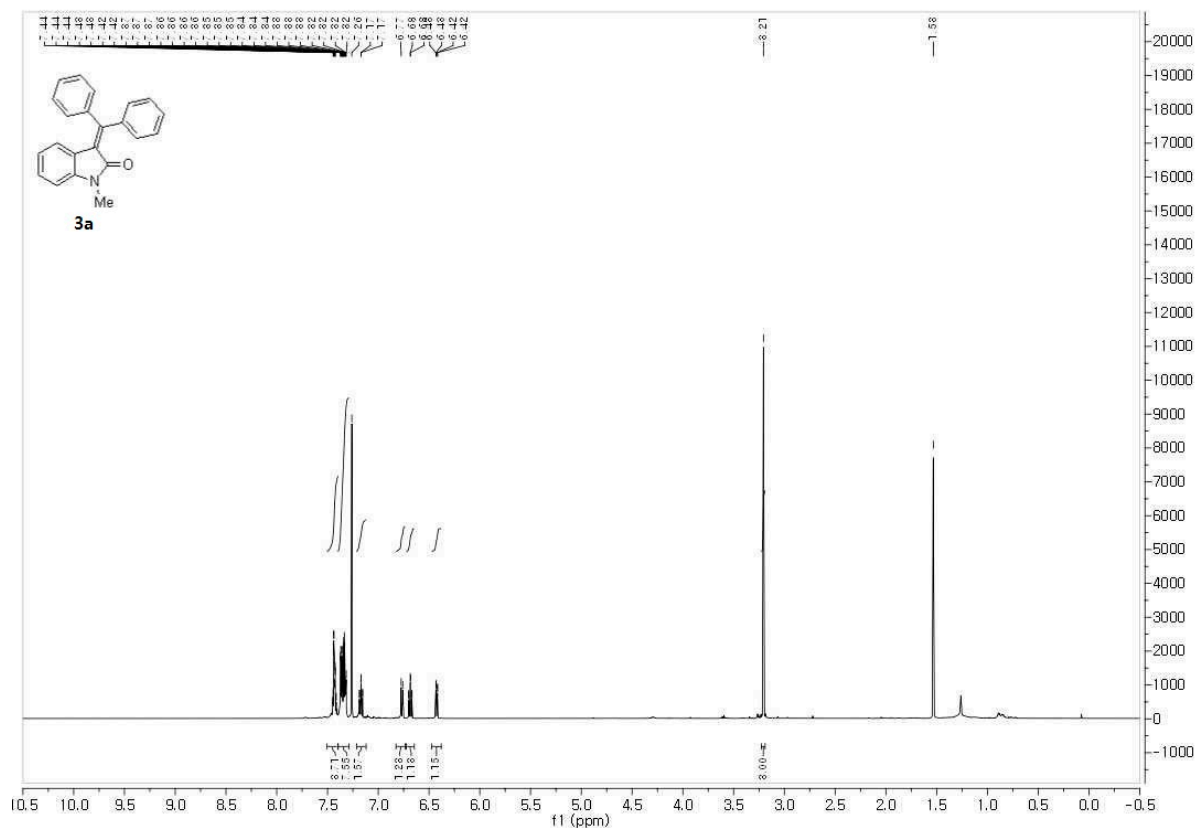


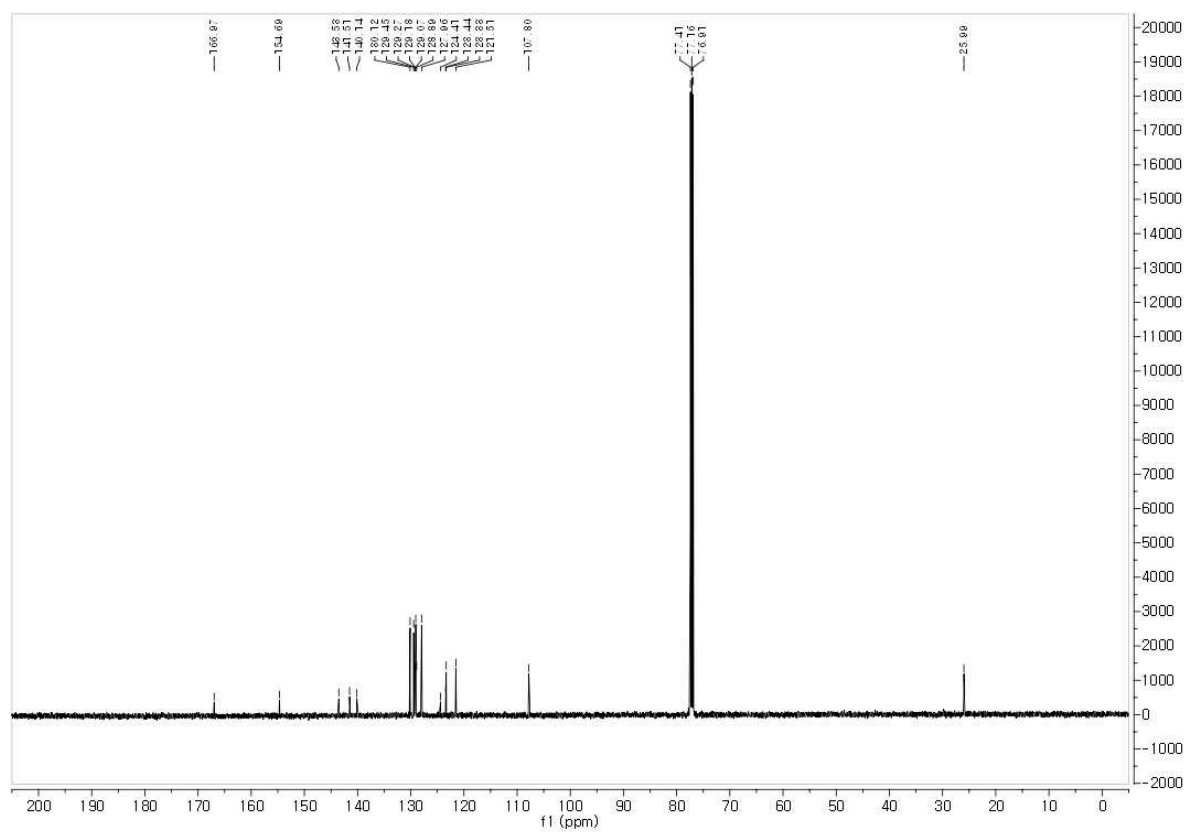
Sequential One-pot versus Tandem Multicomponent Approaches to 3-(Diarylmethylene)oxindoles

***N*-(2-bromophenyl)-*N*-methylpropiolamide (1)**

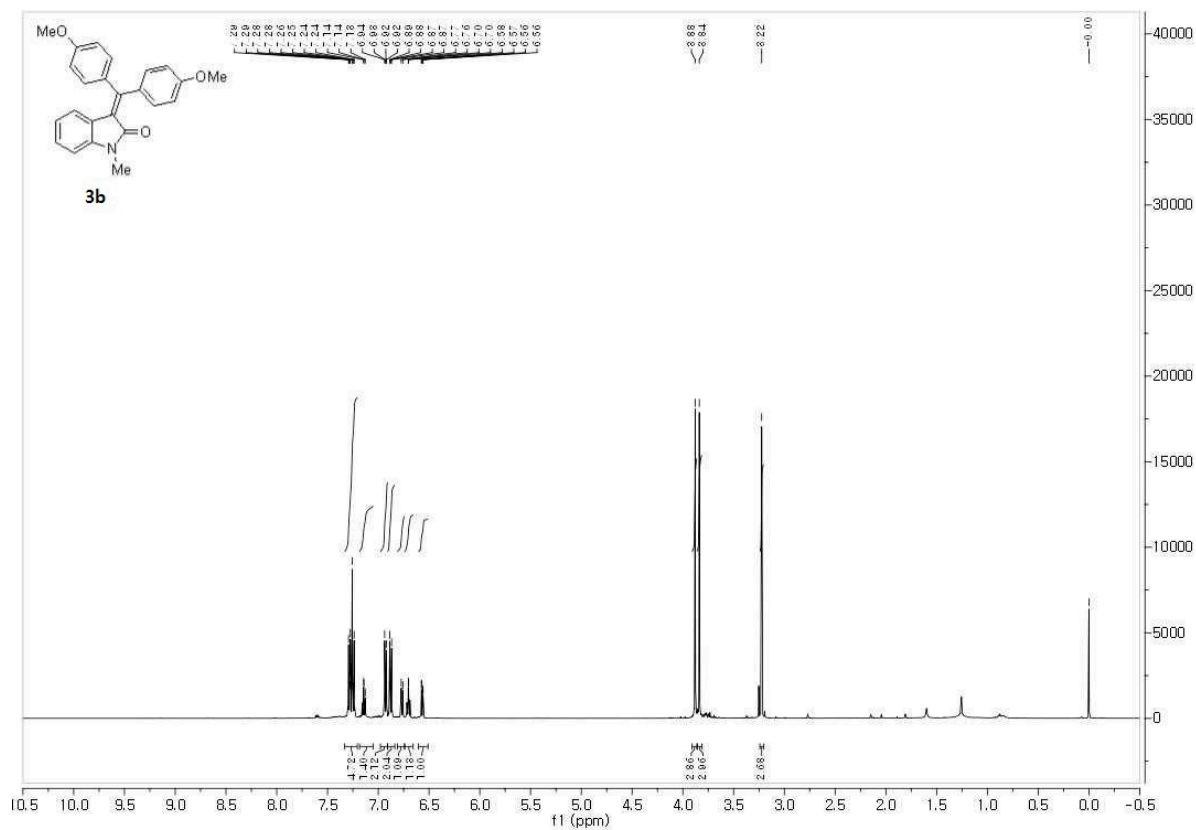
¹H NMR spectrum of 3a



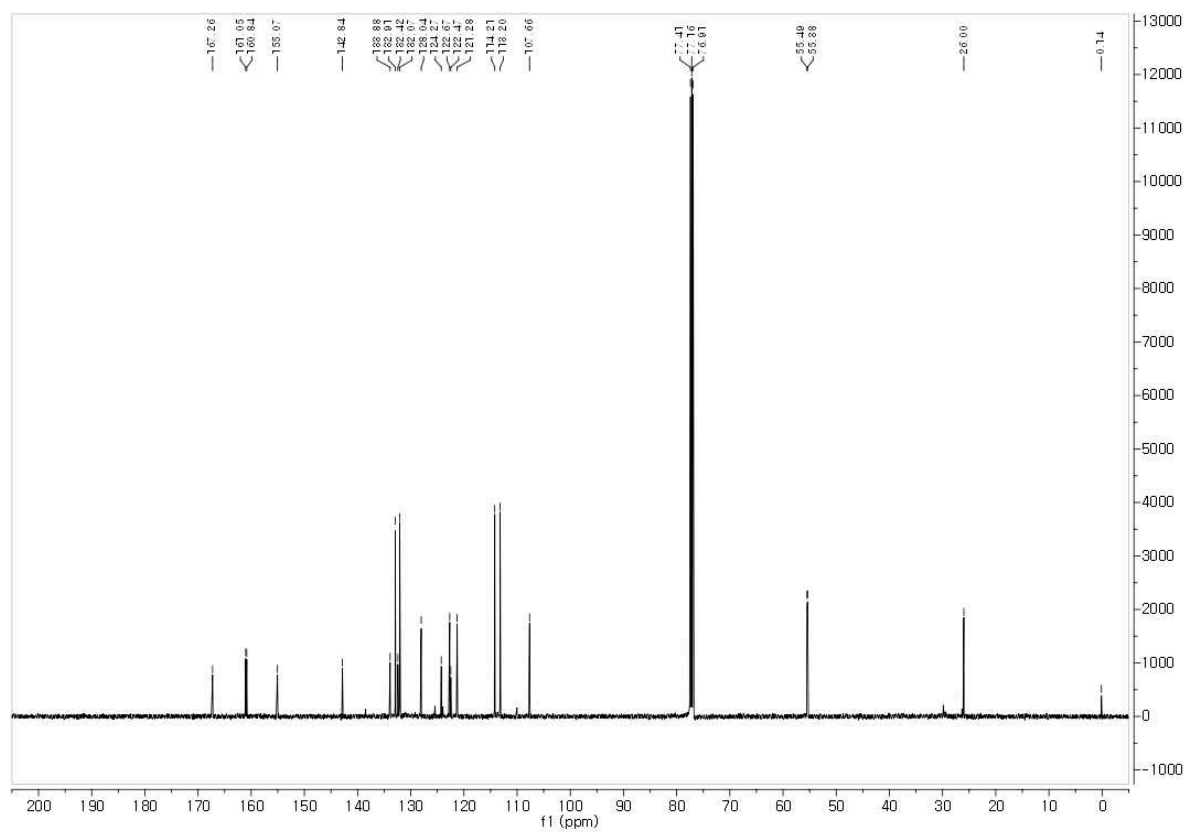
^{13}C NMR spectrum of 3a



¹H NMR spectrum of 3b

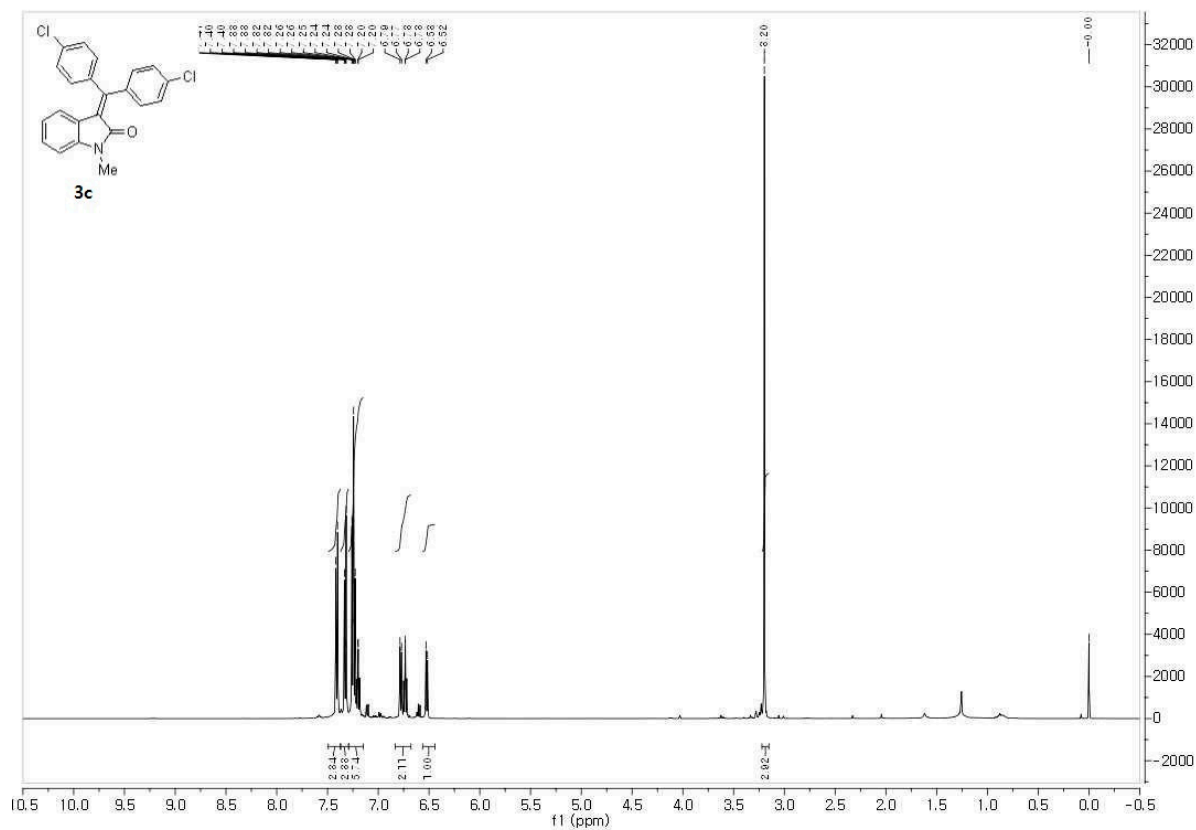


^{13}C NMR spectrum of 3b

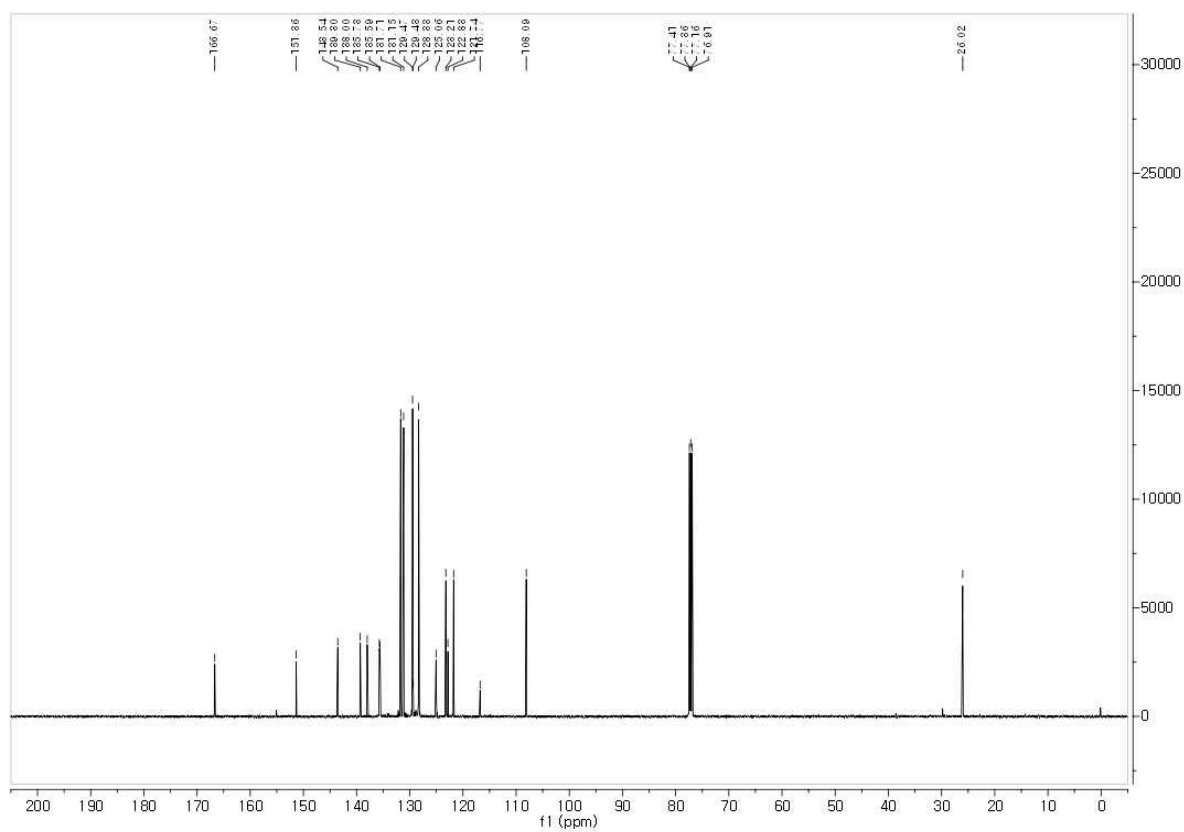


3-(bis(4-chlorophenyl)methylene)-1-methylindolin-2-one (3c)

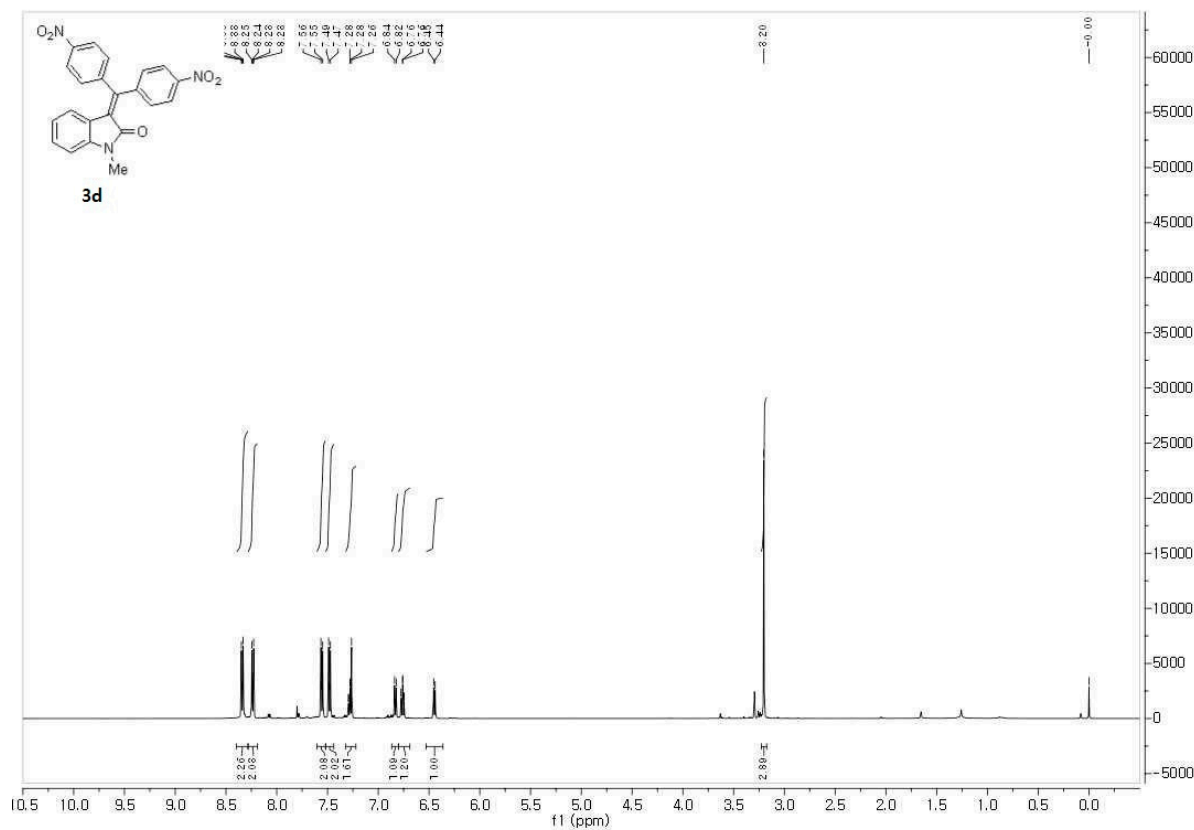
¹H NMR spectrum of 3c



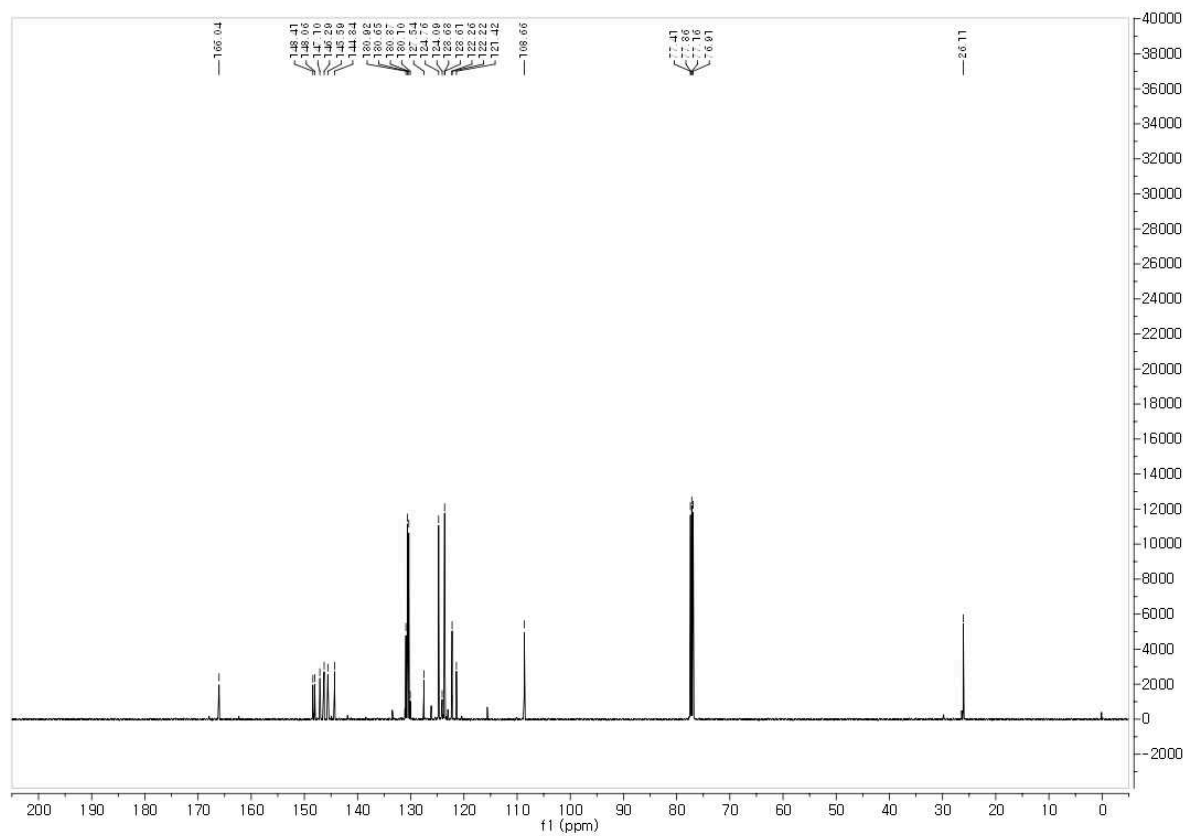
¹³C NMR spectrum of 3c

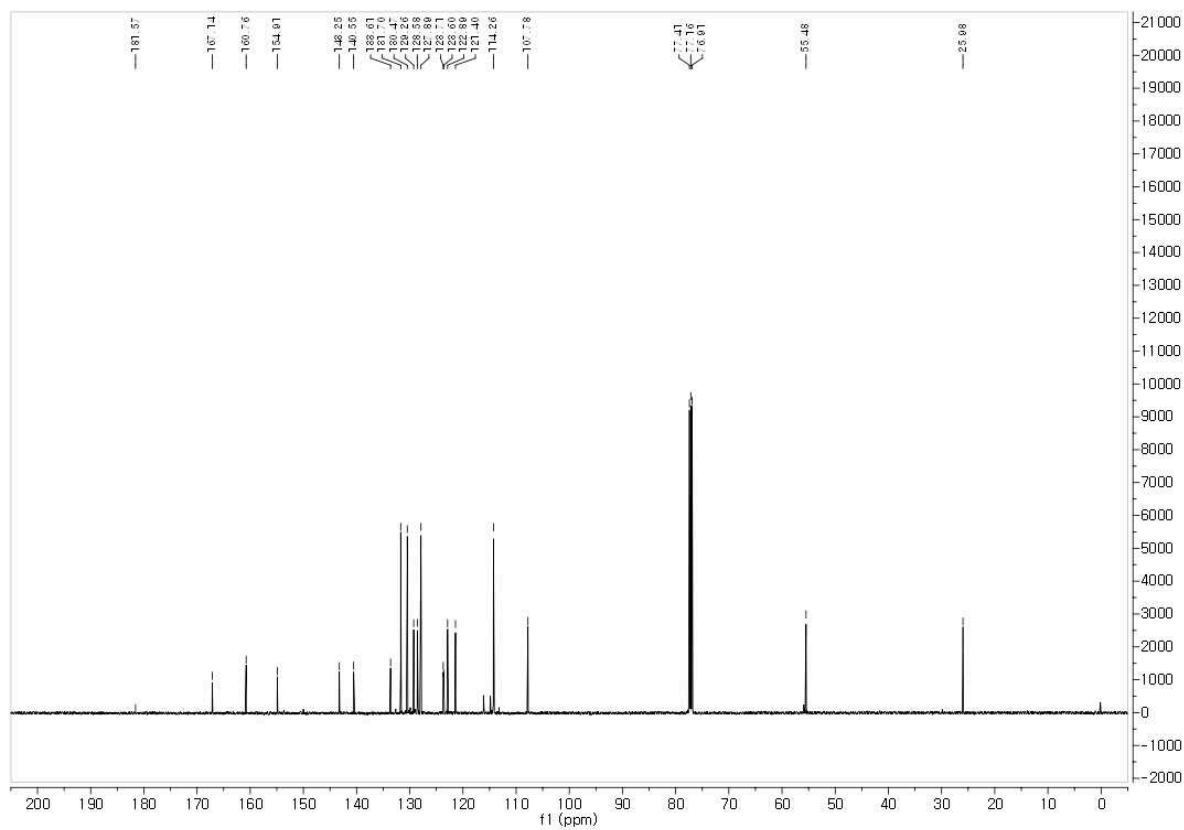


¹H NMR spectrum of 3d

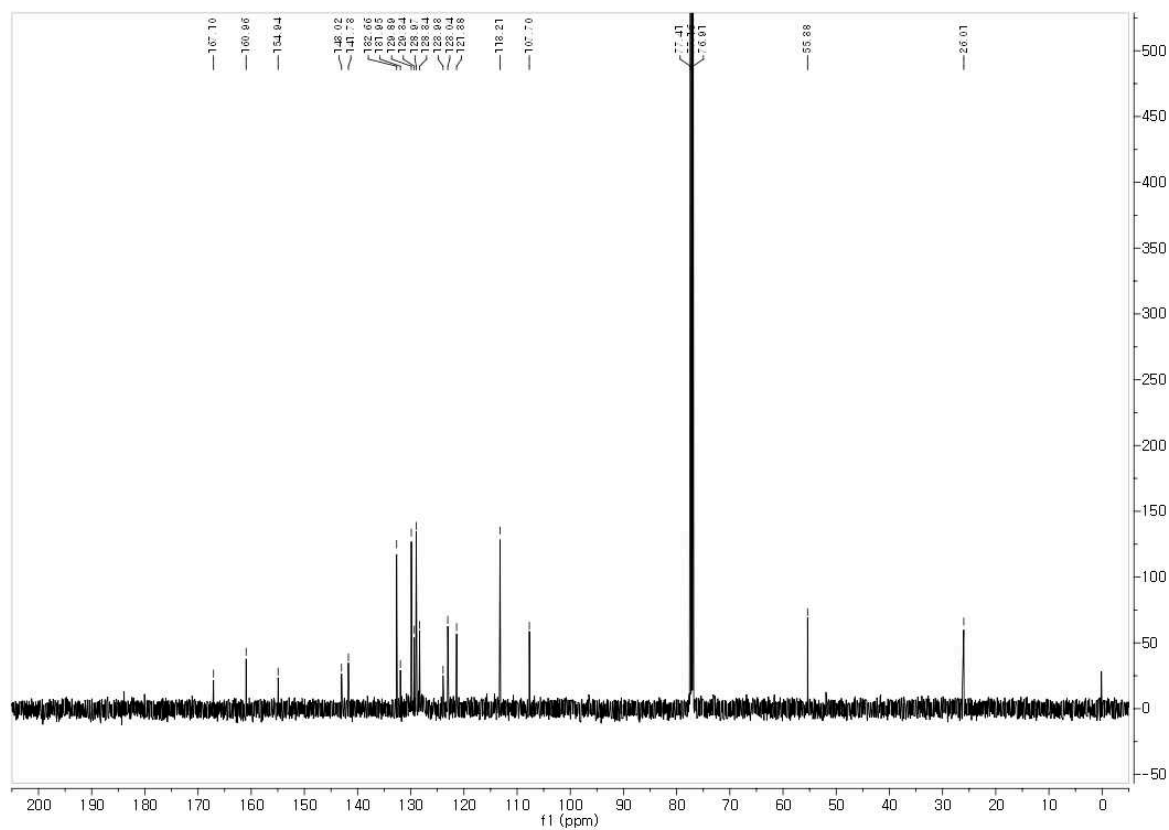


^{13}C NMR spectrum of 3d

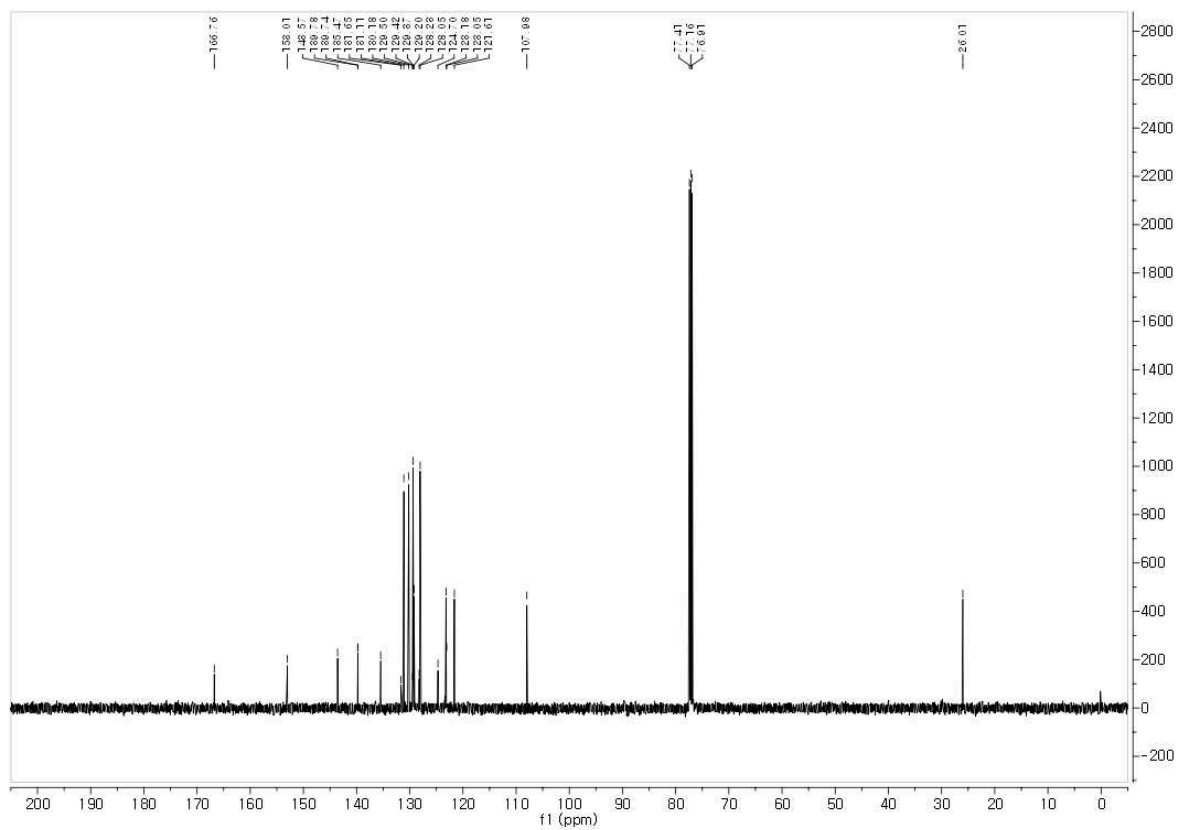




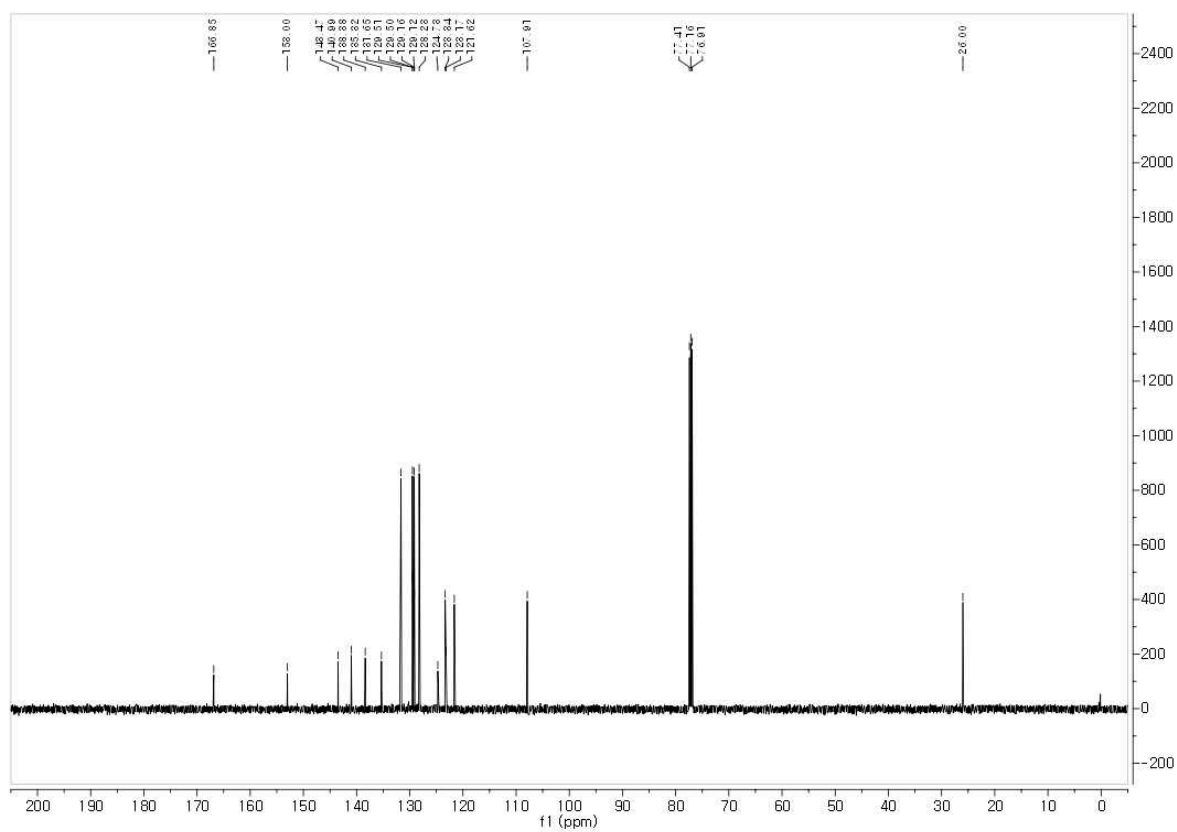
¹H NMR spectrum of (Z)-3e



¹H NMR spectrum of (E)-3f

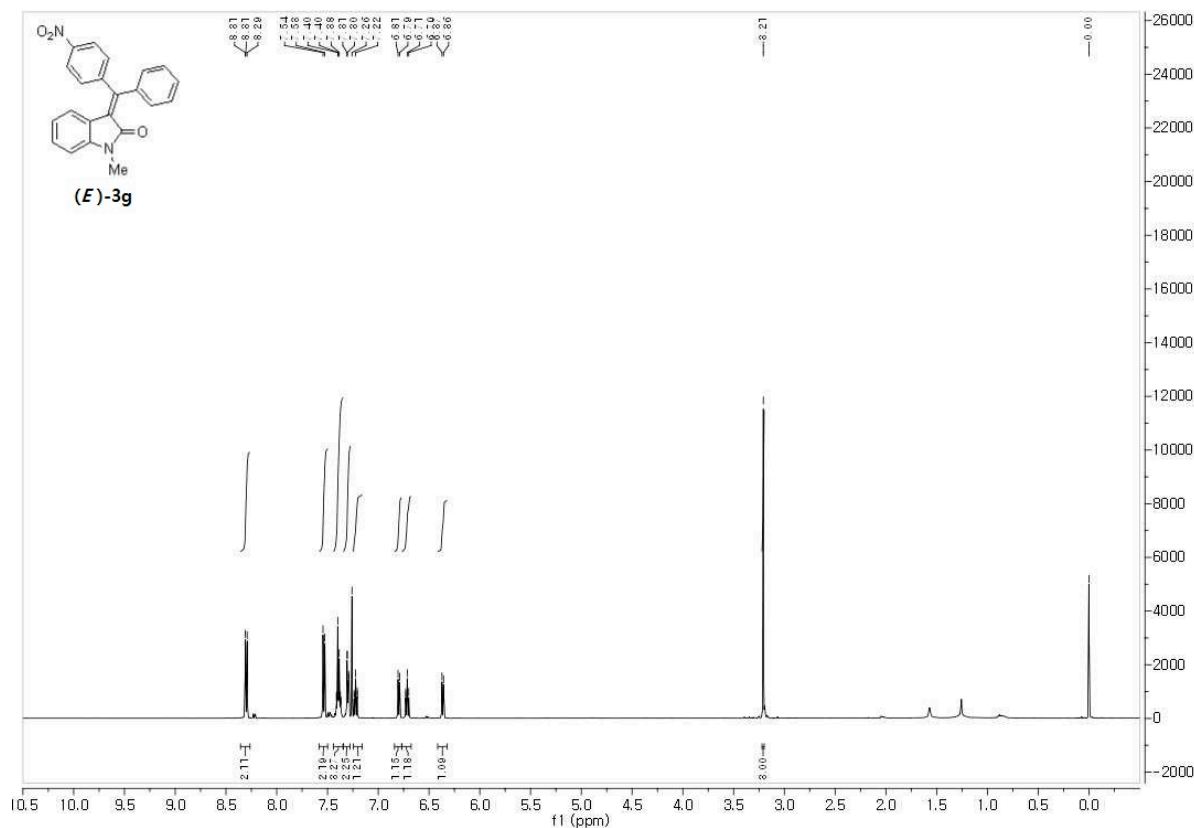


¹H NMR spectrum of (Z)-3f

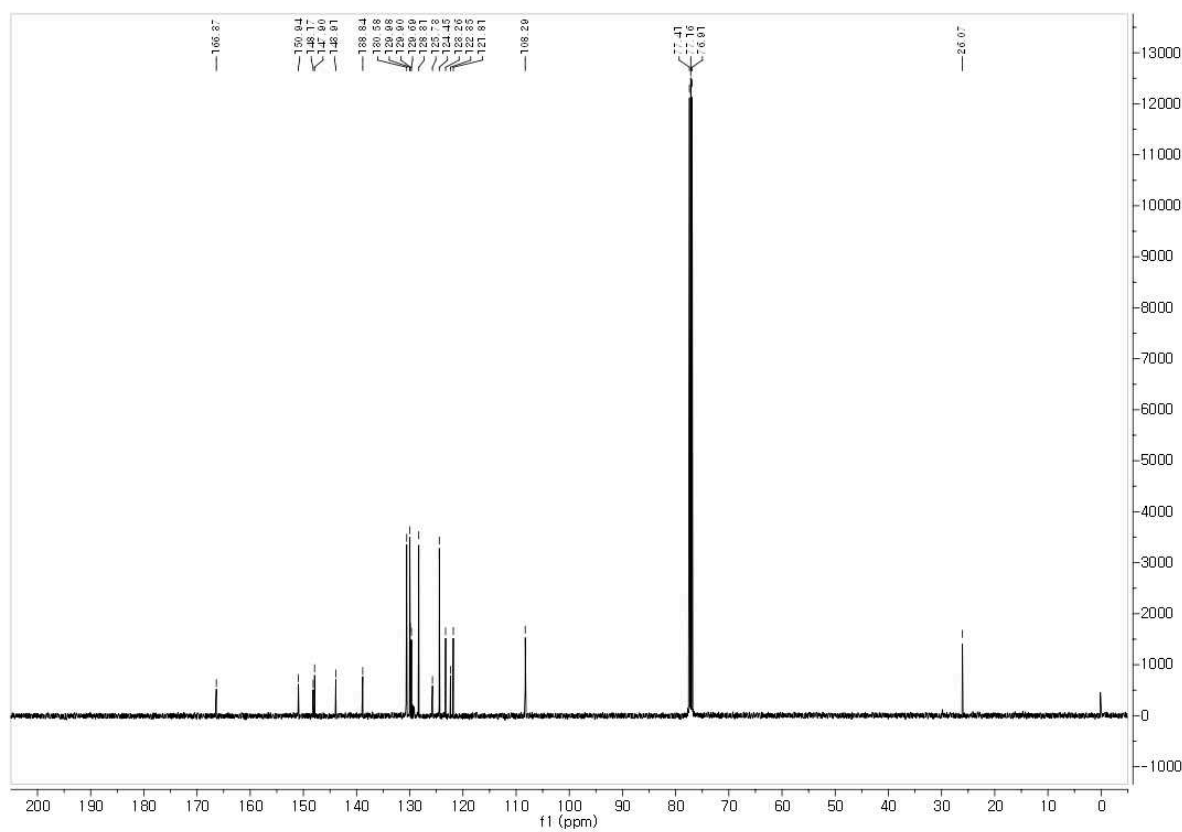


(E)-1-methyl-3-((4-nitrophenyl)(phenyl)methylene)indolin-2-one ((E)-3g)

¹H NMR spectrum of (E)-3g

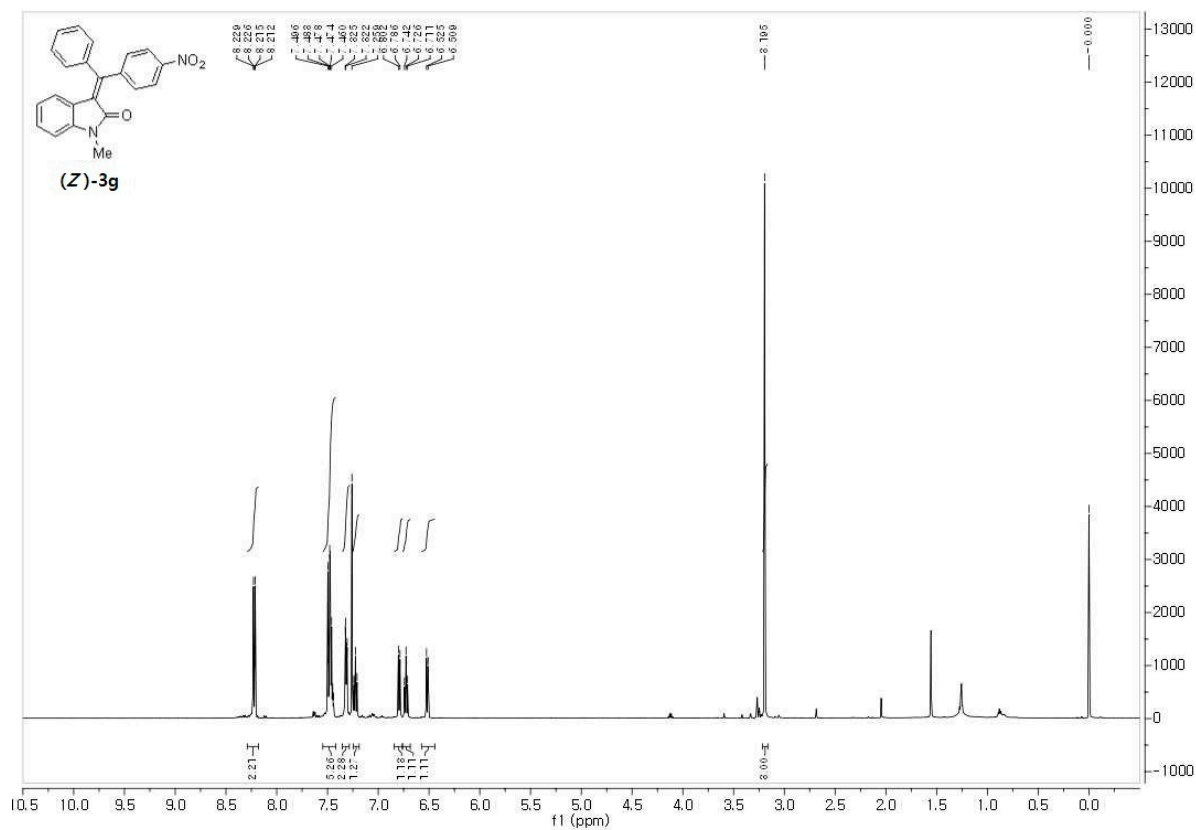


¹³C NMR spectrum of (E)-3g

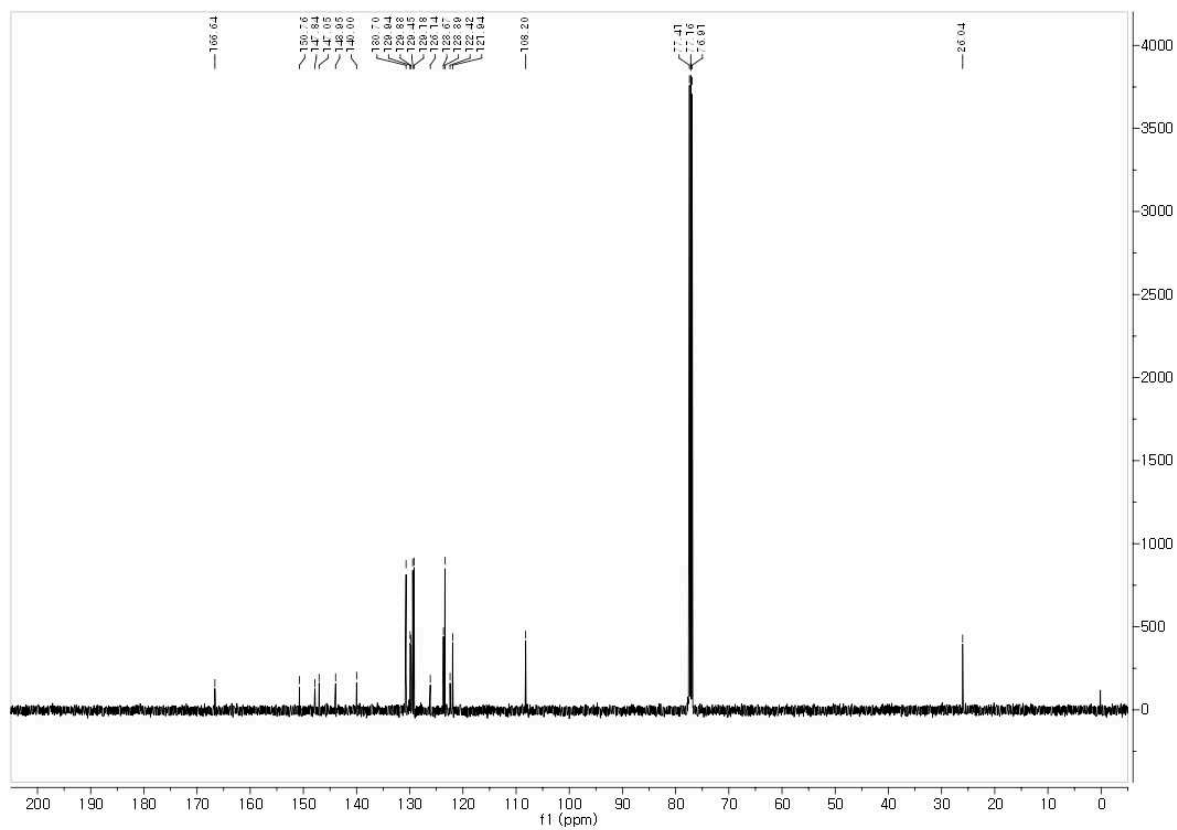


(Z)-1-methyl-3-((4-nitrophenyl)(phenyl)methylene)indolin-2-one ((Z)-3g)

