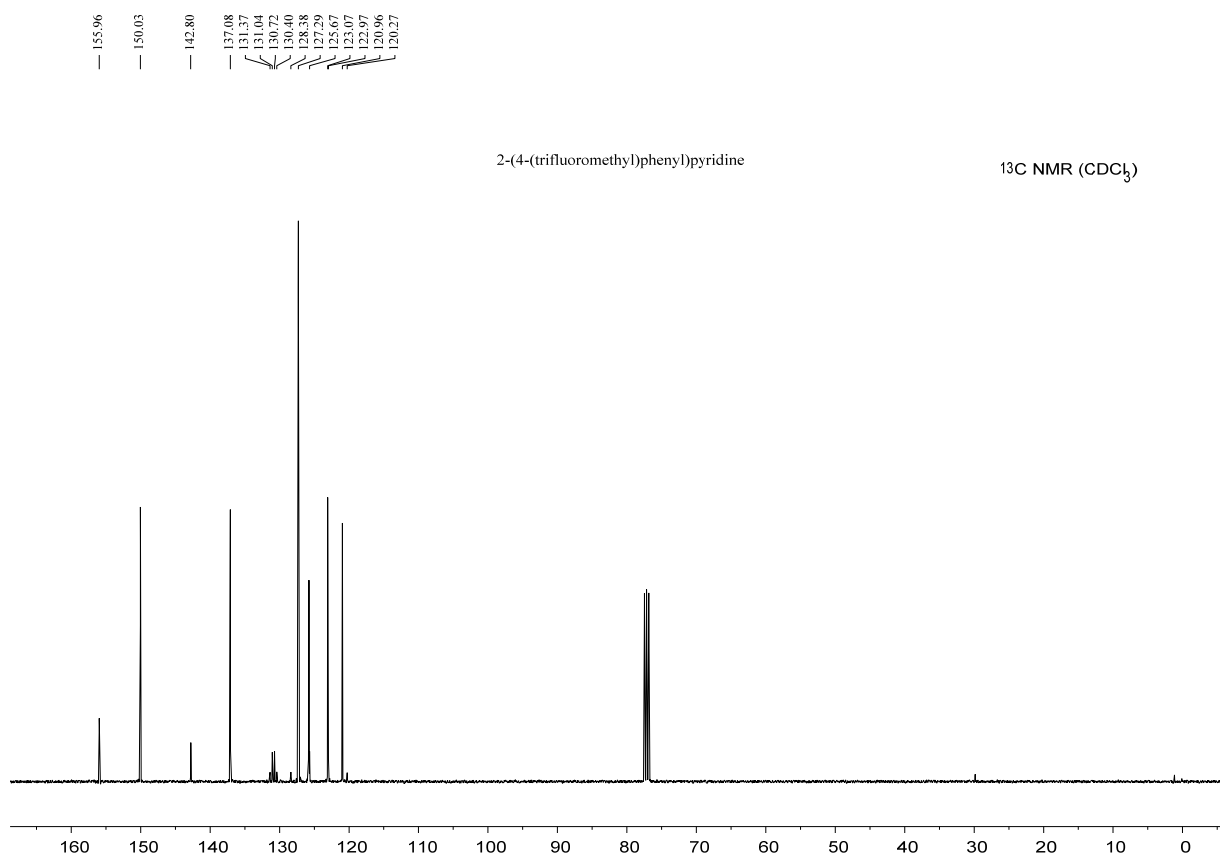
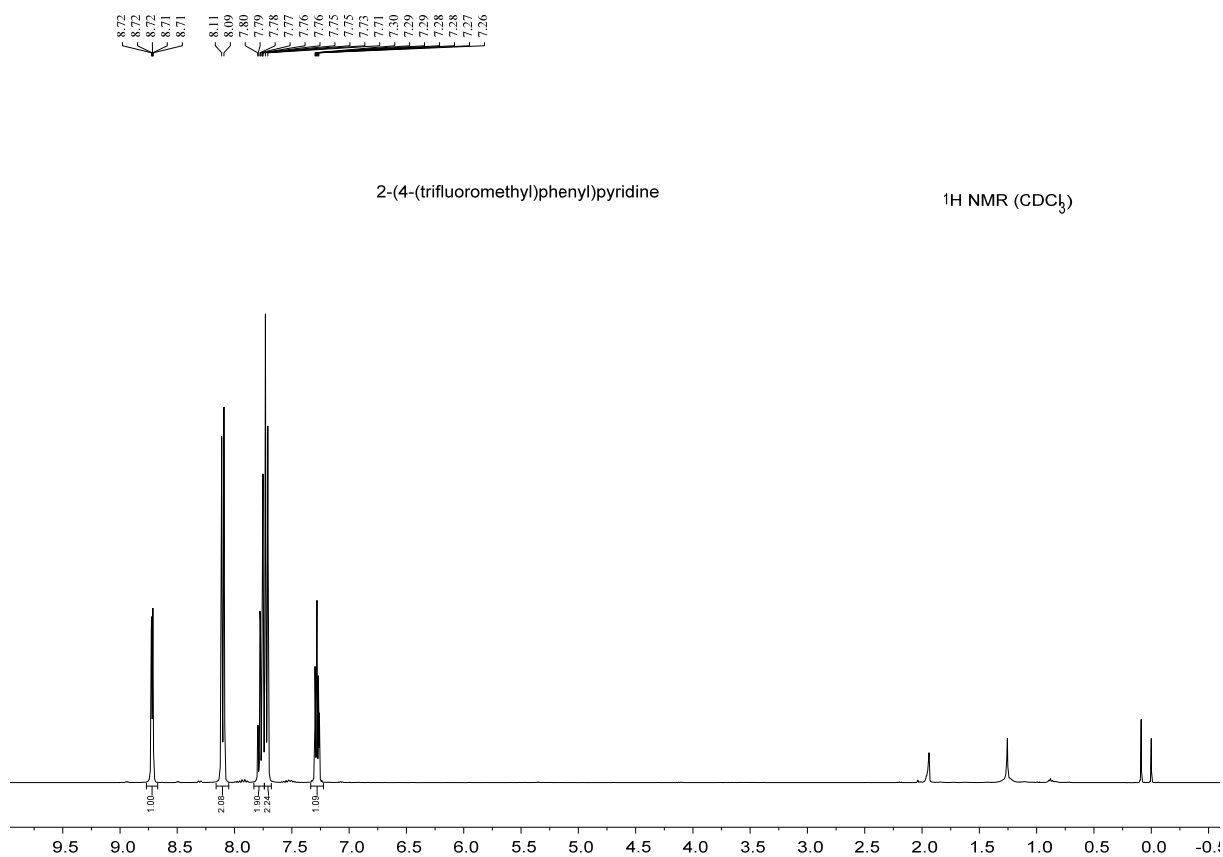
(28) 2-(*p*-tolyl)benzo[*d*]thiazole



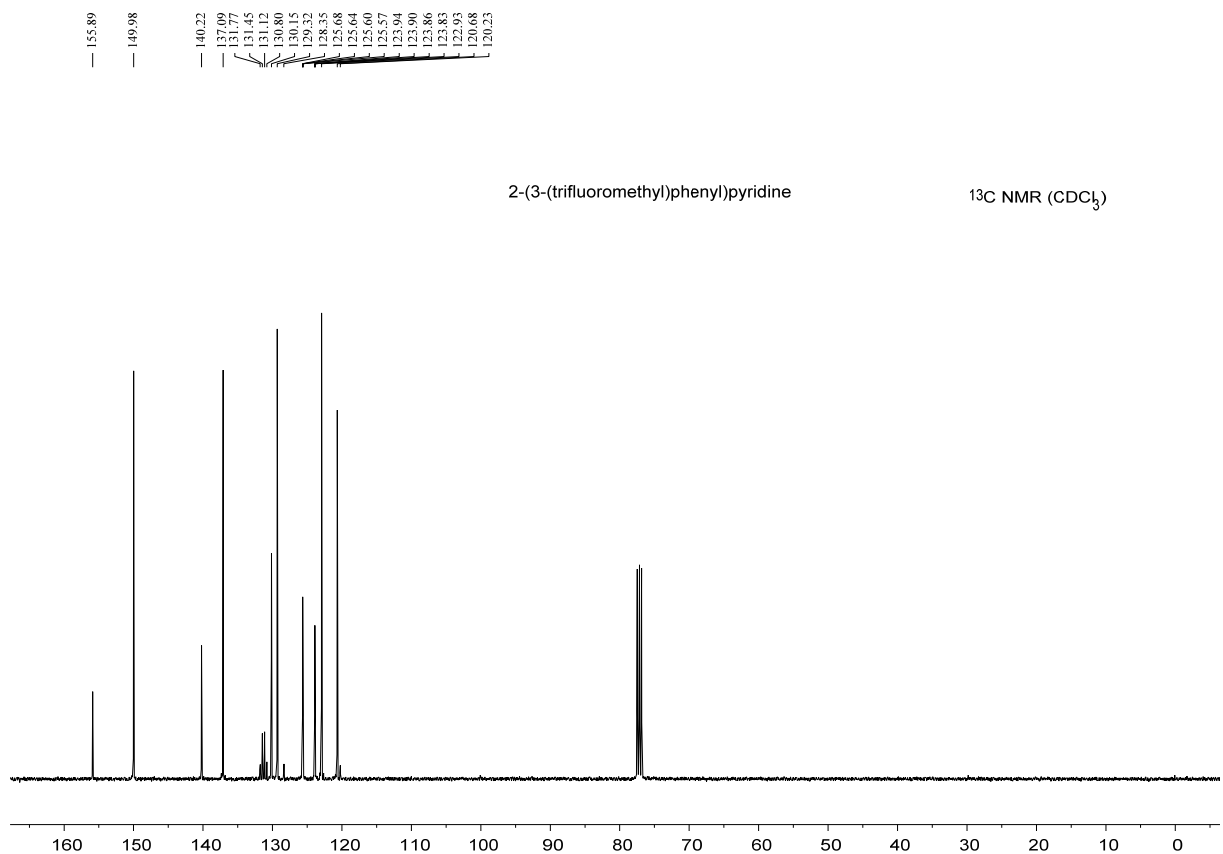