¹H NMR spectrum of (Z)-3g

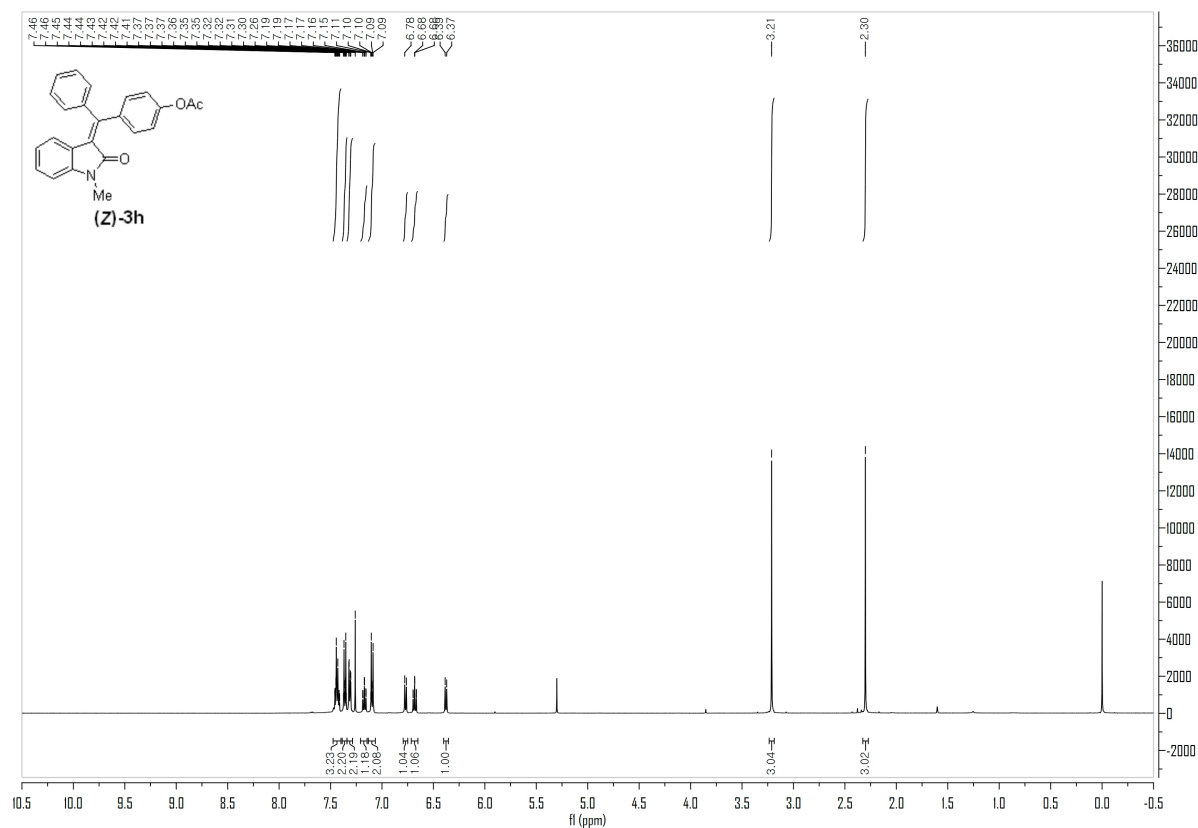


¹³C NMR spectrum of (Z)-3g

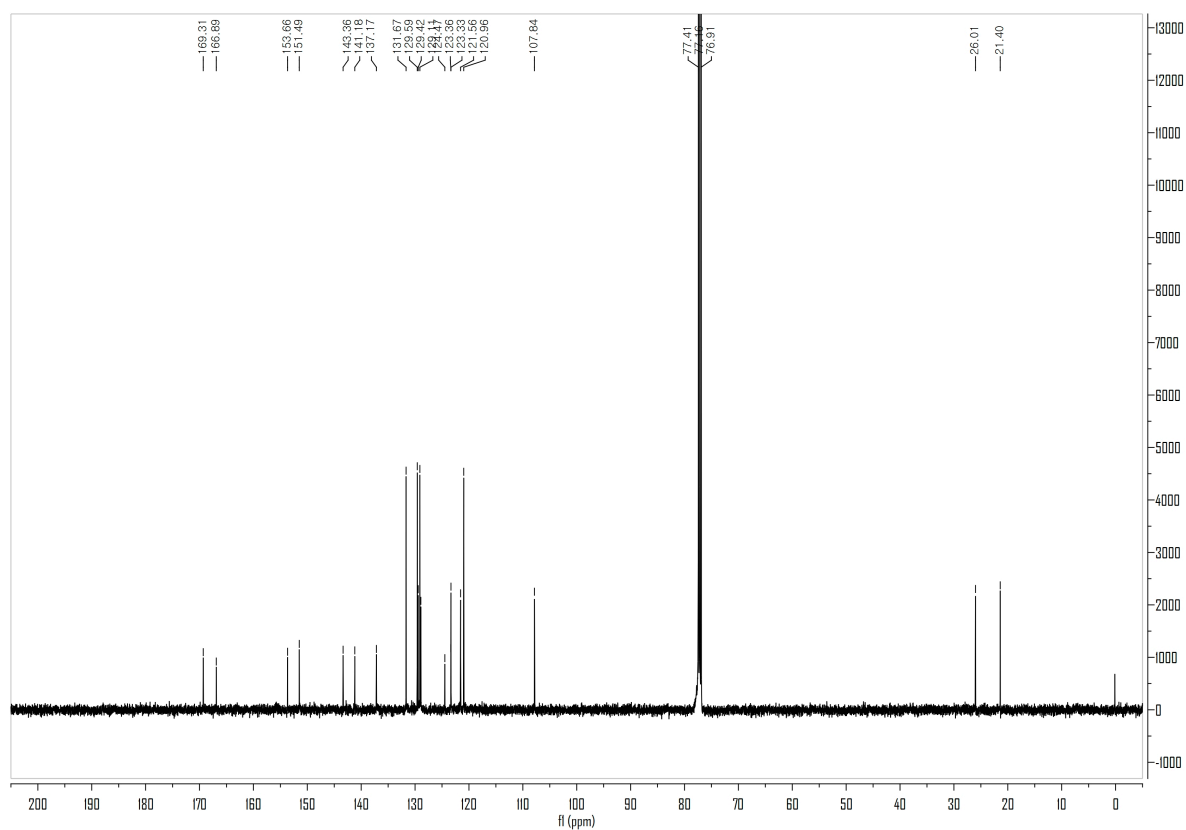


(Z)-4-((1-methyl-2-oxoindolin-3-ylidene)(phenyl)methyl)phenyl acetate ((Z)-3h)

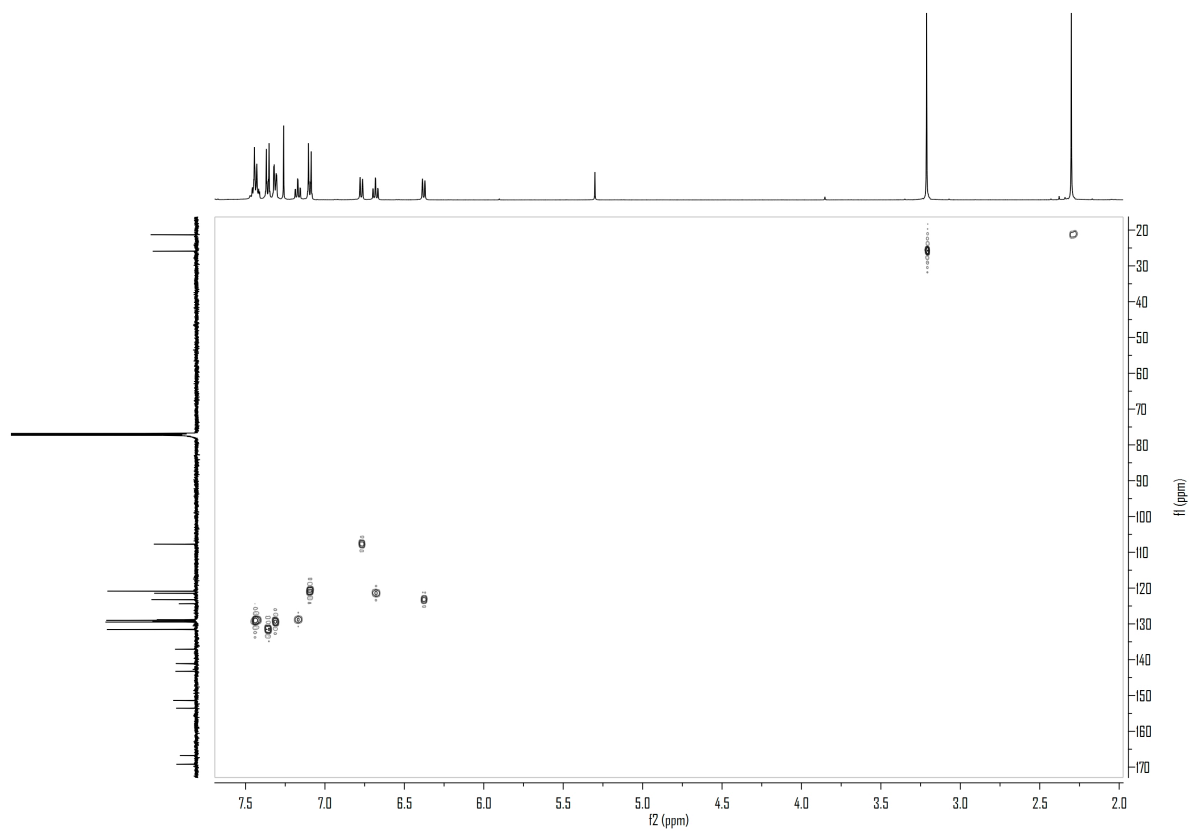
¹H NMR spectrum of (Z)-3h



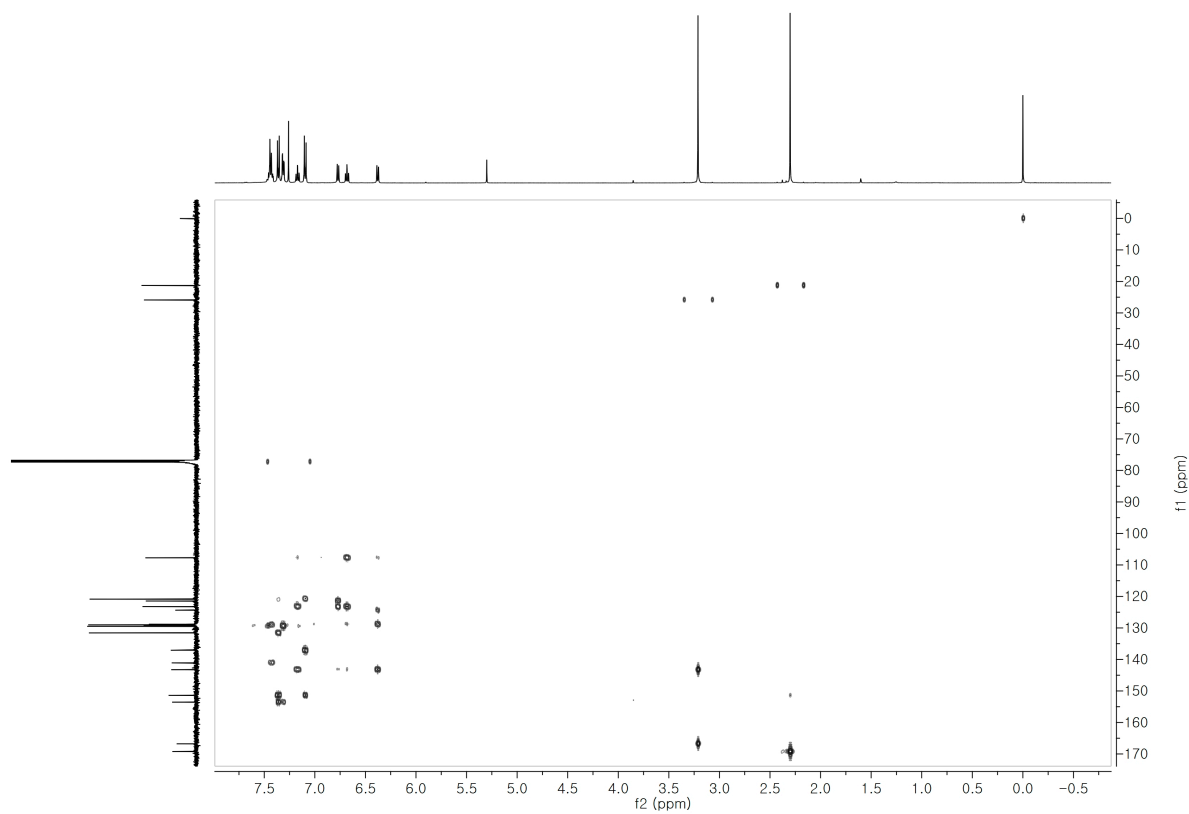
¹³C NMR spectrum of (Z)-3h



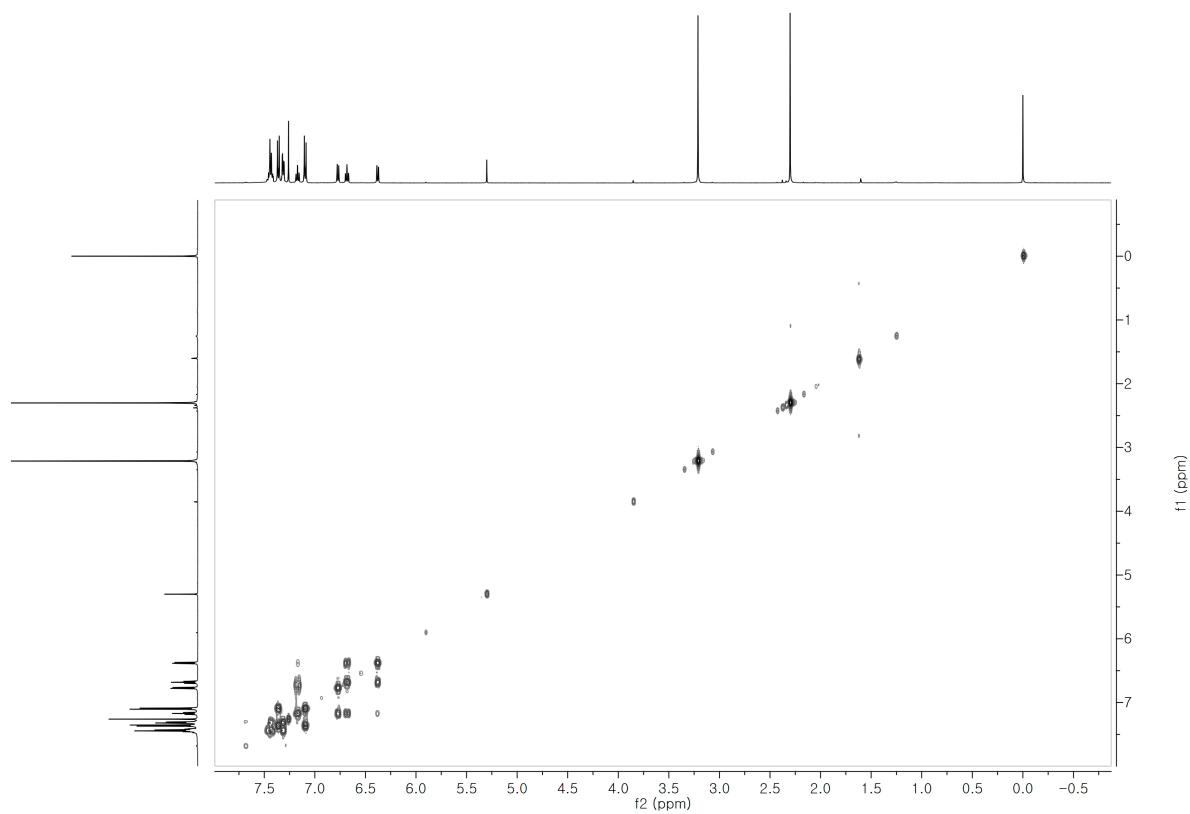
HSQC spectrum of (Z)-3h



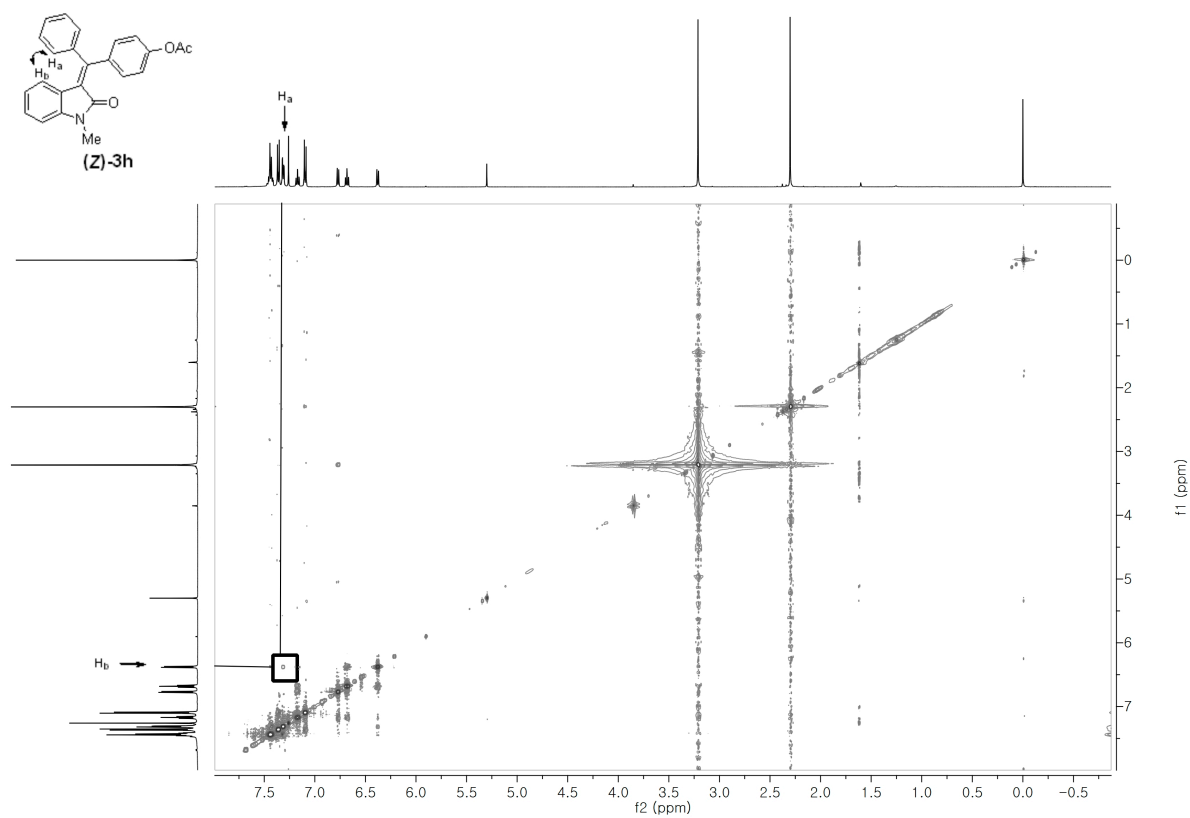
HMBC spectrum of (Z)-3h



COSY spectrum of (Z)-3h

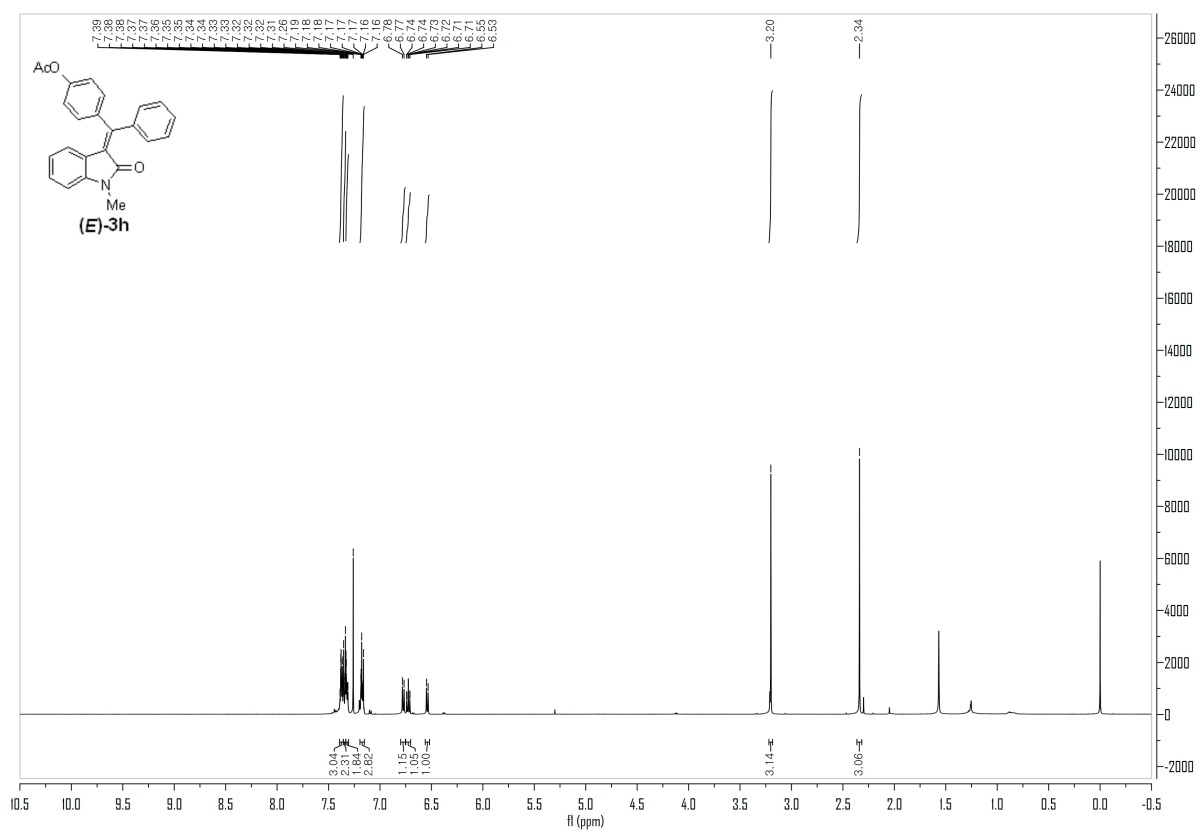


ROESY spectrum of (Z)-3h

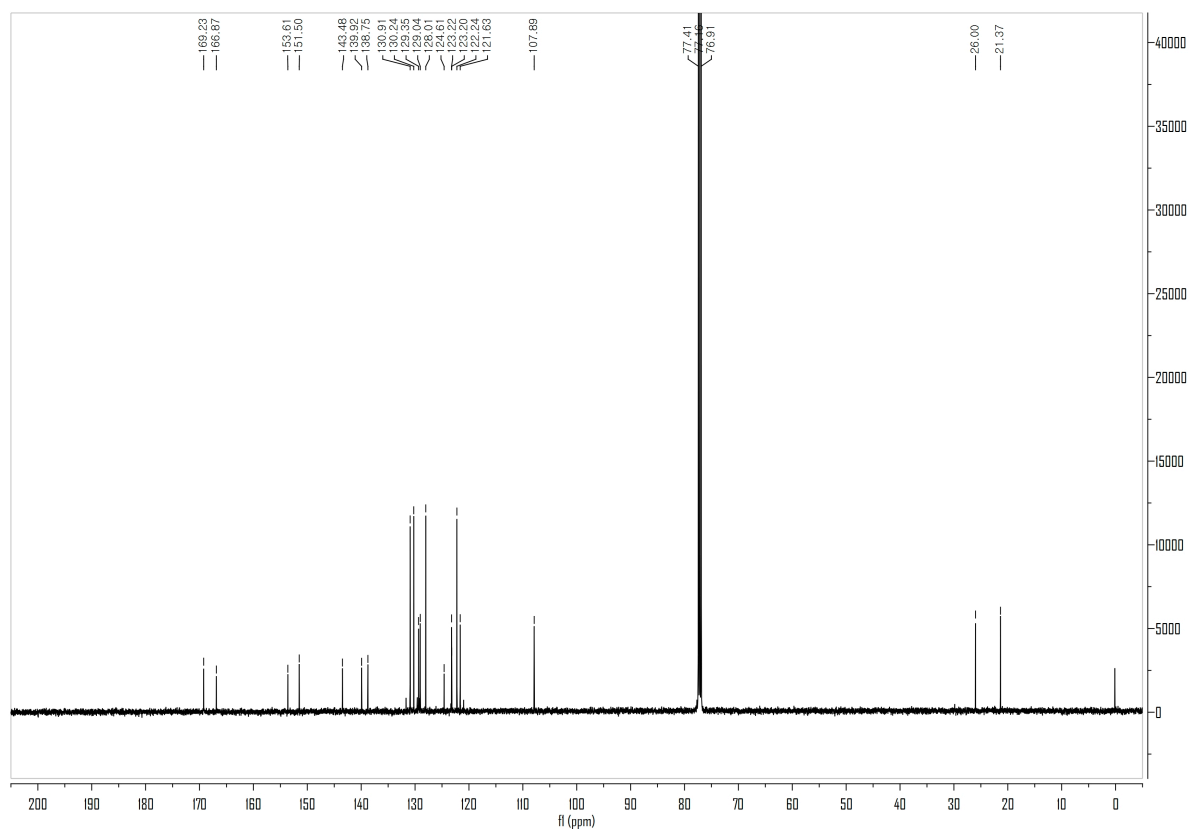


(*E*)-4-((1-methyl-2-oxoindolin-3-ylidene)(phenyl)methyl)phenyl acetate ((*E*)-3h)

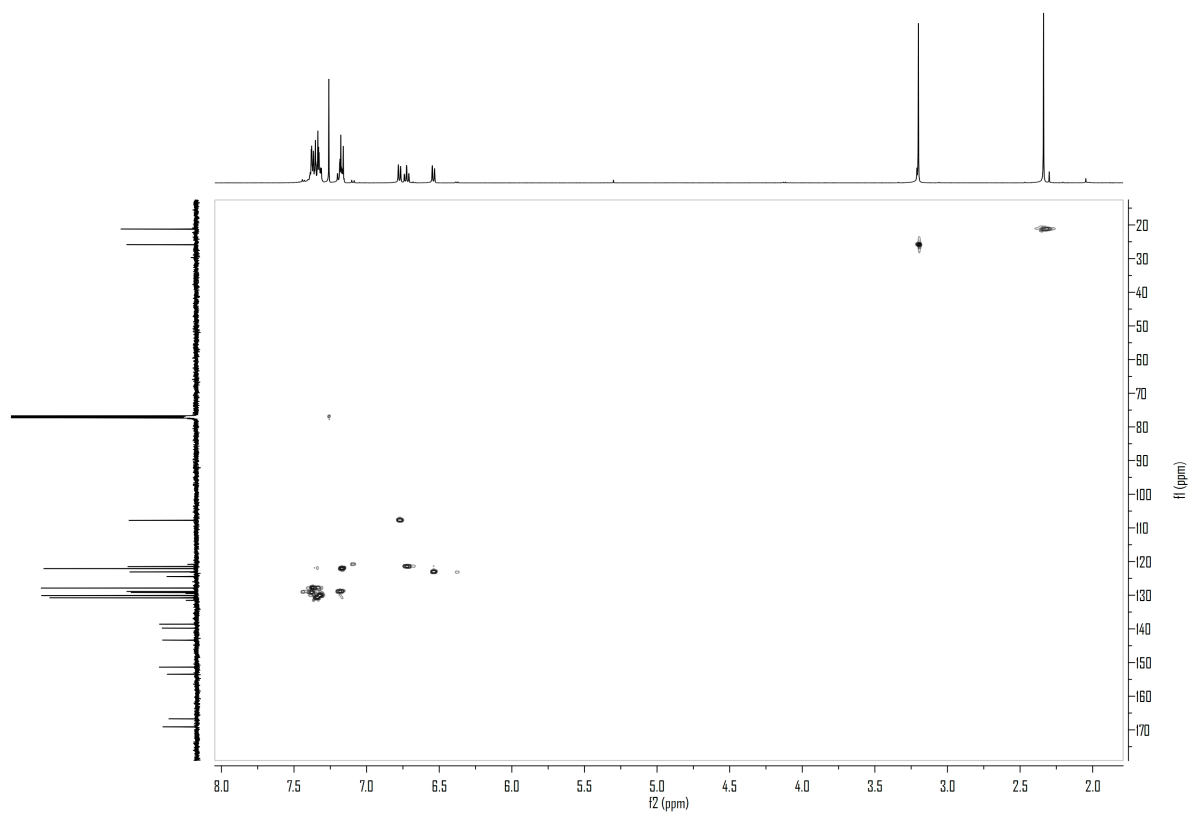
¹H NMR spectrum of (*E*)-3h



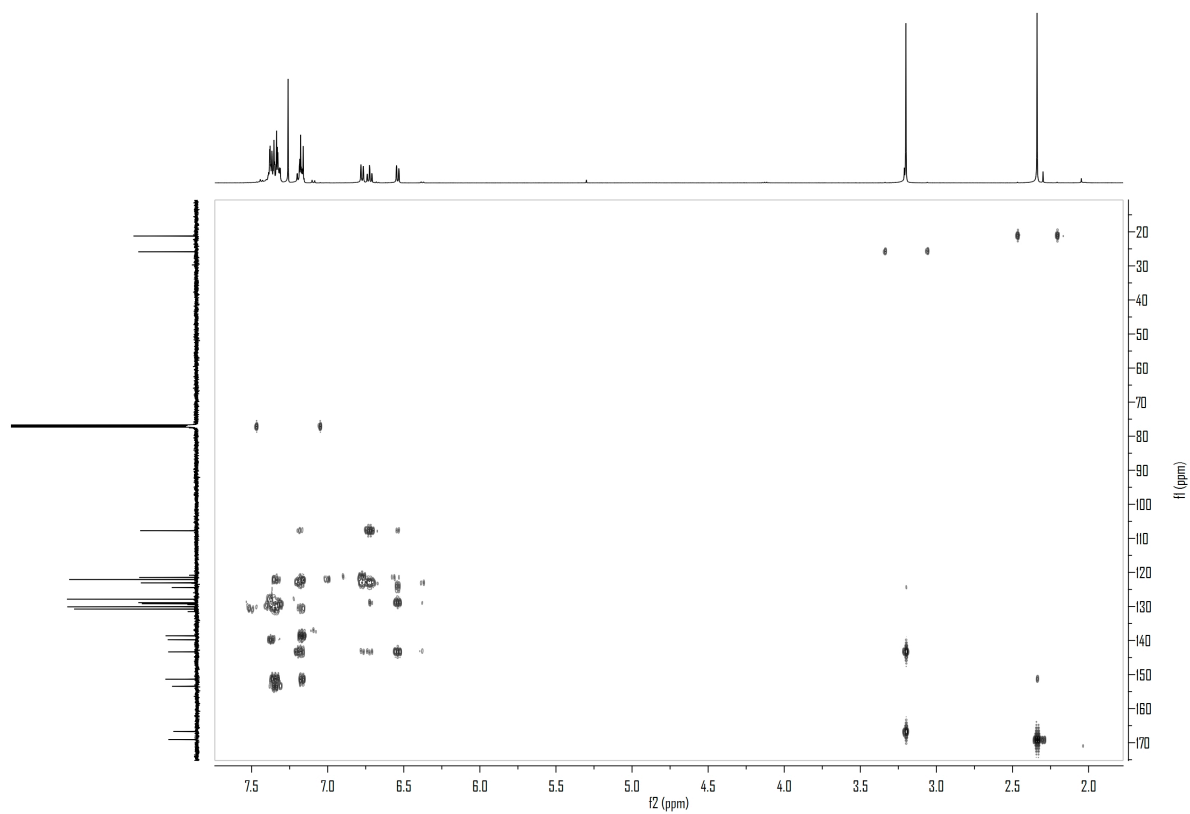
¹³C NMR spectrum of (*E*)-3h



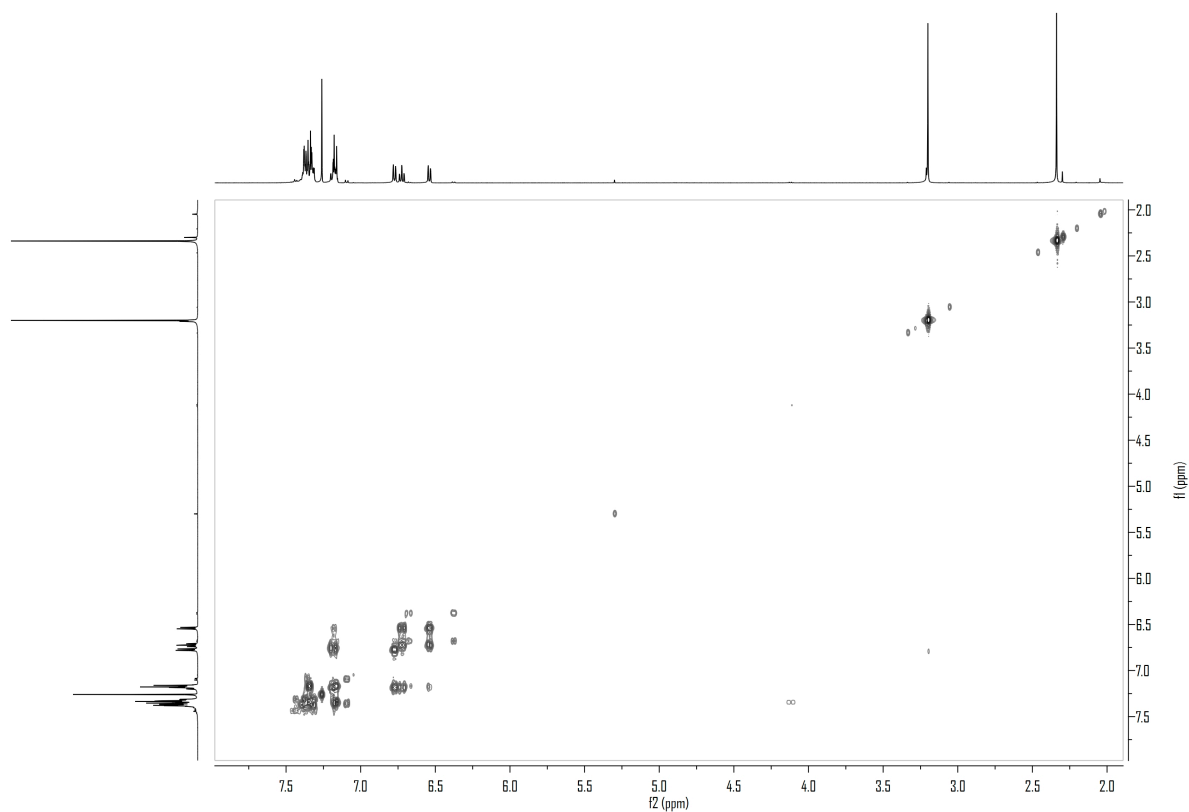
HSQC spectrum of (*E*)-3h



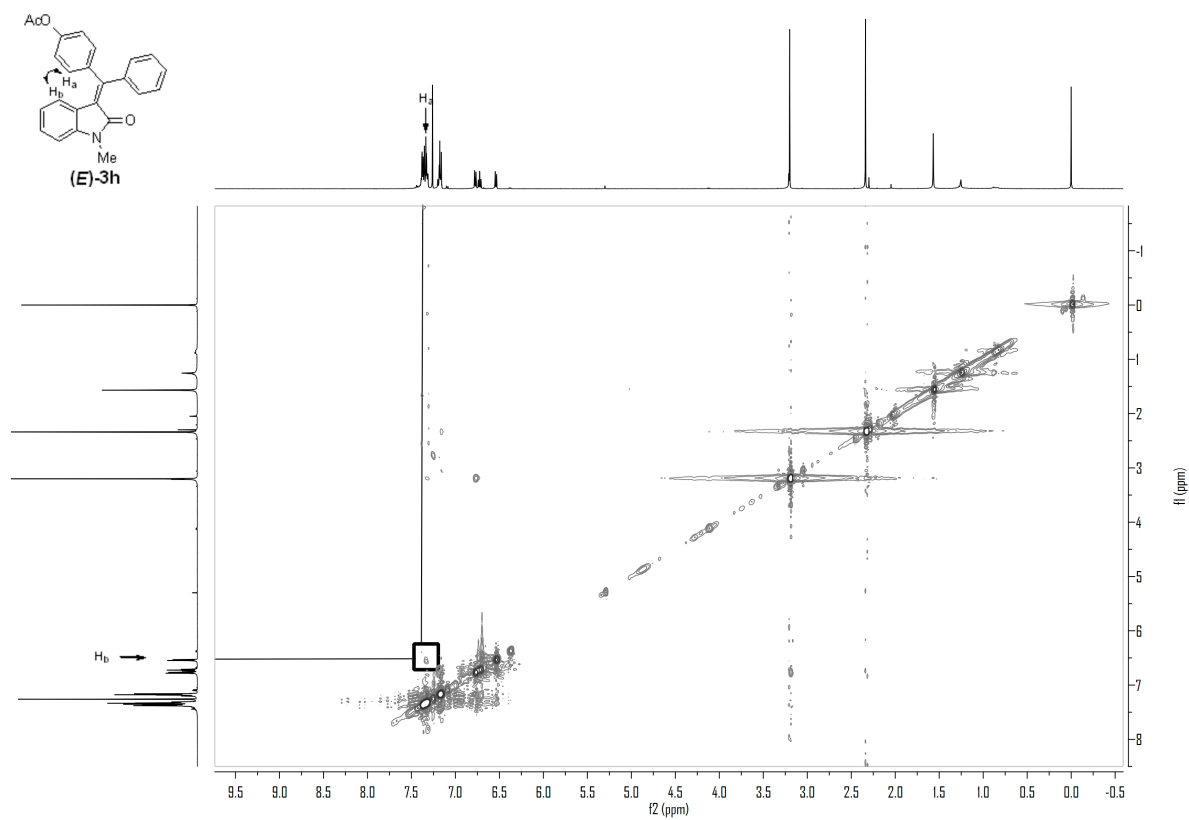
HMBC spectrum of (*E*)-3h



COSY spectrum of (*E*)-3h

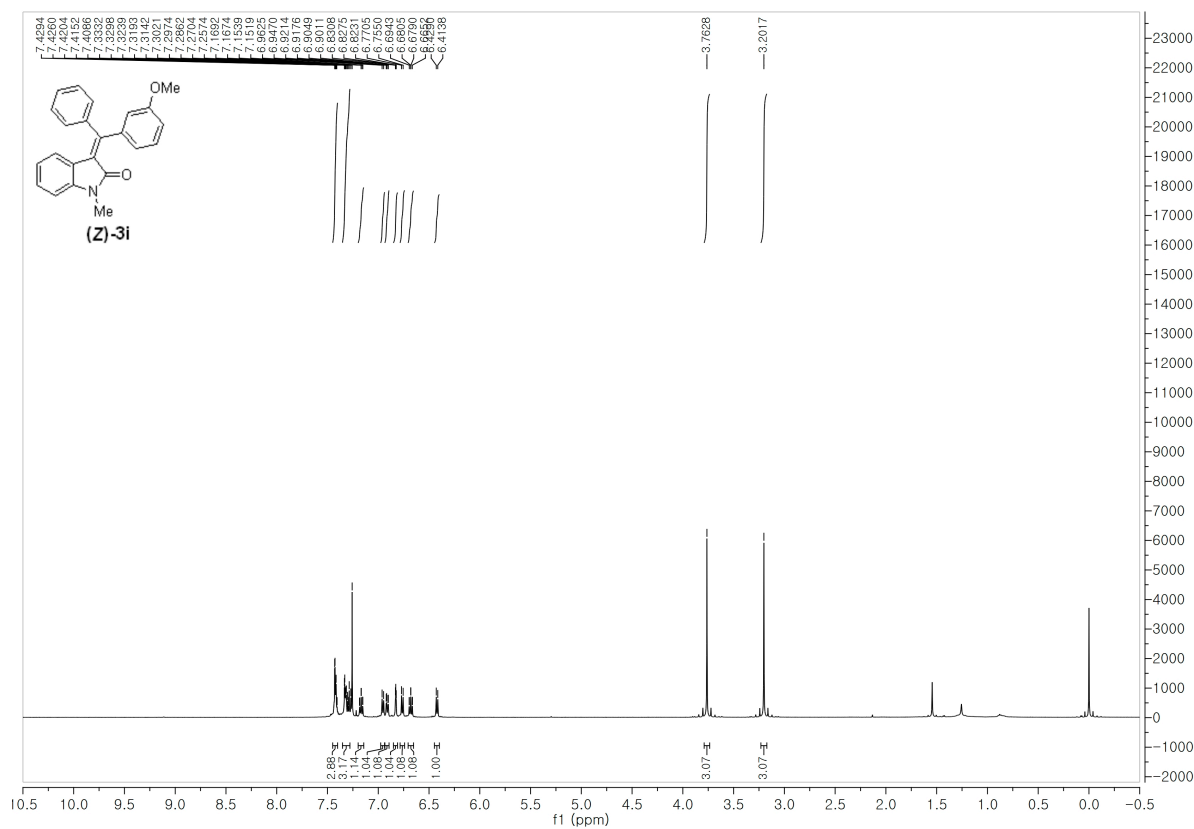


ROESY spectrum (*E*)-3h

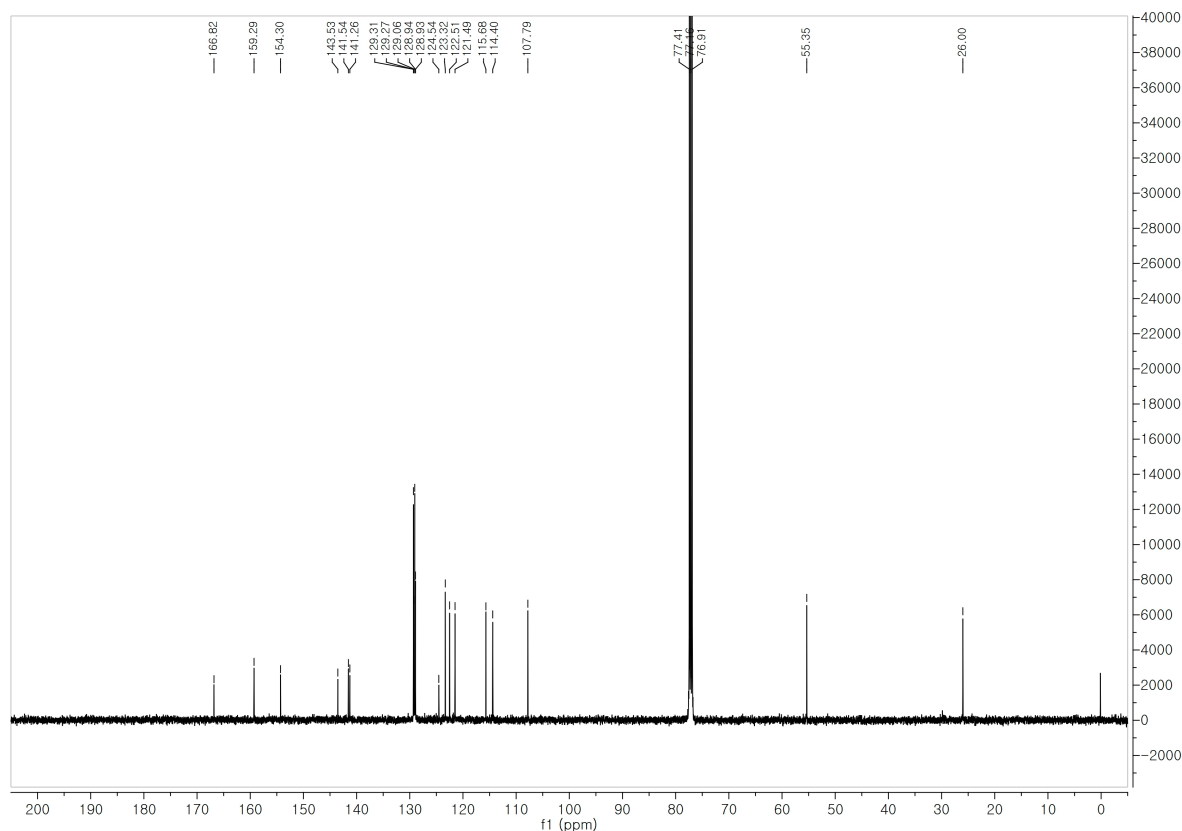


(Z)-3-((3-methoxyphenyl)(phenyl)methylene)-1-methylindolin-2-one ((Z)-3i)

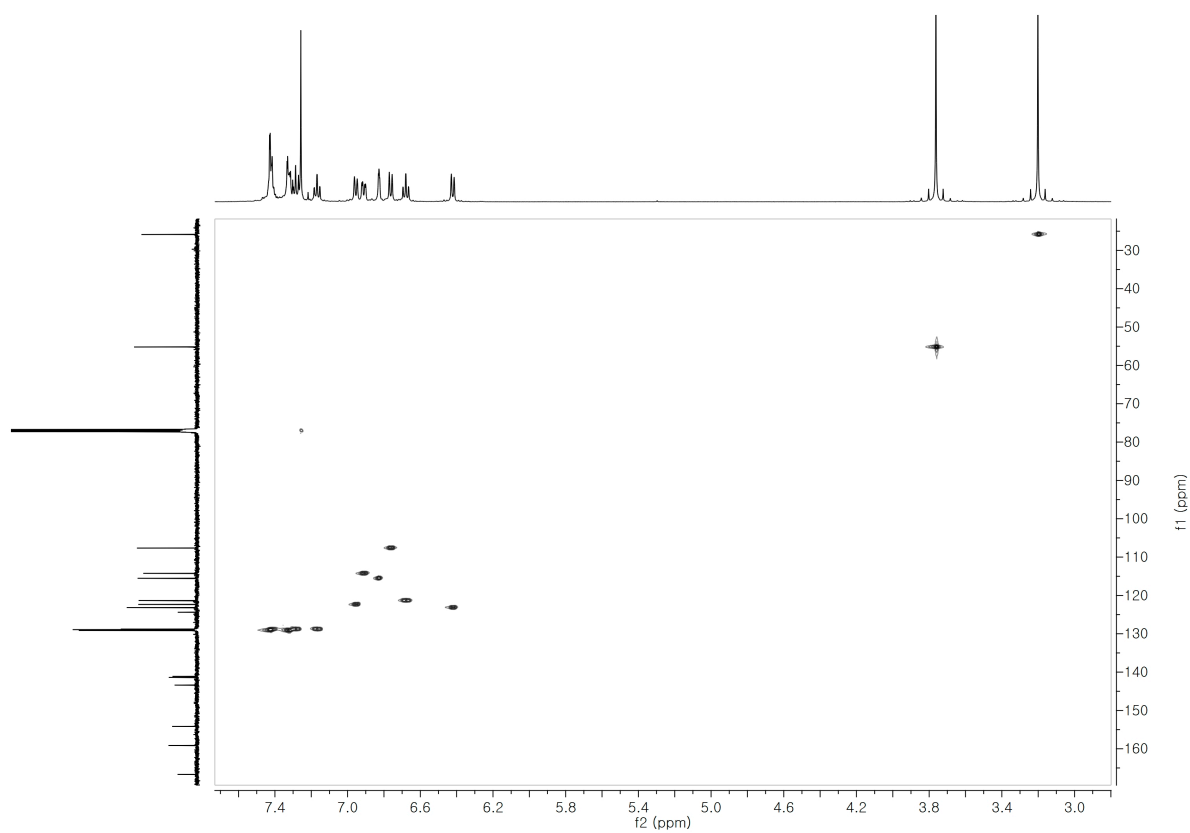
¹H NMR spectrum of (Z)-3i



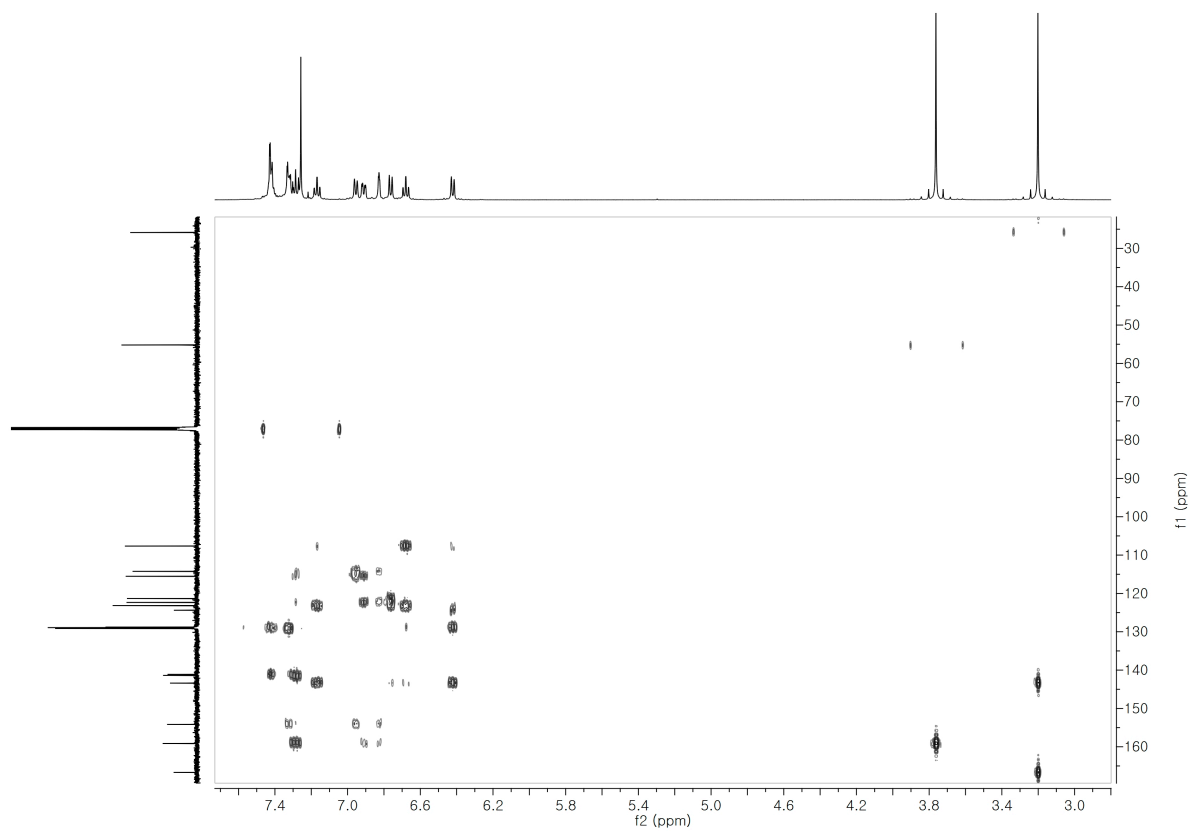
¹³C NMR spectrum of (Z)-3i



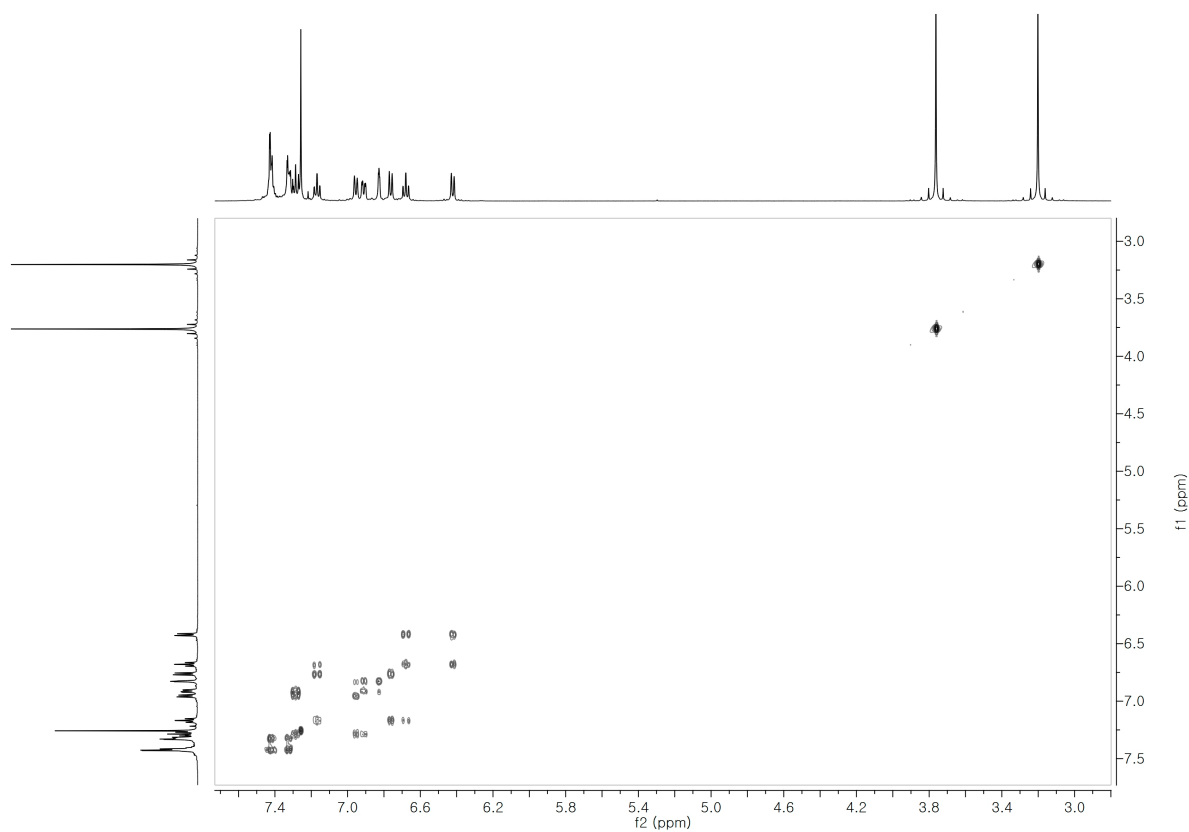
HSQC spectrum of (Z)-3i



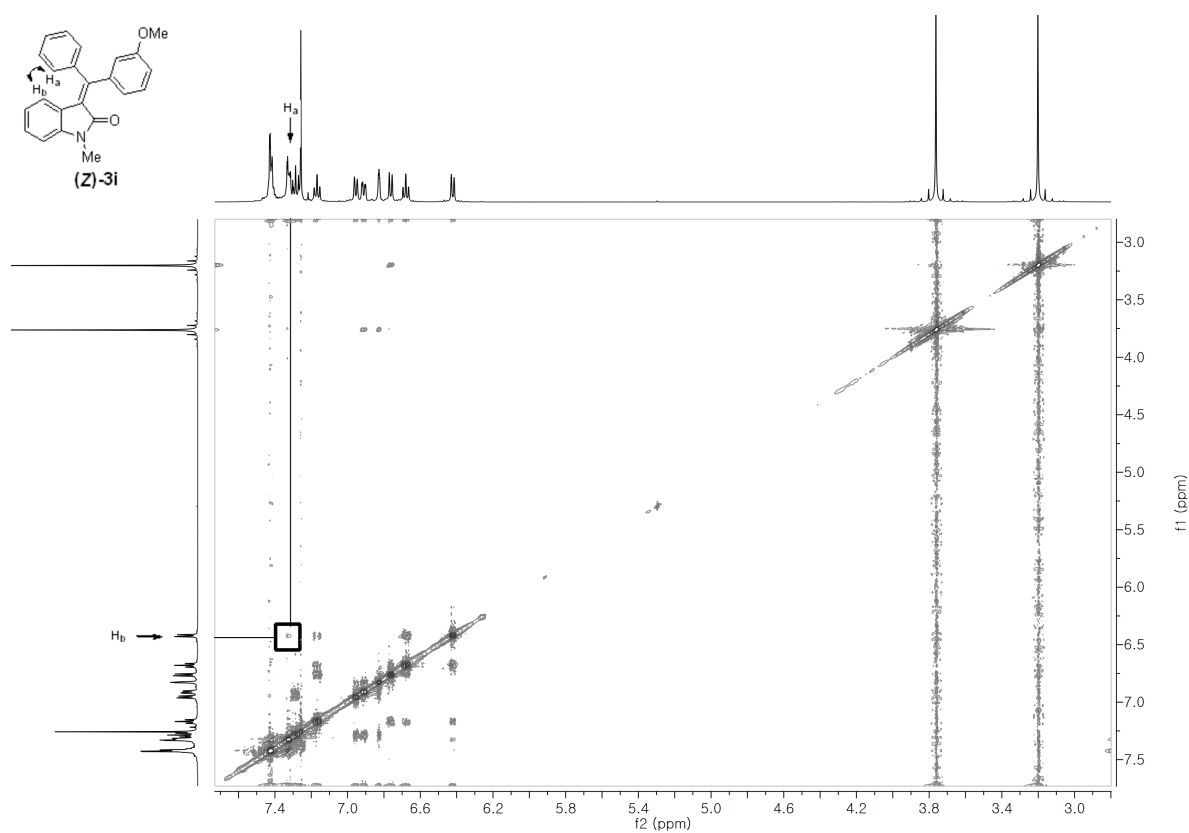
HMBC spectrum of (Z)-3i



COSY spectrum of (Z)-3i

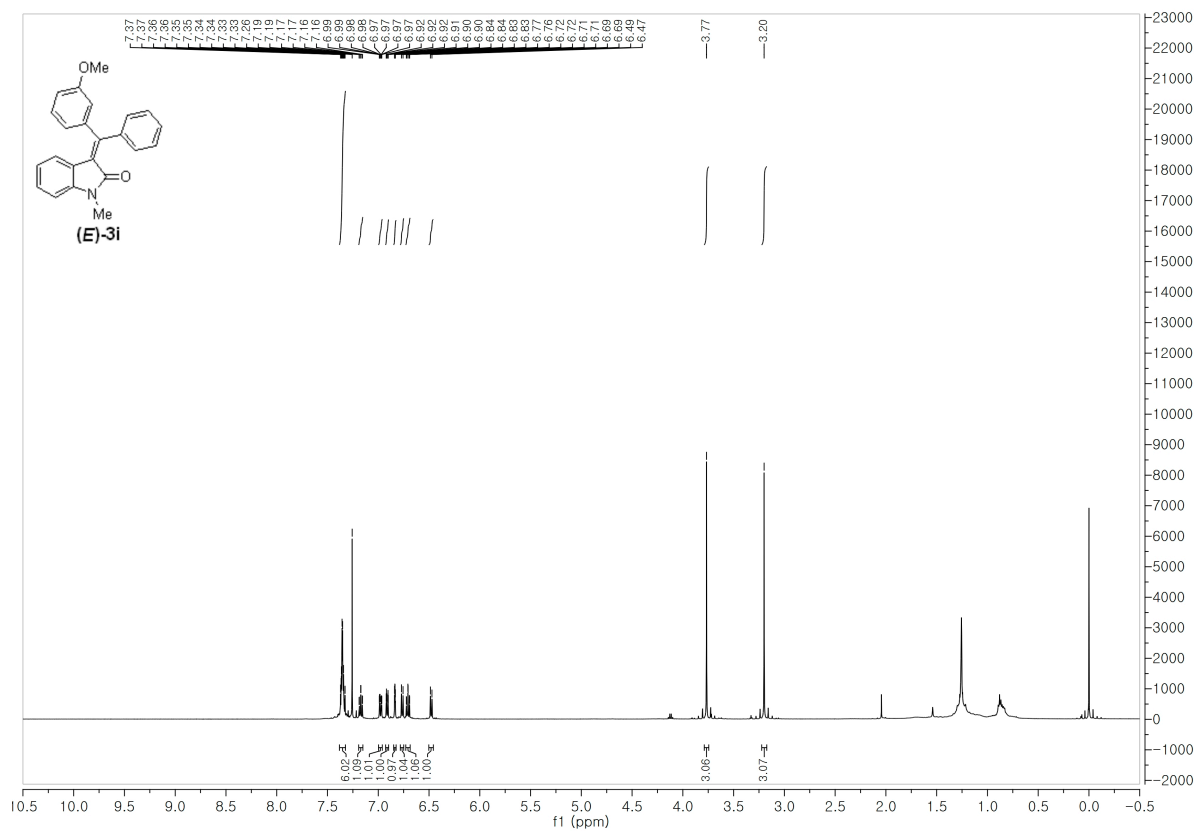


ROESY spectrum of (Z)-3i

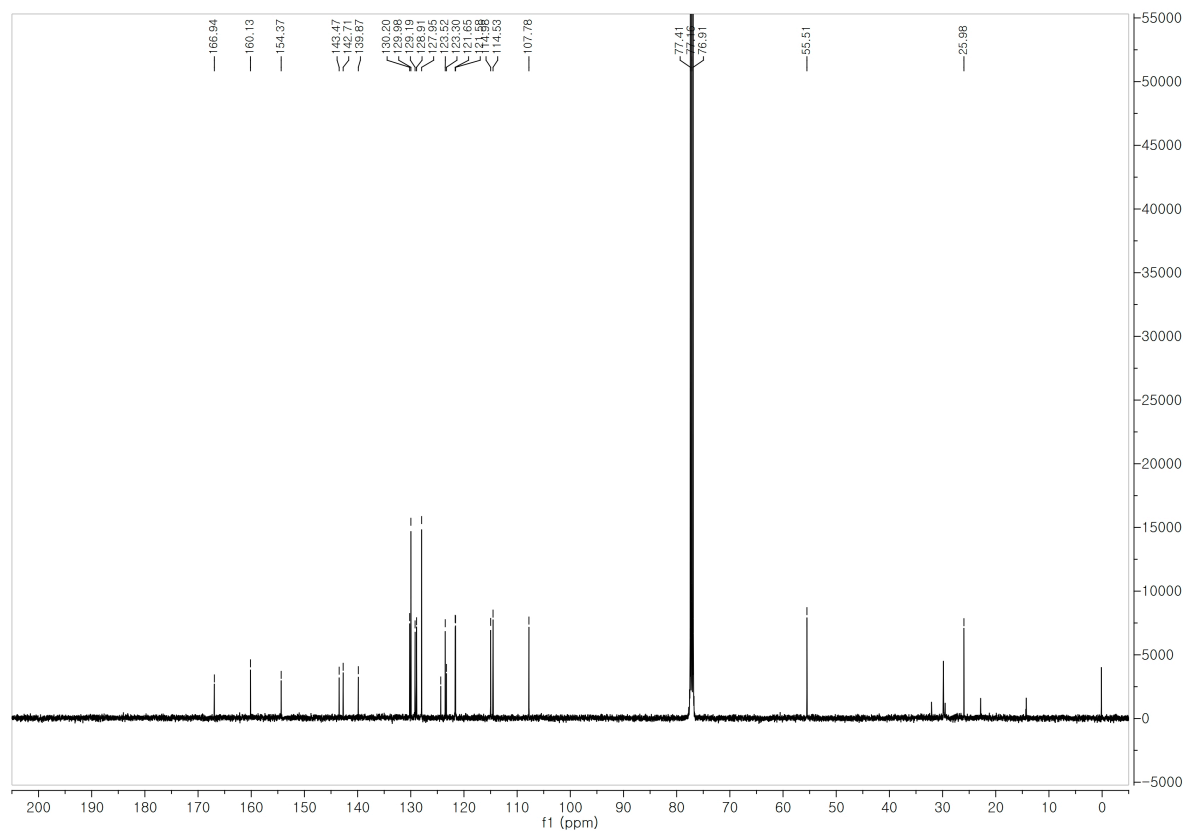


(*E*)-3-((3-methoxyphenyl)(phenyl)methylene)-1-methylindolin-2-one ((*E*)-3i)

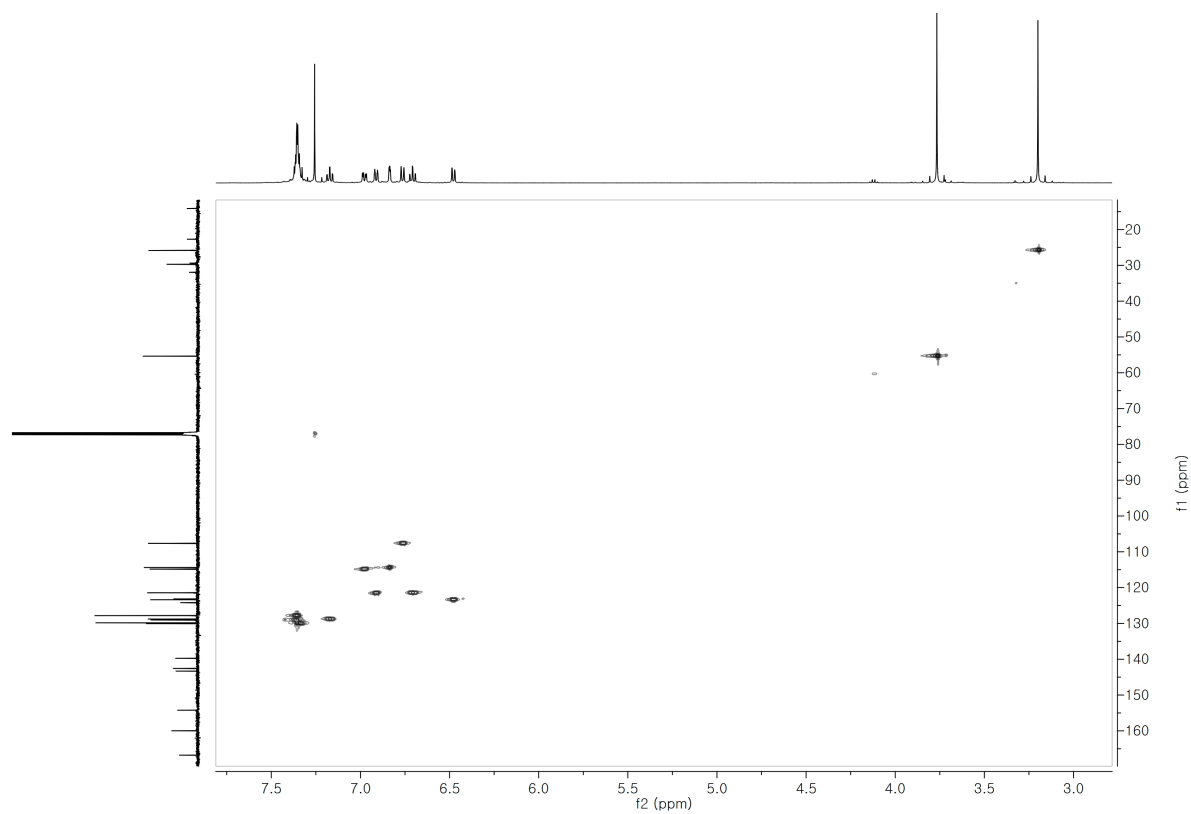
¹H NMR spectrum of (*E*)-3i



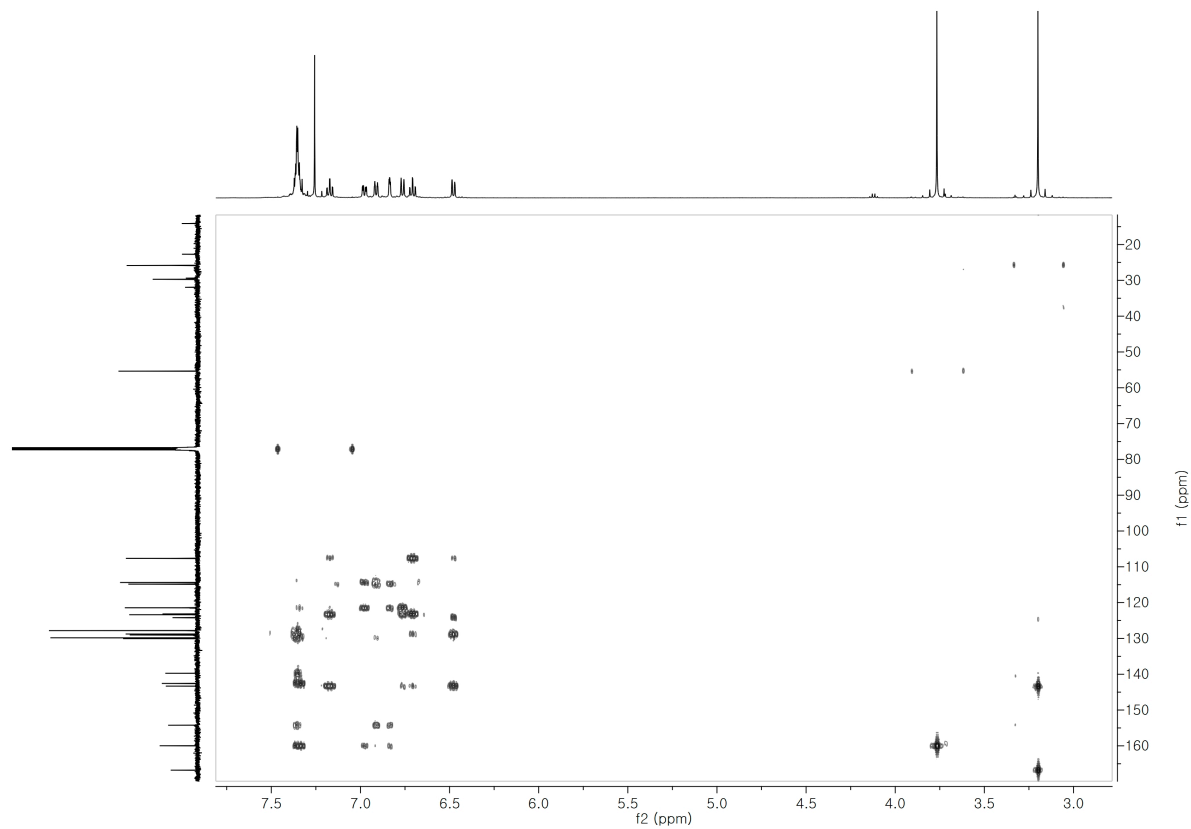
¹³C NMR spectrum of (*E*)-3i



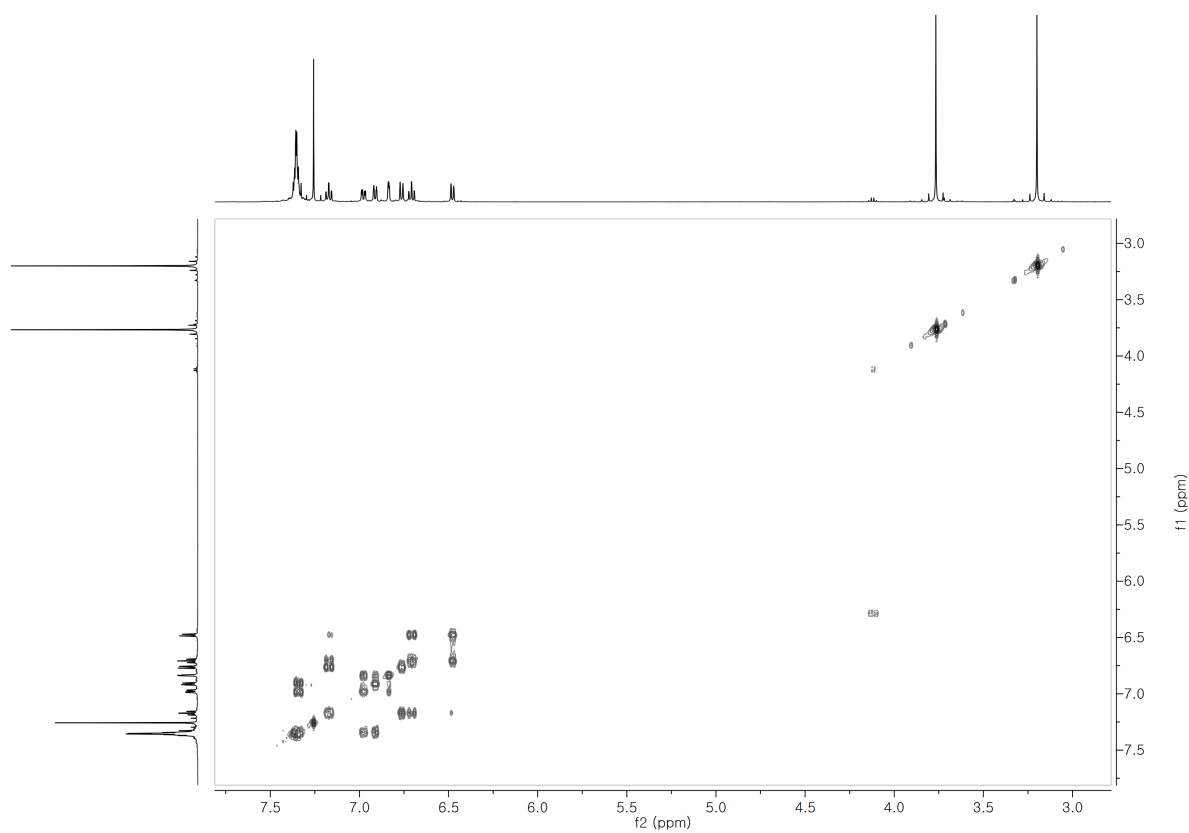
HSQC spectrum of (*E*)-3i



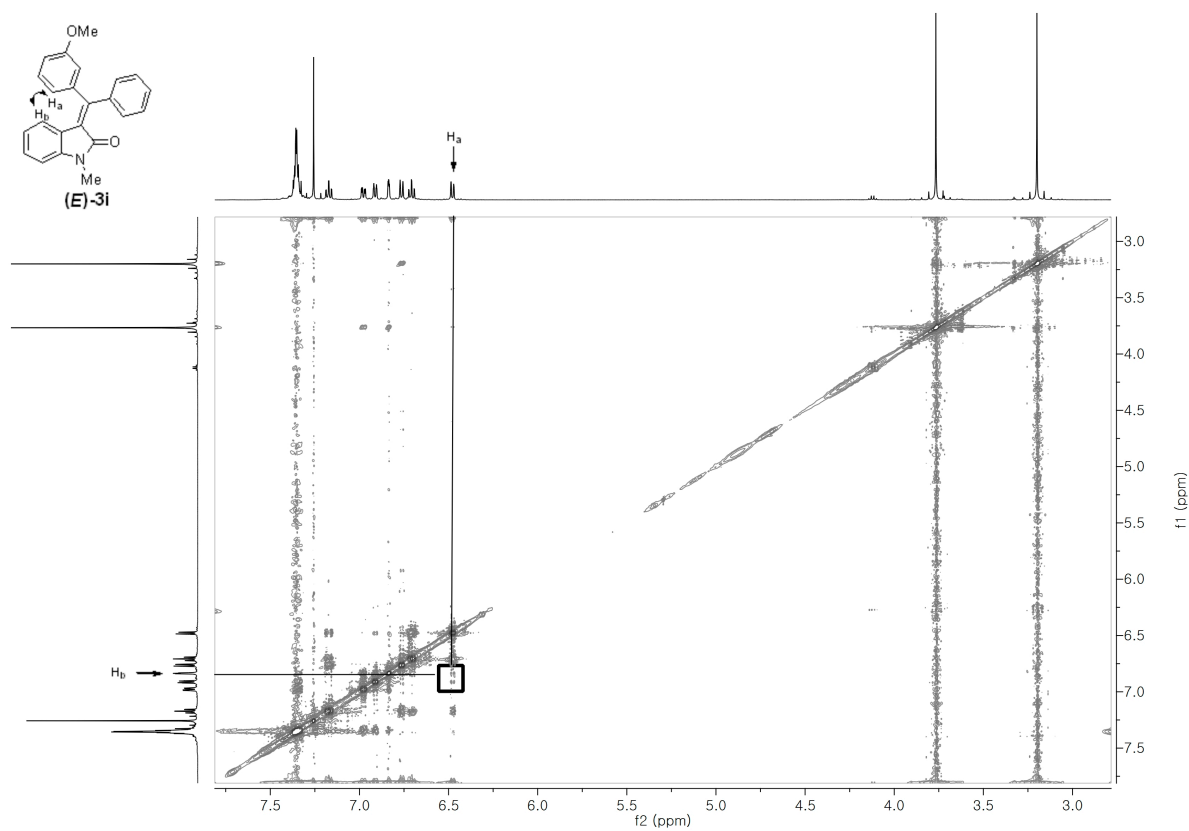
HMBC spectrum of (*E*)-3i



COSY spectrum of (*E*)-3i

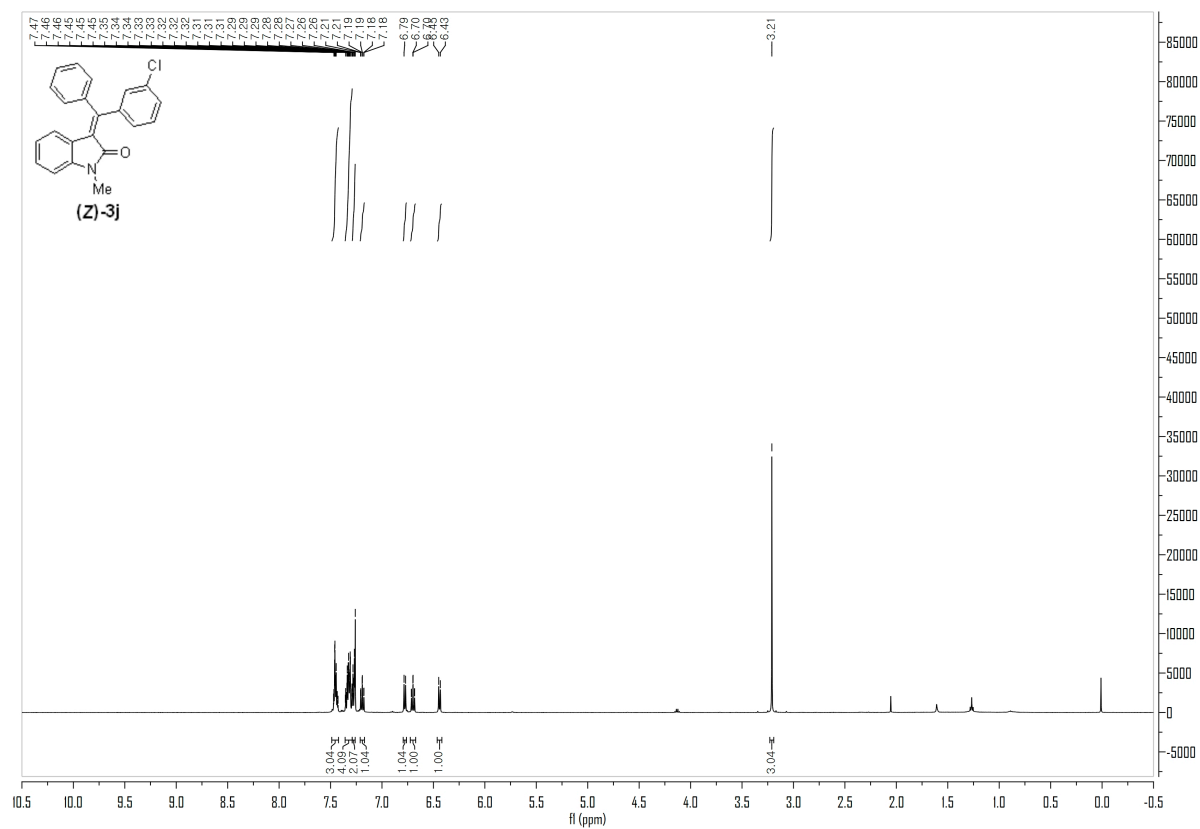


ROESY spectrum of (*E*)-3i

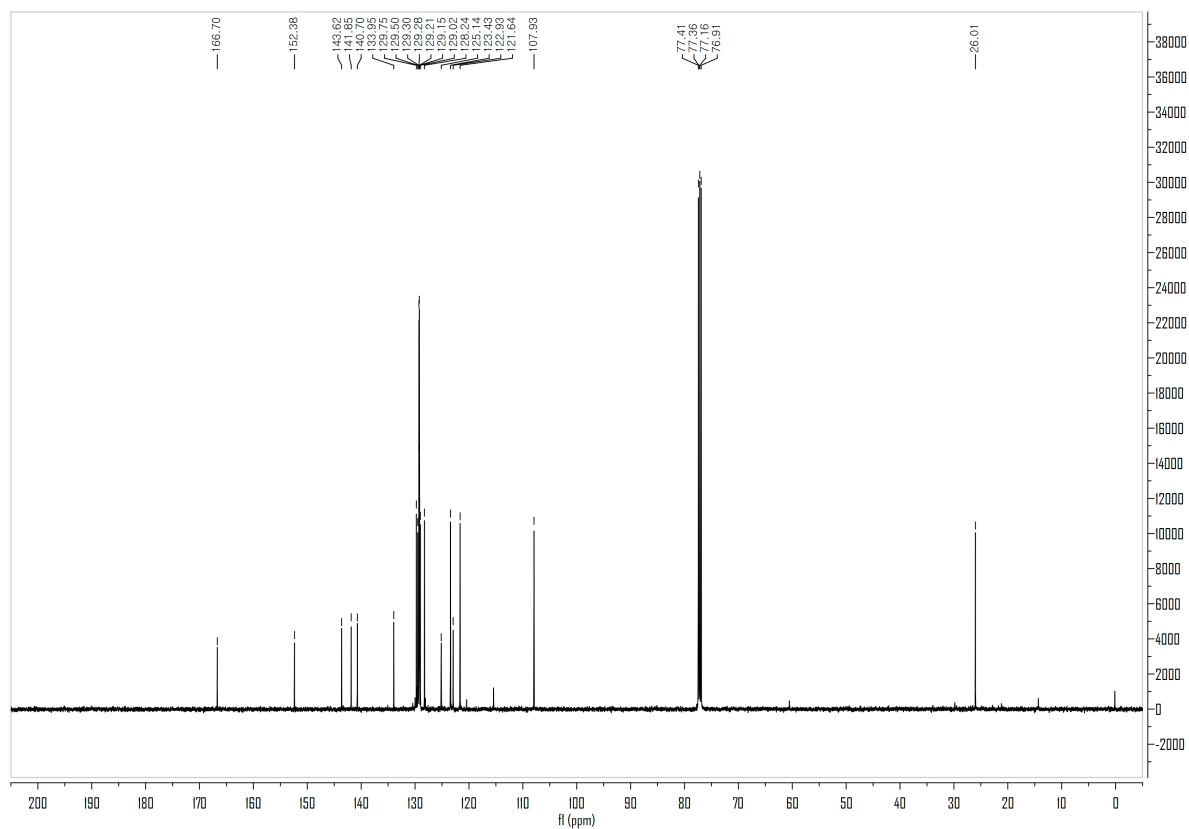


(Z)-3-((3-chlorophenyl)(phenyl)methylene)-1-methylindolin-2-one ((Z)-3j)

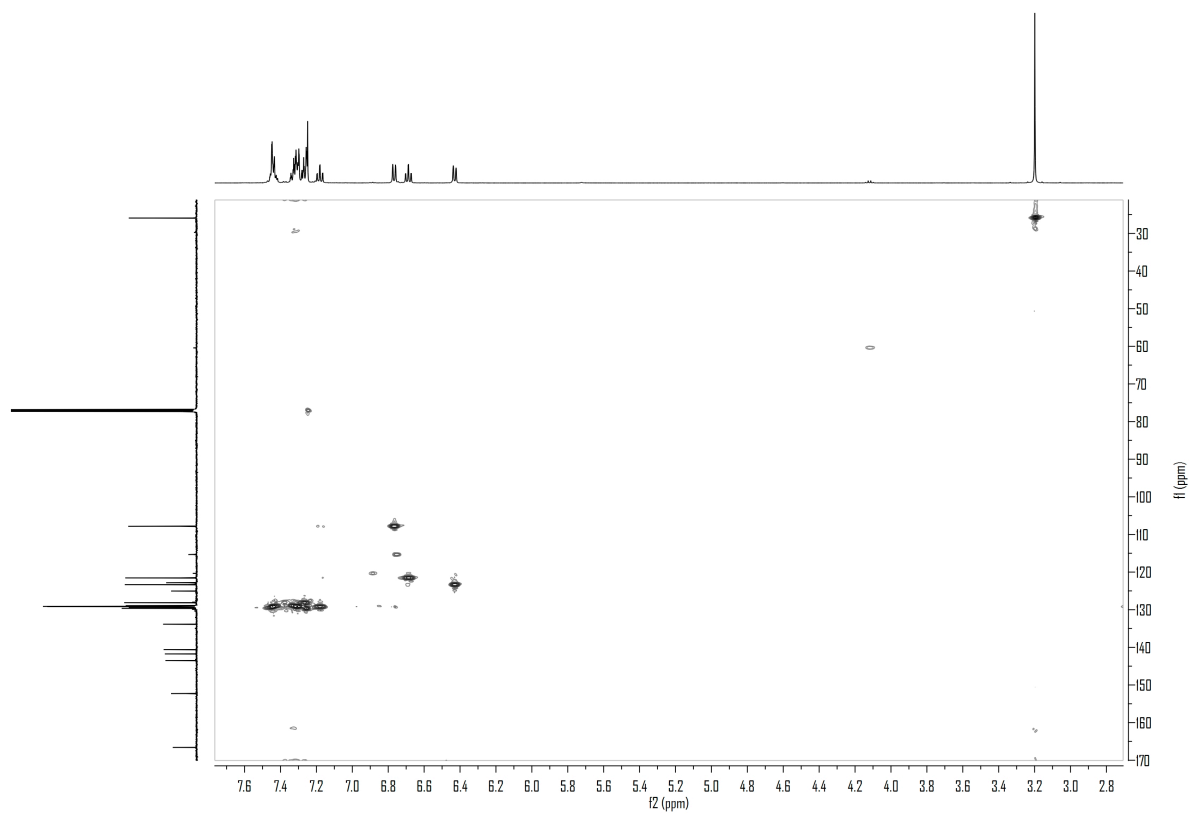
¹H NMR spectrum of (Z)-3j



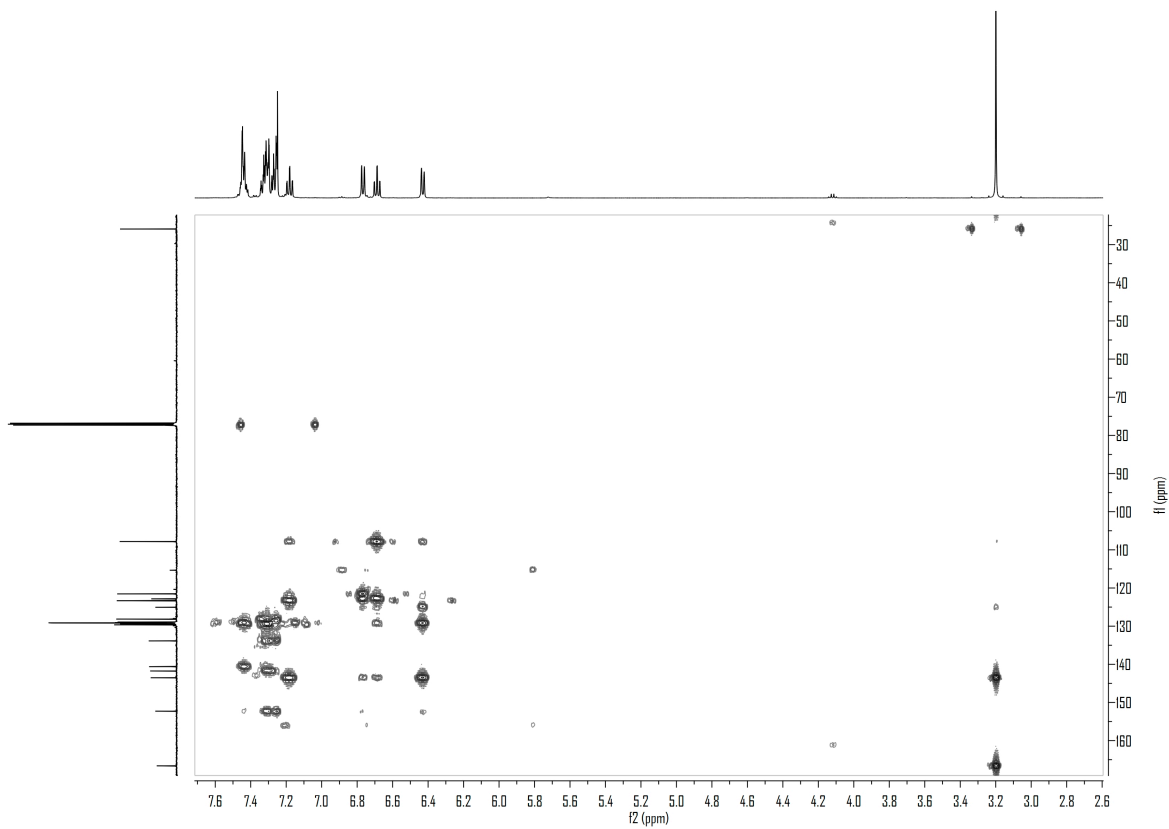
¹³C NMR spectrum of (Z)-3j



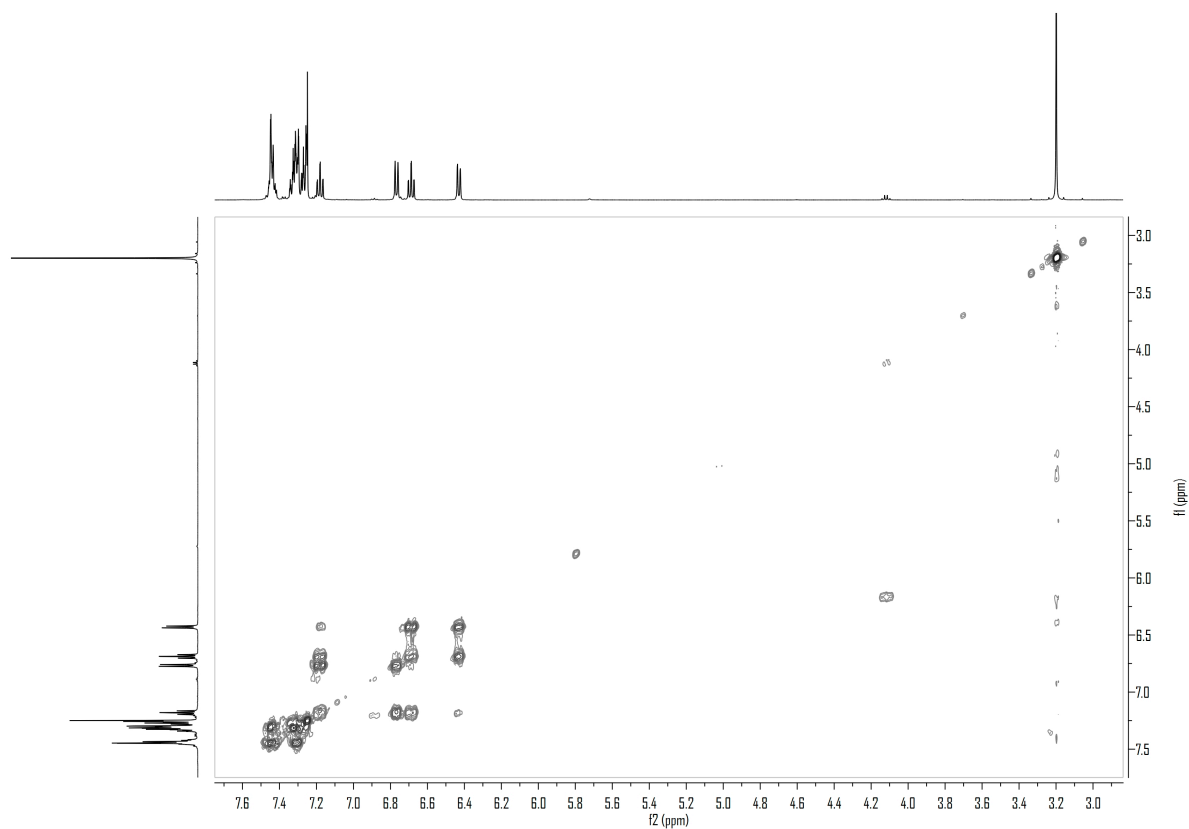
HSQC spectrum of (Z)-3j



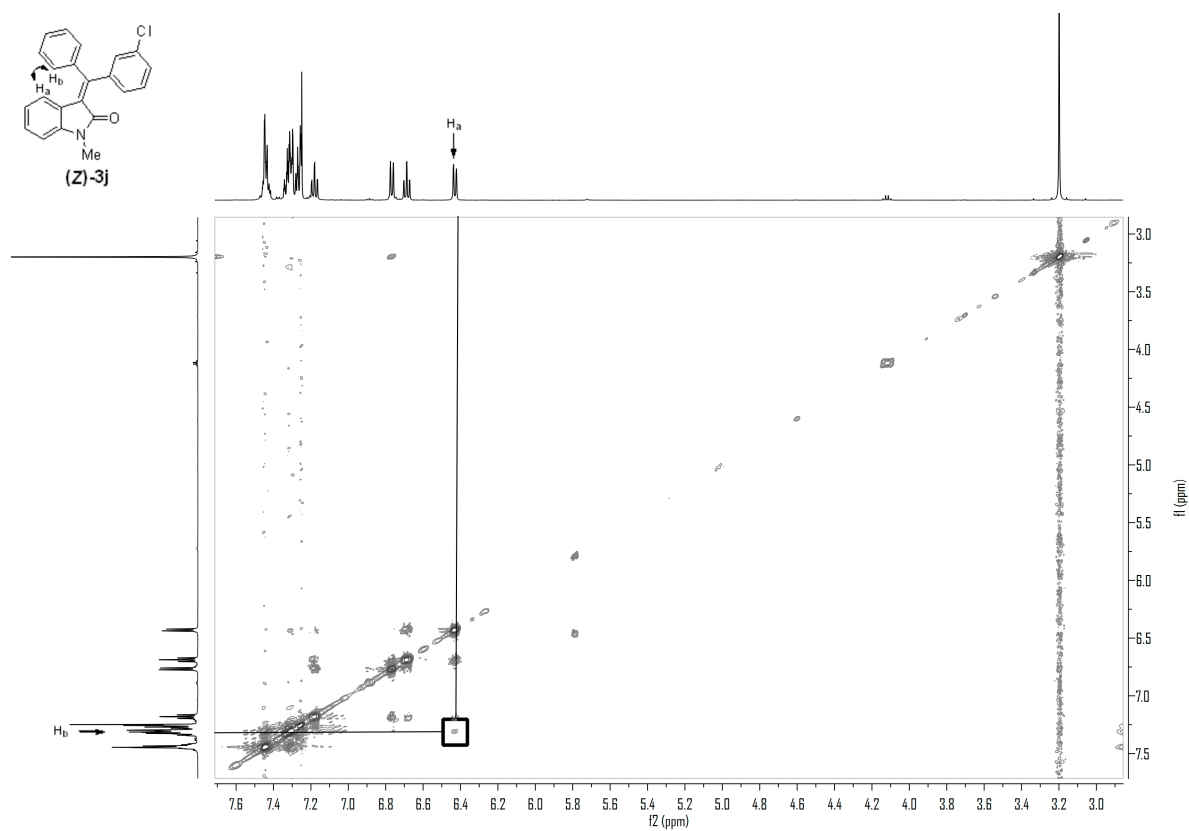
HMBC spectrum of (Z)-3j



COSY spectrum of (Z)-3j

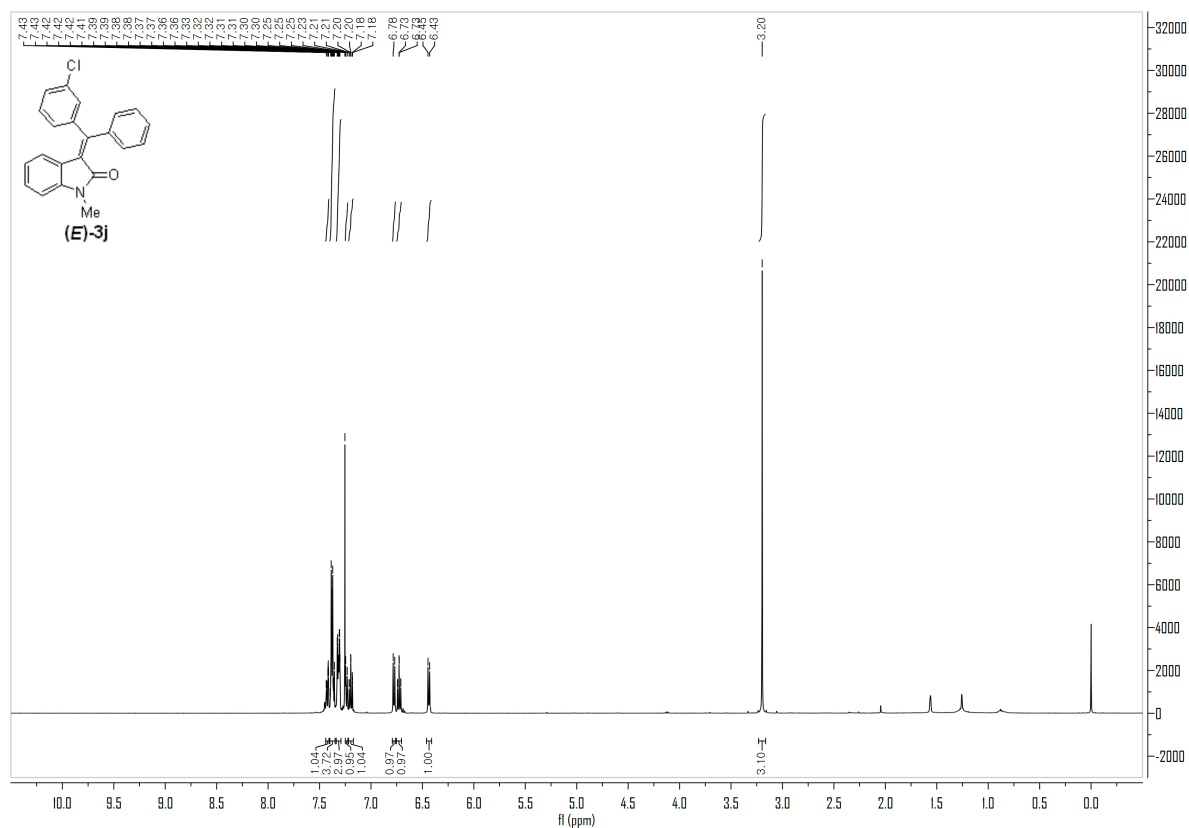


ROESY spectrum of (Z)-3j

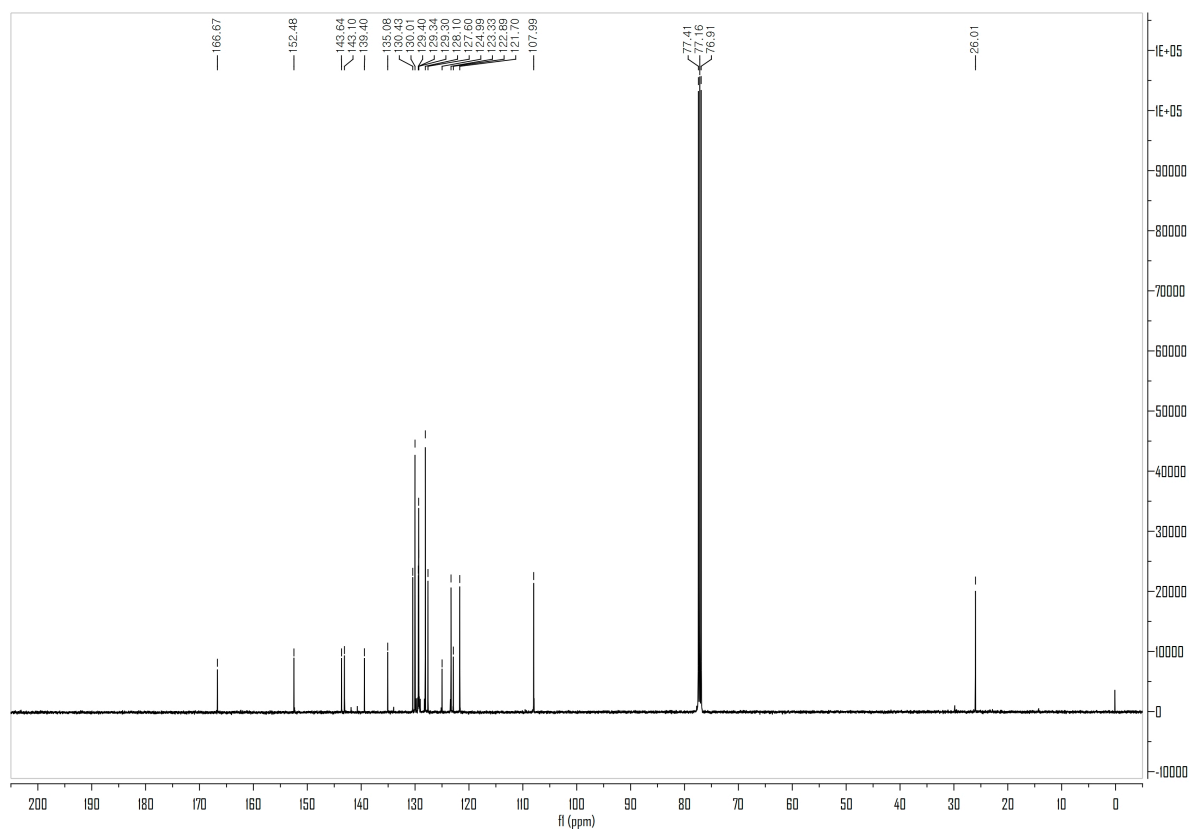


(E)-3-((3-chlorophenyl)(phenyl)methylene)-1-methylindolin-2-one ((E)-3j)