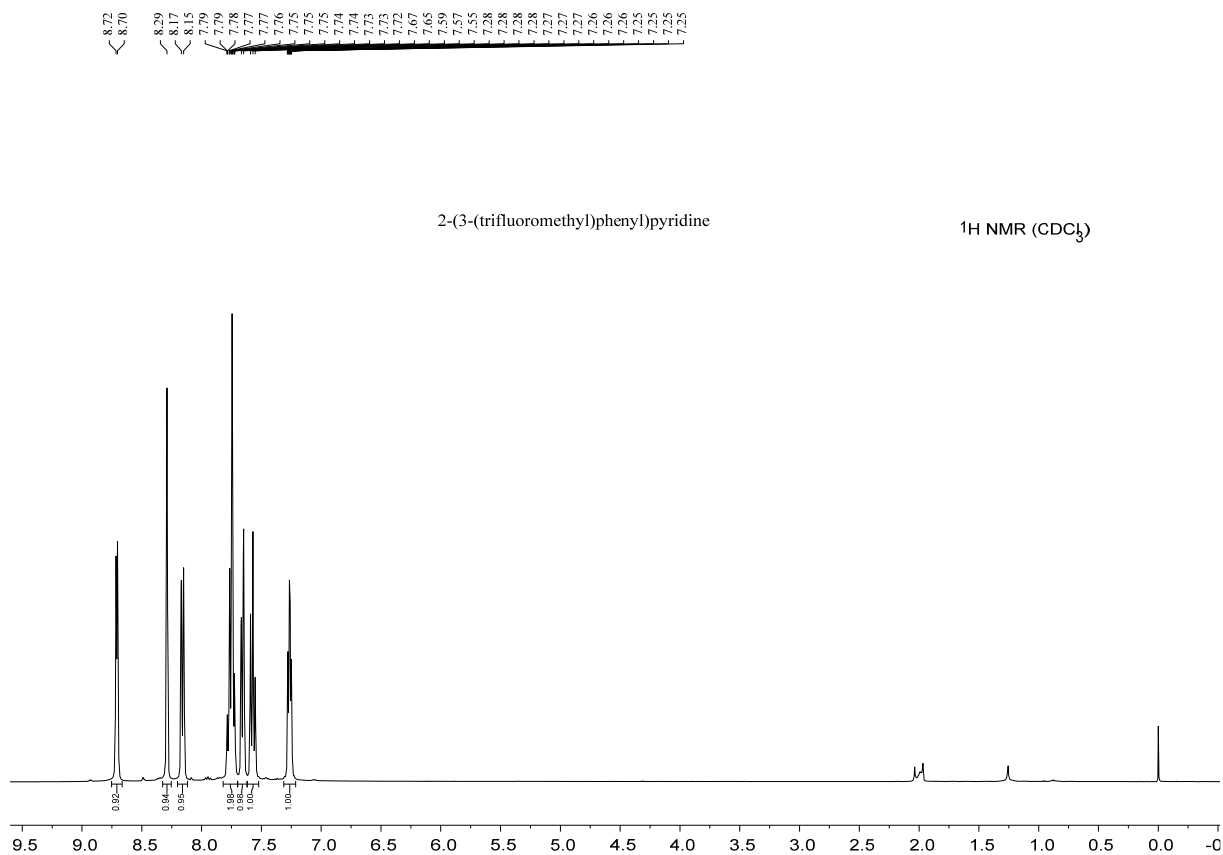
(29) 4-(Benzo[d]thiazol-2-yl)-*N,N*-dimethylaniline with *N^t,N^t,N^{t'},N^{t'}*-tetramethylbiphenyl-4,4'-diamine impurity



(30) 2-(4-(trifluoromethyl)phenyl)pyridine



(31) 2-(3-(Trifluoromethyl)phenyl)pyridine



(32) 2-(3-(Trifluoromethyl)phenyl)benzo[d]oxazole