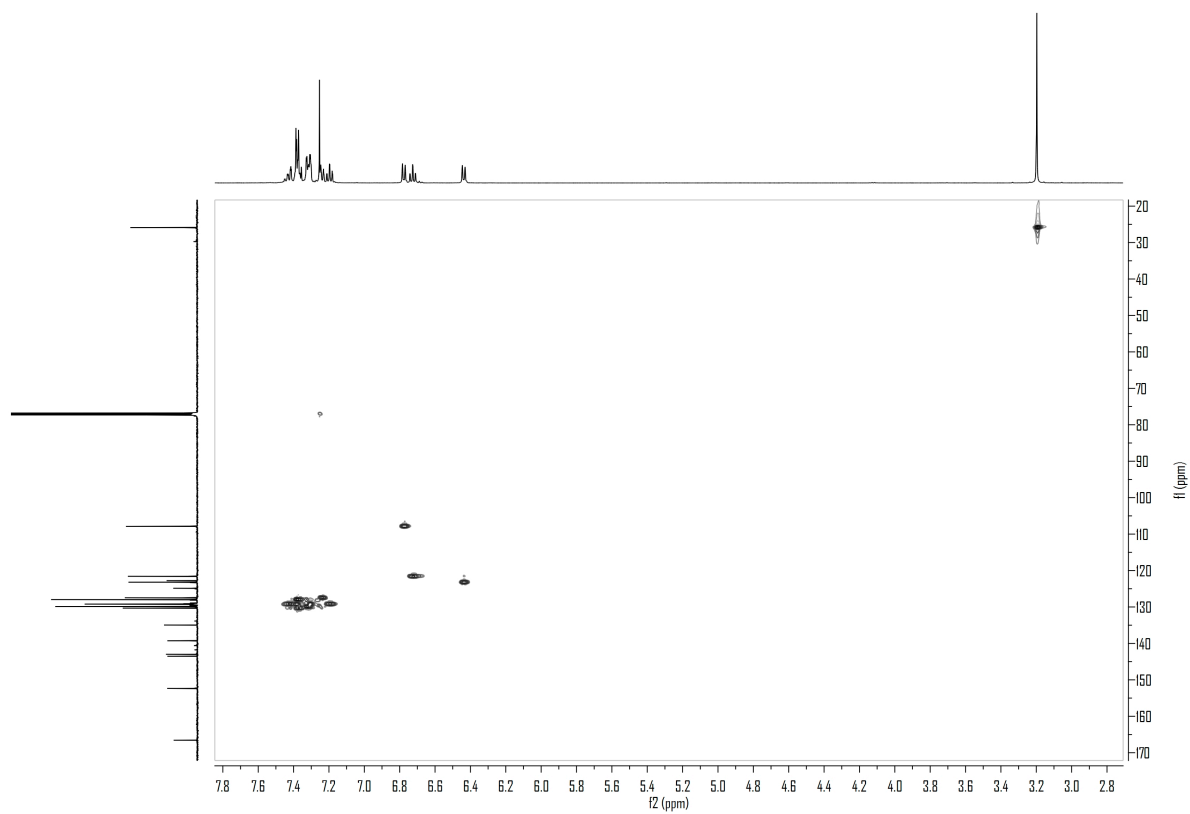
¹H NMR spectrum of (E)-3j



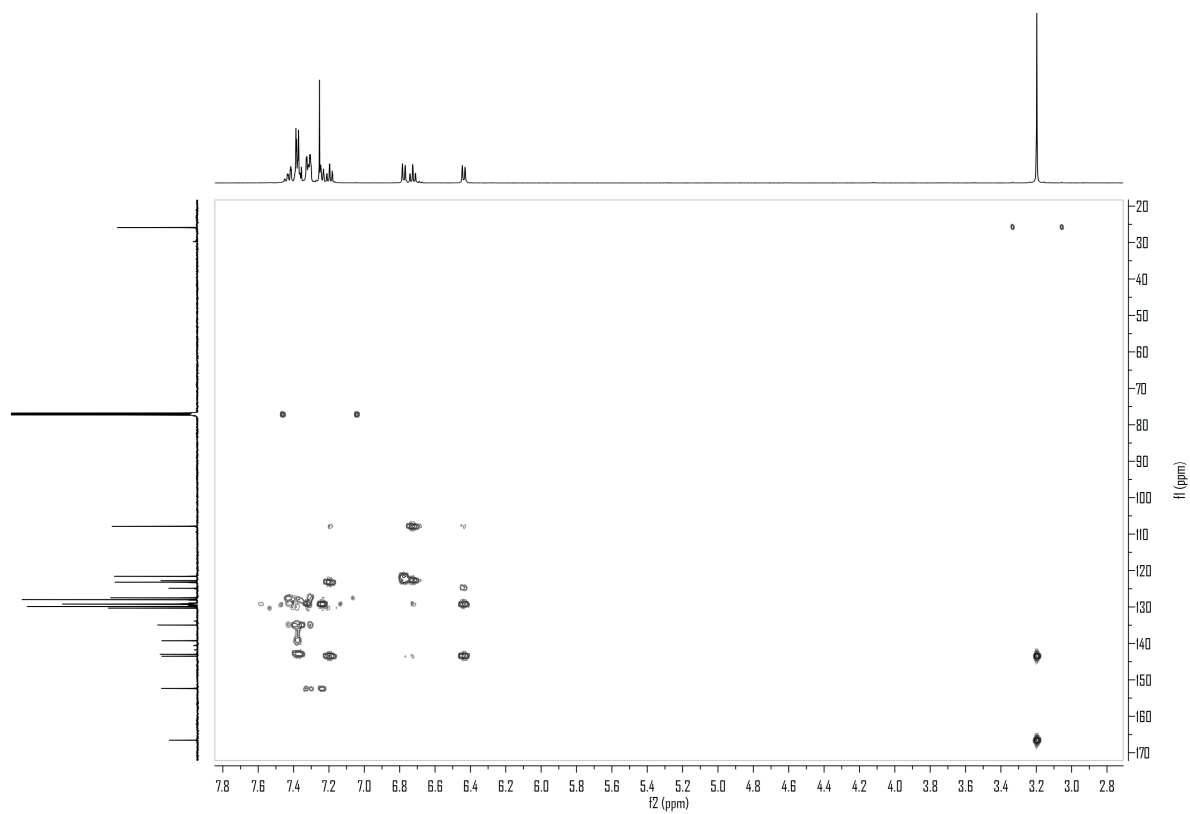
¹³C NMR spectrum of (E)-3j



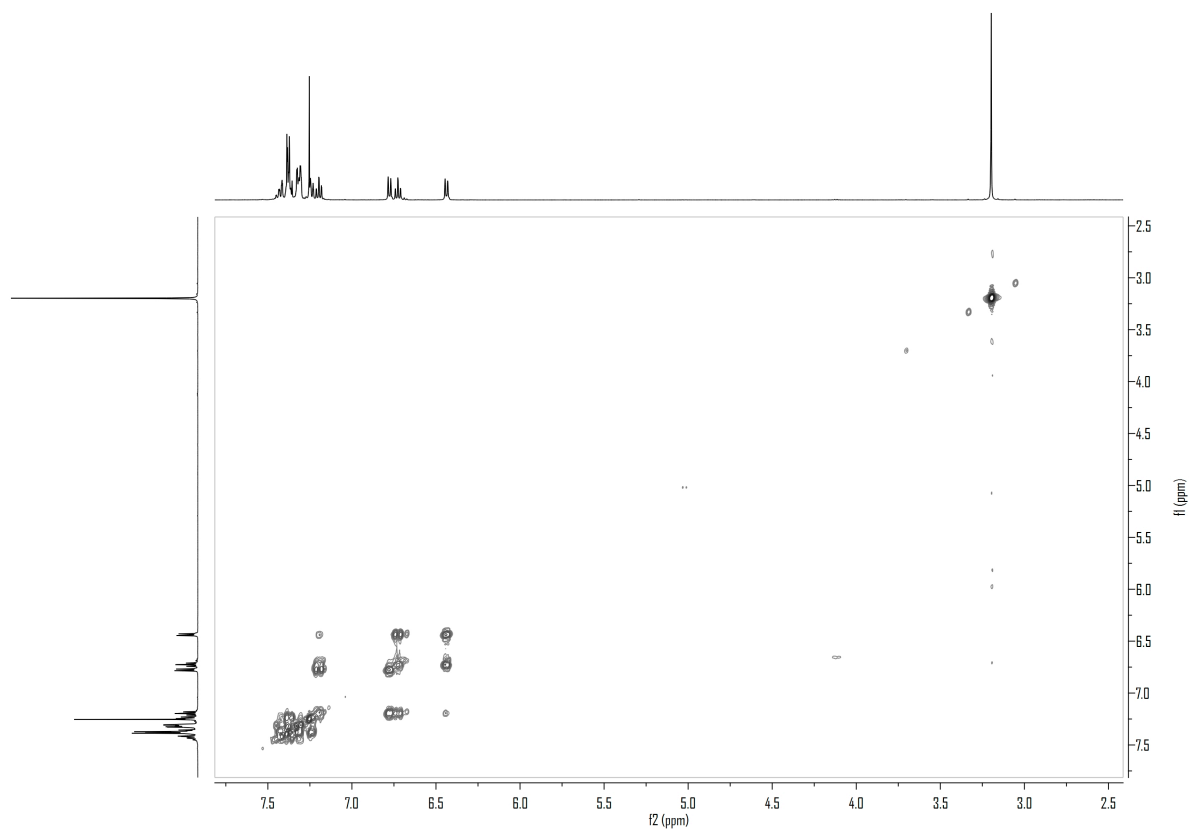
HSQC spectrum of (*E*)-3j



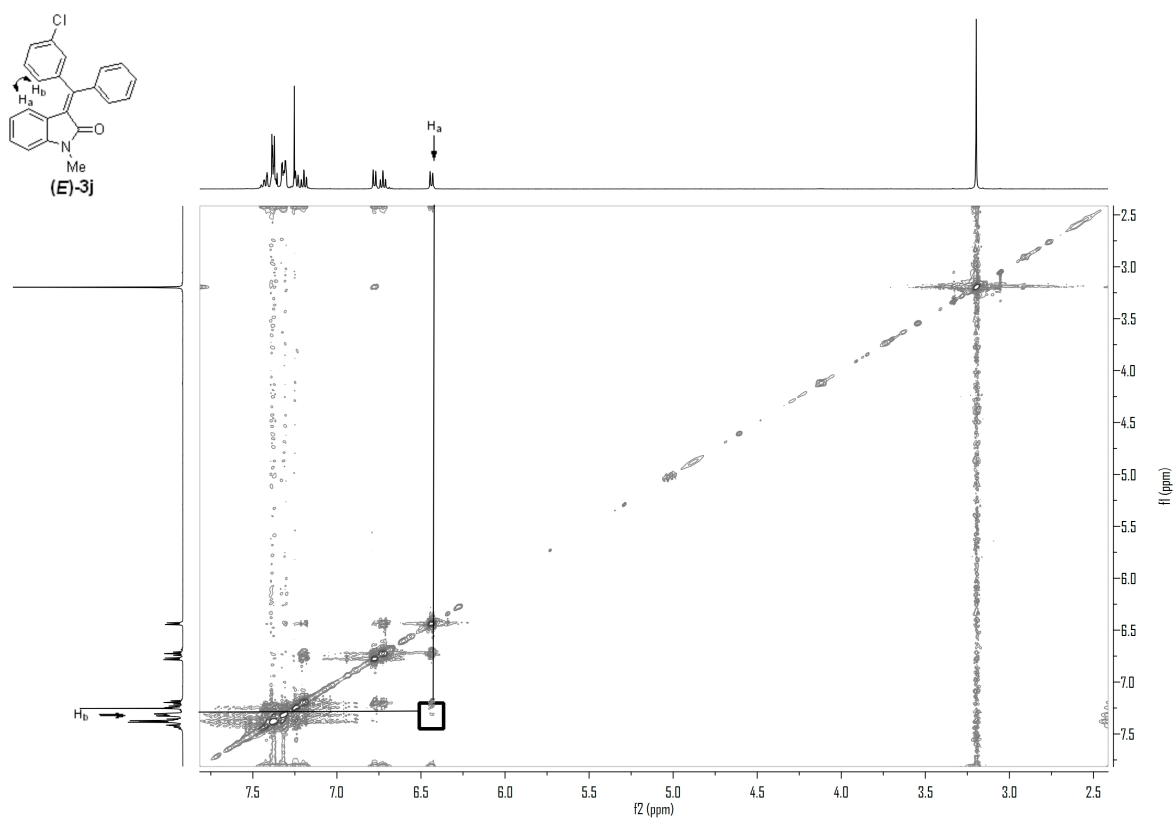
HMBC spectrum of (*E*)-3j



COSY spectrum of (*E*)-3j

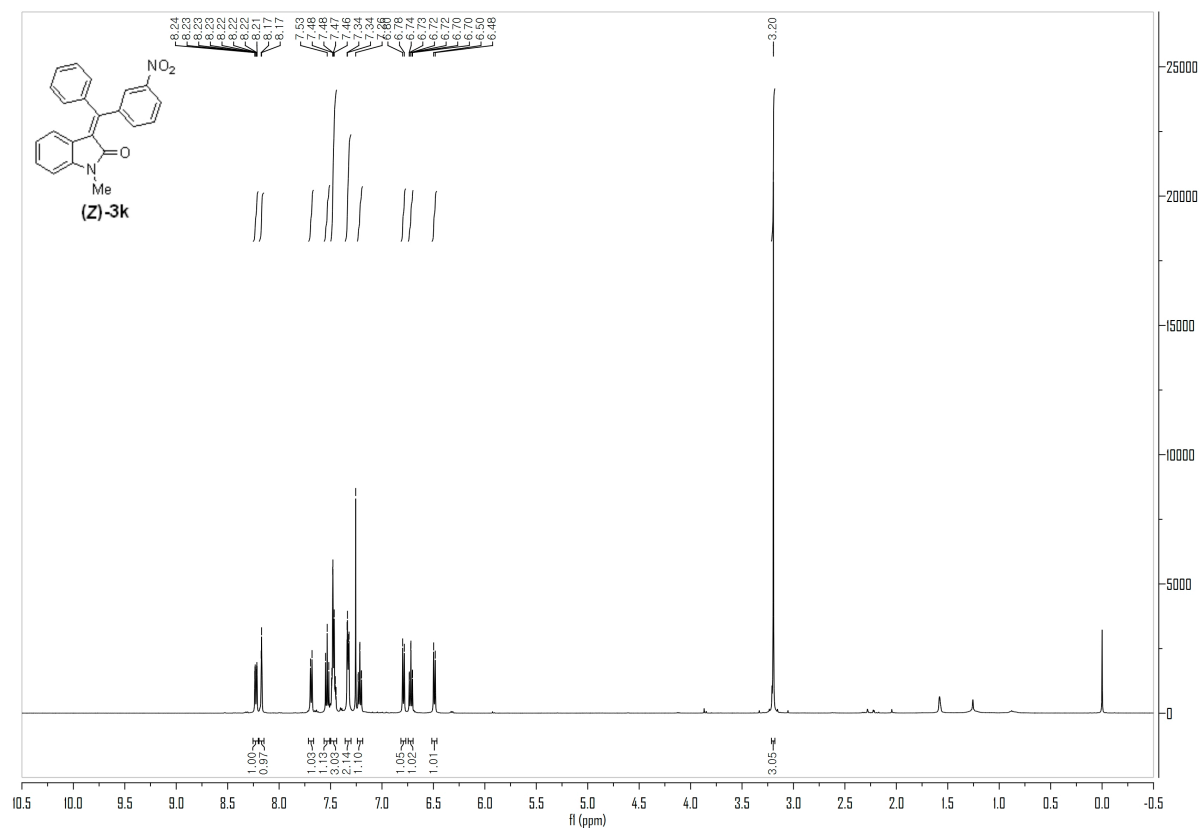


ROESY spectrum of (*E*)-3j

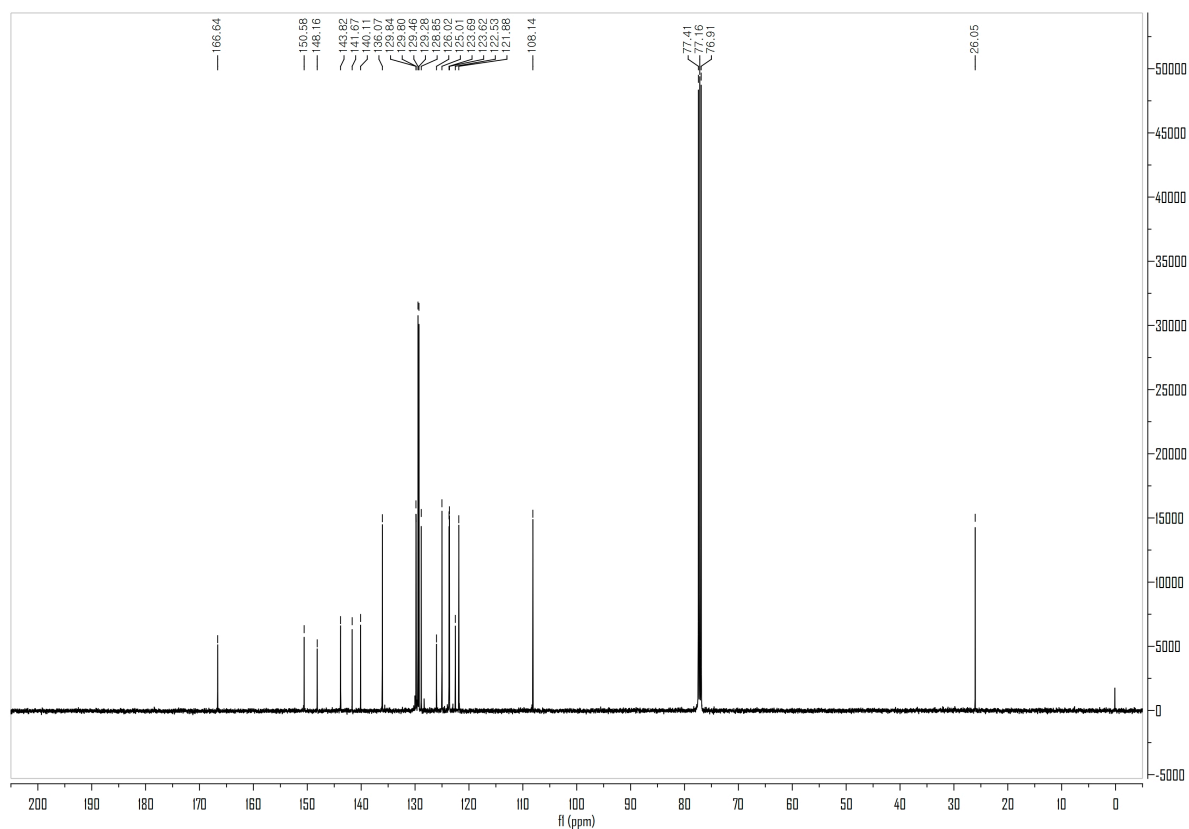


(Z)-1-methyl-3-((3-nitrophenyl)(phenyl)methylene)indolin-2-one ((Z)-3k)

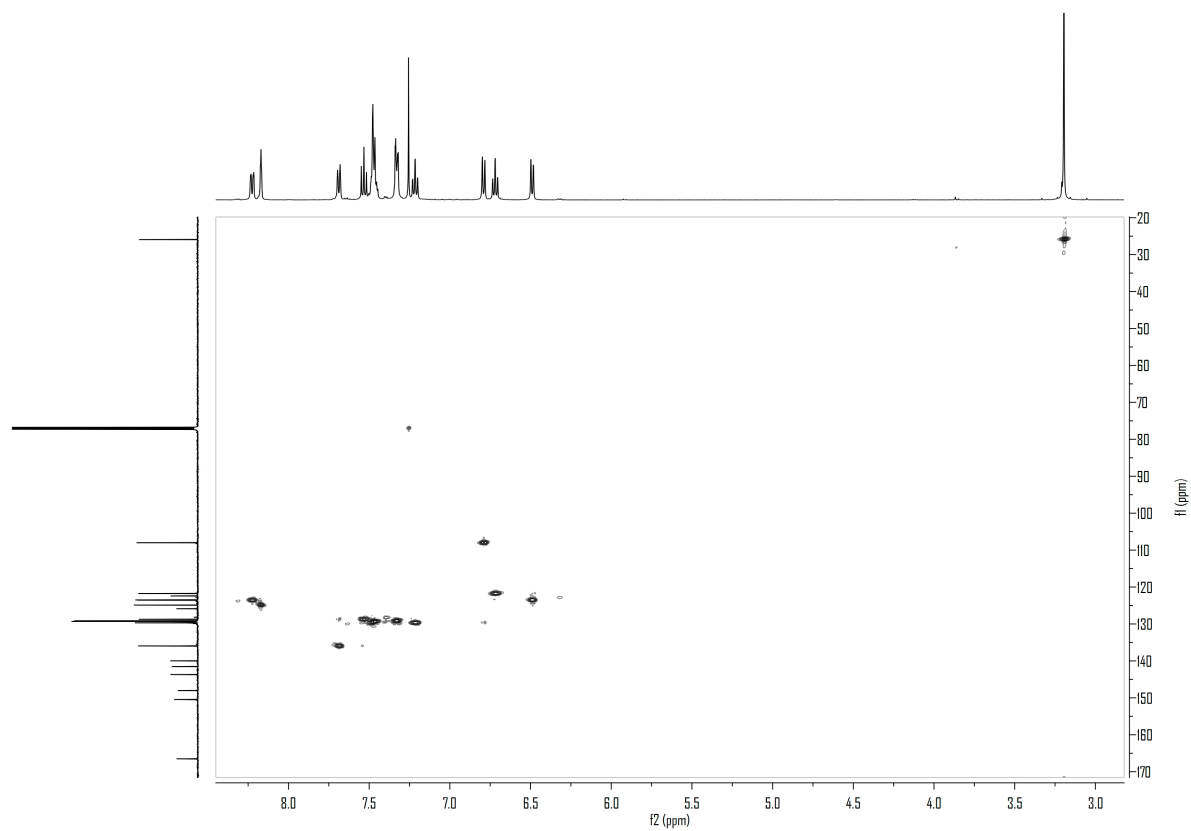
¹H NMR spectrum of (Z)-3k



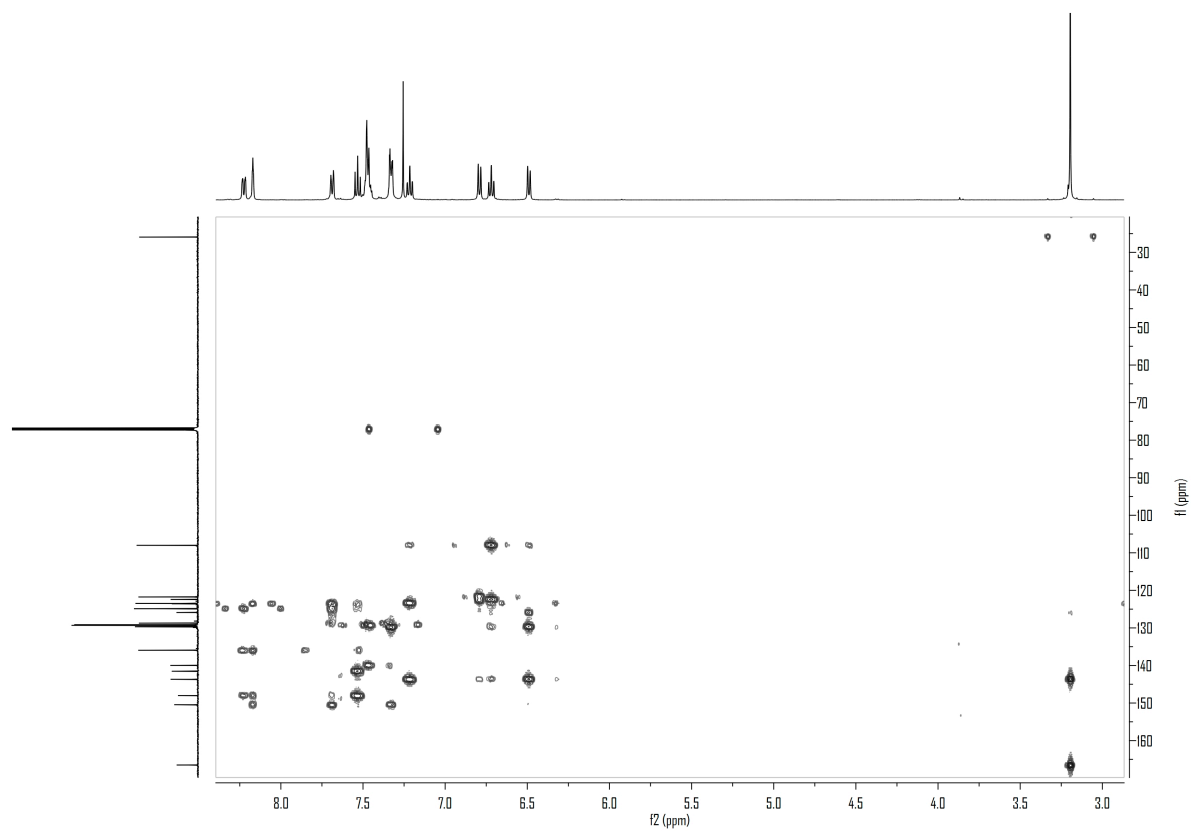
¹³C NMR spectrum of (Z)-3k



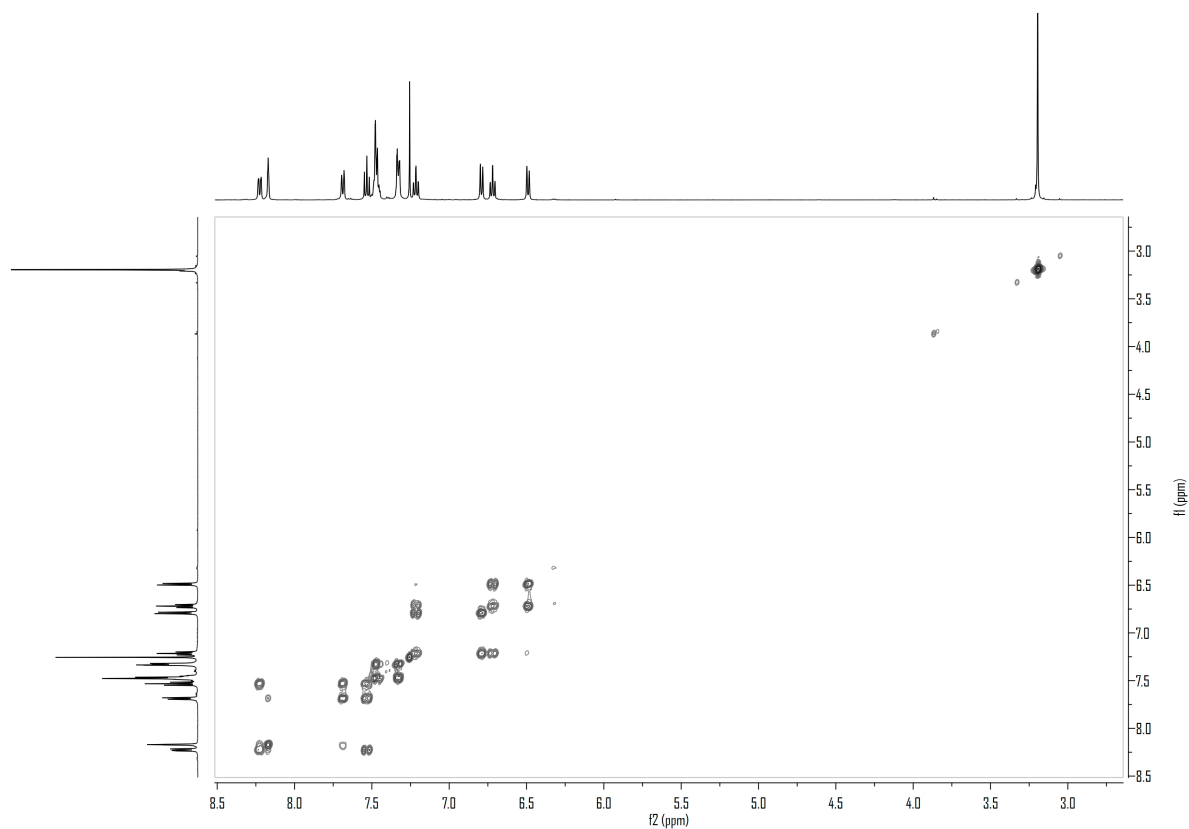
HSQC spectrum of (Z)-3k



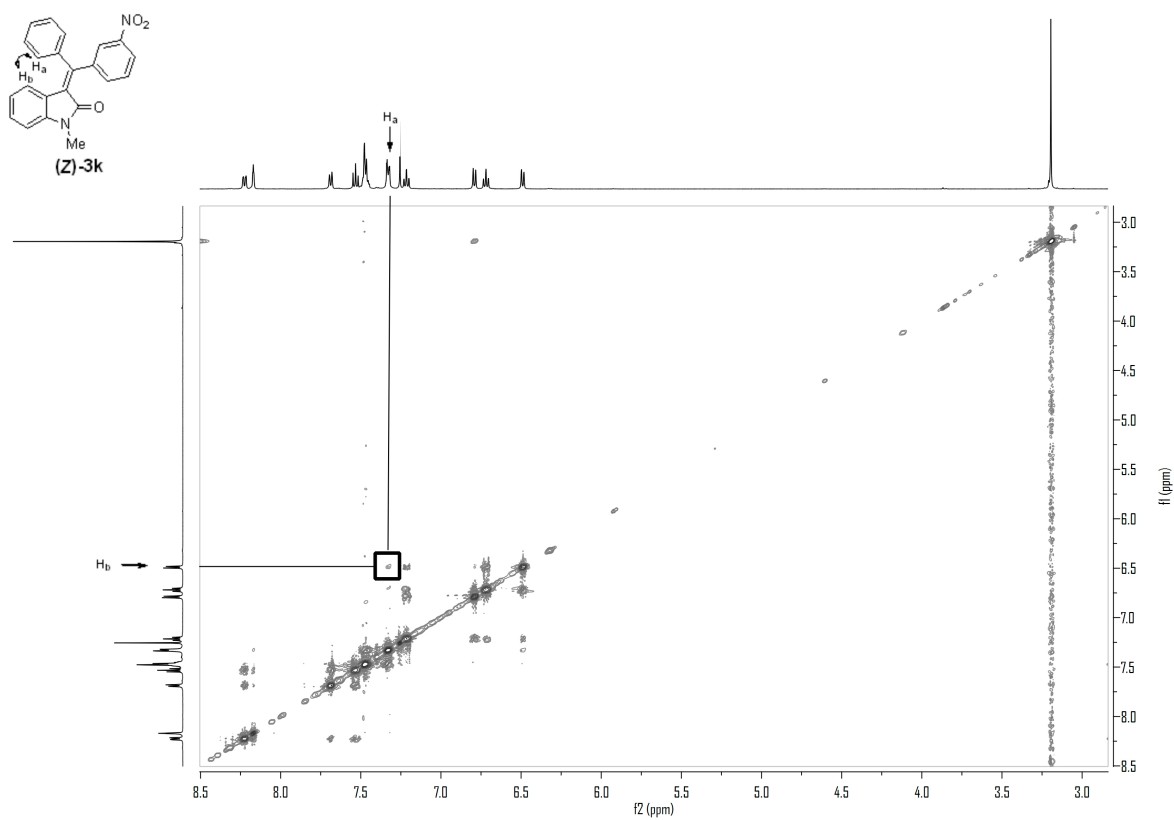
HMBC spectrum of (Z)-3k



COSY spectrum of (Z)-3k

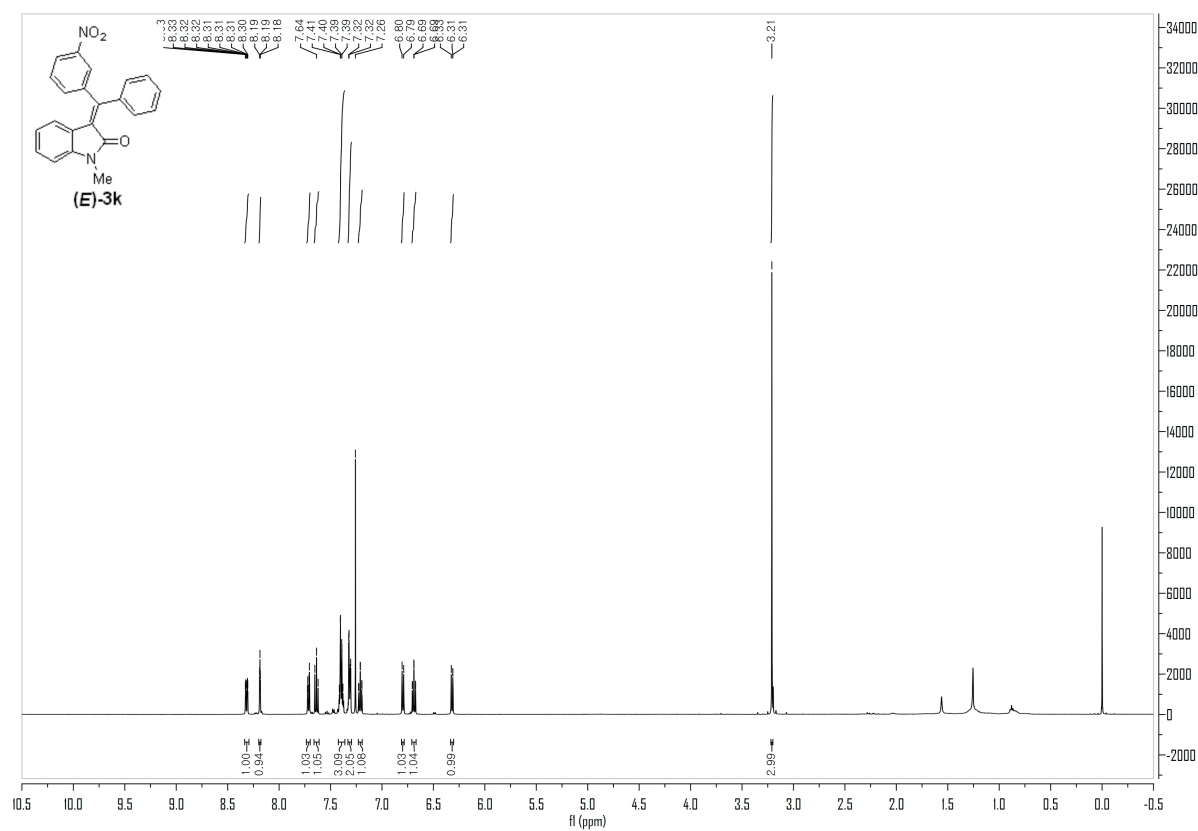


ROESY spectrum of (Z)-3k

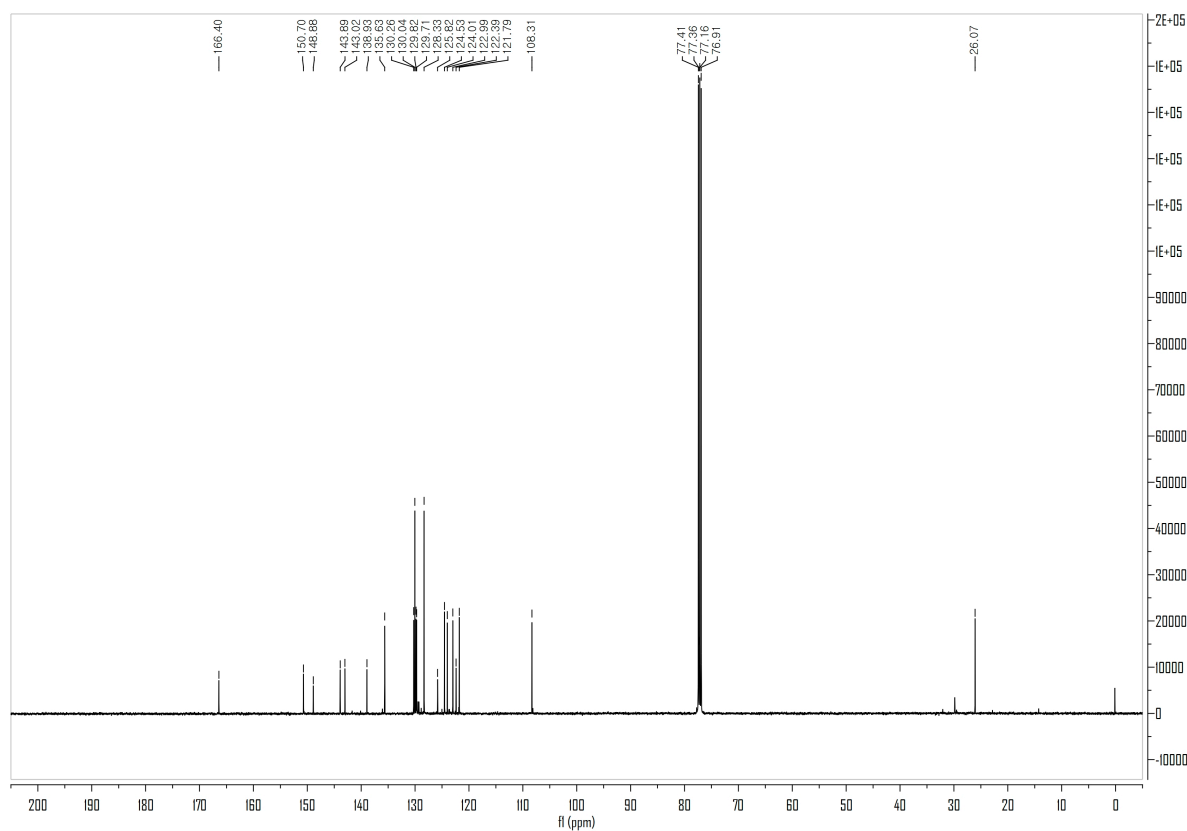


(E)-1-methyl-3-((3-nitrophenyl)(phenyl)methylene)indolin-2-one ((E)-3k)

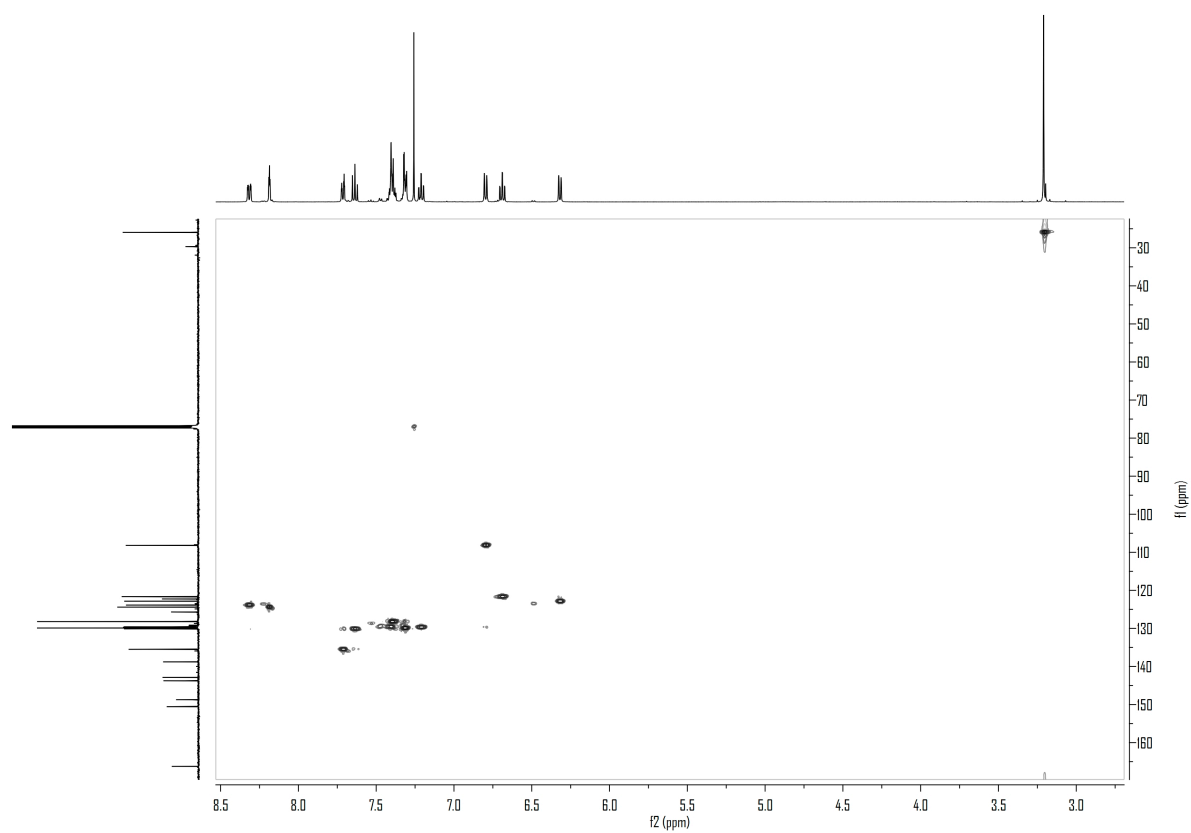
¹H NMR spectrum of (E)-3k



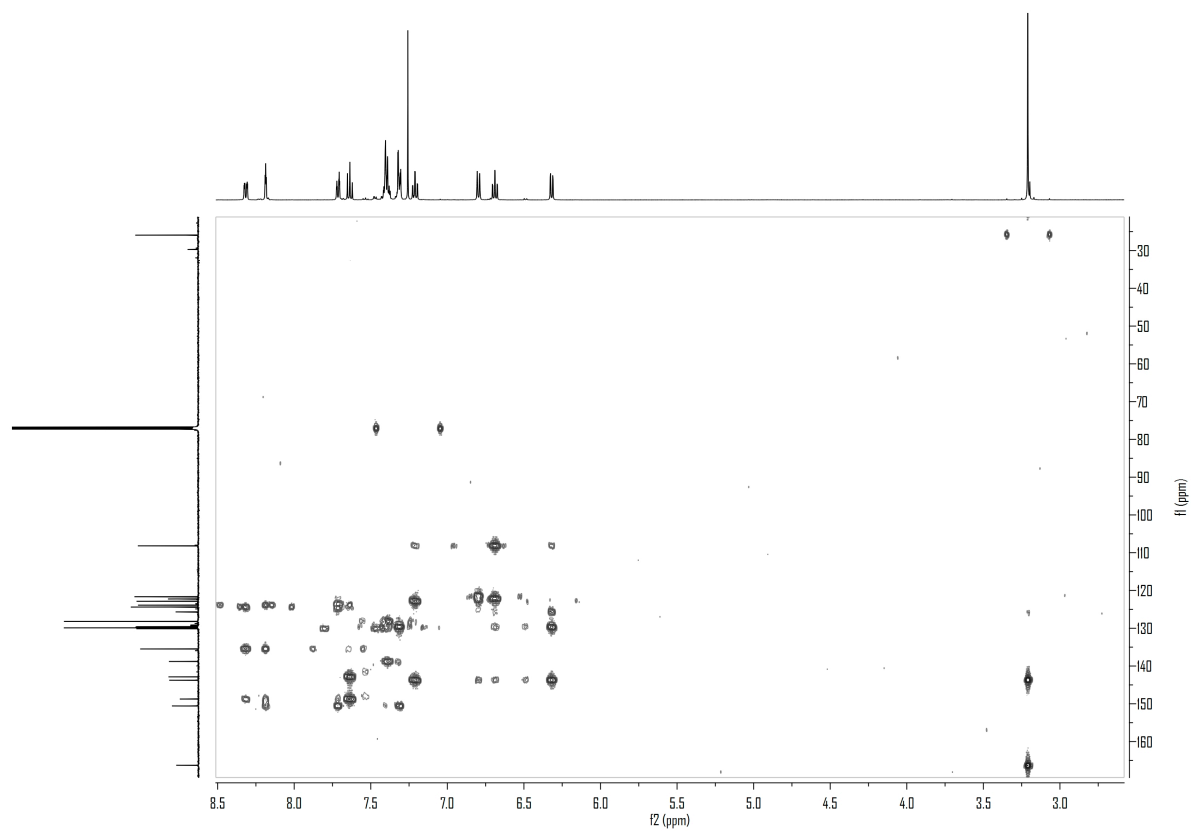
¹³C NMR spectrum of (E)-3k



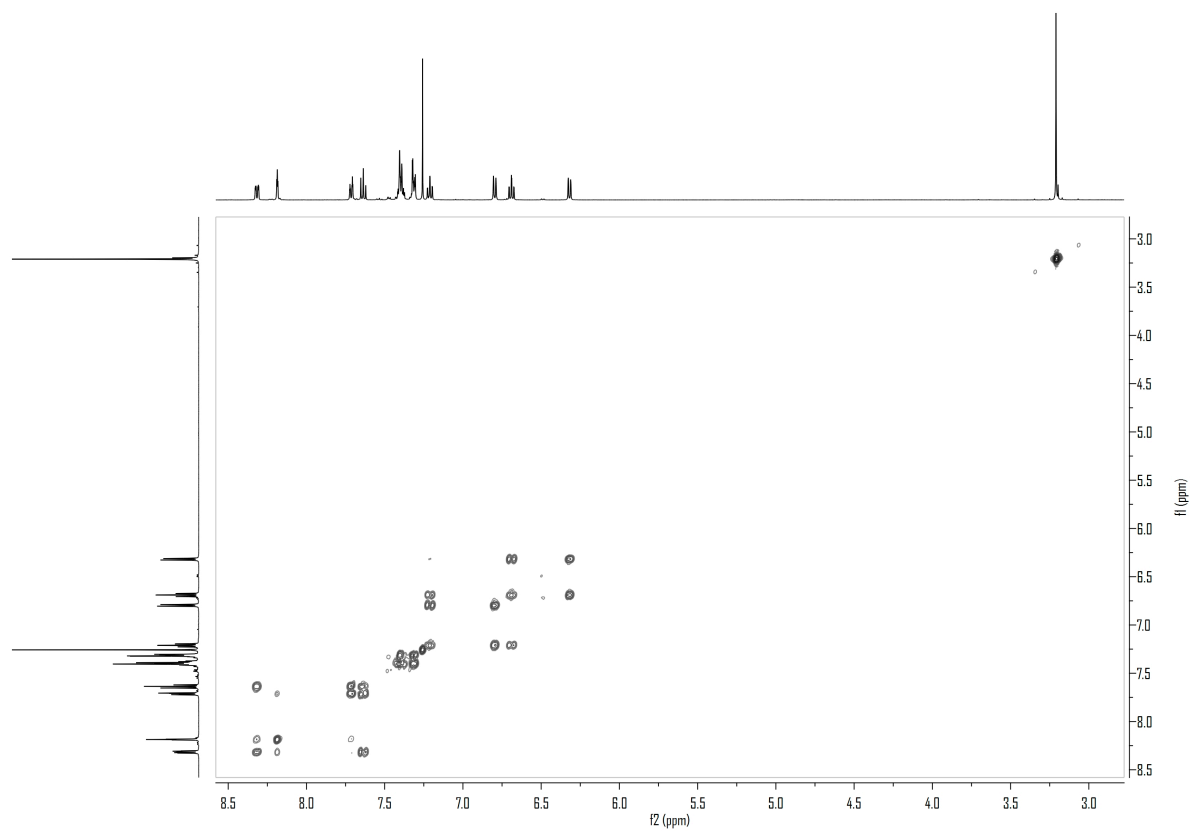
HSQC spectrum of (*E*)-3k



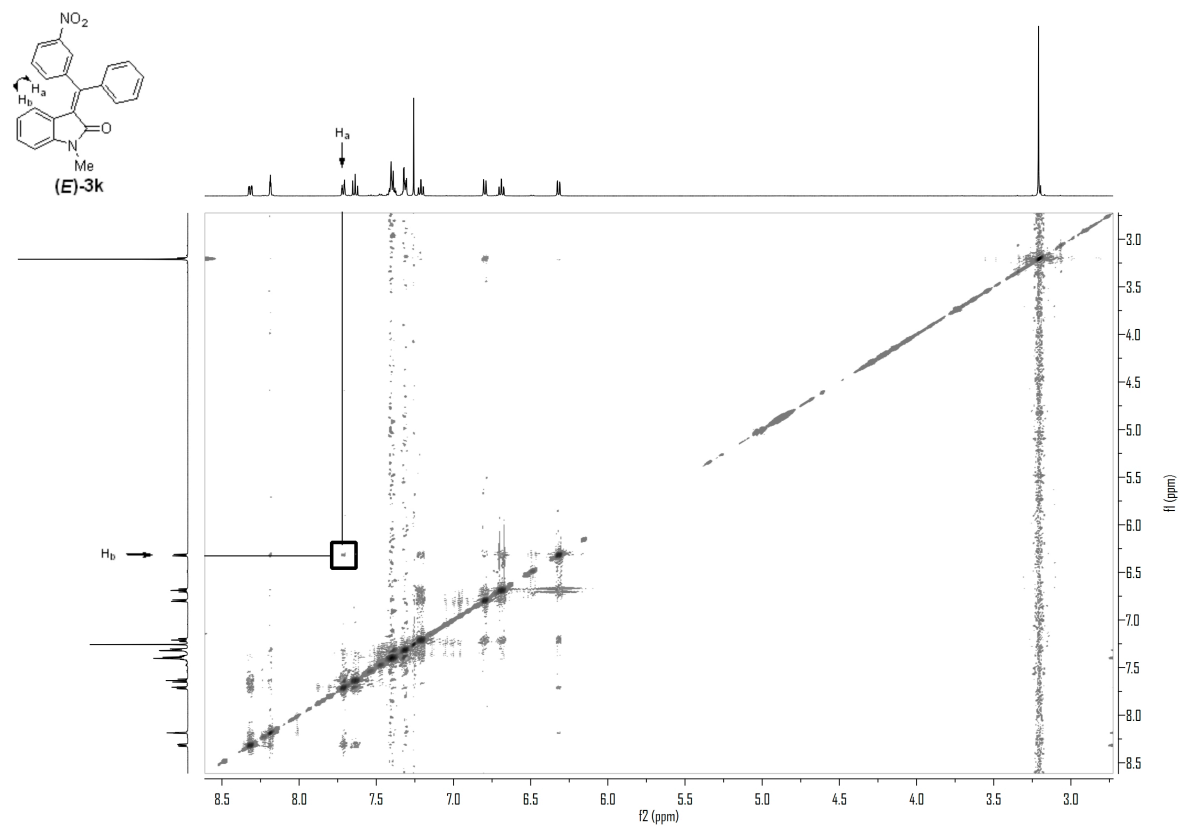
HMBC spectrum of (*E*)-3k



COSY spectrum of (*E*)-3k

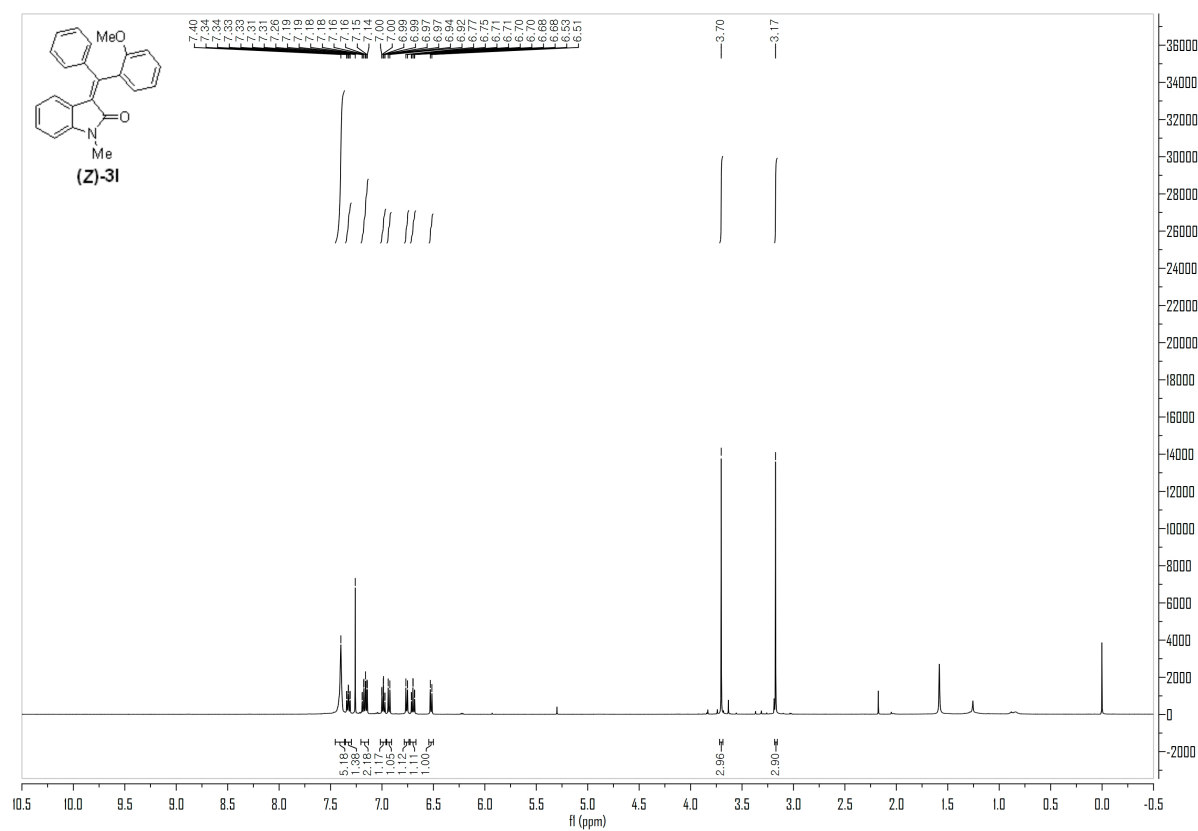


ROESY spectrum of (*E*)-3k

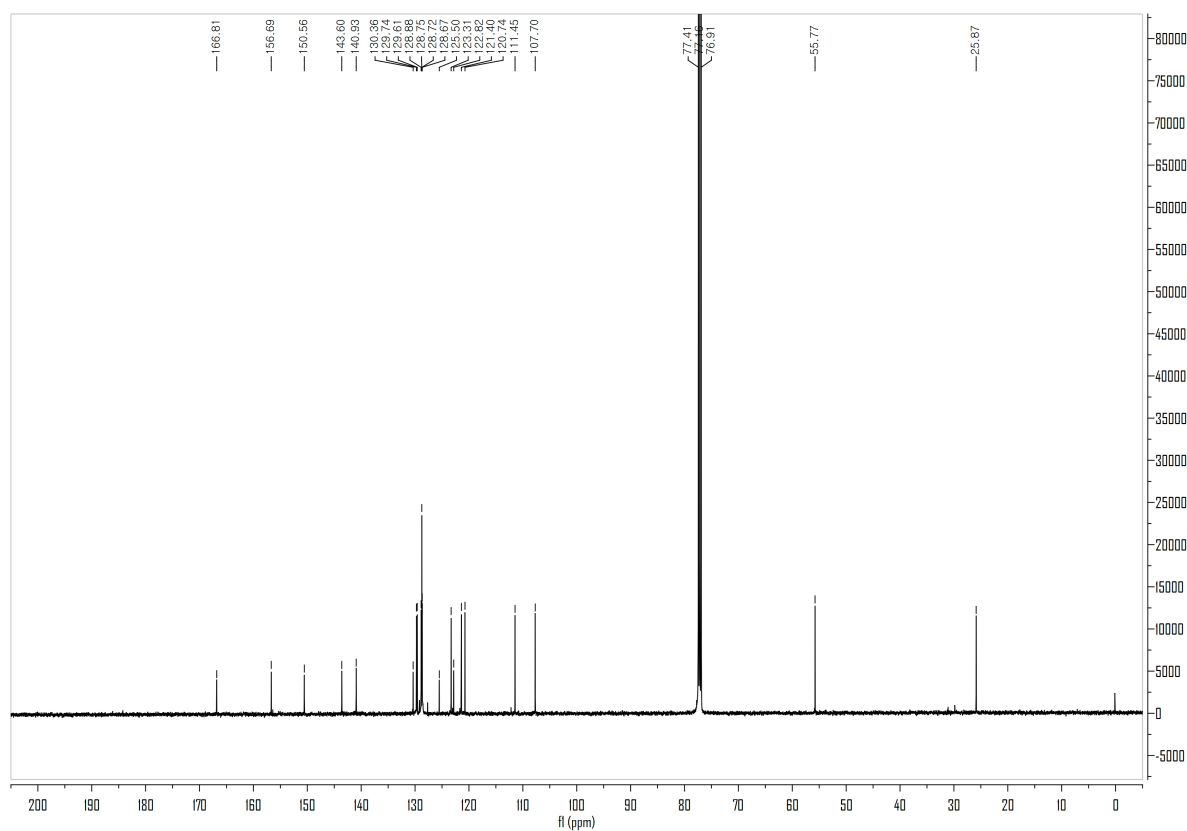


(Z)-3-((2-methoxyphenyl)(phenyl)methylene)-1-methylindolin-2-one ((Z)-3I)

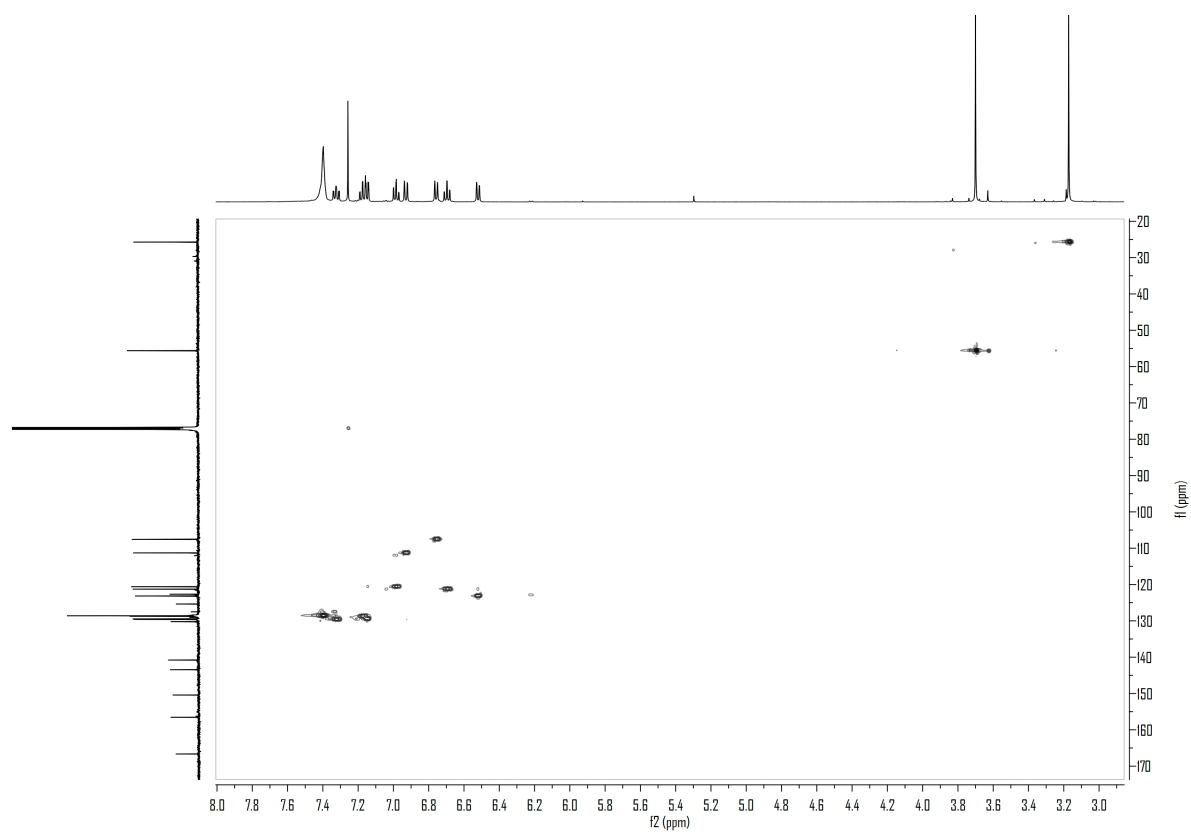
¹H NMR spectrum of (Z)-3I



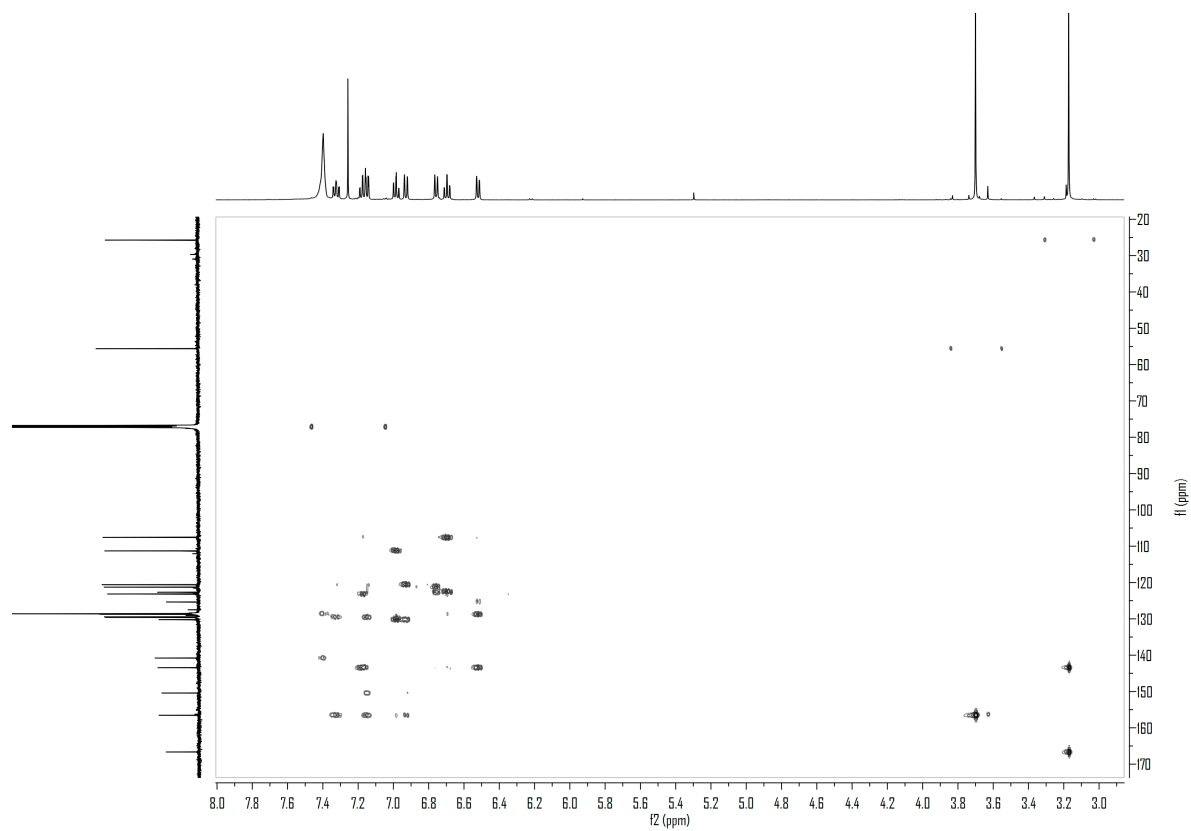
¹³C NMR spectrum of (Z)-3I



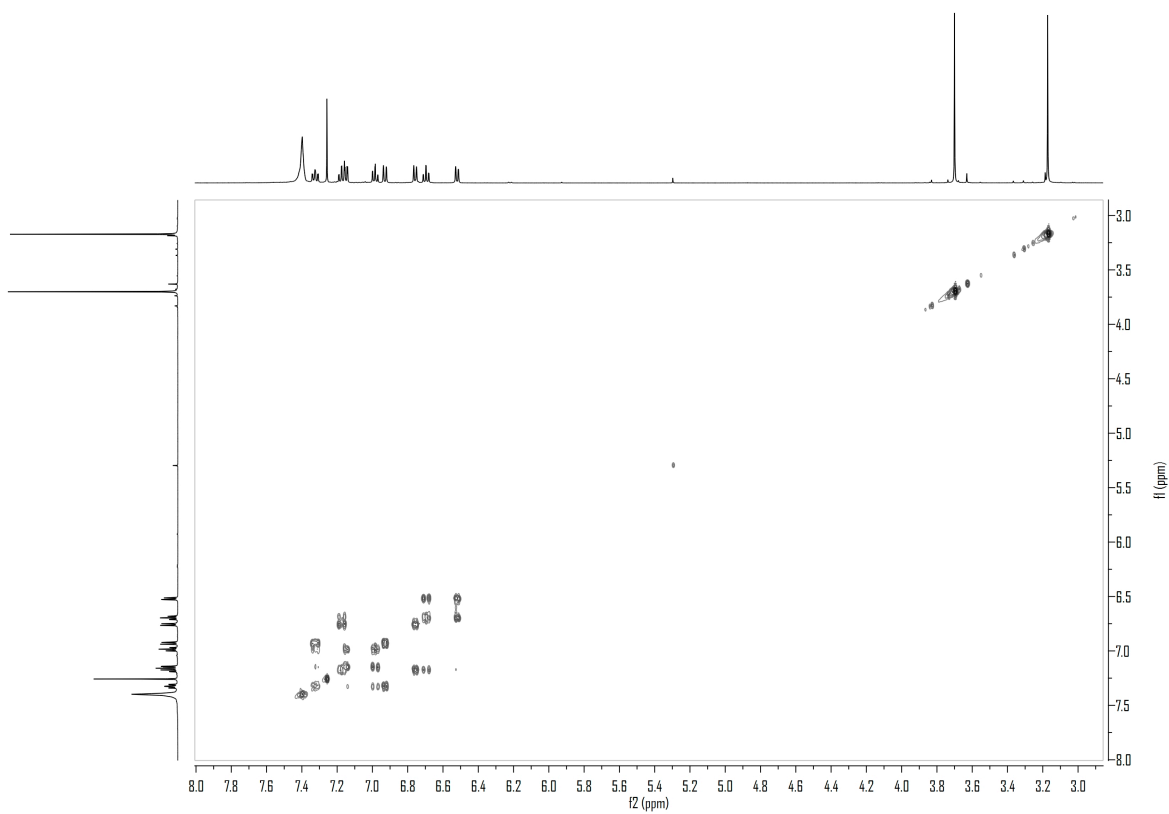
HSQC spectrum of (Z)-31



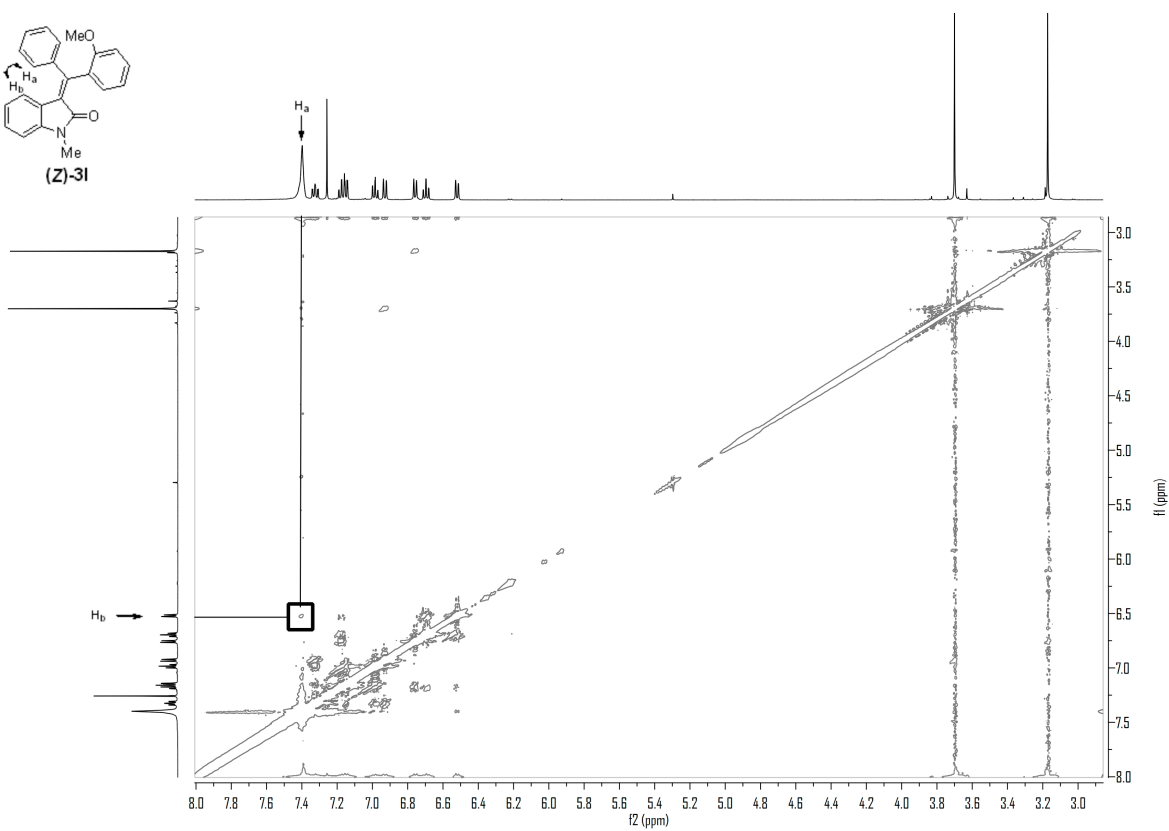
HMBC spectrum of (Z)-31



COSY spectrum of (Z)-31

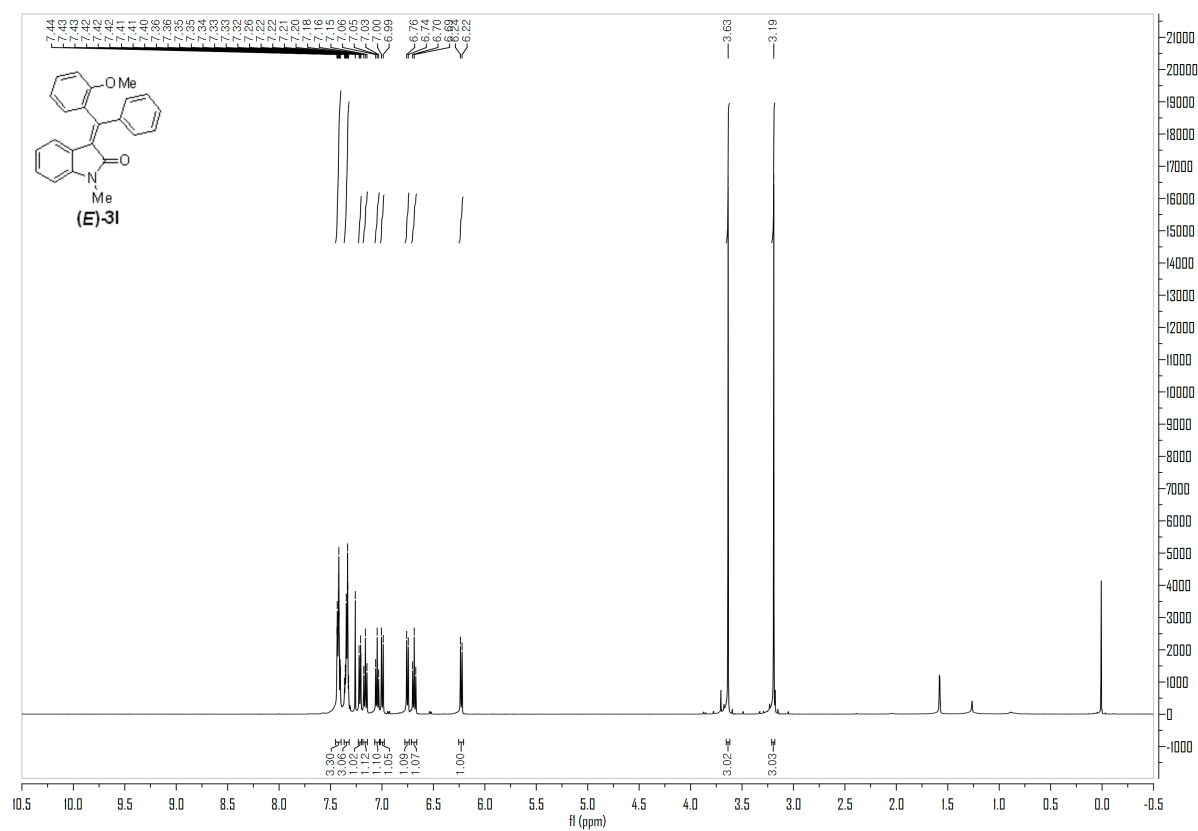


ROESY spectrum of (Z)-31

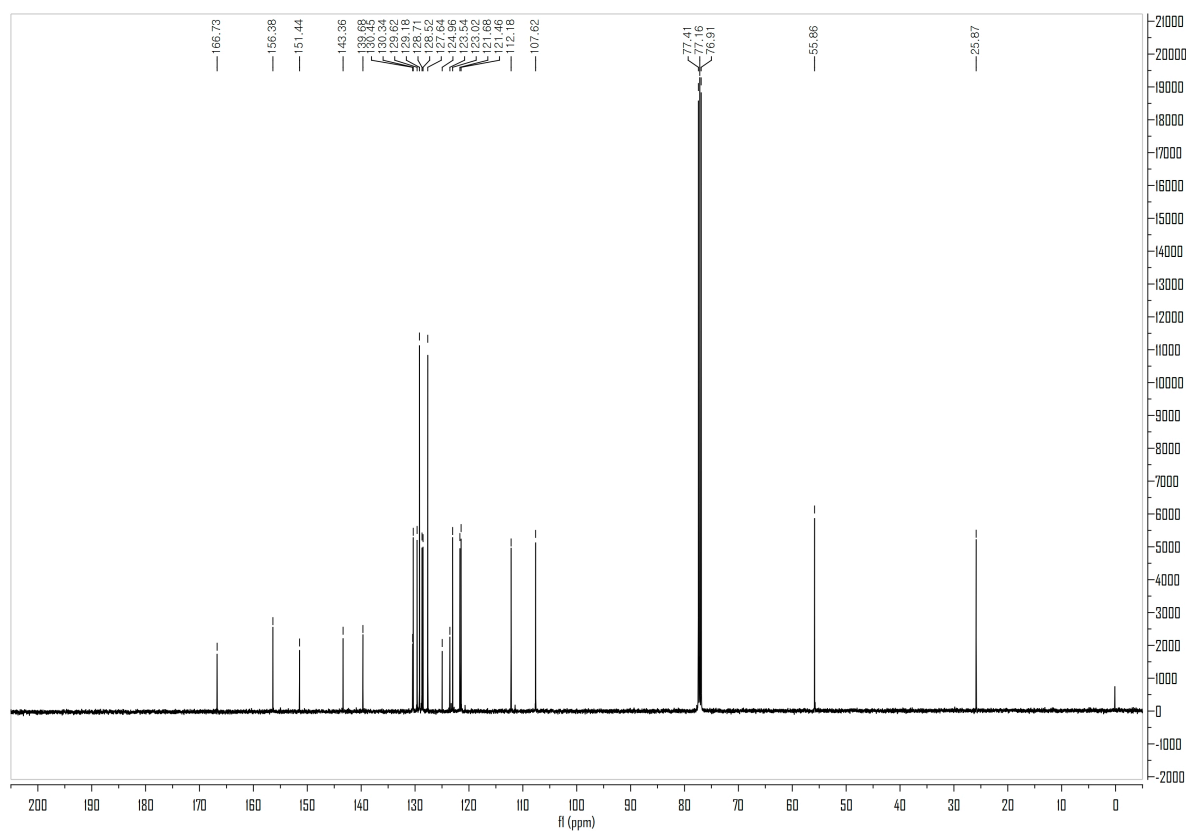


(*E*)-3-((2-methoxyphenyl)(phenyl)methylene)-1-methylindolin-2-one ((*E*)-3I)

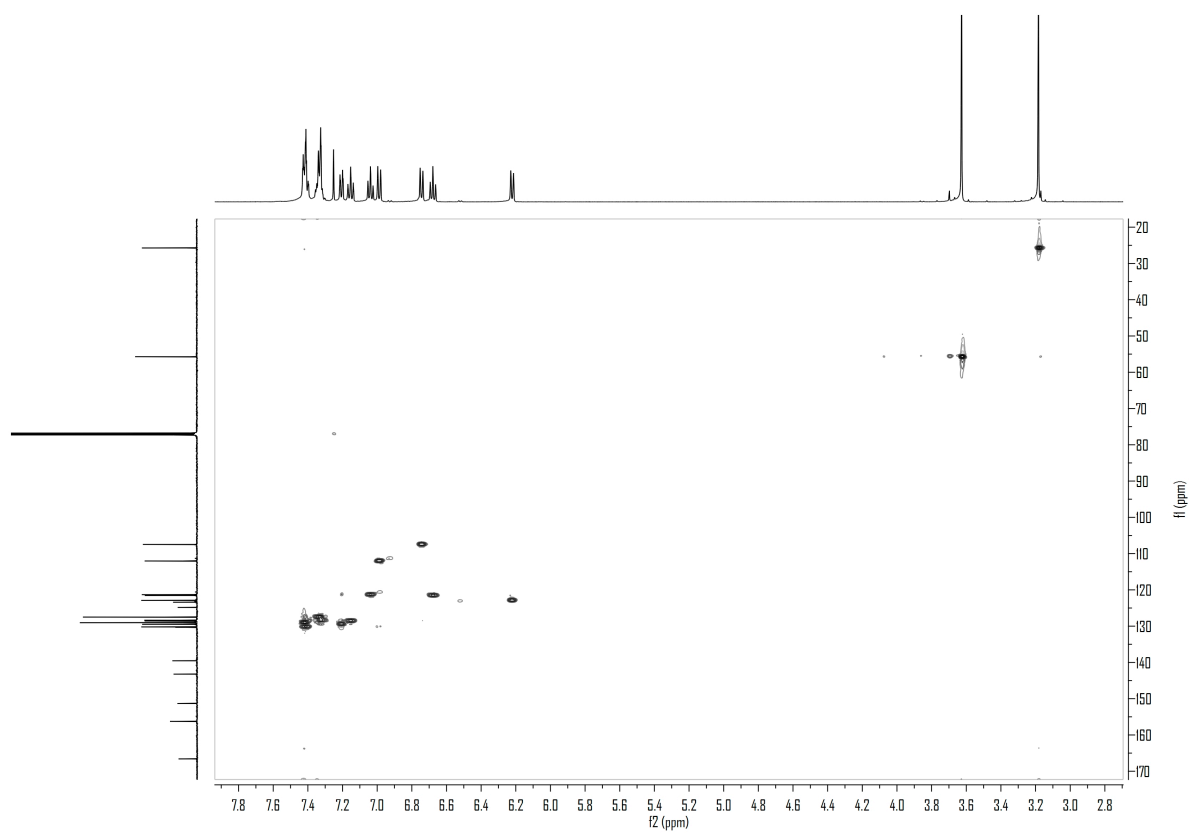
¹H NMR spectrum of (*E*)-3I



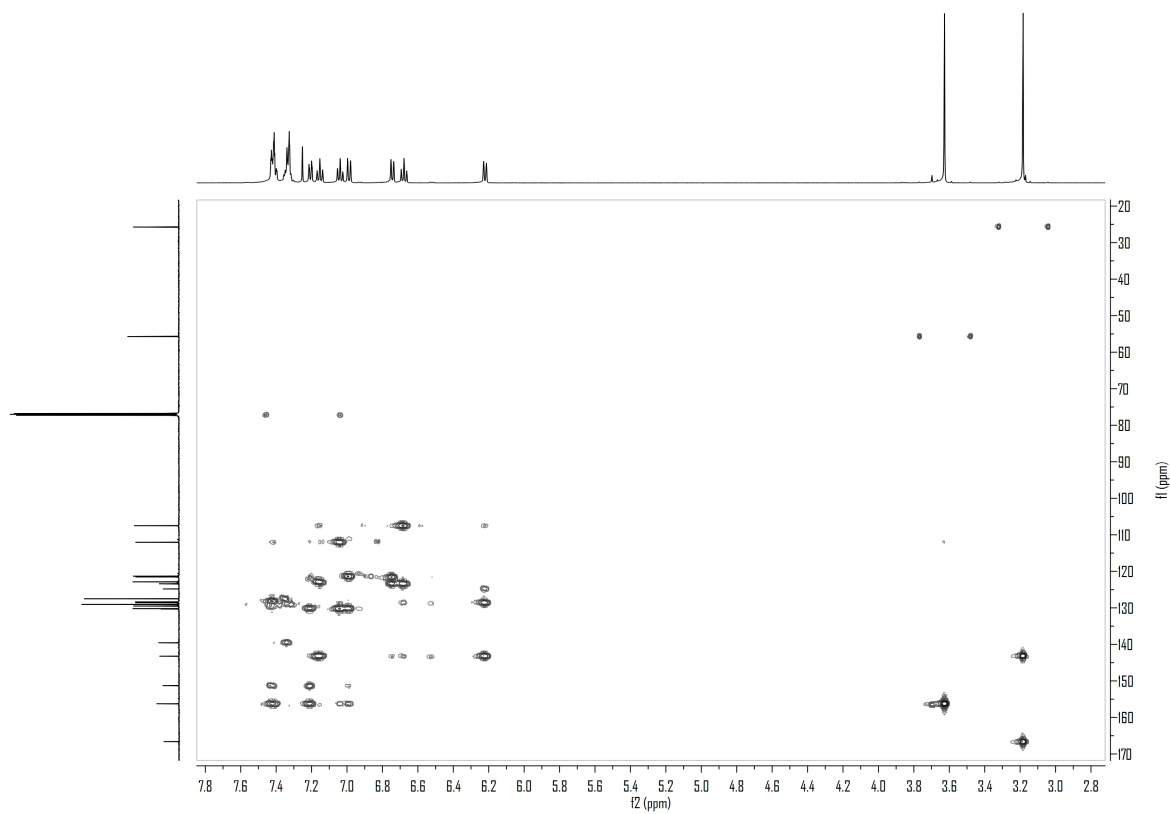
¹³C NMR spectrum of (*E*)-3I



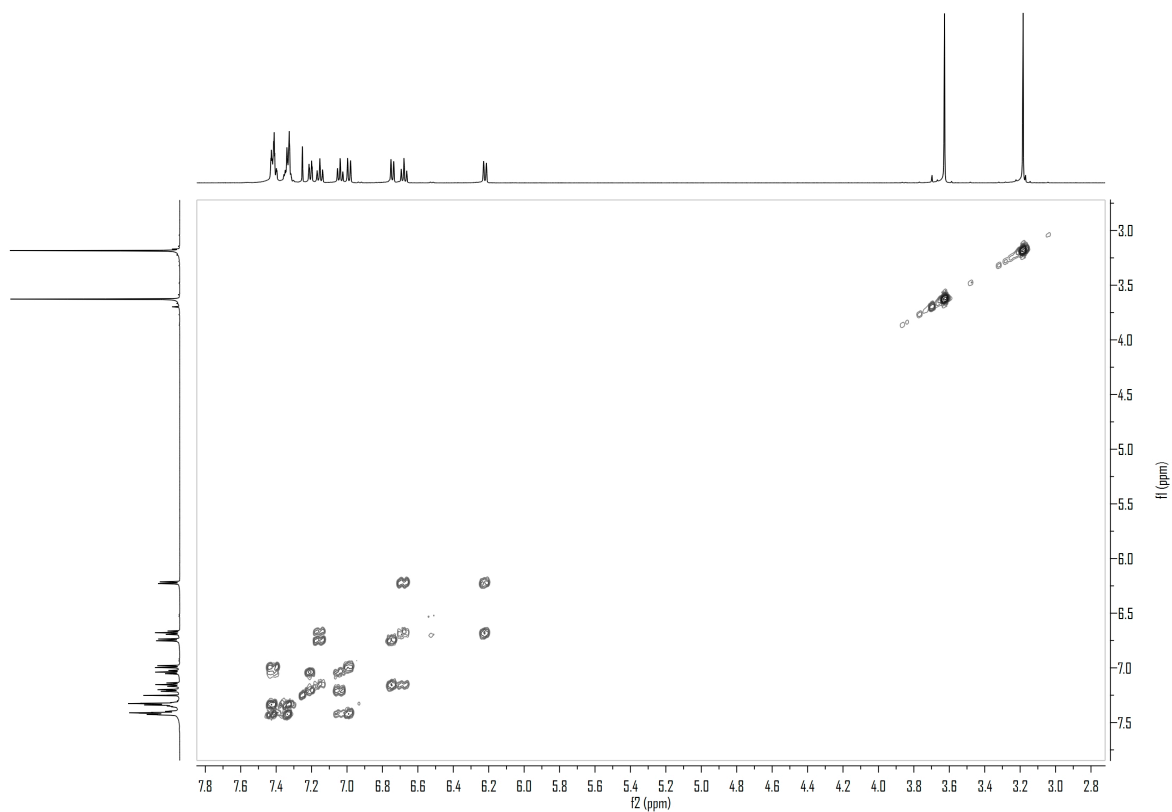
HSQC spectrum of (*E*)-31



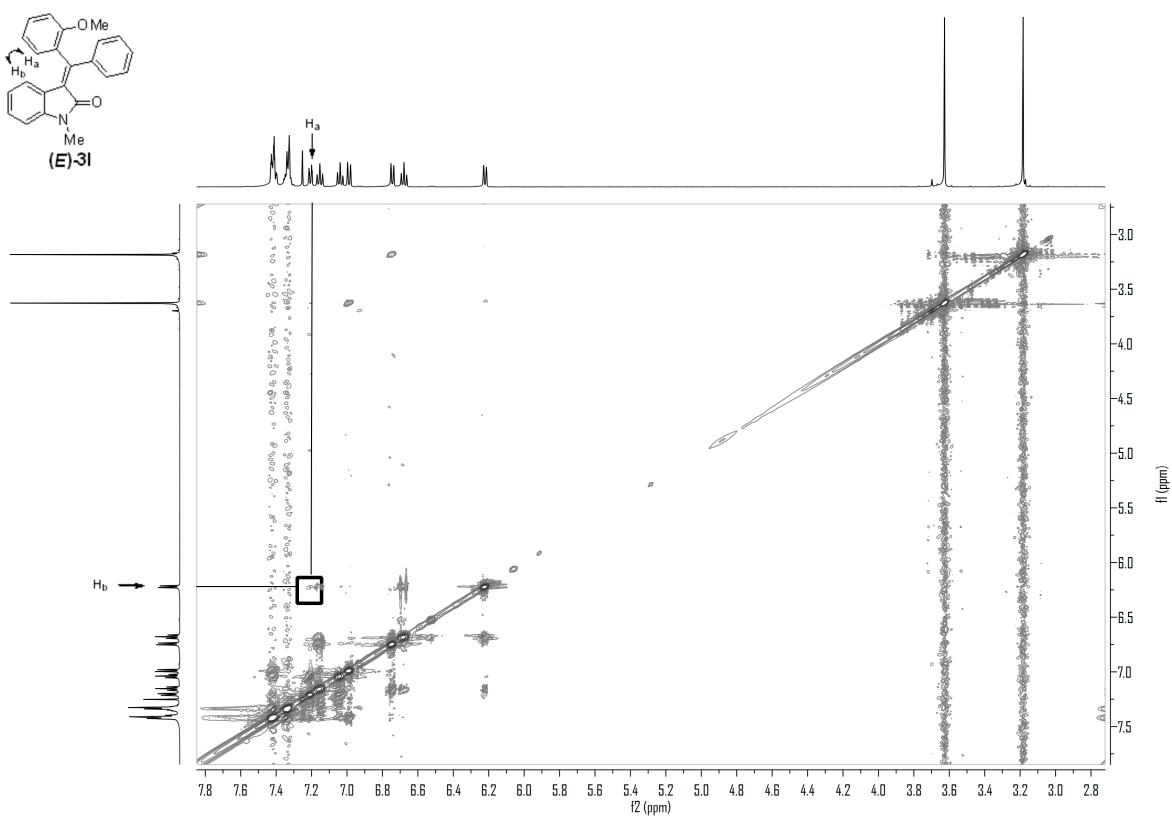
HMBC spectrum of (*E*)-31



COSY spectrum of (*E*)-31

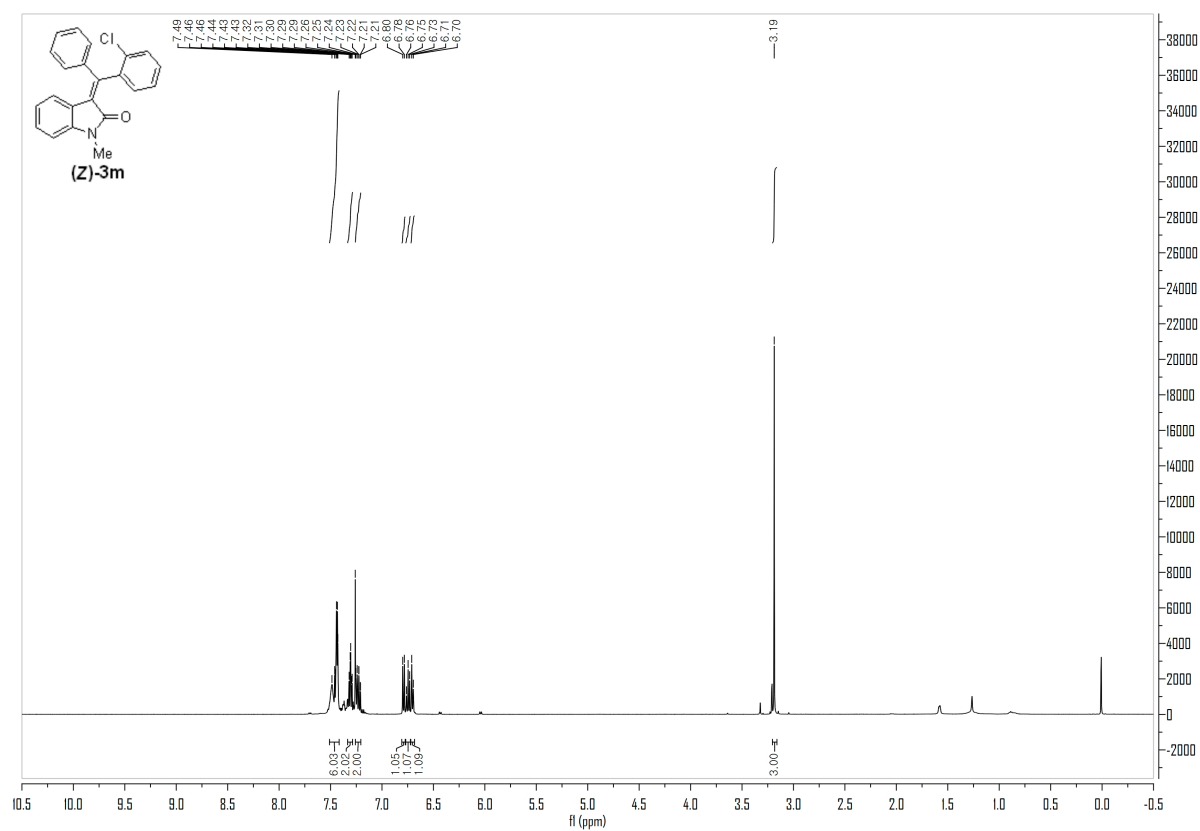


ROESY spectrum of (*E*)-31

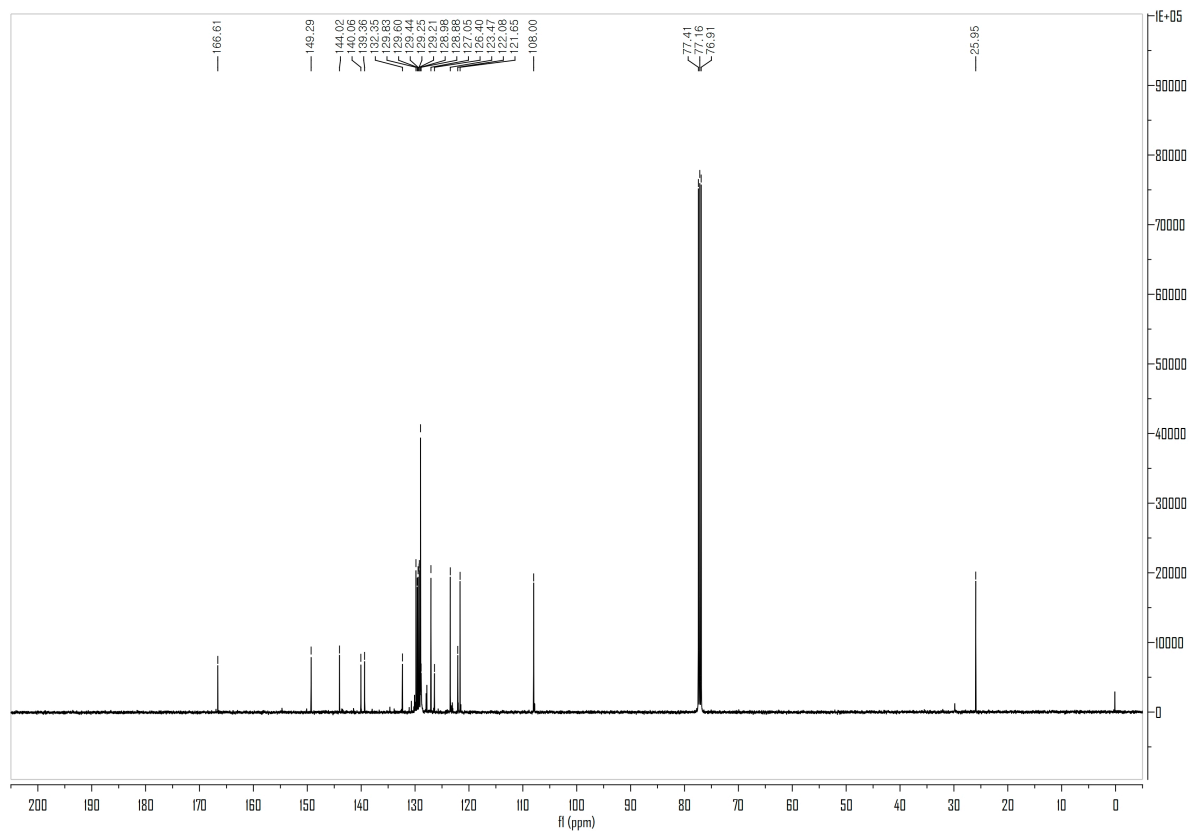


(Z)-3-((2-chlorophenyl)(phenyl)methylene)-1-methylindolin-2-one ((Z)-3m)

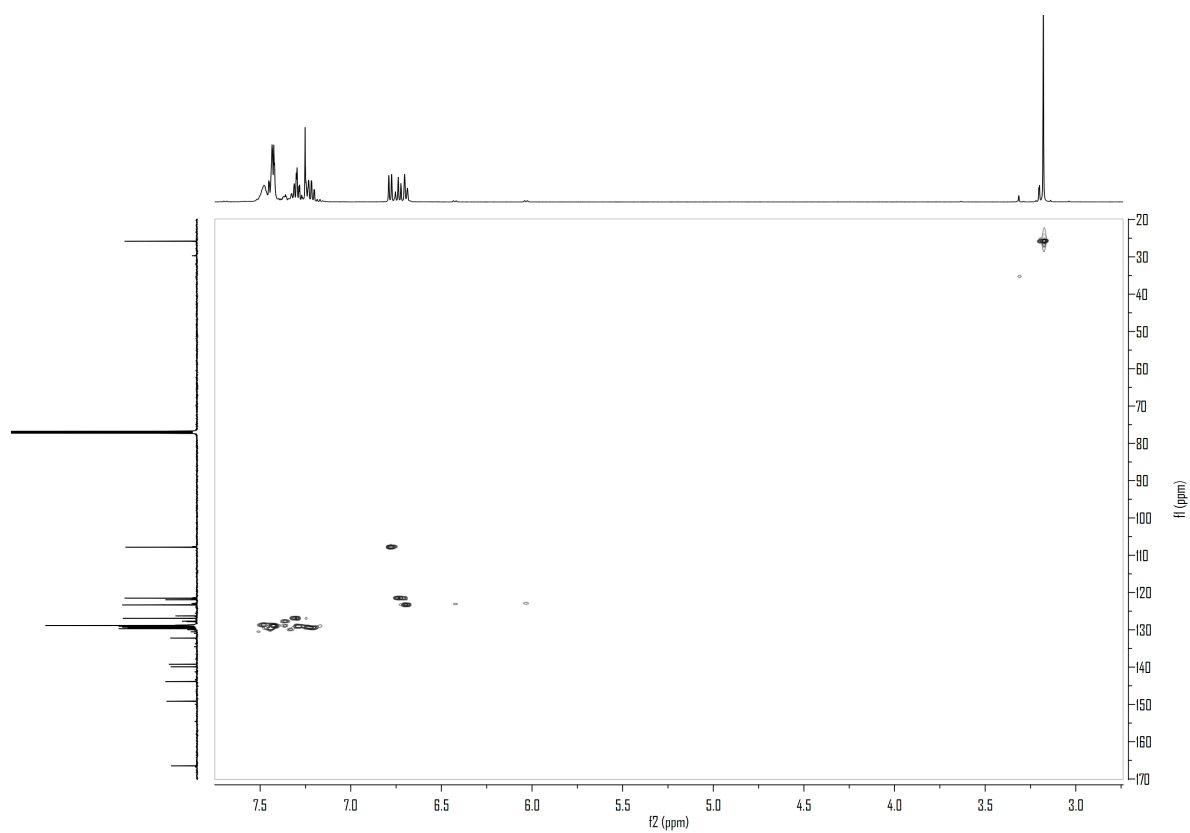
¹H NMR spectrum of (Z)-3m



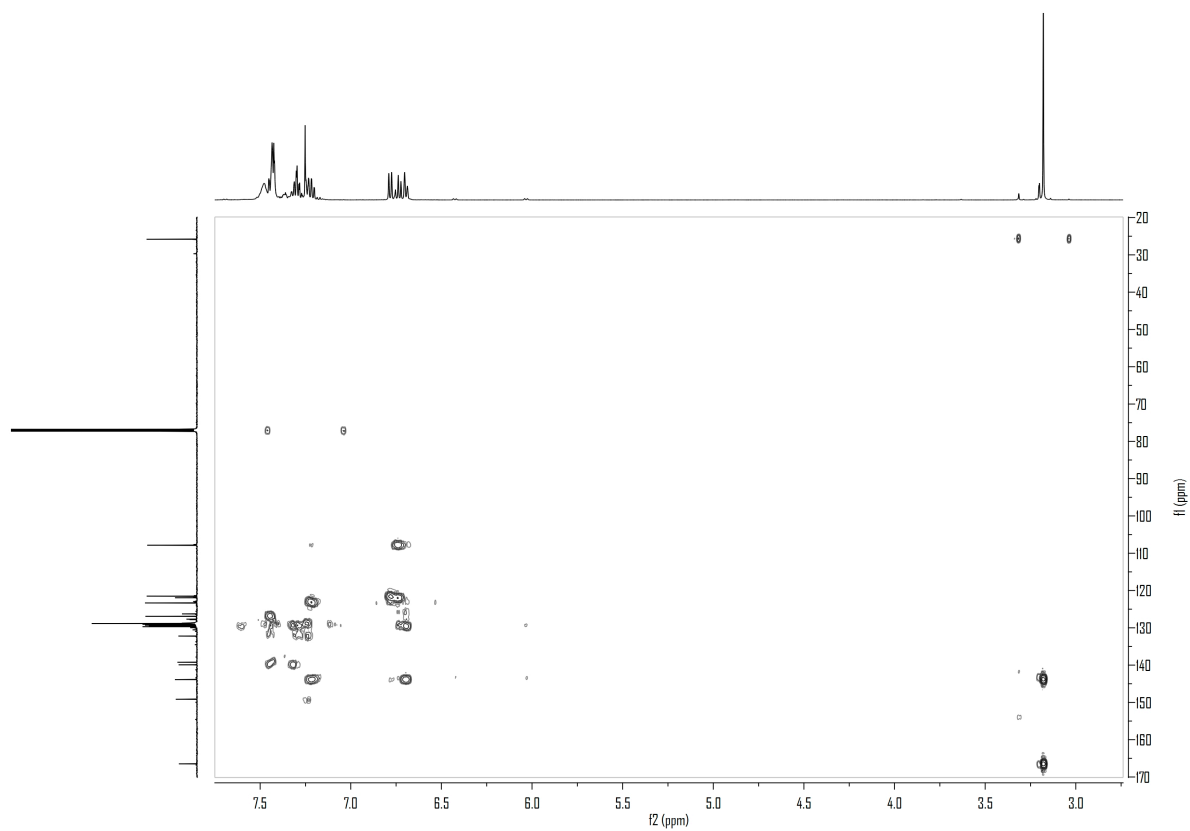
¹³C NMR spectrum of (Z)-3m



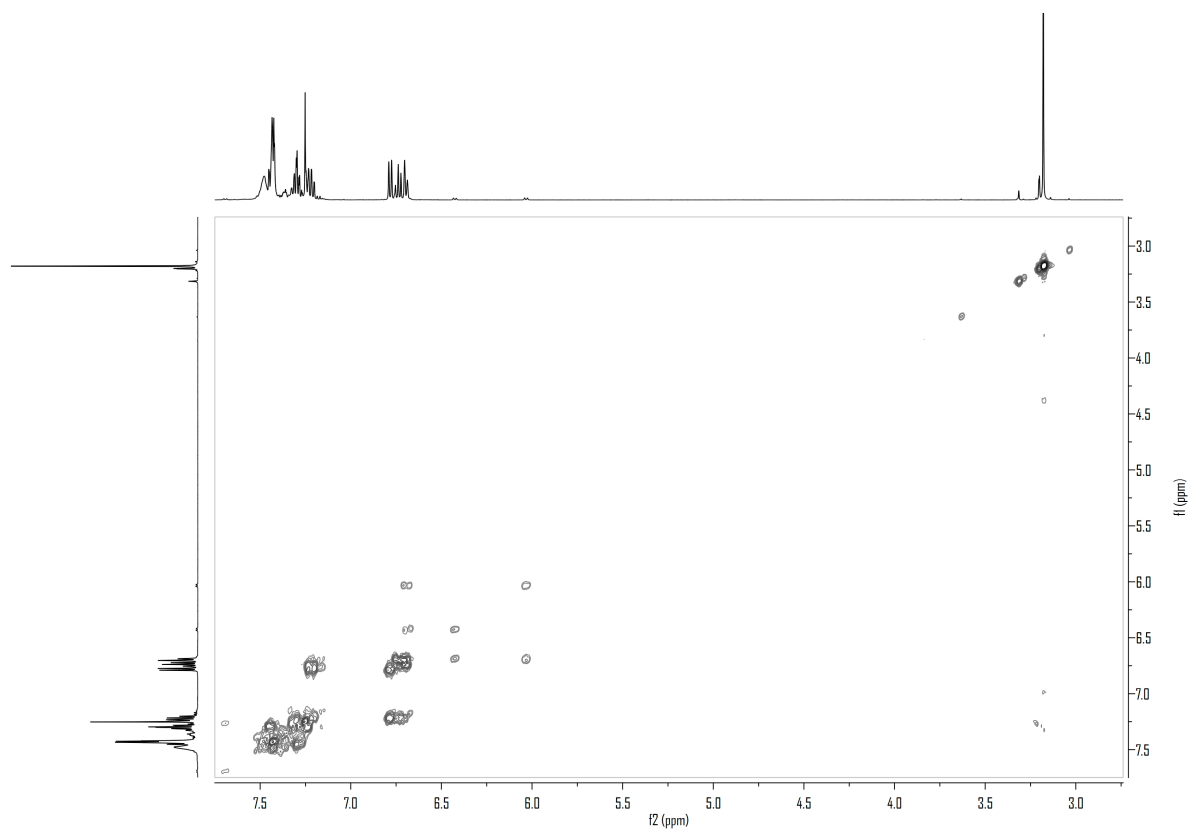
HSQC spectrum of (Z)-3m



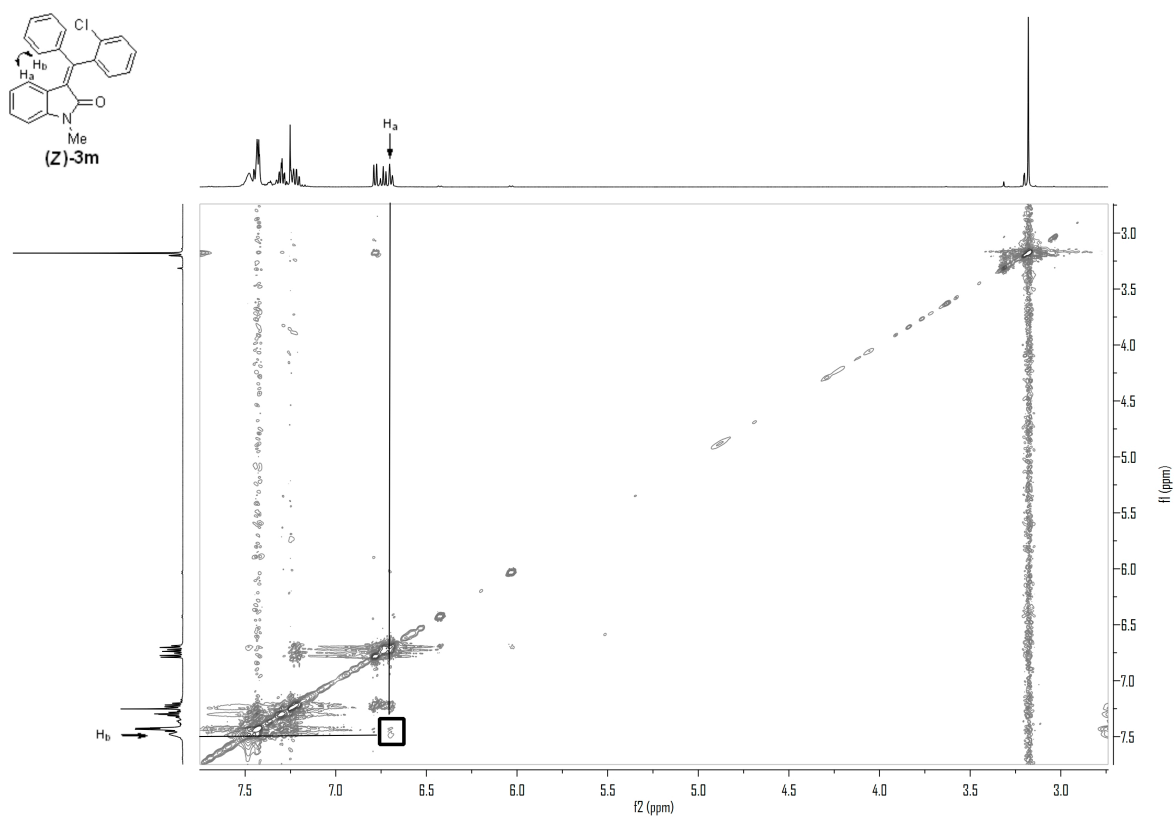
HMBC spectrum of (Z)-3m



COSY spectrum of (Z)-3m

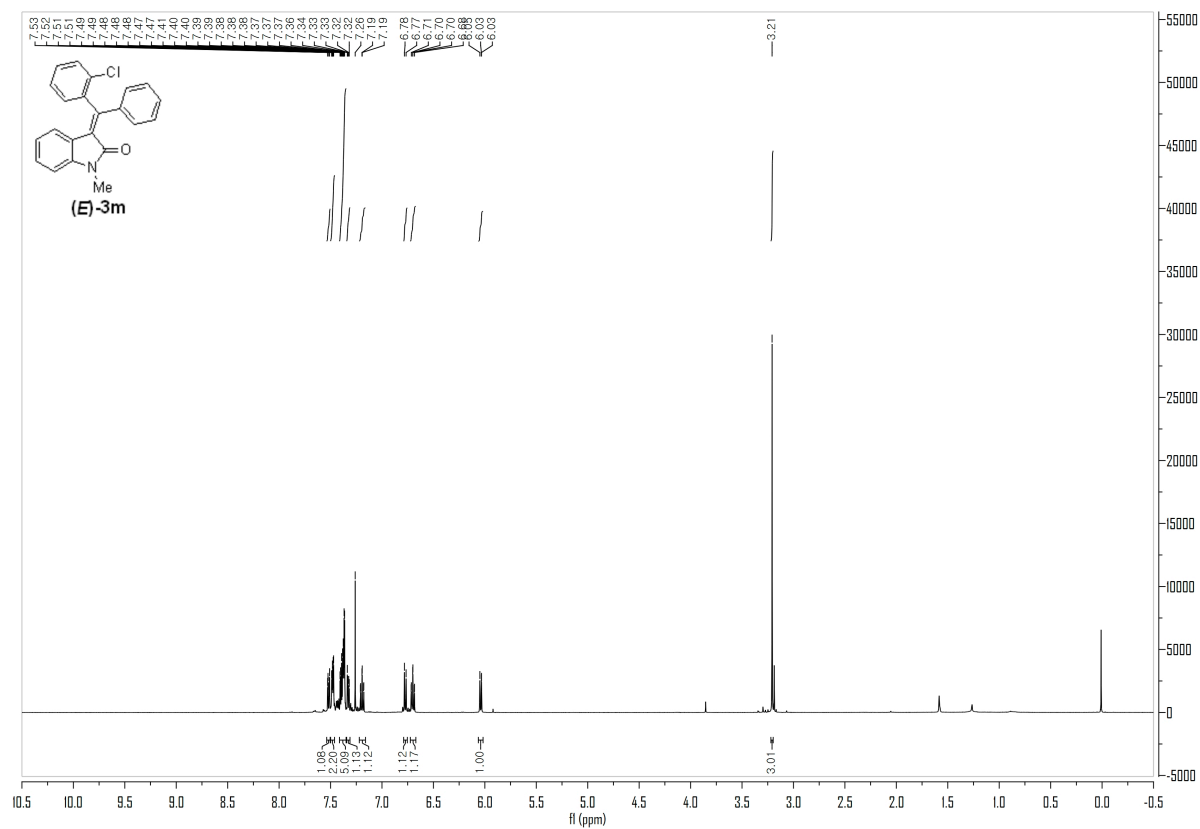


ROESY spectrum of (Z)-3m

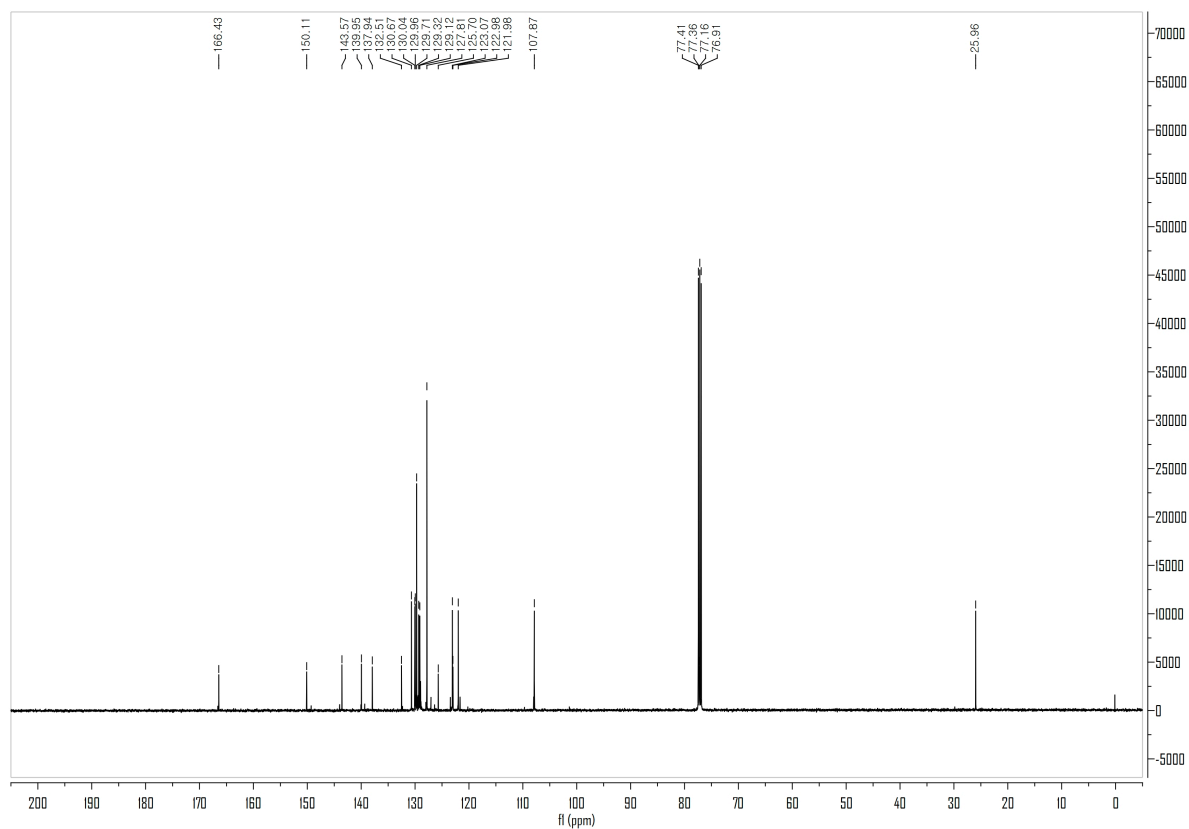


(*E*)-3-((2-chlorophenyl)(phenyl)methylene)-1-methylindolin-2-one ((*E*)-3m)

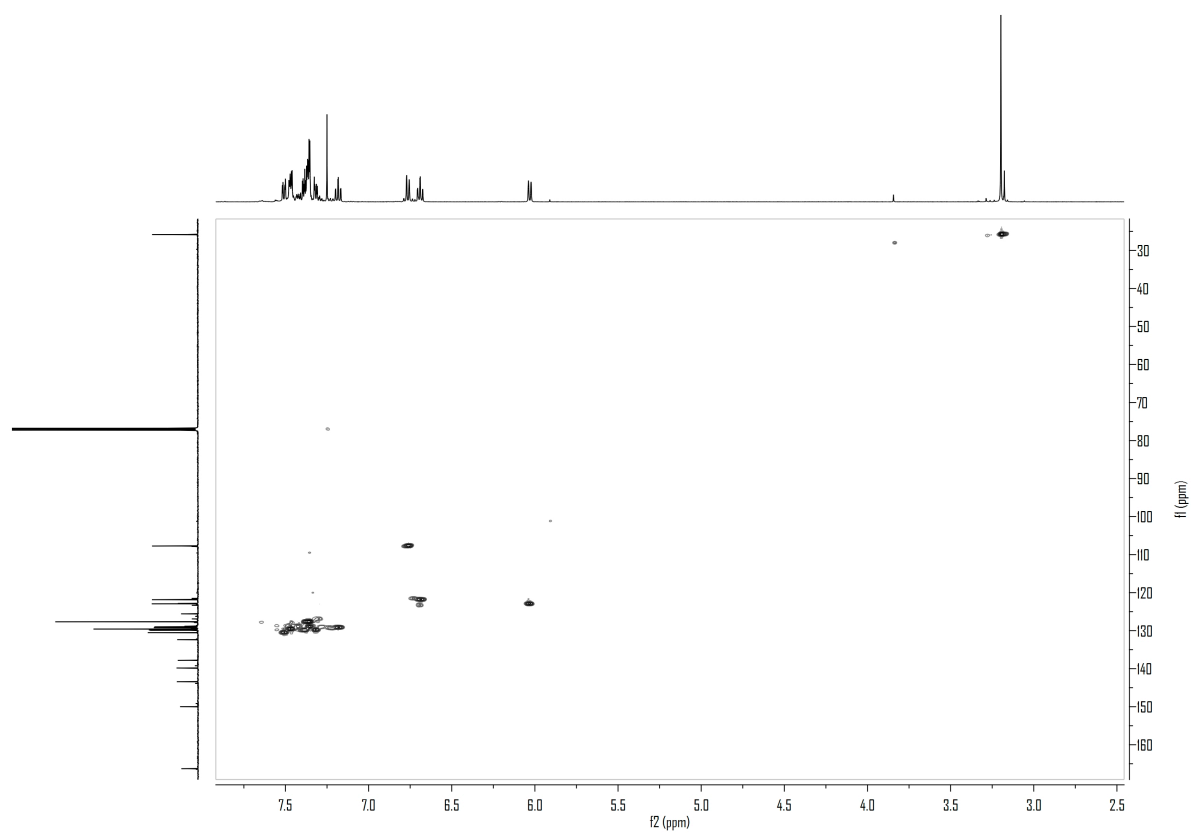
¹H NMR spectrum of (*E*)-3m



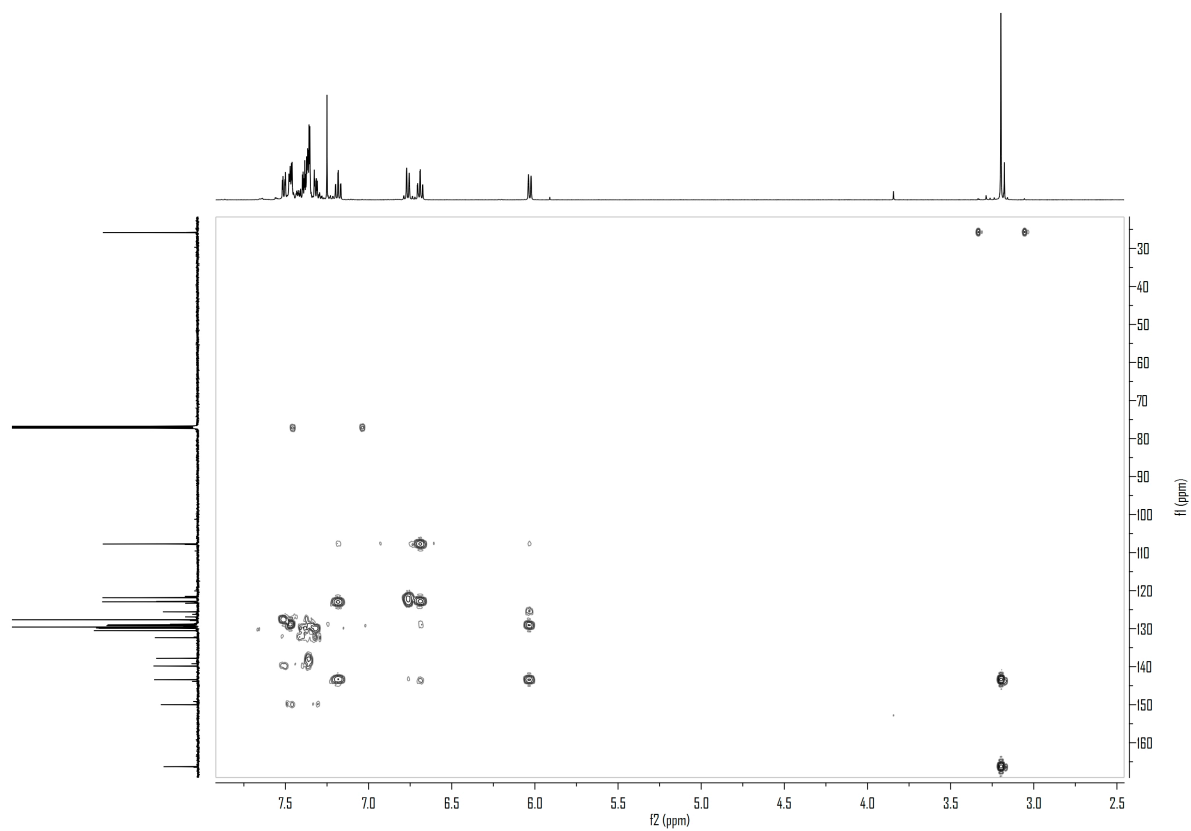
¹³C NMR spectrum of (*E*)-3m



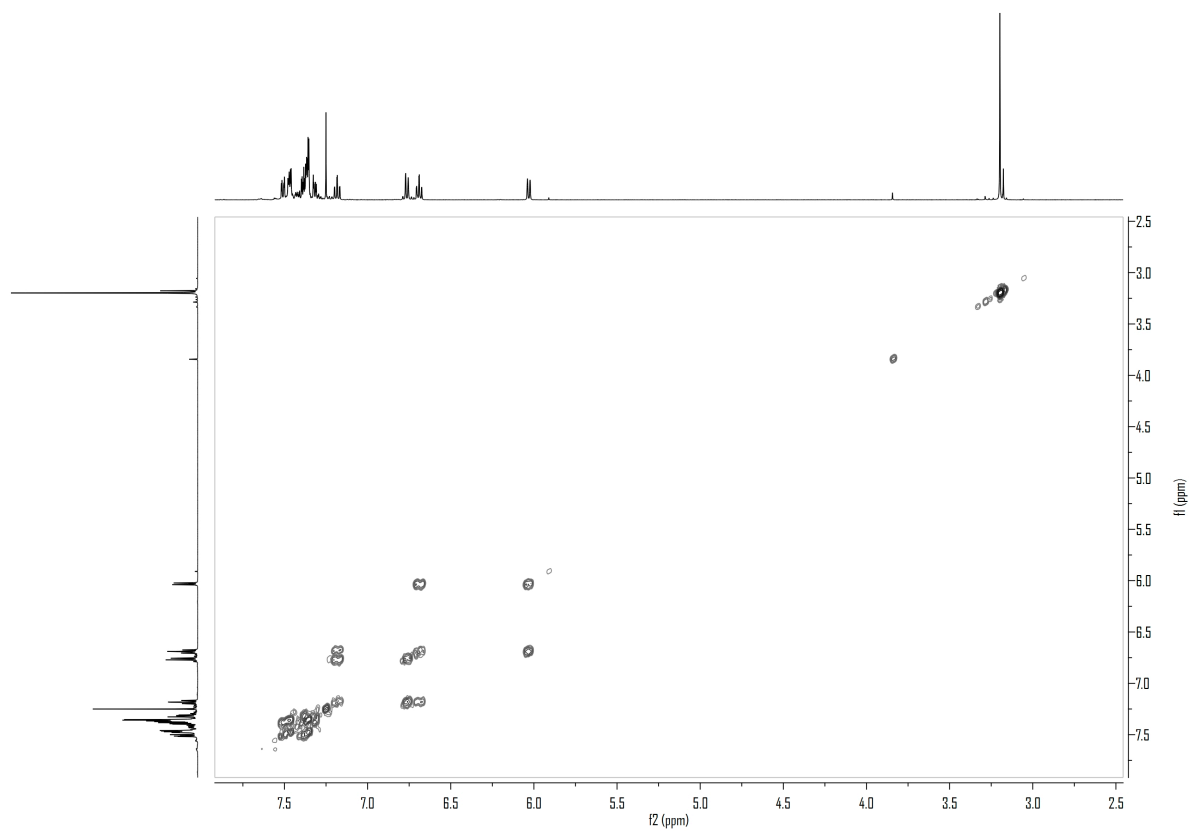
HSQC spectrum of (*E*)-3m



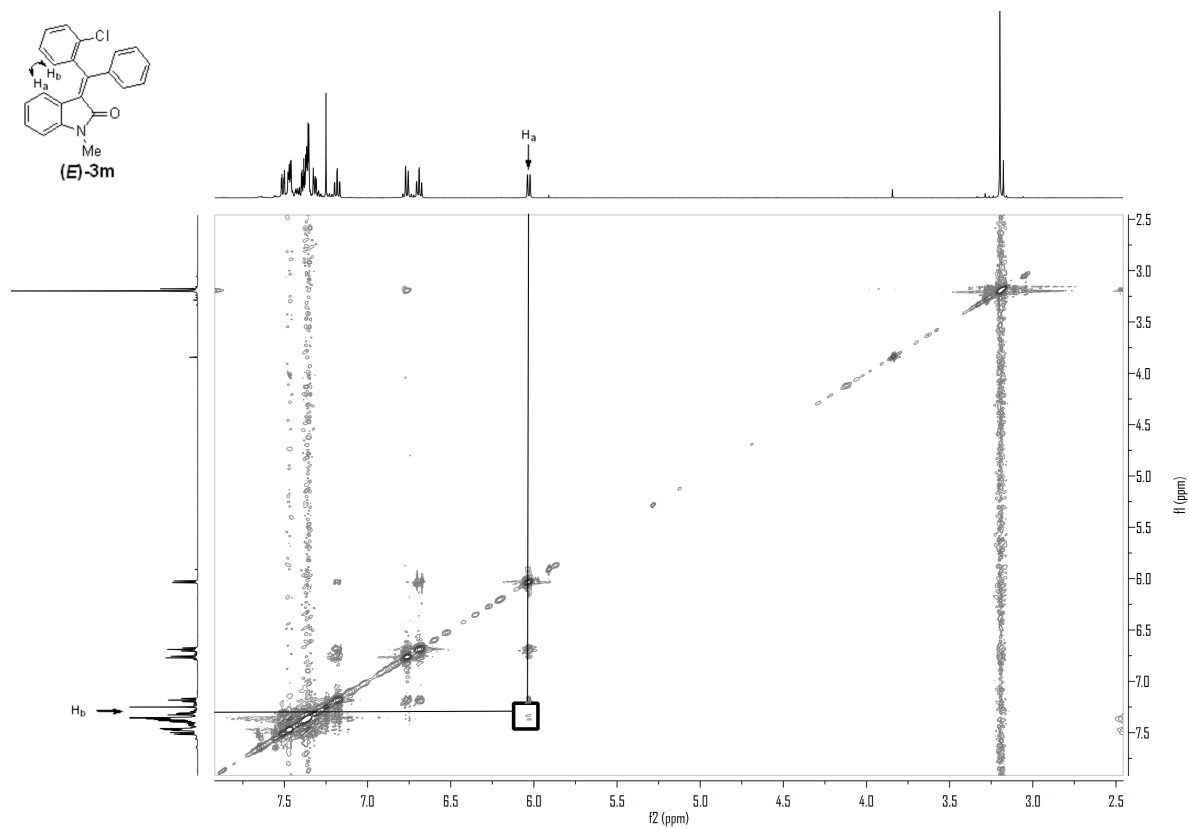
HMBC spectrum of (*E*)-3m



COSY spectrum of (*E*)-3m

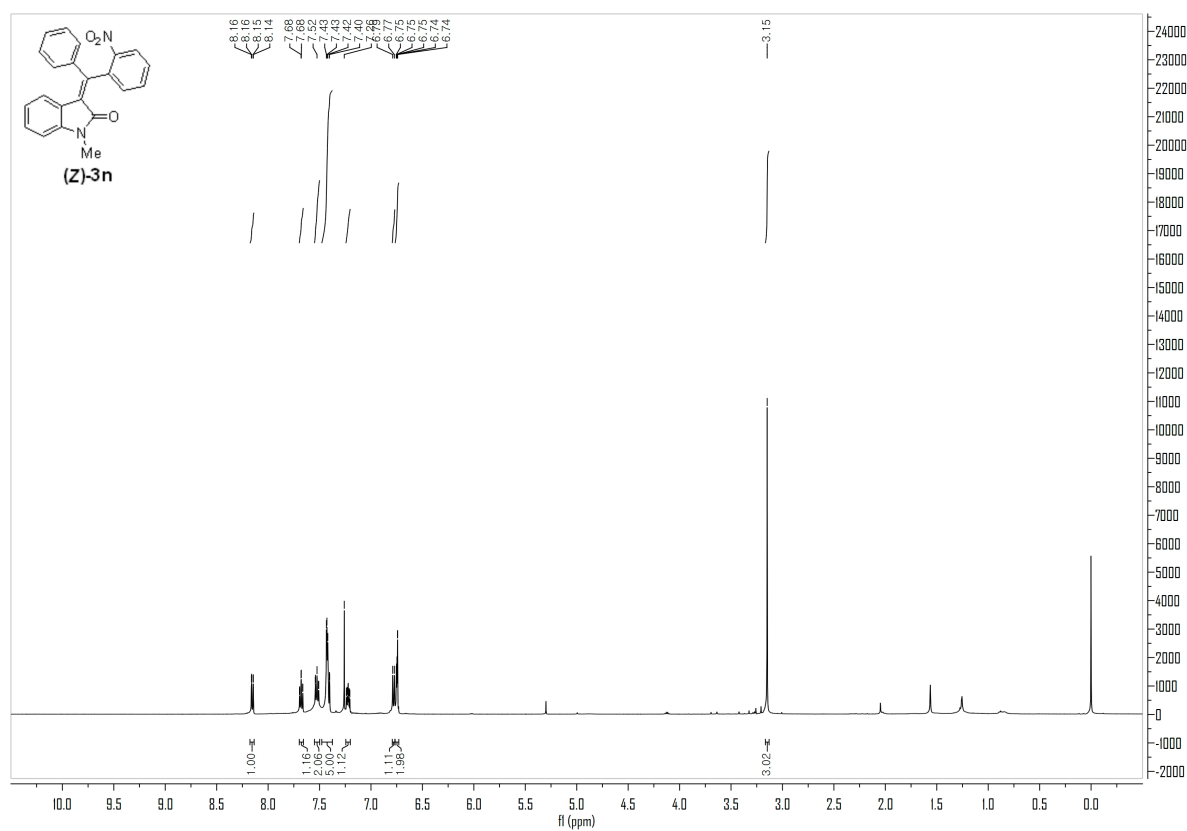


ROESY spectrum of (*E*)-3m

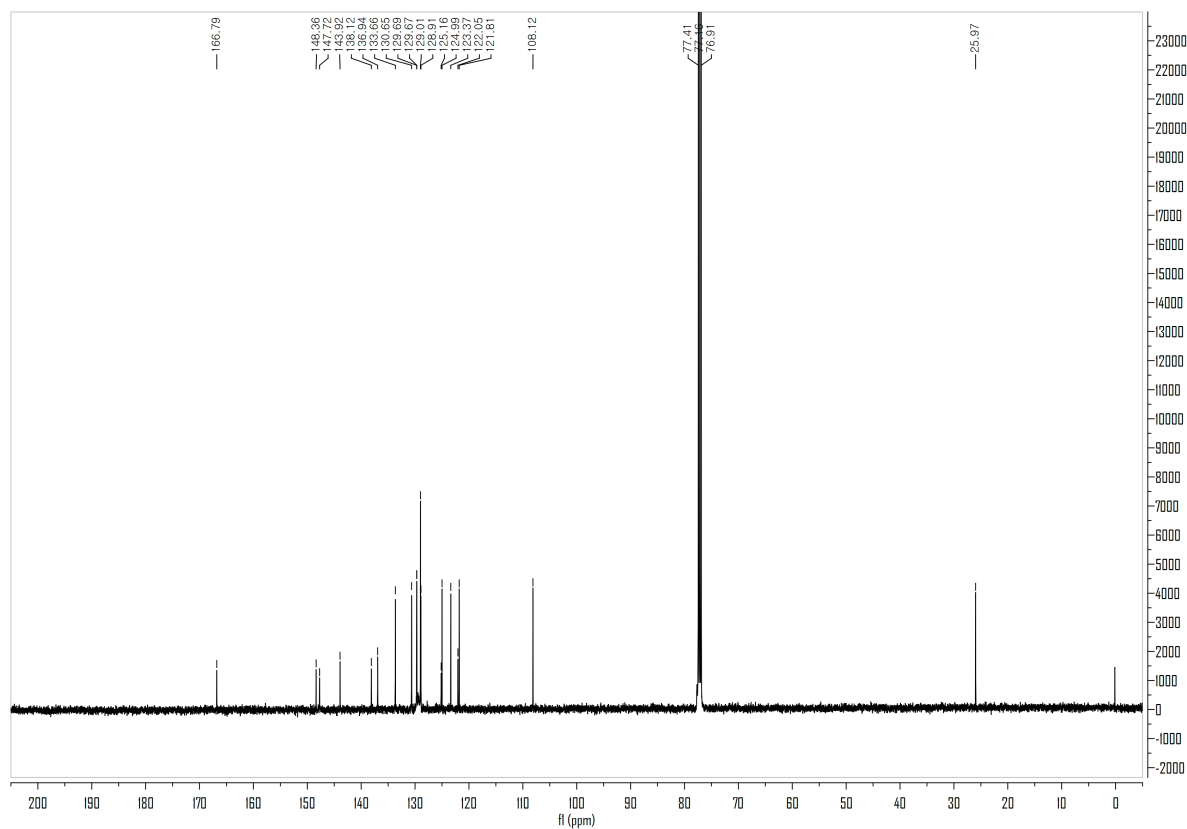


(Z)-1-methyl-3-((2-nitrophenyl)(phenyl)methylene)indolin-2-one ((Z)-3n)

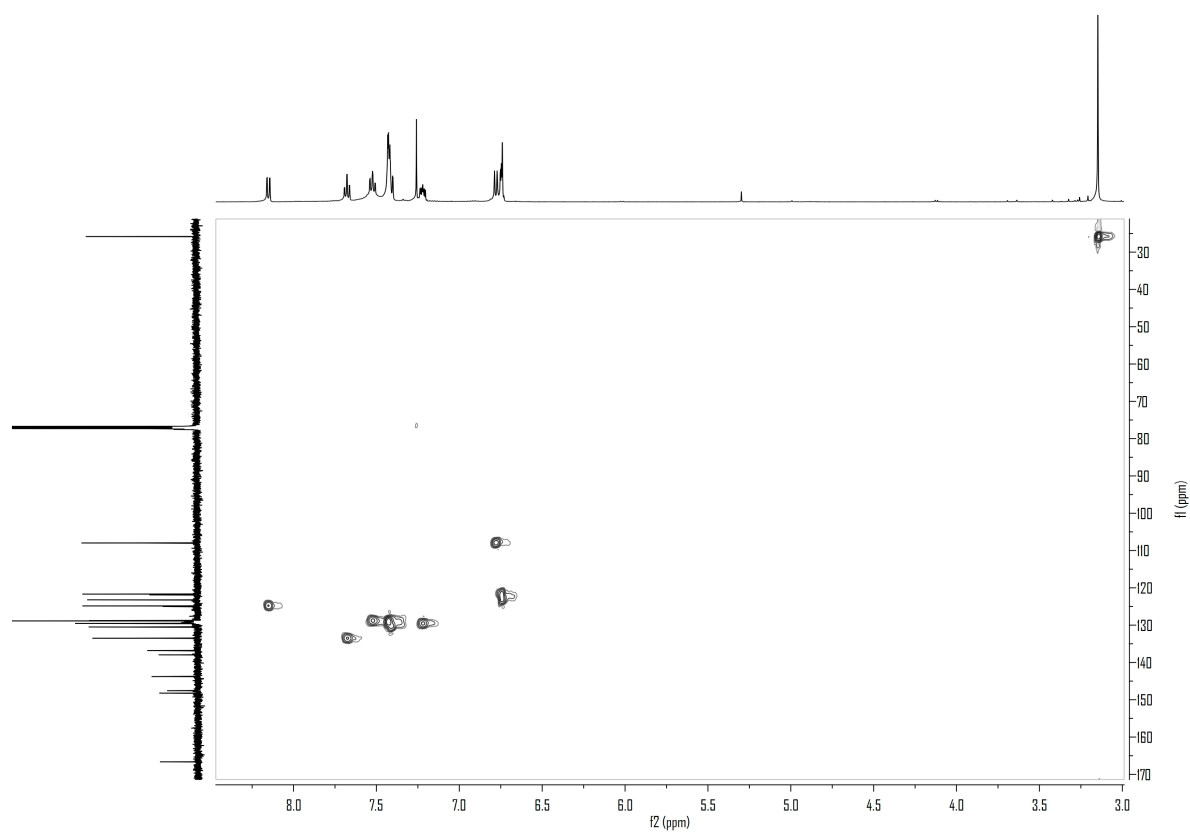
¹H NMR spectrum of (Z)-3n



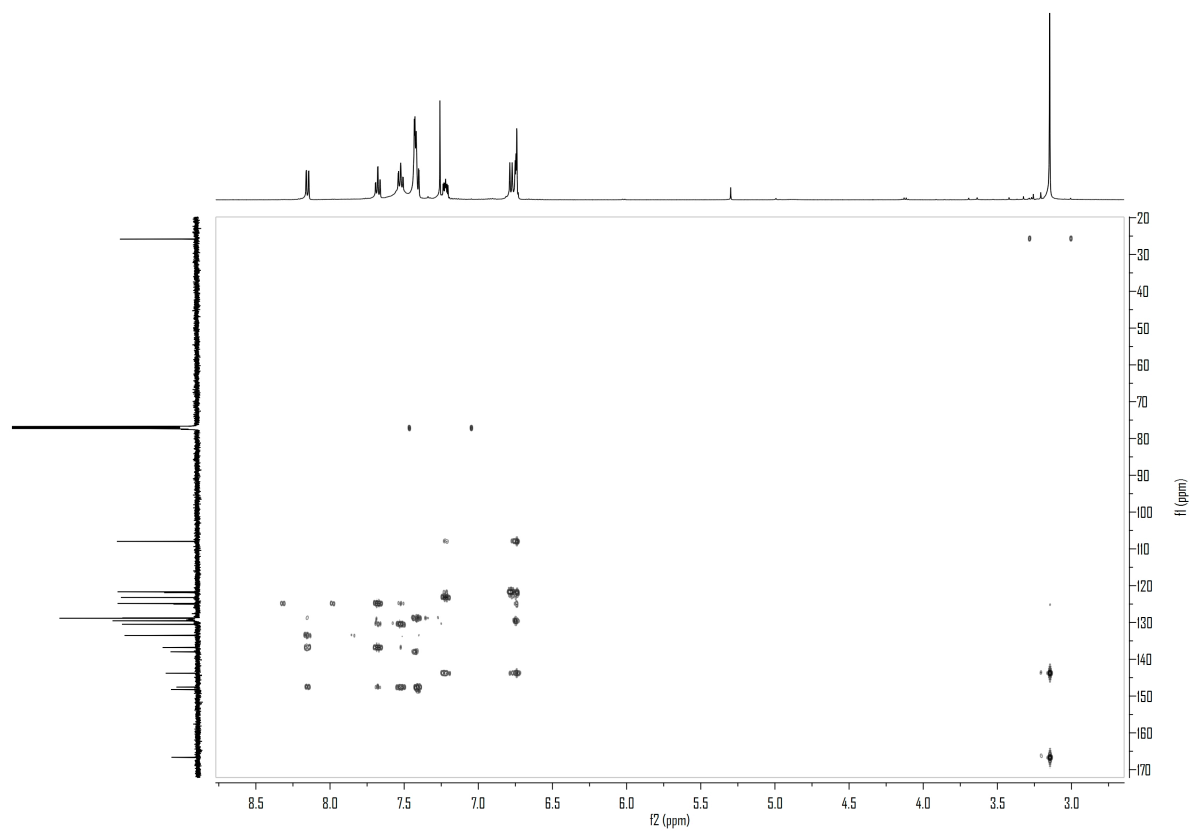
¹³C NMR spectrum of (Z)-3n



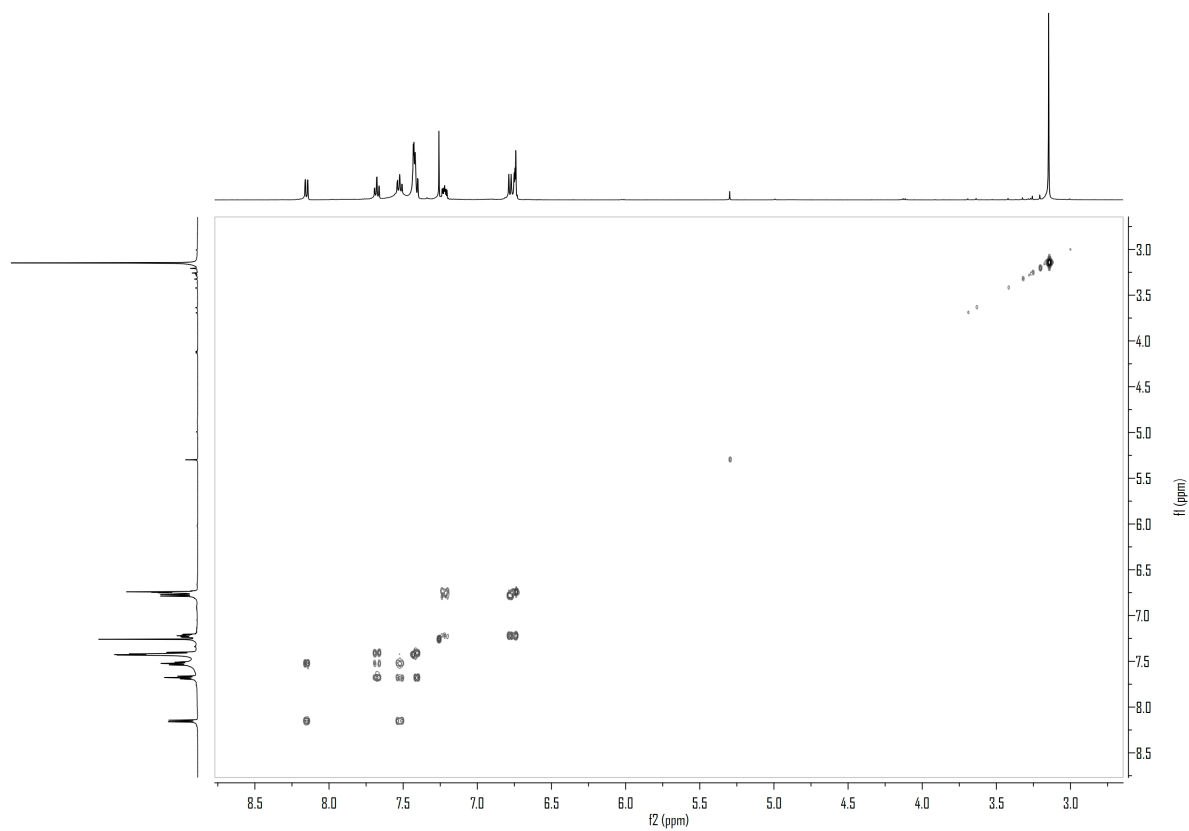
HSQC spectrum of (Z)-3n



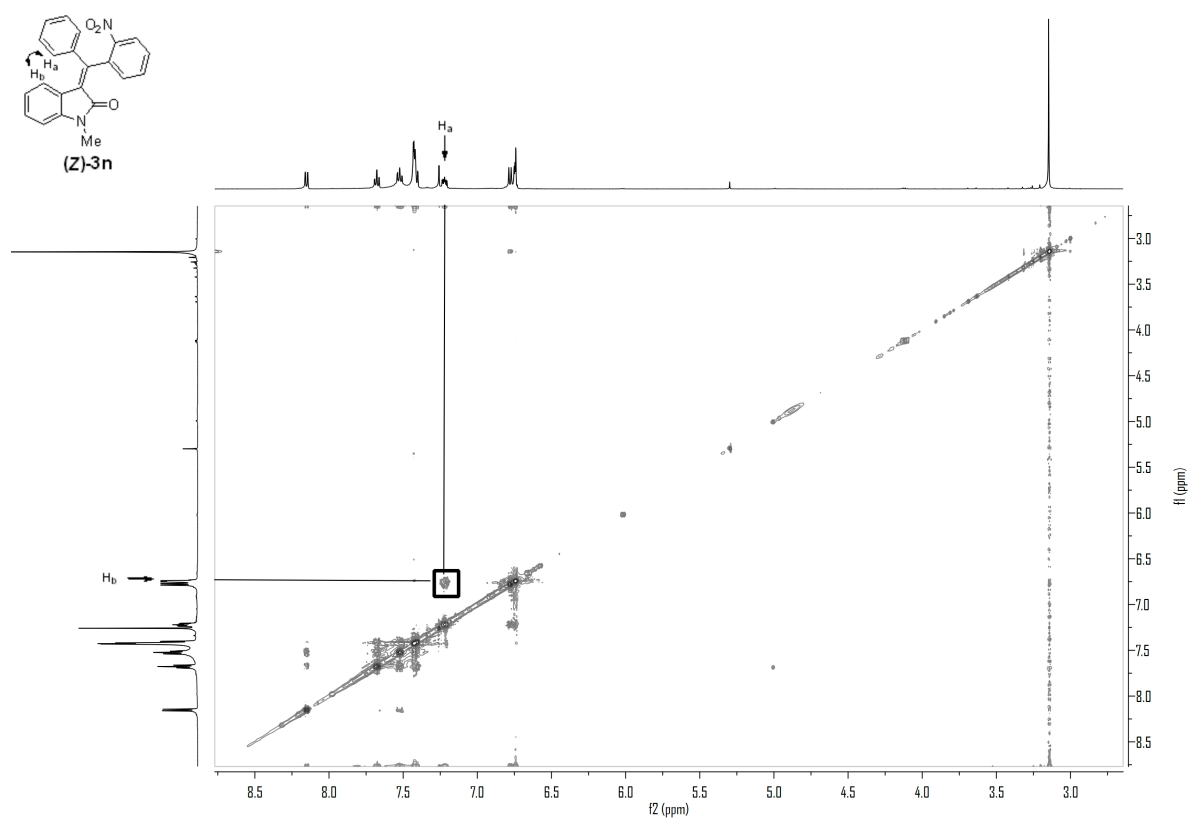
HMBC spectrum of (Z)-3n



COSY spectrum of (Z)-3n

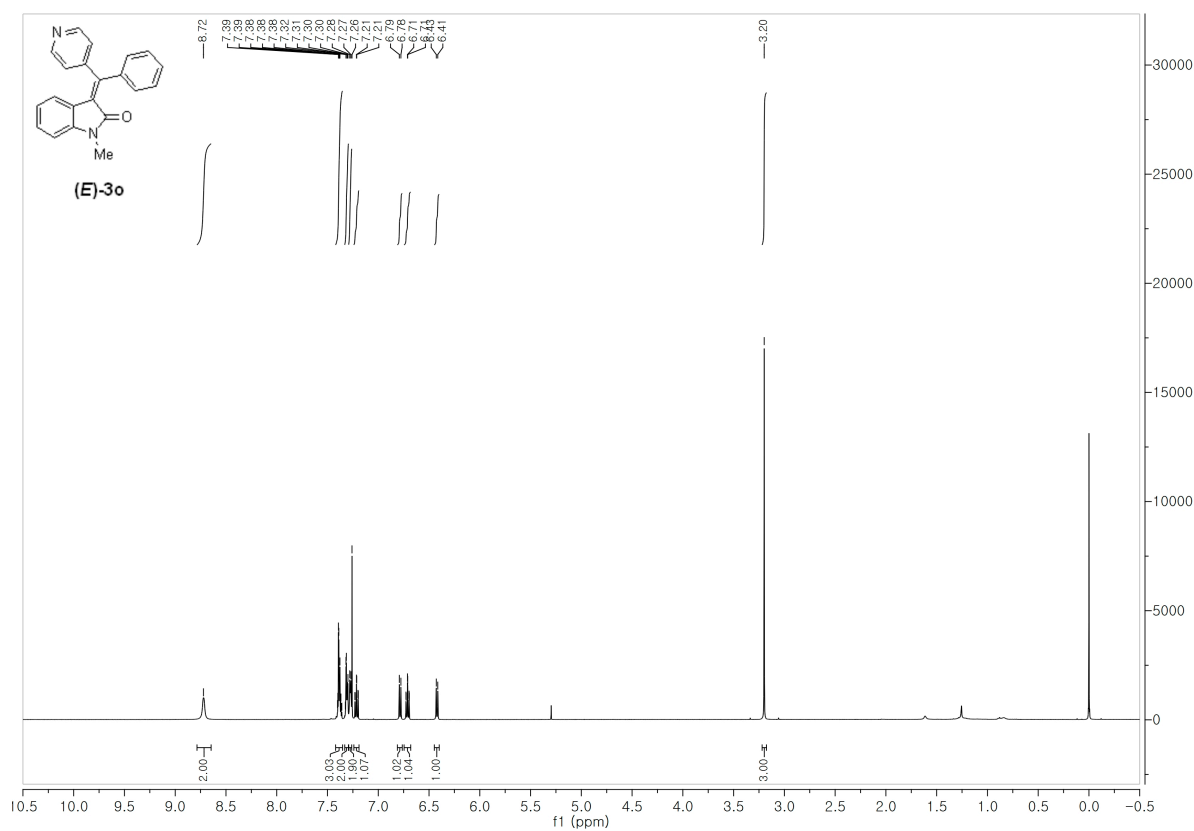


ROESY spectrum of (Z)-3n

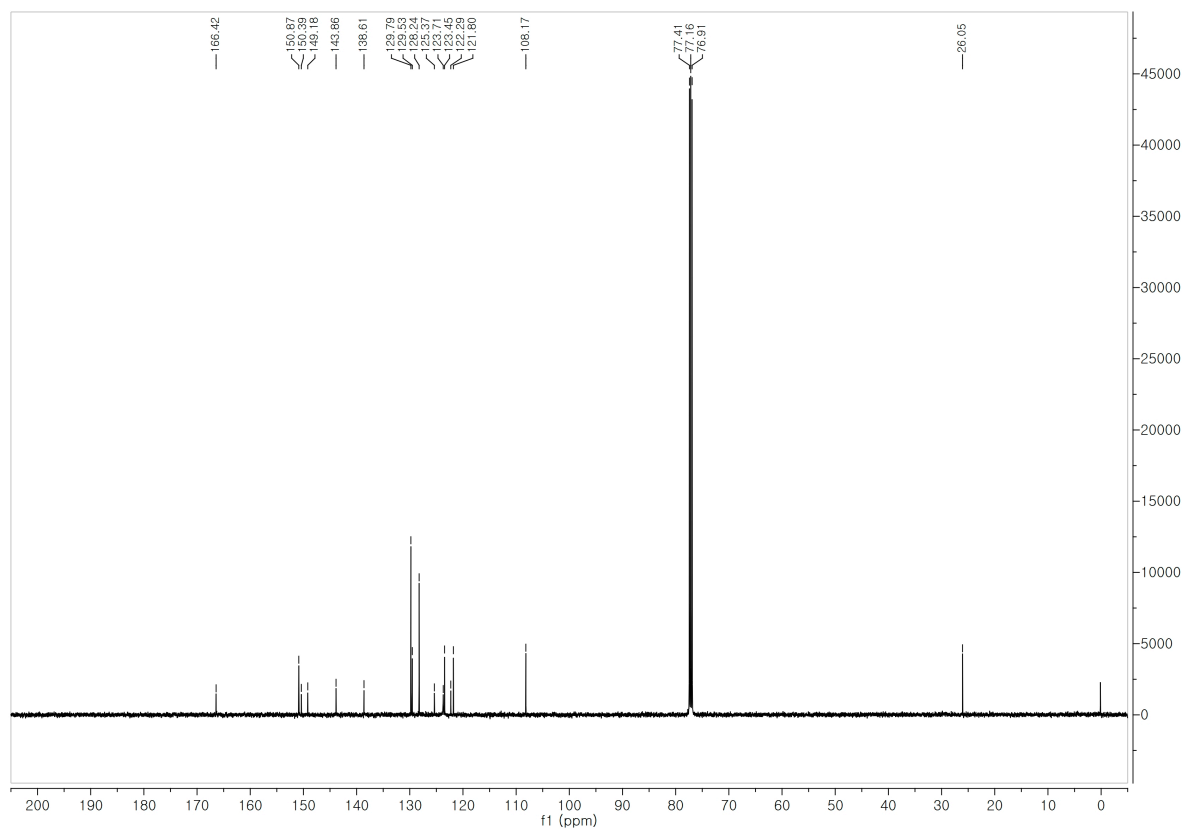


(*E*)-1-methyl-3-(phenyl-(pyridin-4-yl)methylene)indolin-2-one ((*E*)-3o)

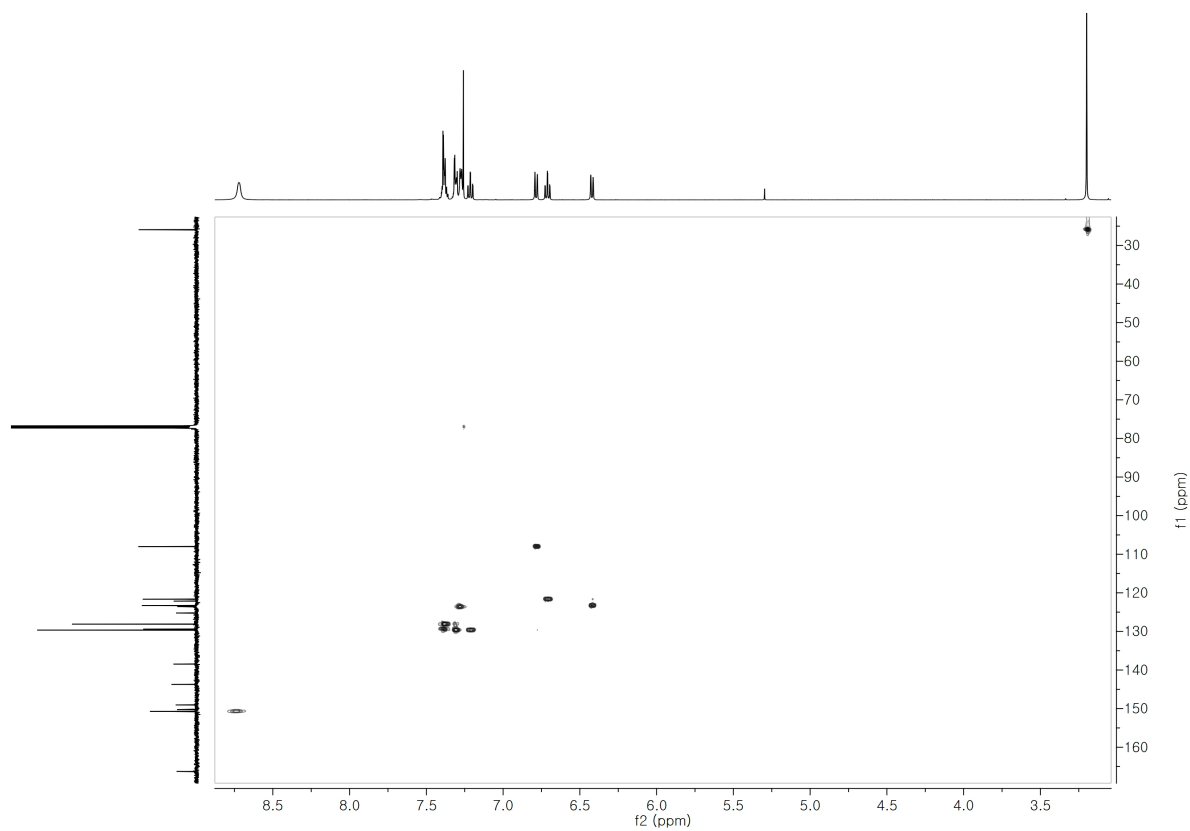
¹H NMR spectrum of (*E*)-3o



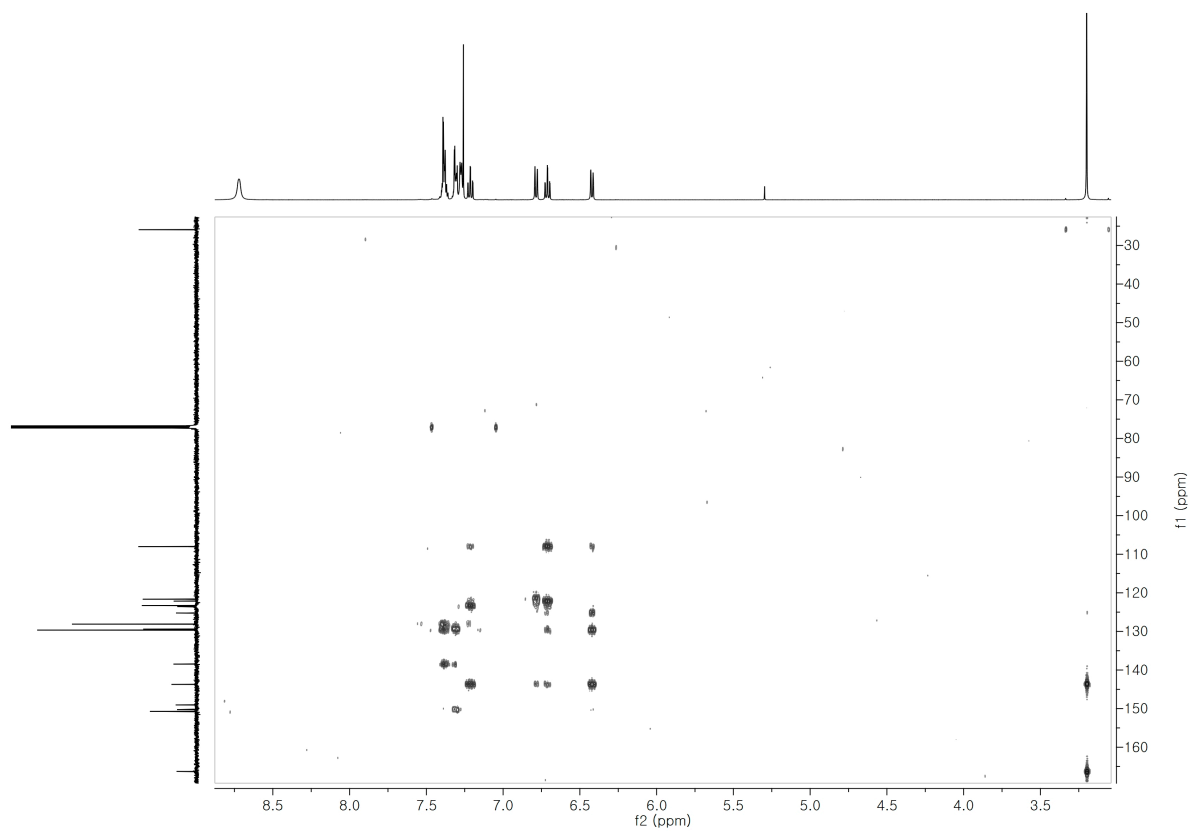
¹³C NMR spectrum of (*E*)-3o



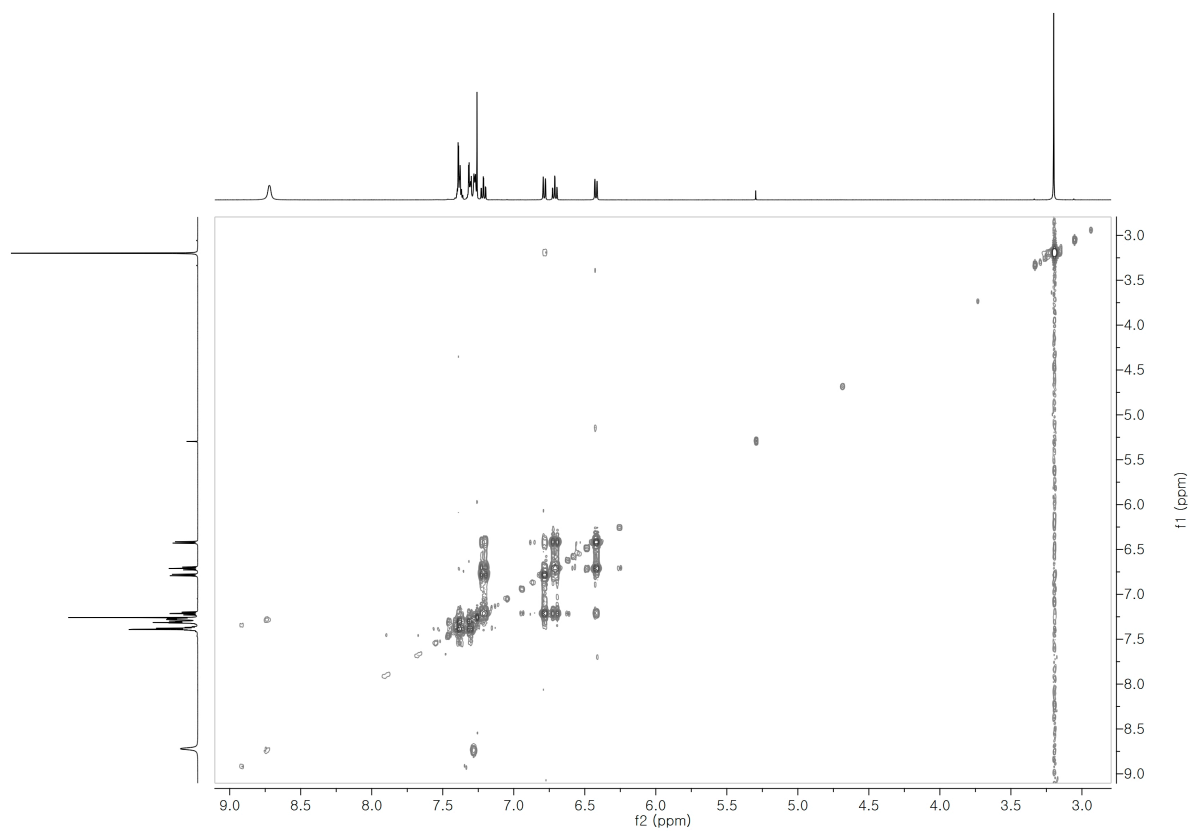
HSQC spectrum of (*E*)-3o



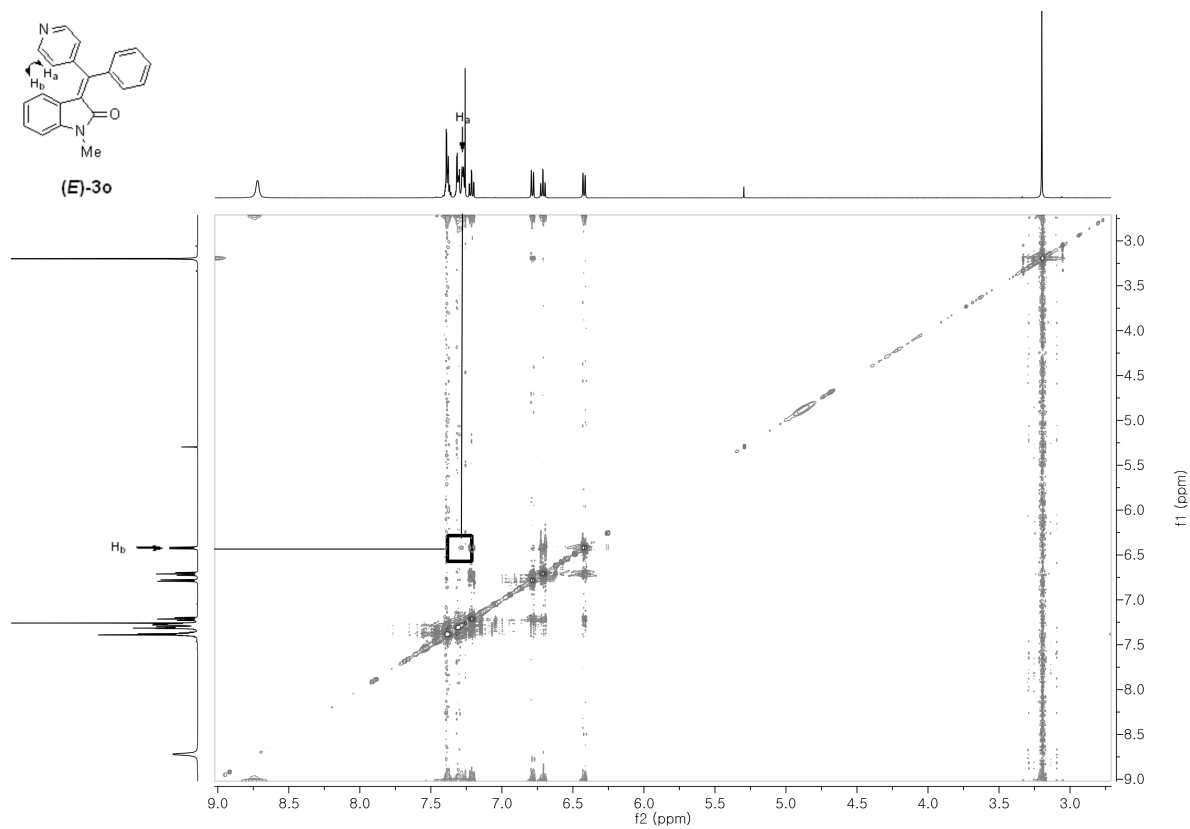
HMBC spectrum of (*E*)-3o



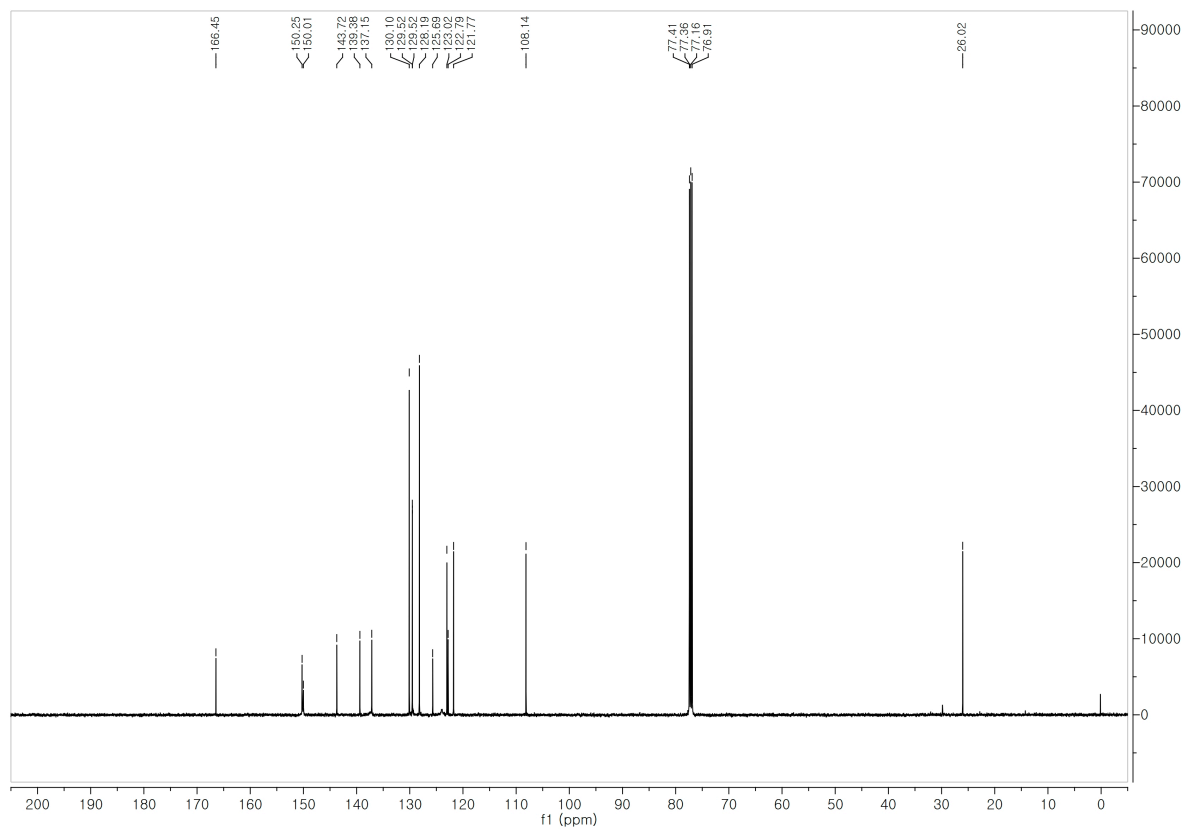
COSY spectrum of (*E*)-3o



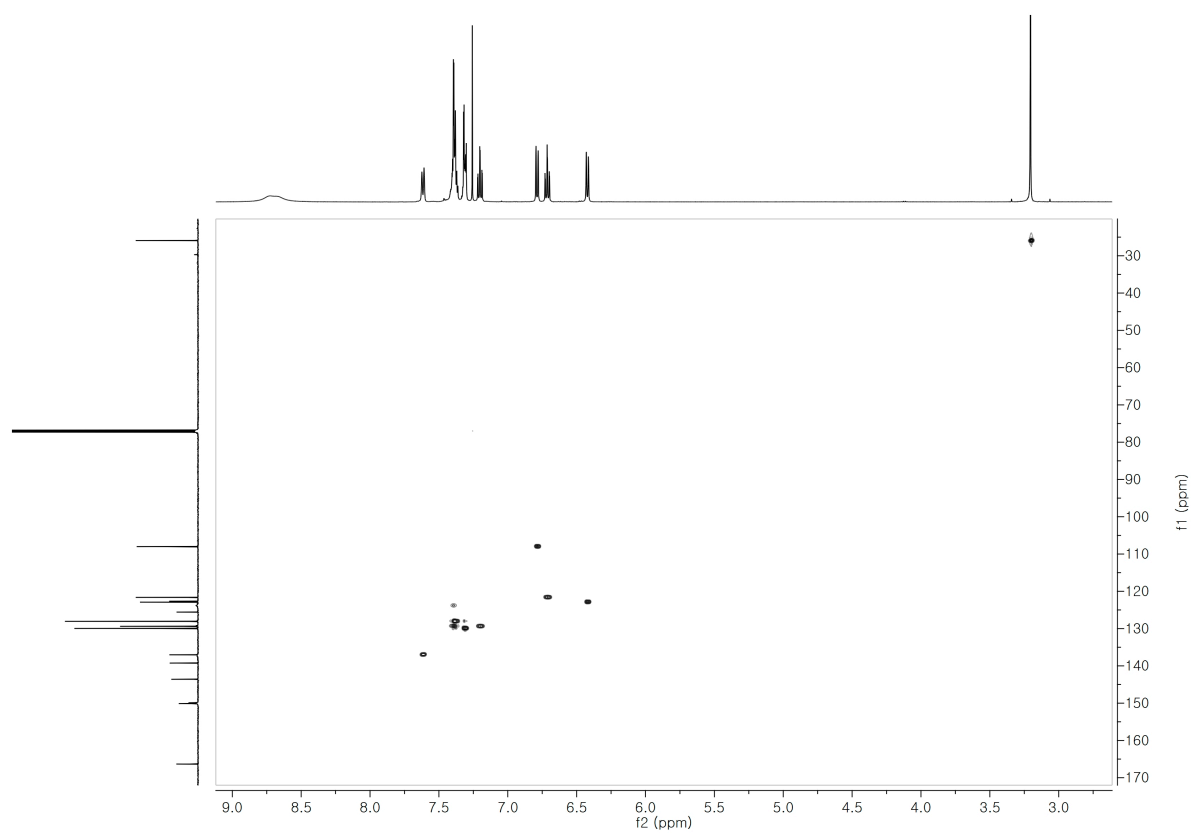
ROESY spectrum of (*E*)-3o



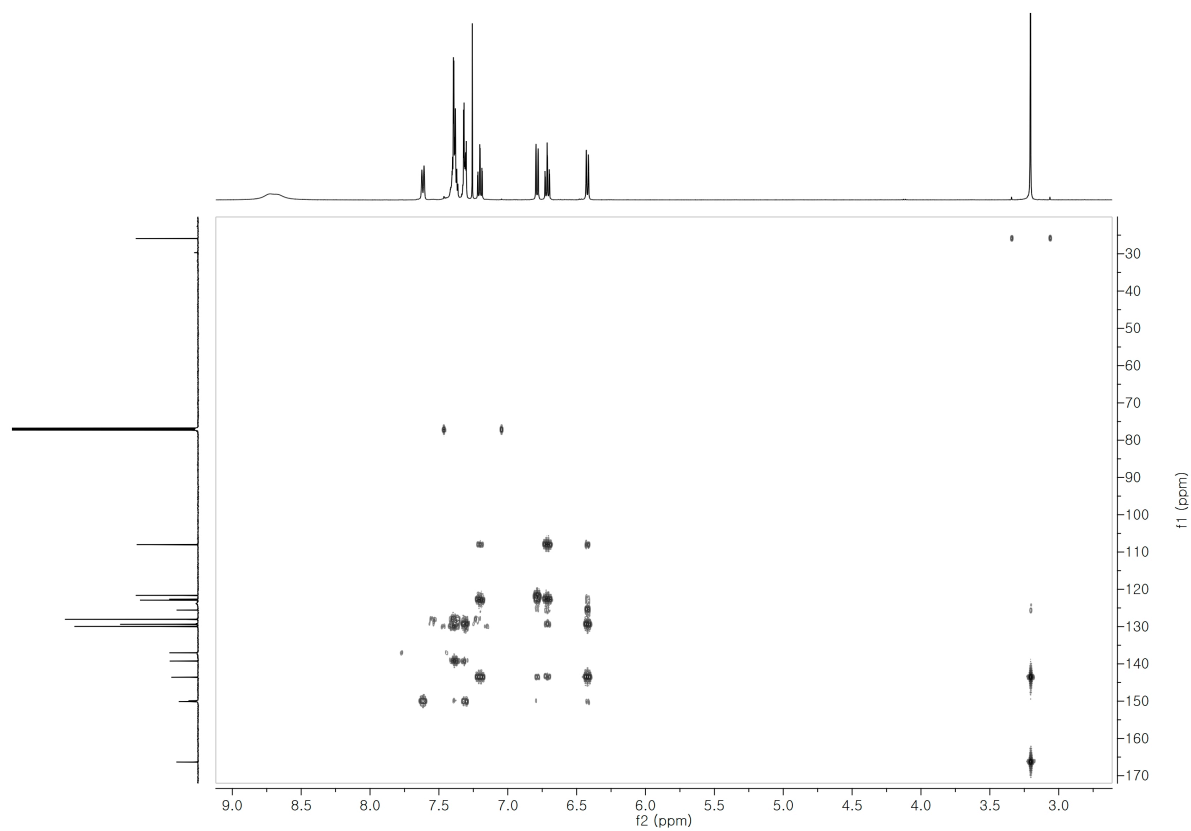
¹H NMR spectrum of (*E*)-3p



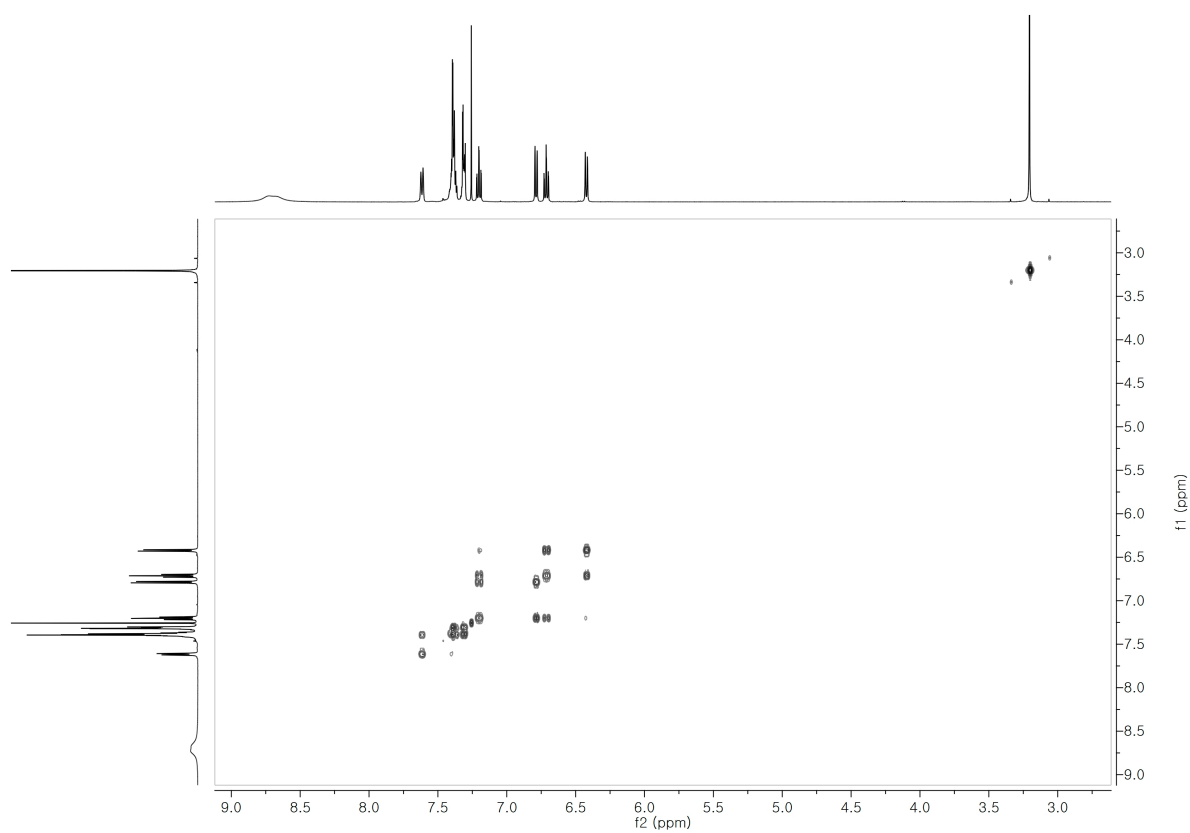
HSQC spectrum of (*E*)-3p



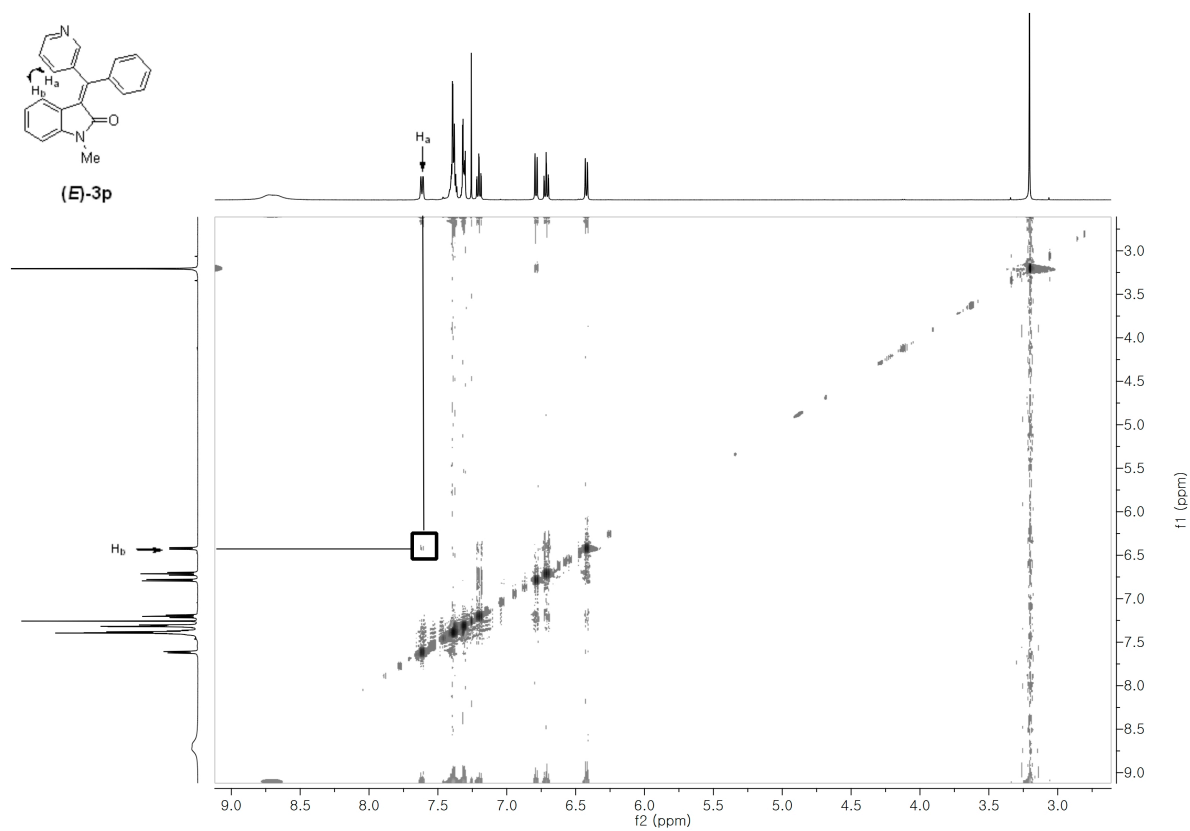
HMBC spectrum of (*E*)-3p



COSY spectrum of (*E*)-3p

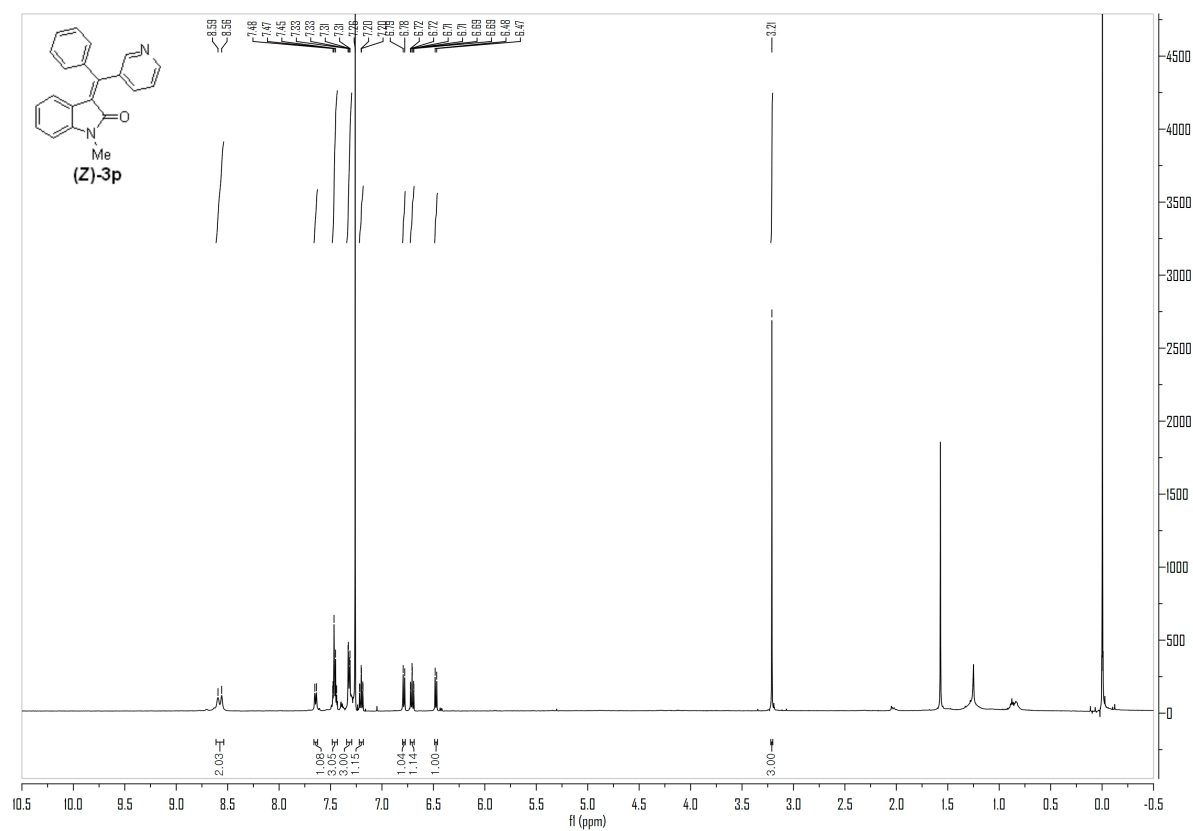


ROESY spectrum of (*E*)-3p

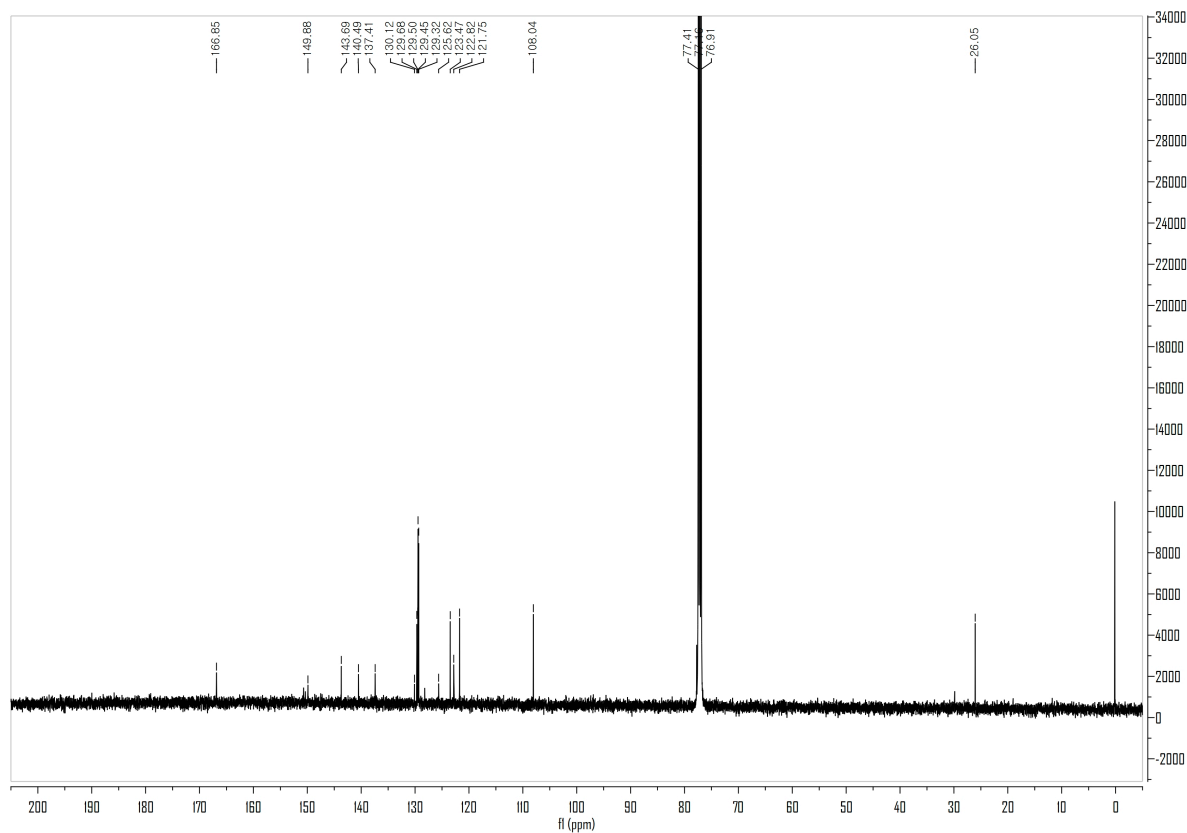


(Z)-1-methyl-3-(phenyl(pyridin-3-yl)methylene)indolin-2-one ((Z)-3p)

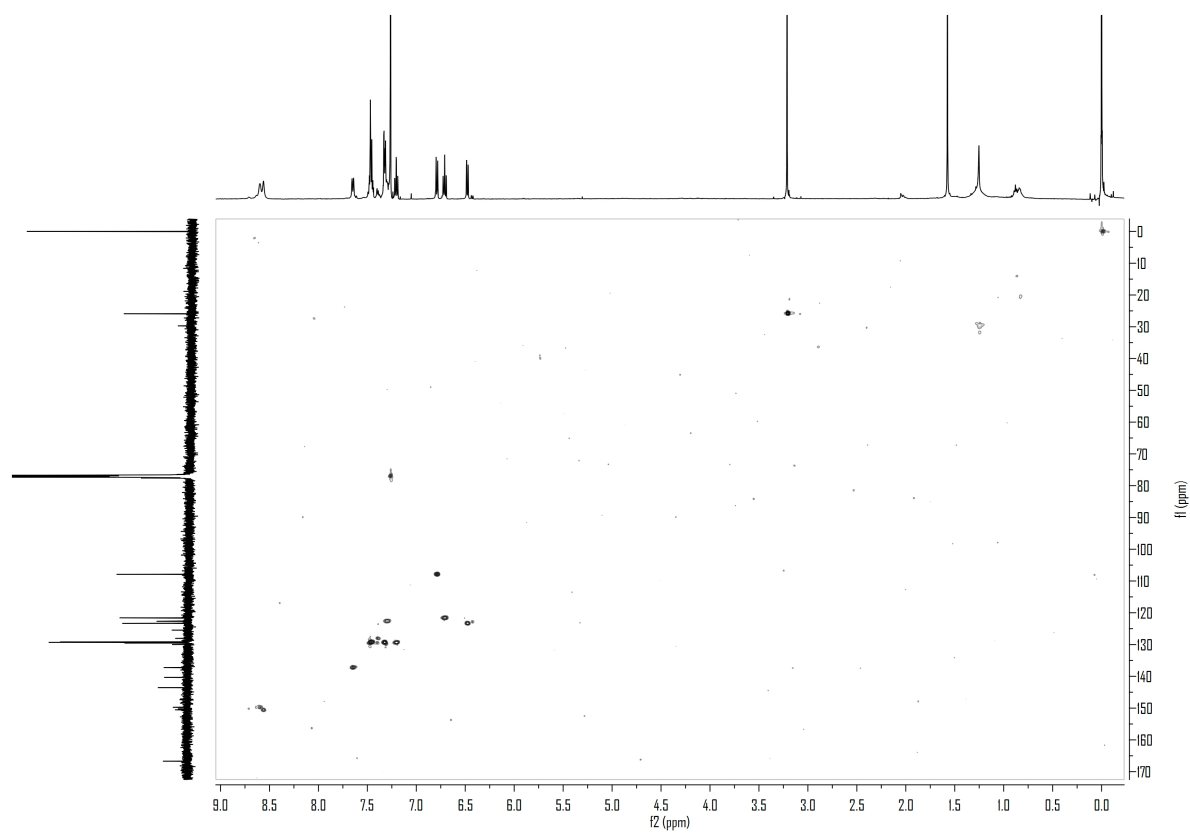
¹H NMR spectrum of (Z)-3p



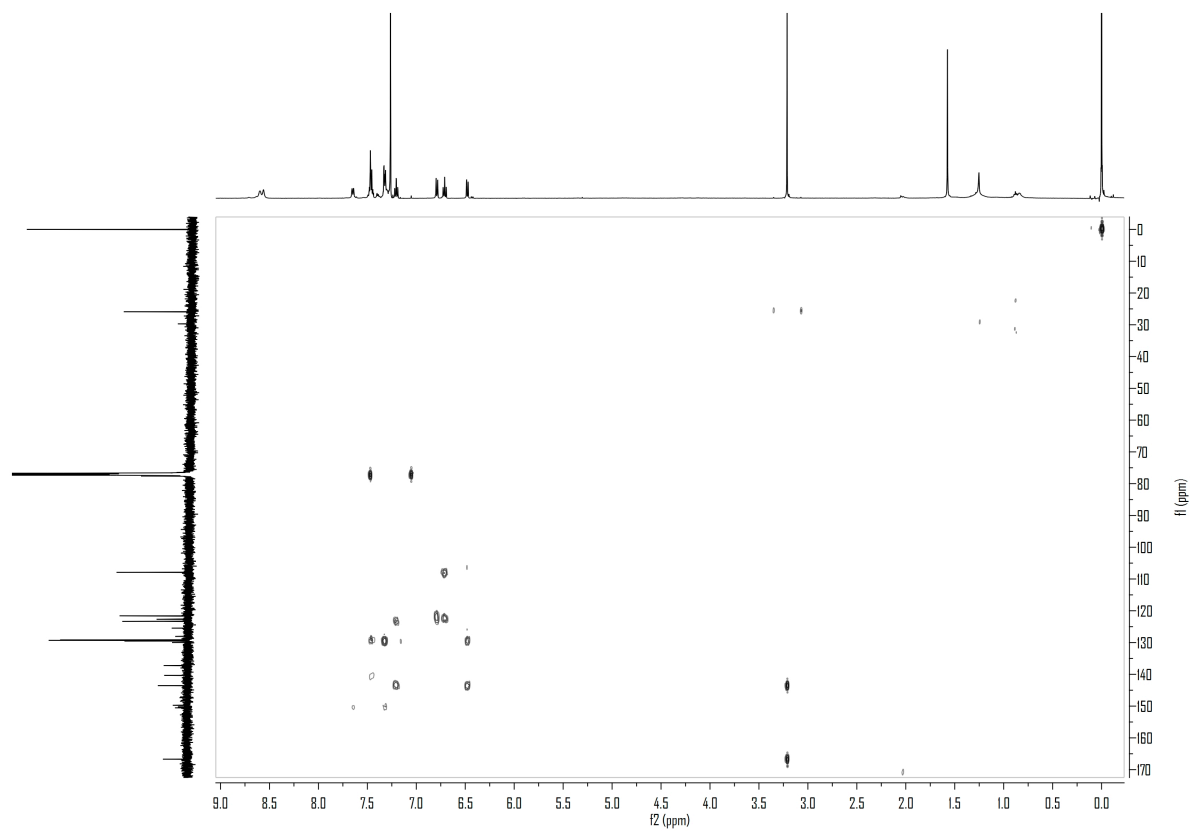
¹³C NMR spectrum of (Z)-3p



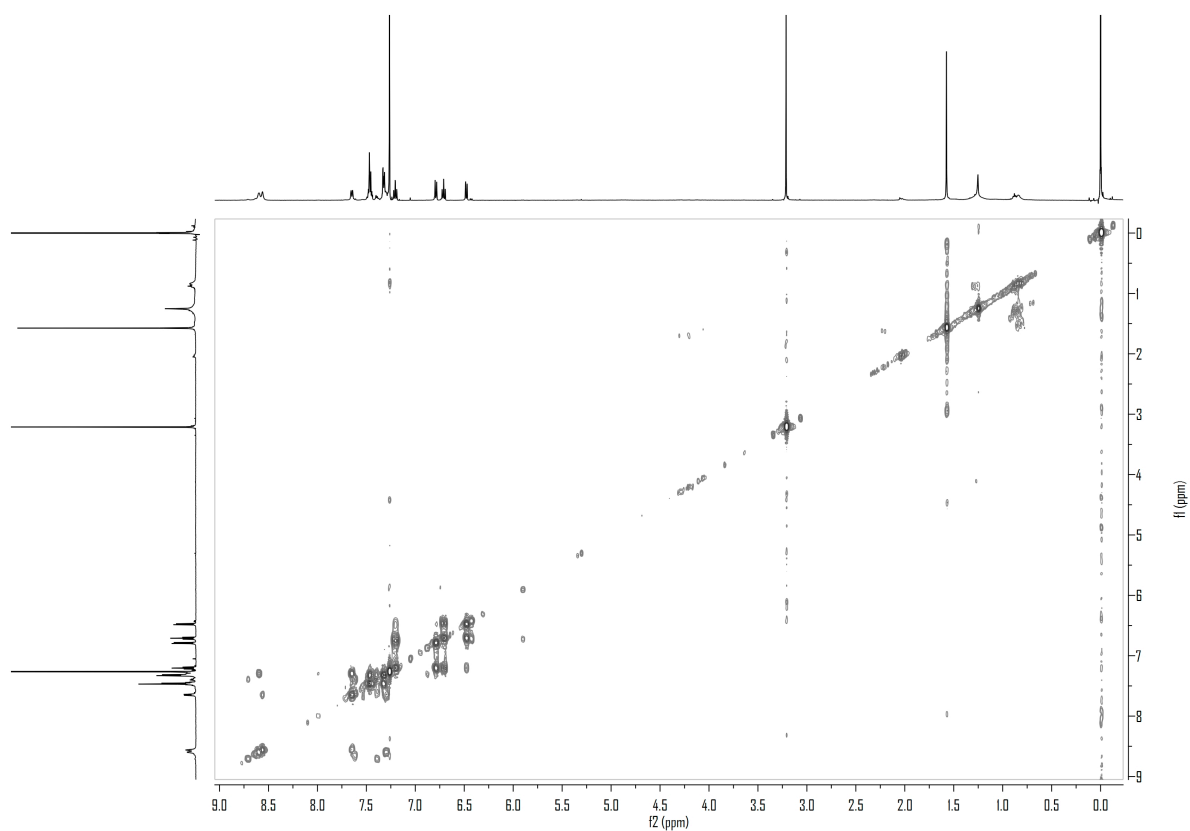
HSQC spectrum of (Z)-3p



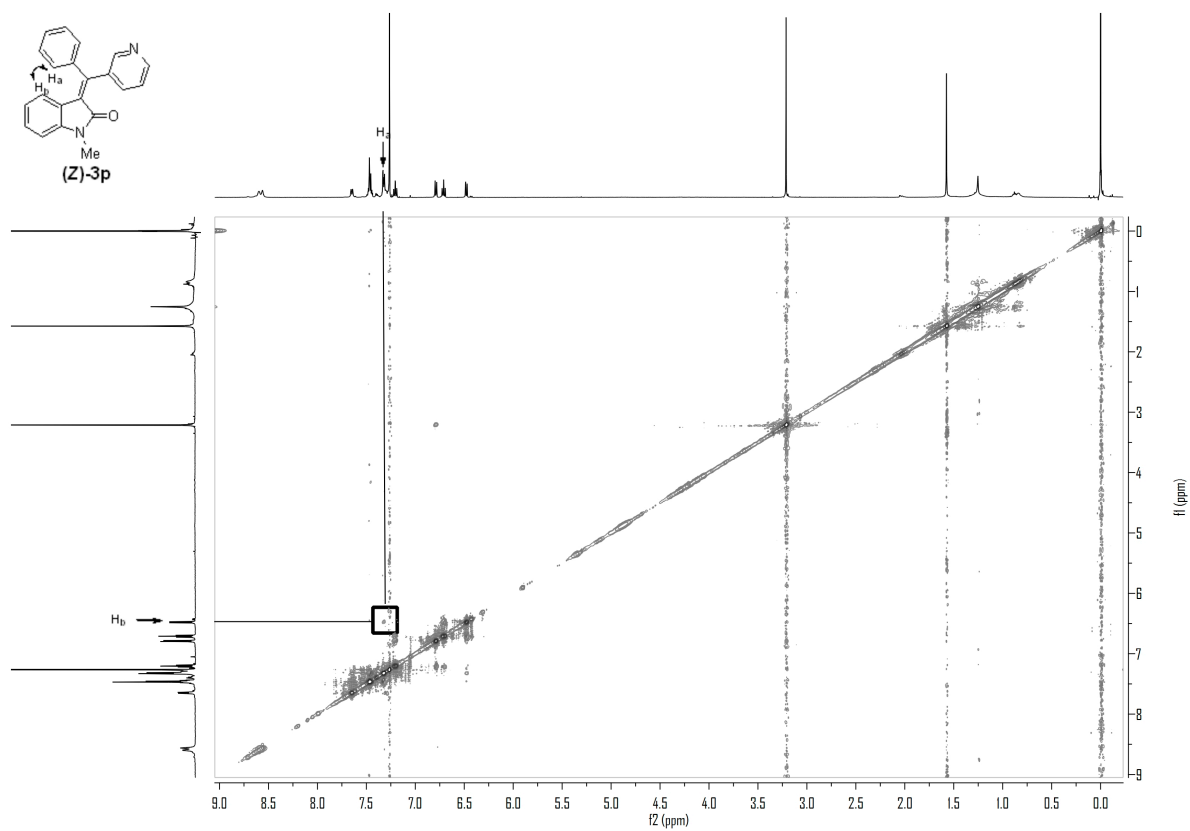
HMBC spectrum of (Z)-3p



COSY spectrum of (Z)-3p

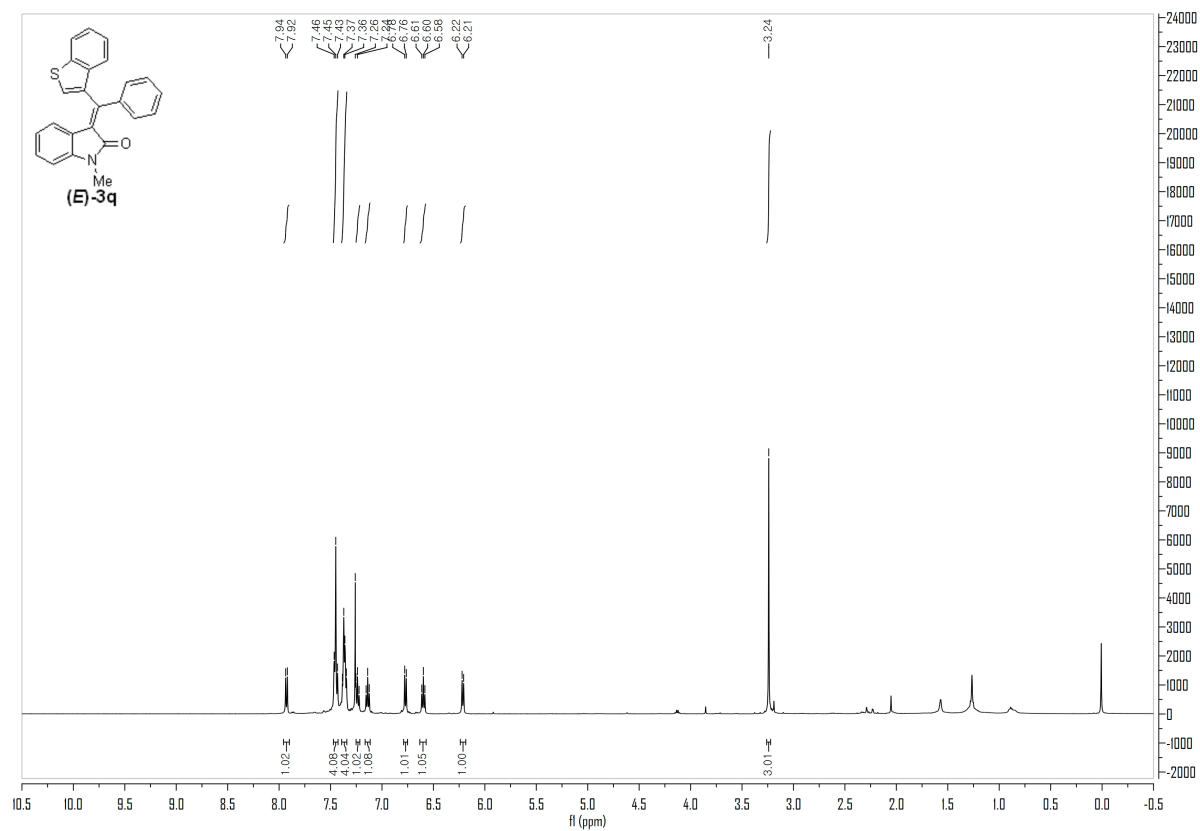


ROESY spectrum of (Z)-3p

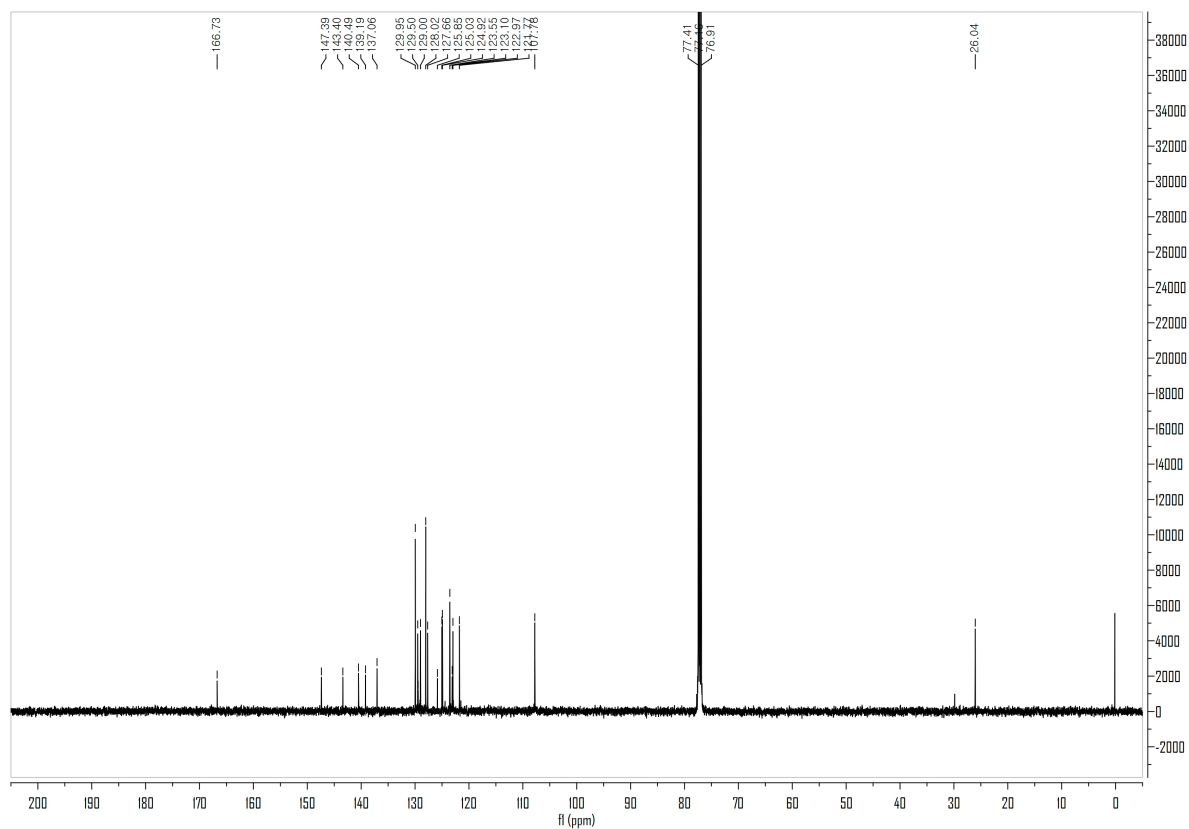


(*E*)-3-(benzo[*b*]thiophen-3-yl(phenyl)methylene)-1-methylindolin-2-one ((*E*)-3q)

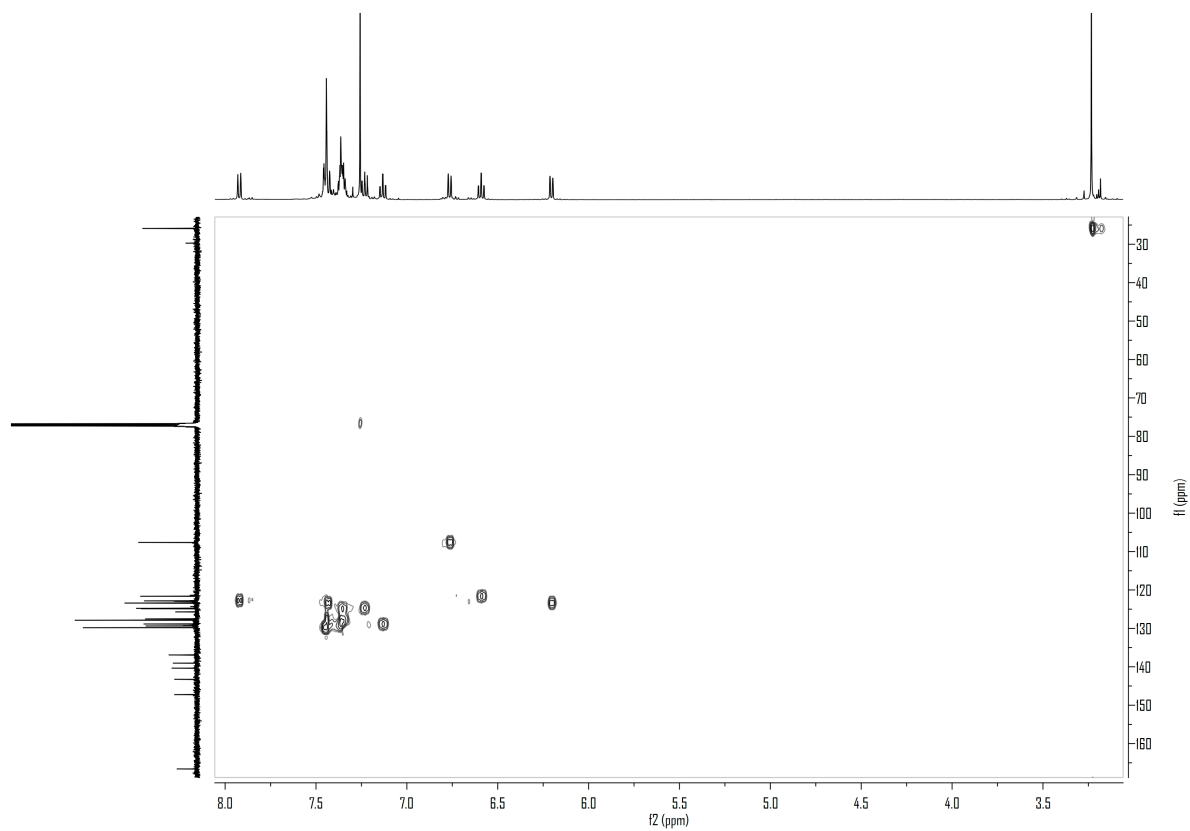
¹H NMR spectrum of (*E*)-3q



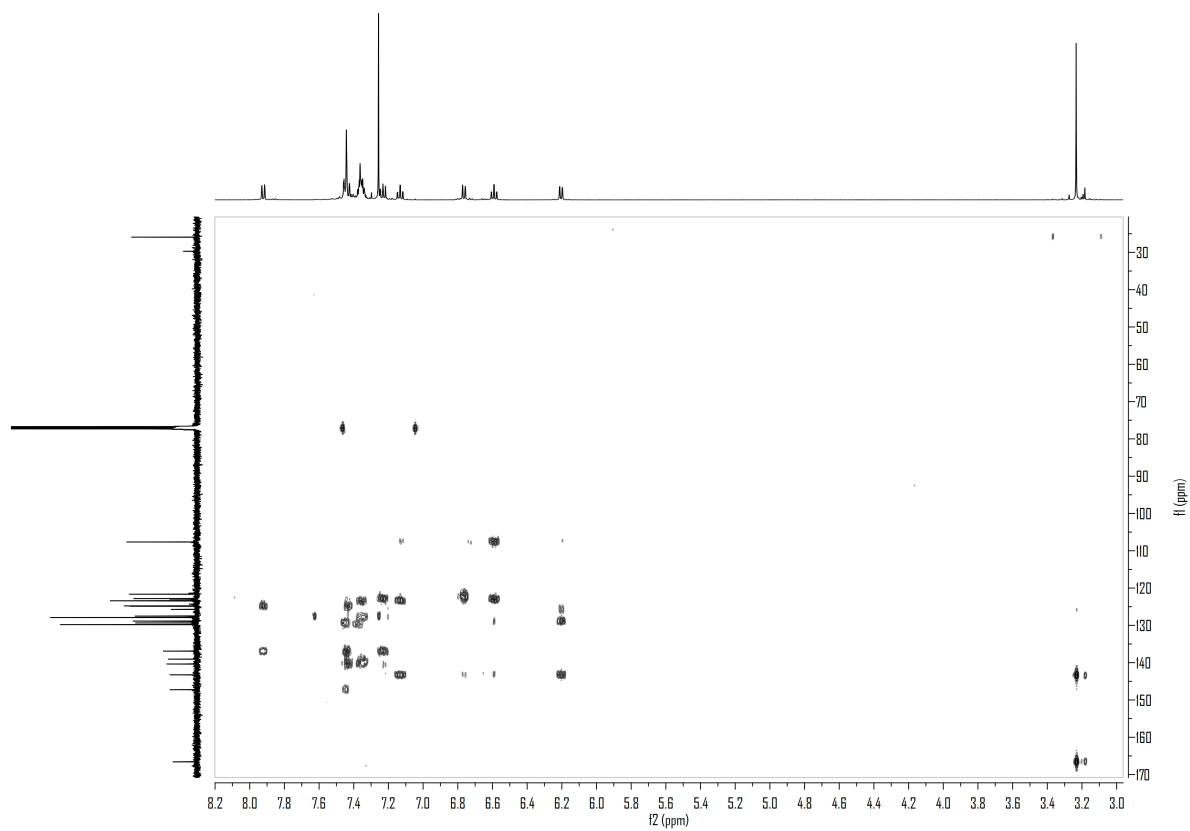
¹³C NMR spectrum of (*E*)-3q



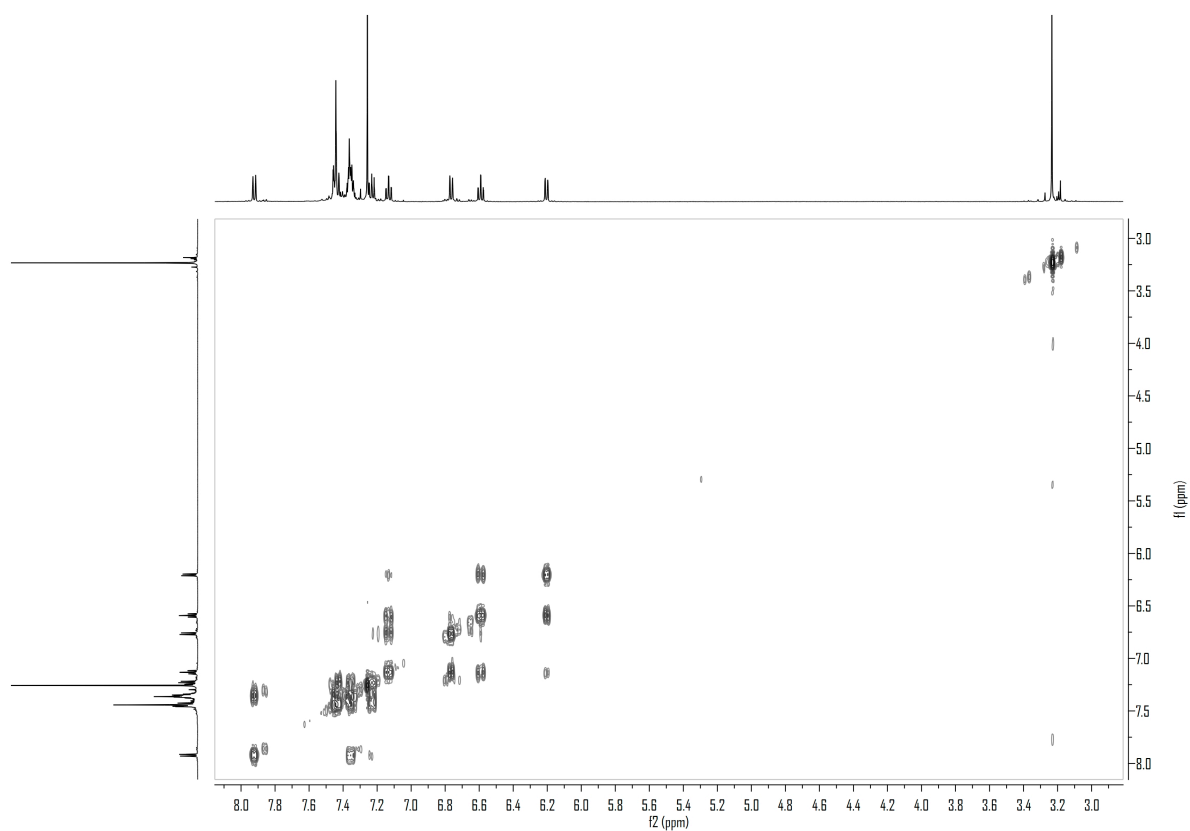
HSQC spectrum of (*E*)-3q



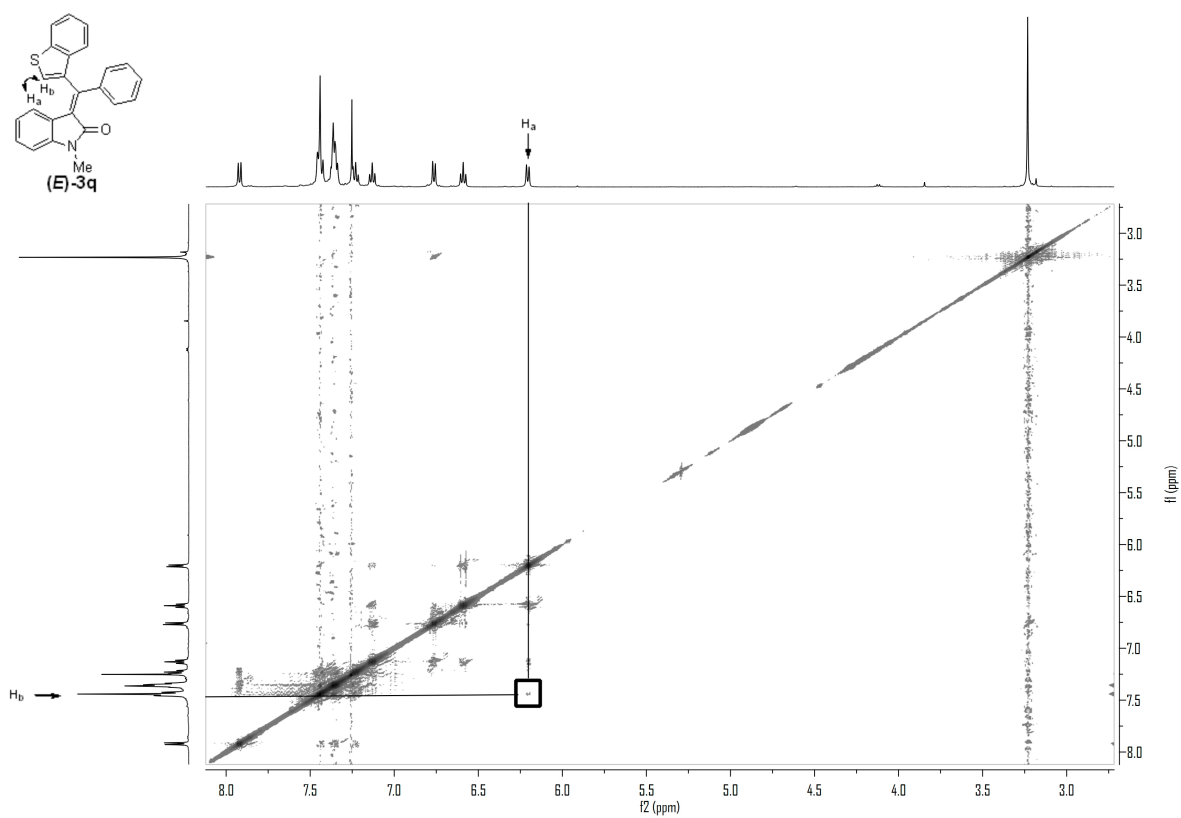
HMBC spectrum of (*E*)-3q



COSY spectrum of (*E*)-3q

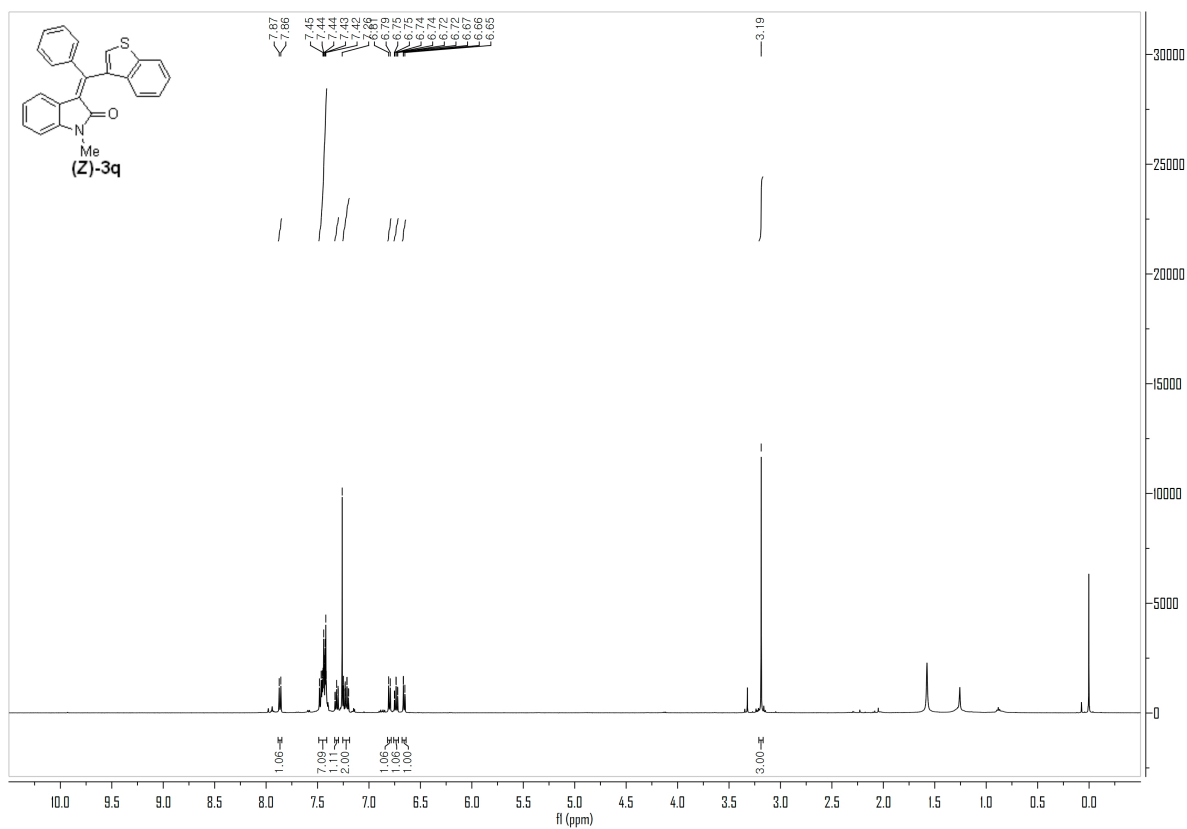


ROESY spectrum of (*E*)-3q

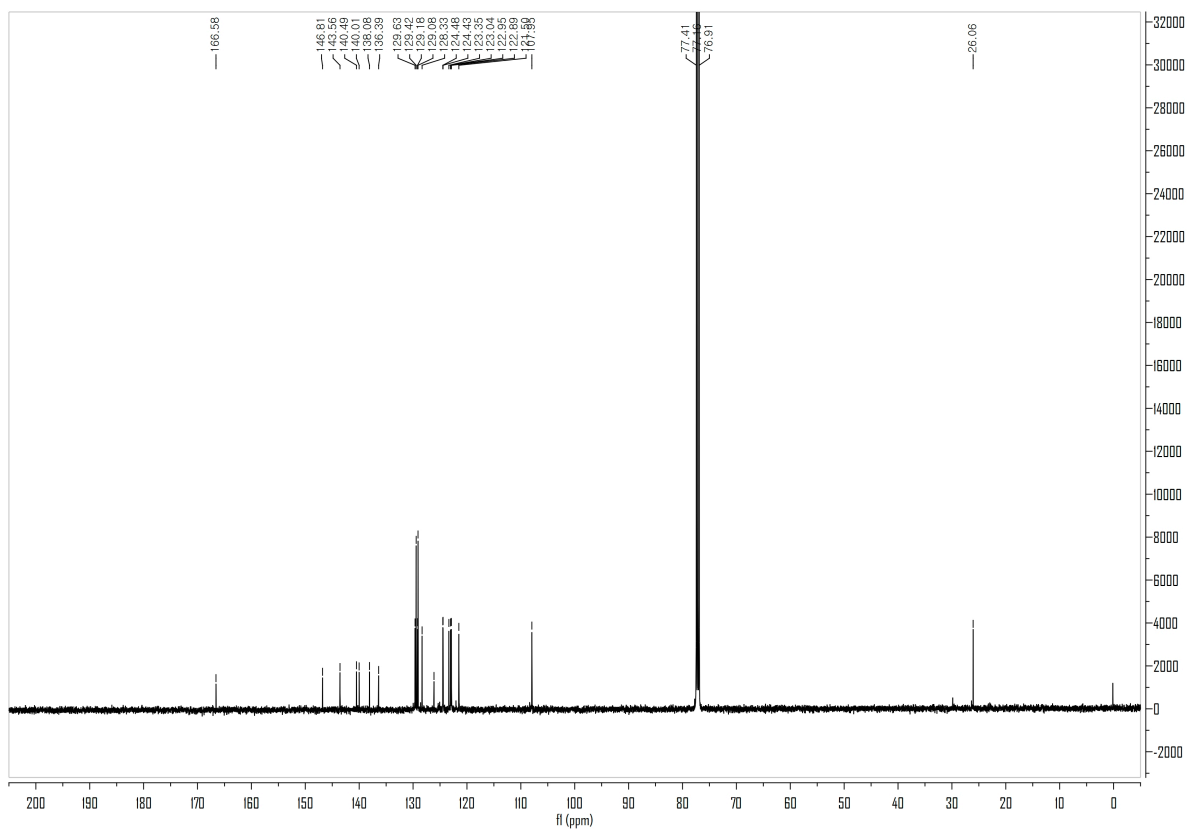


(Z)-3-(benzo[b]thiophen-3-yl(phenyl)methylene)-1-methylindolin-2-one ((Z)-3q)

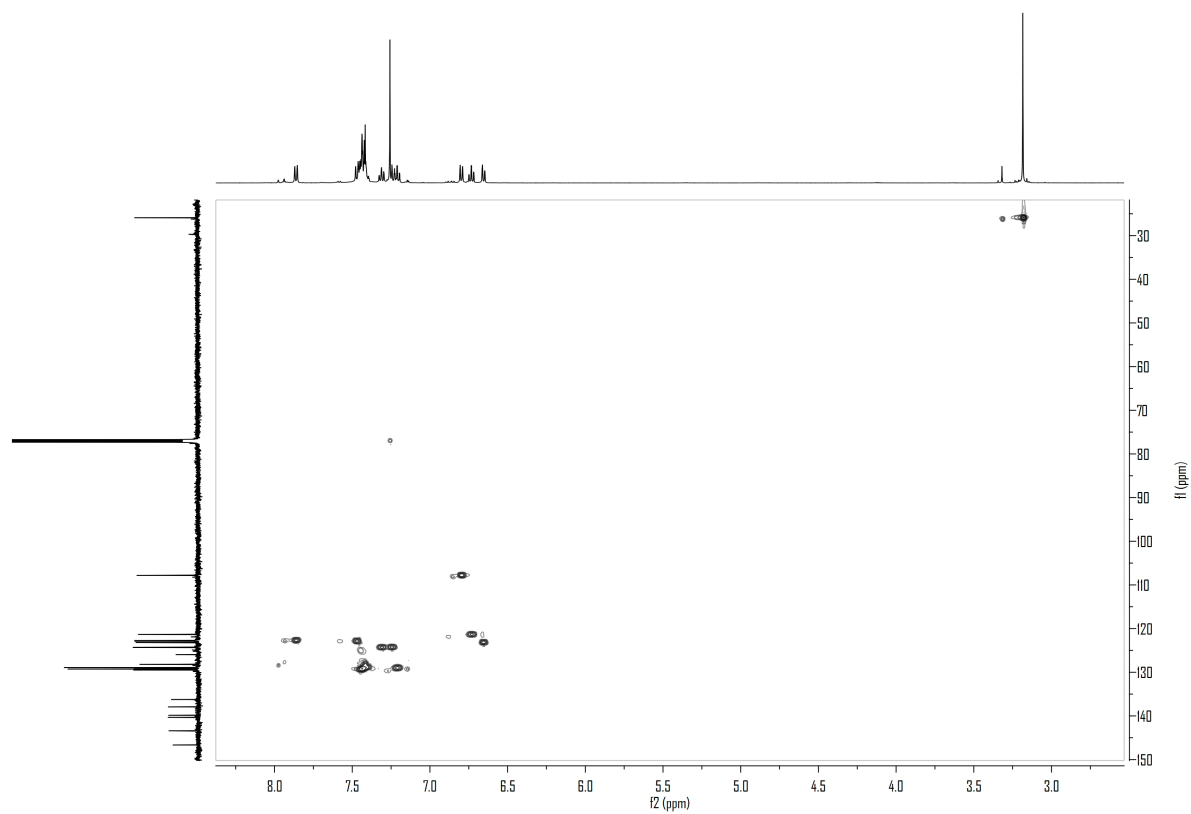
¹H NMR spectrum of (Z)-3q



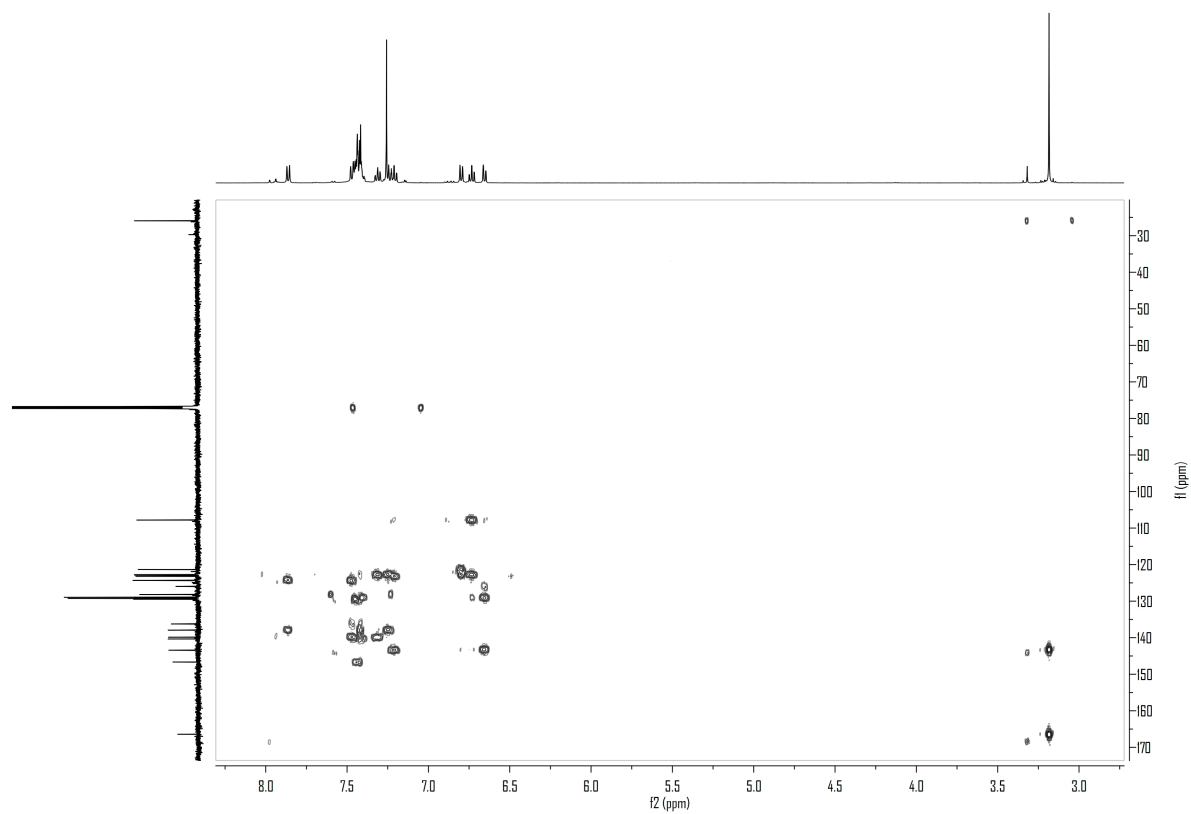
¹³C NMR spectrum of (Z)-3q



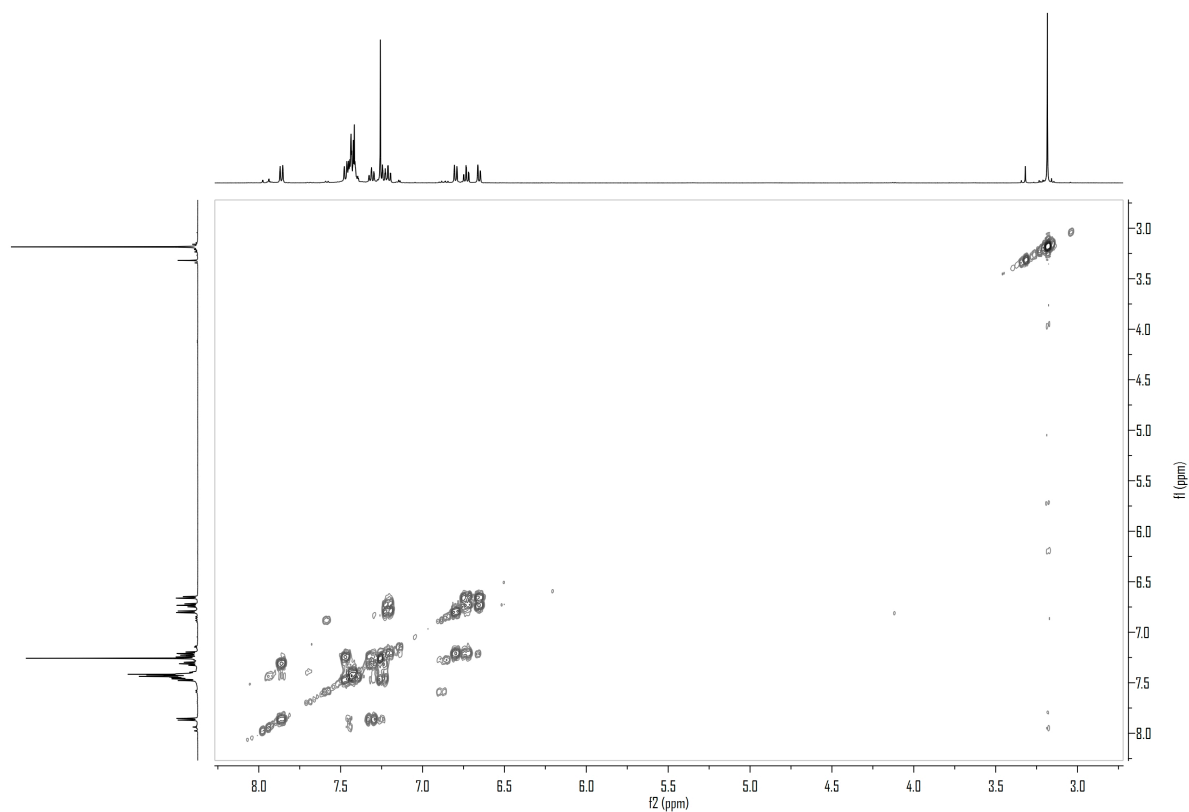
HSQC spectrum of (Z)-3q



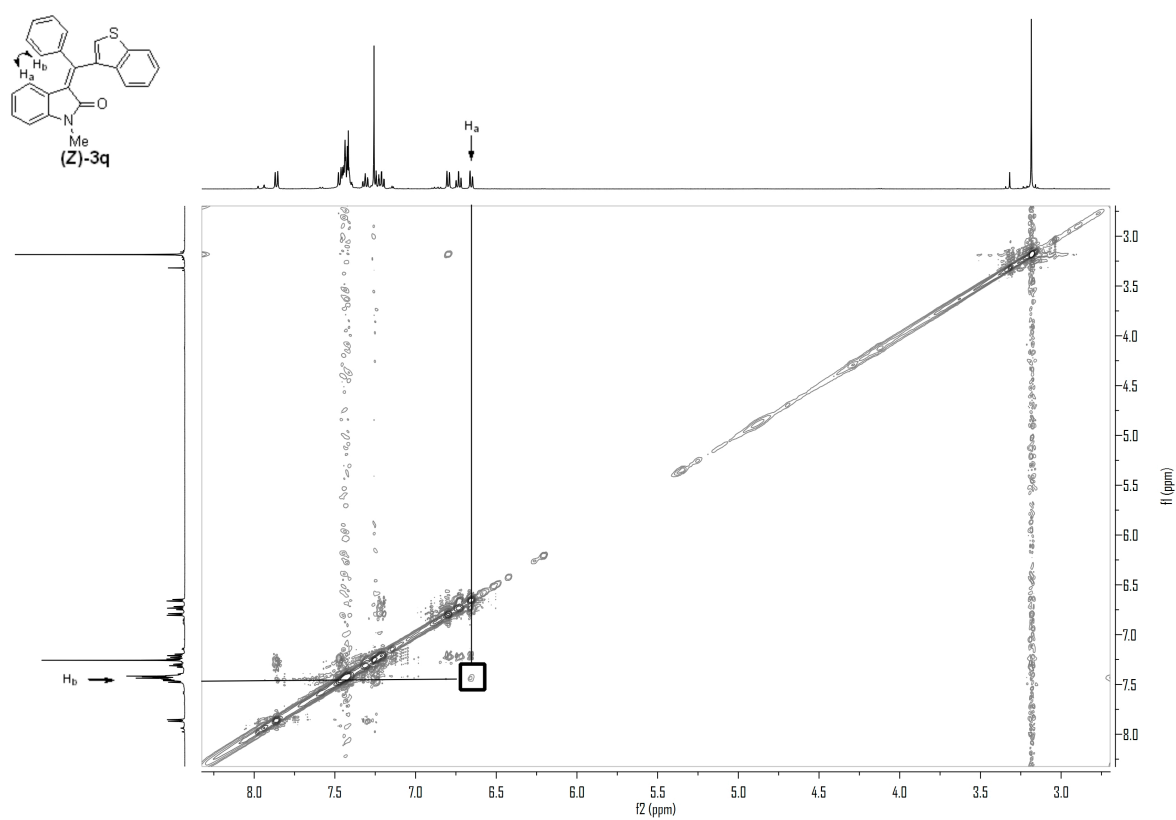
HMBC spectrum of (Z)-3q



COSY spectrum of (Z)-3q

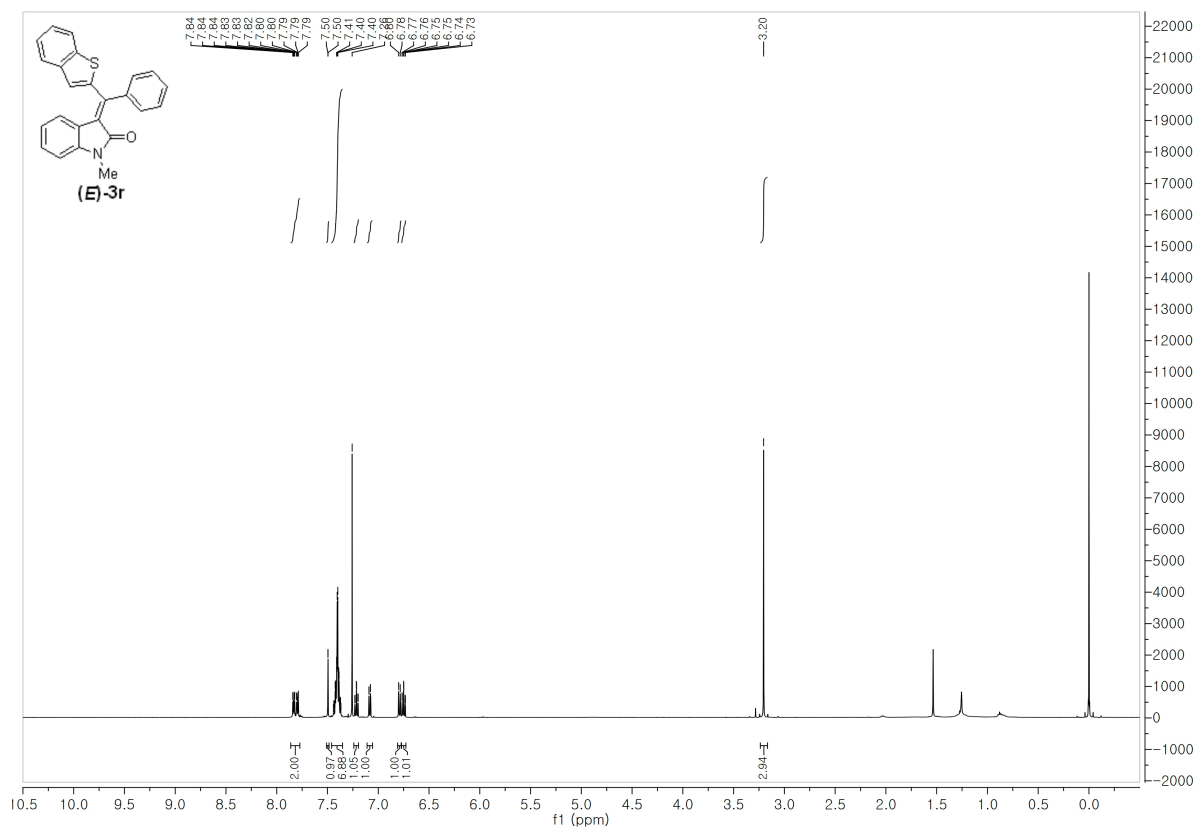


ROESY spectrum of (Z)-3q

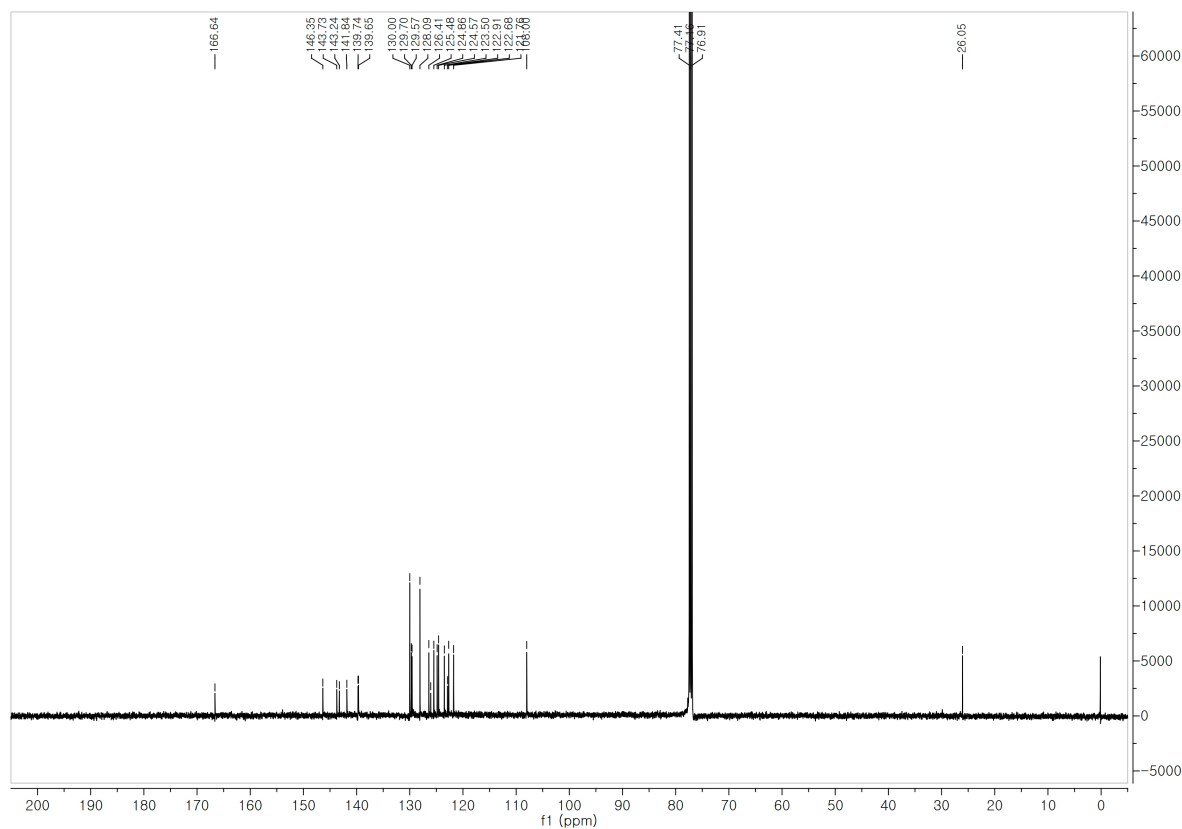


(E)-3-(benzo[b]thiophen-2-yl(phenyl)methylene)-1-methylindolin-2-one ((E)-3r)

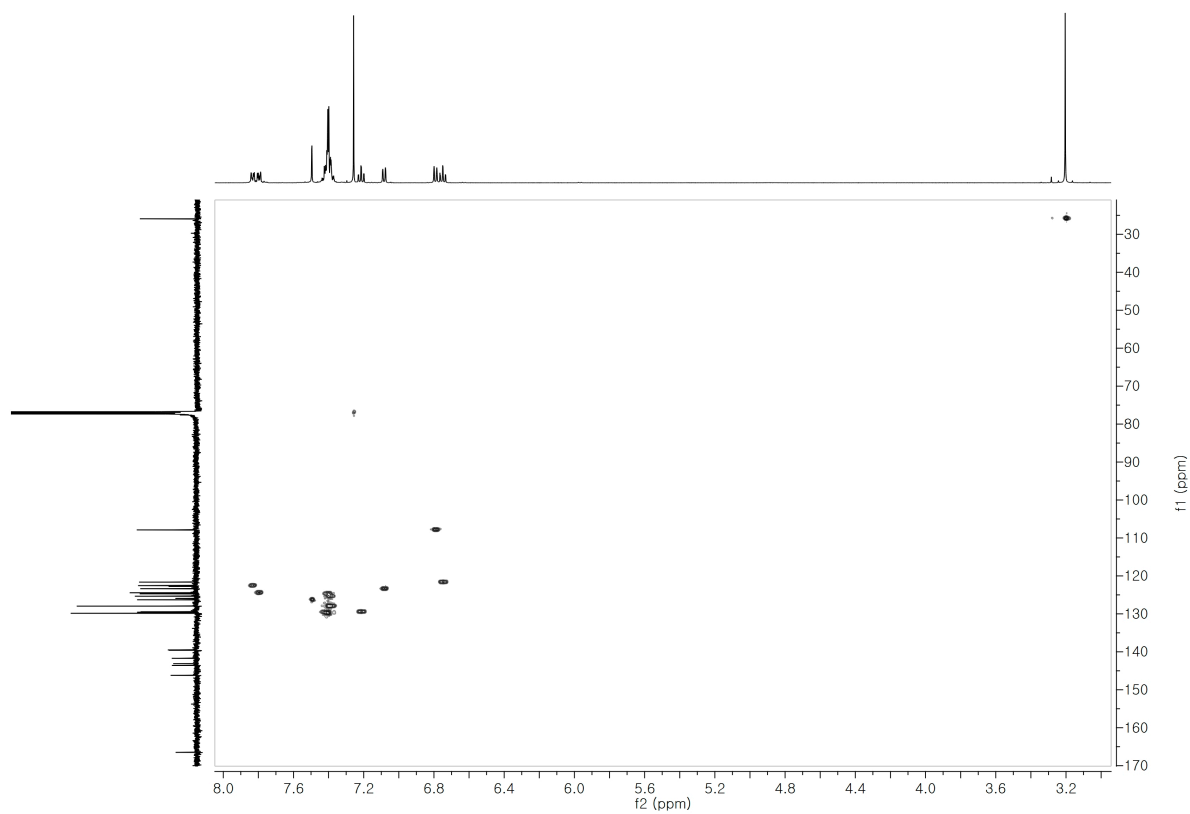
¹H NMR spectrum of (E)-3r



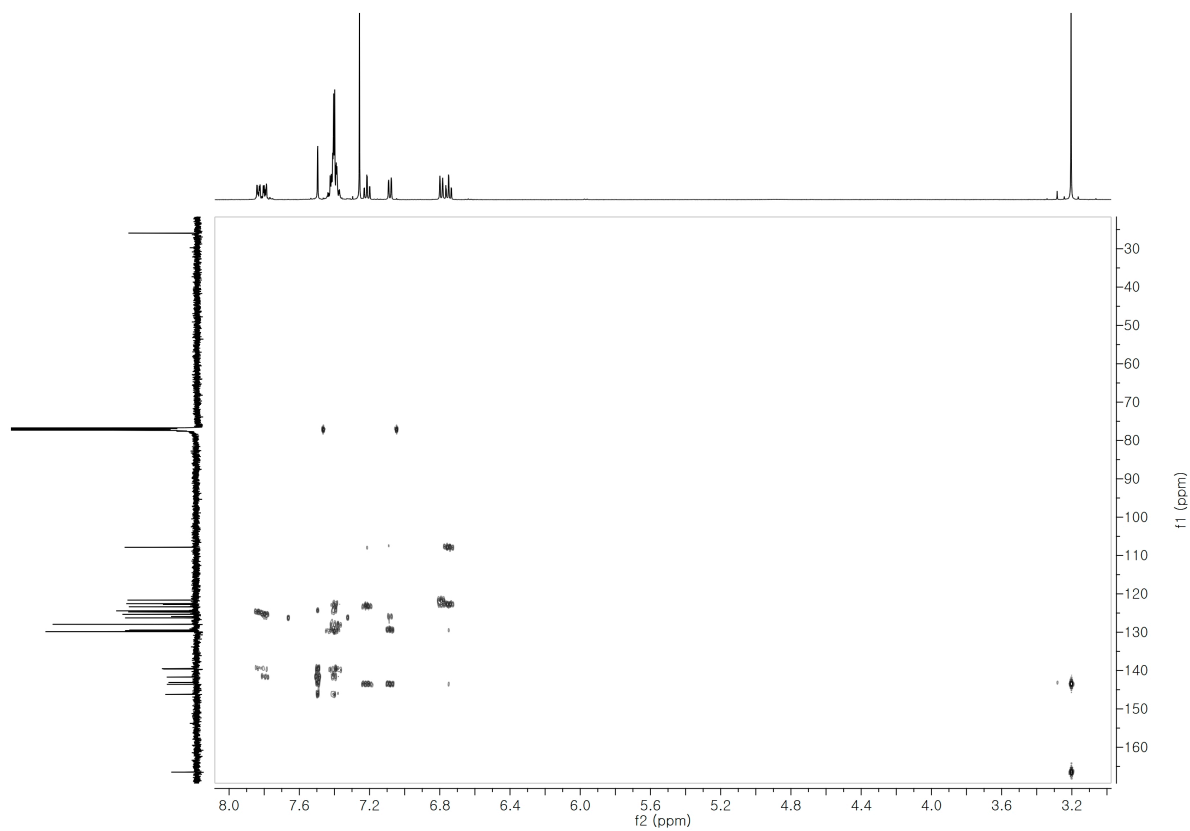
^{13}C NMR spectrum of (*E*)-3r



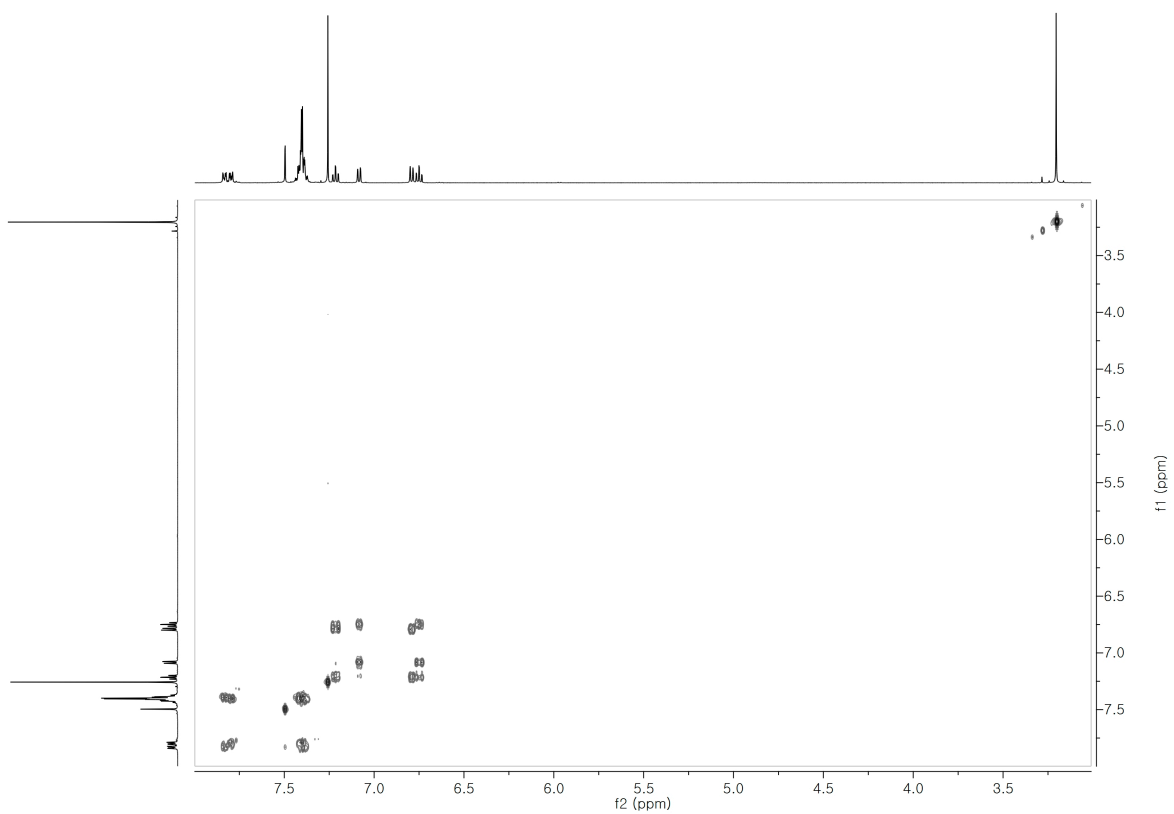
HSQC spectrum of (*E*)-3r



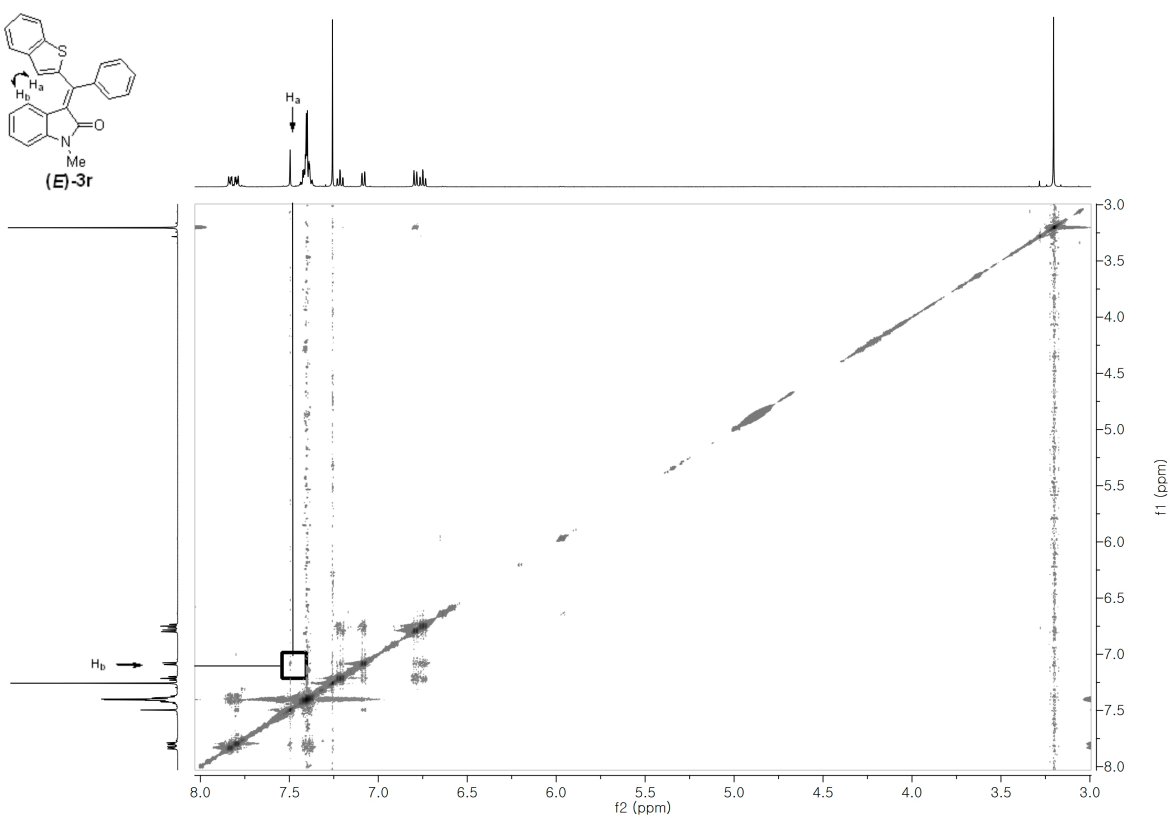
HMBC spectrum of (*E*)-3r



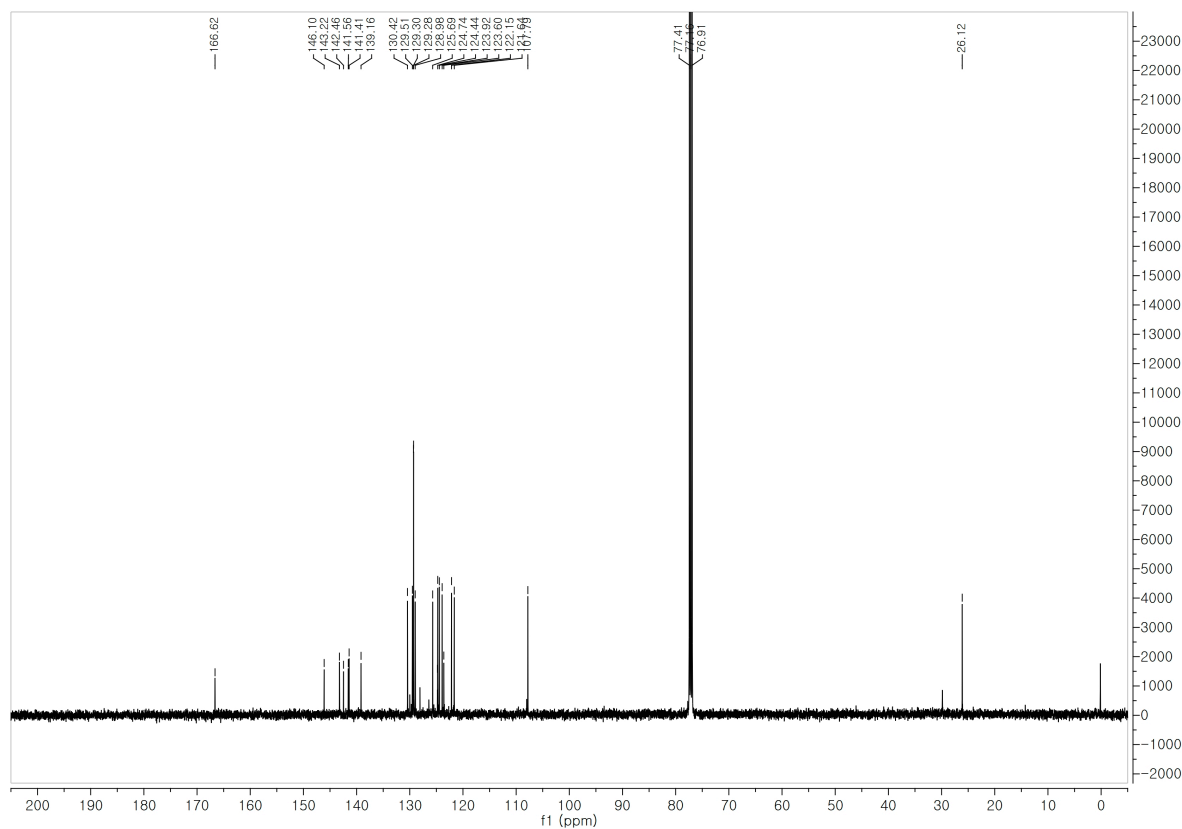
COSY spectrum of (*E*)-3r



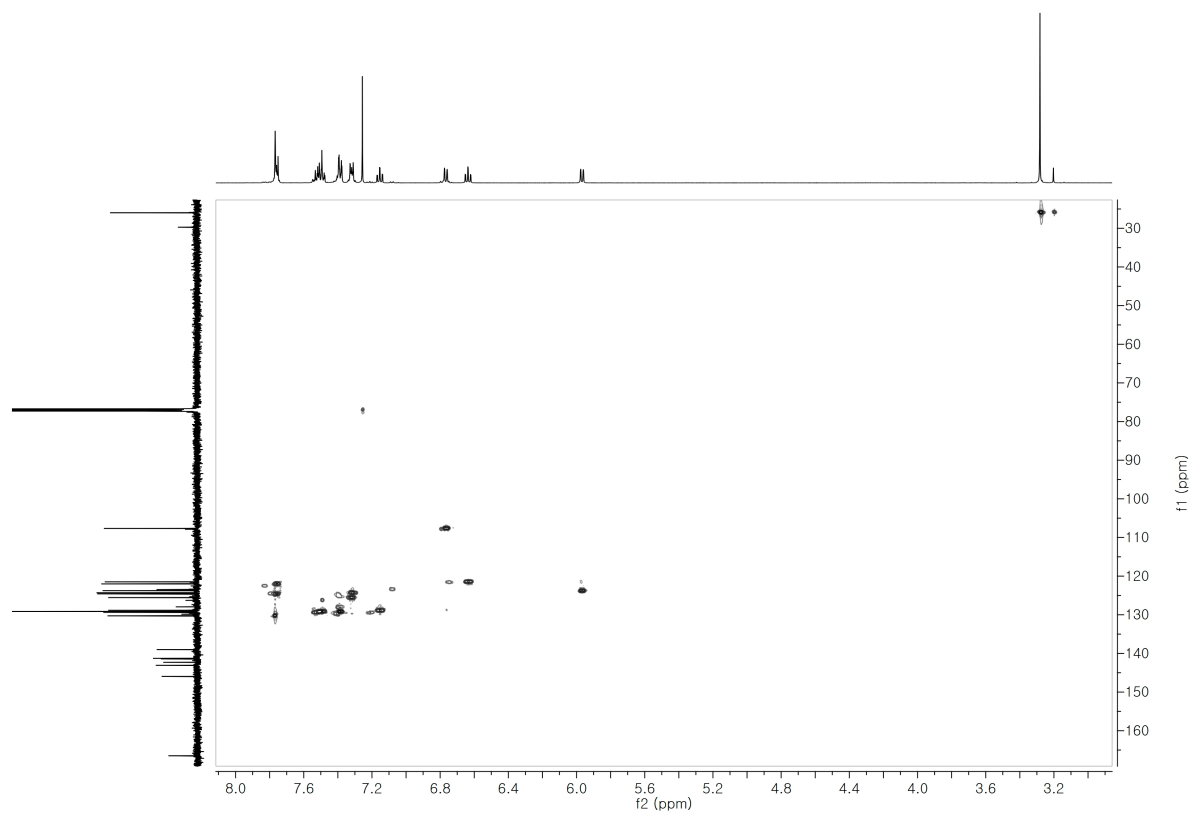
ROESY spectrum of (*E*)-3r



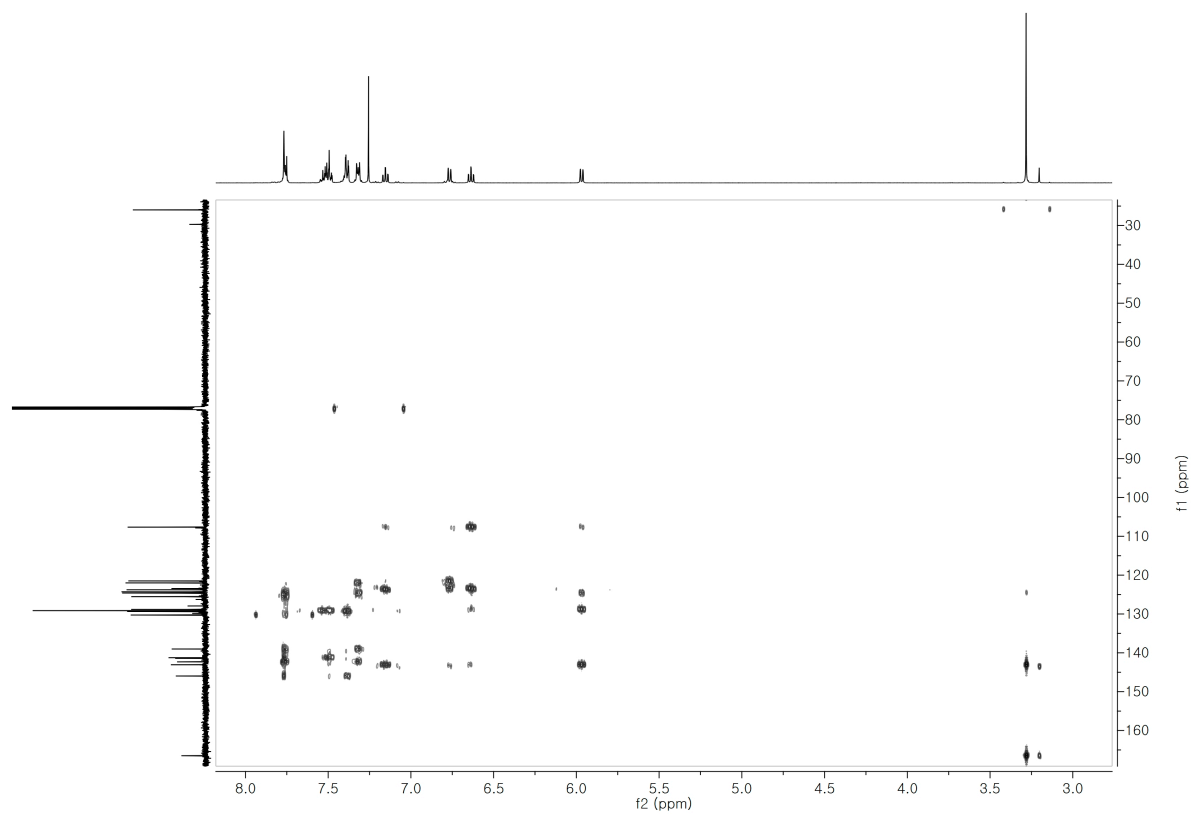
¹H NMR spectrum of (Z)-3r



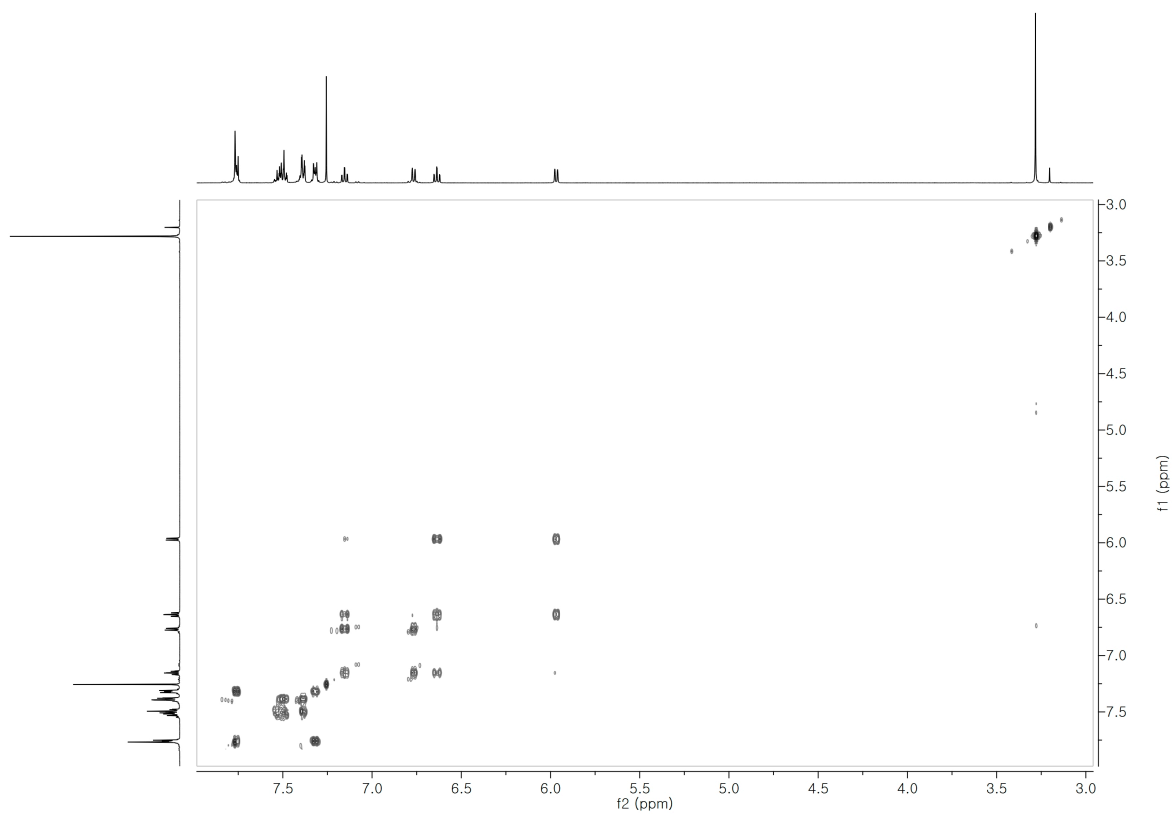
HSQC spectrum of (Z)-3r



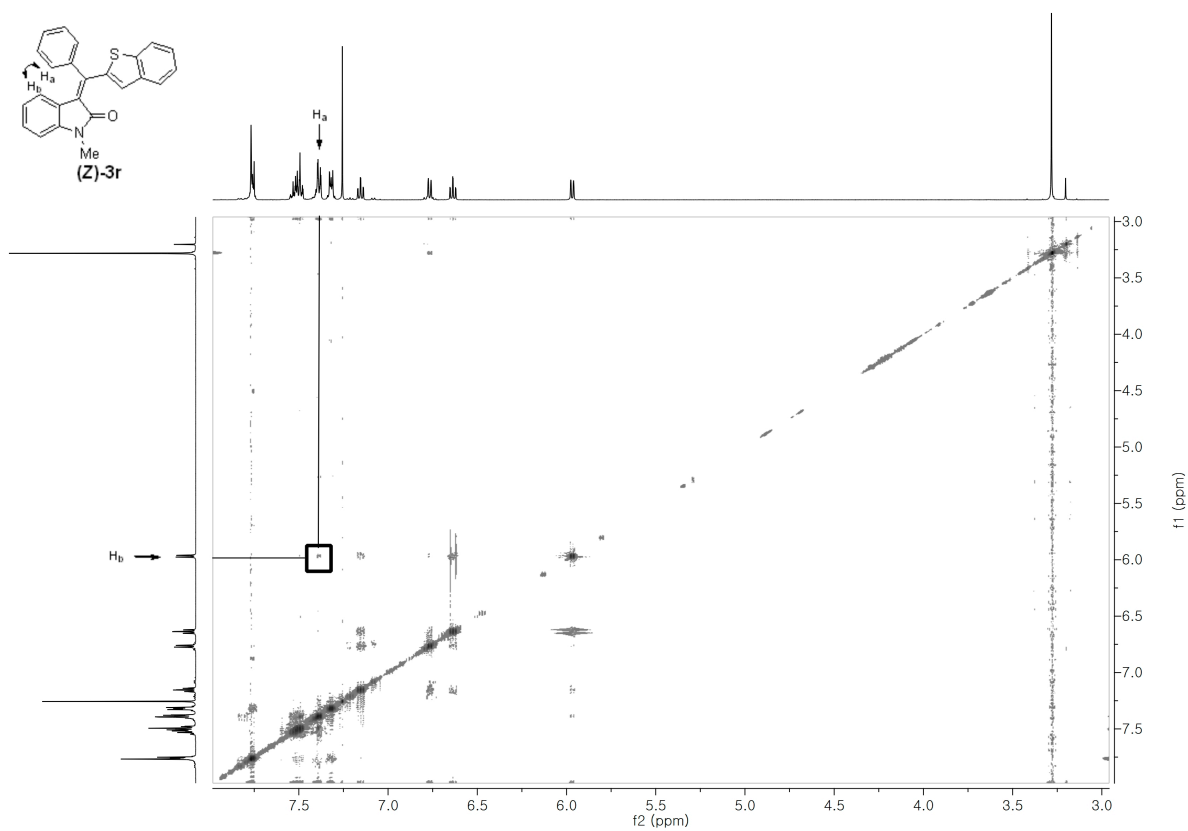
HMBC spectrum of (Z)-3r



COSY spectrum of (Z)-3r

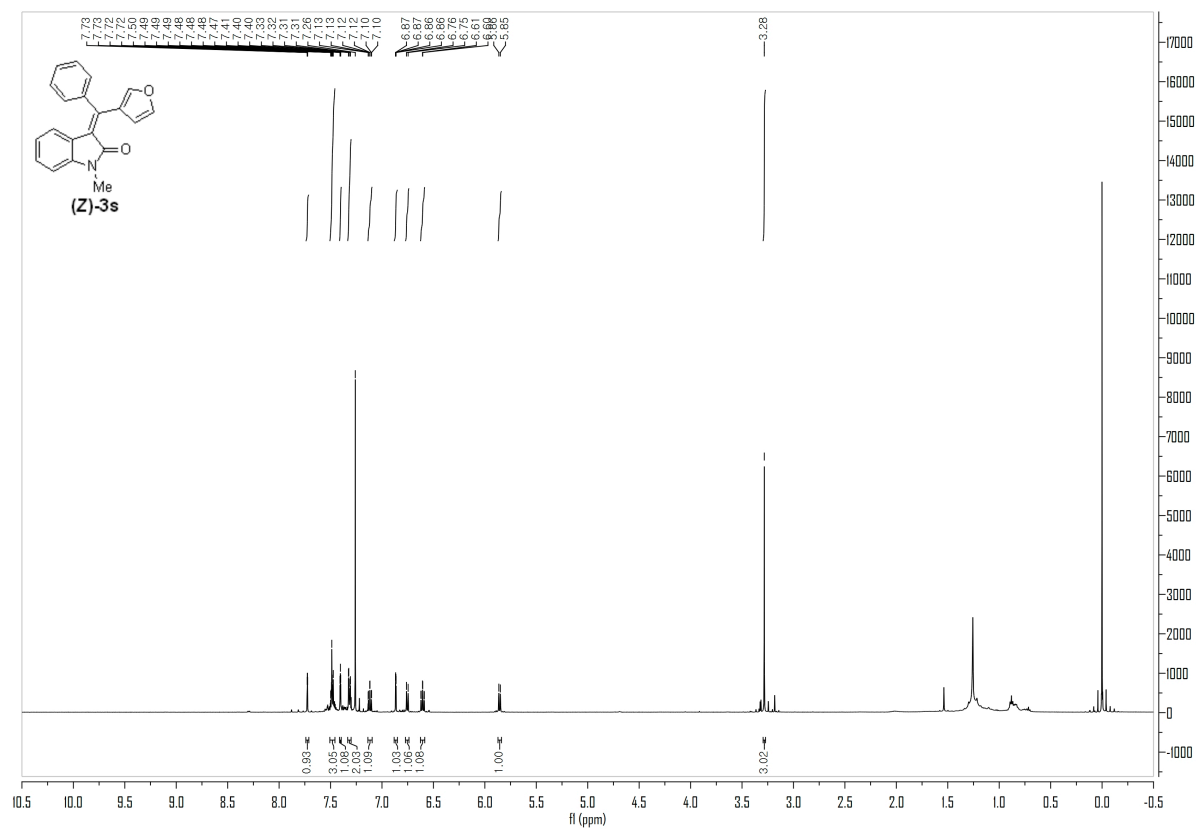


ROESY spectrum of (Z)-3r

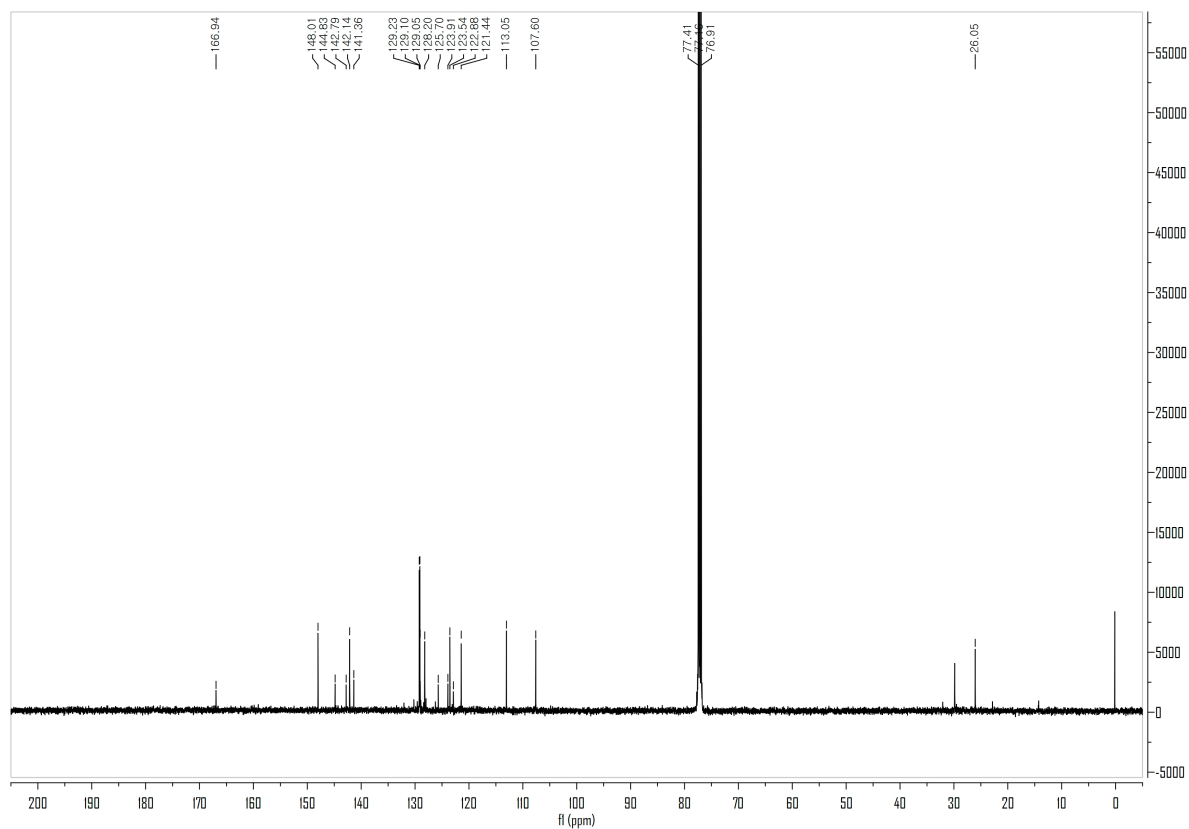


(Z)-3-(furan-3-yl(phenyl)methylene)-1-methylindolin-2-one ((Z)-3s)

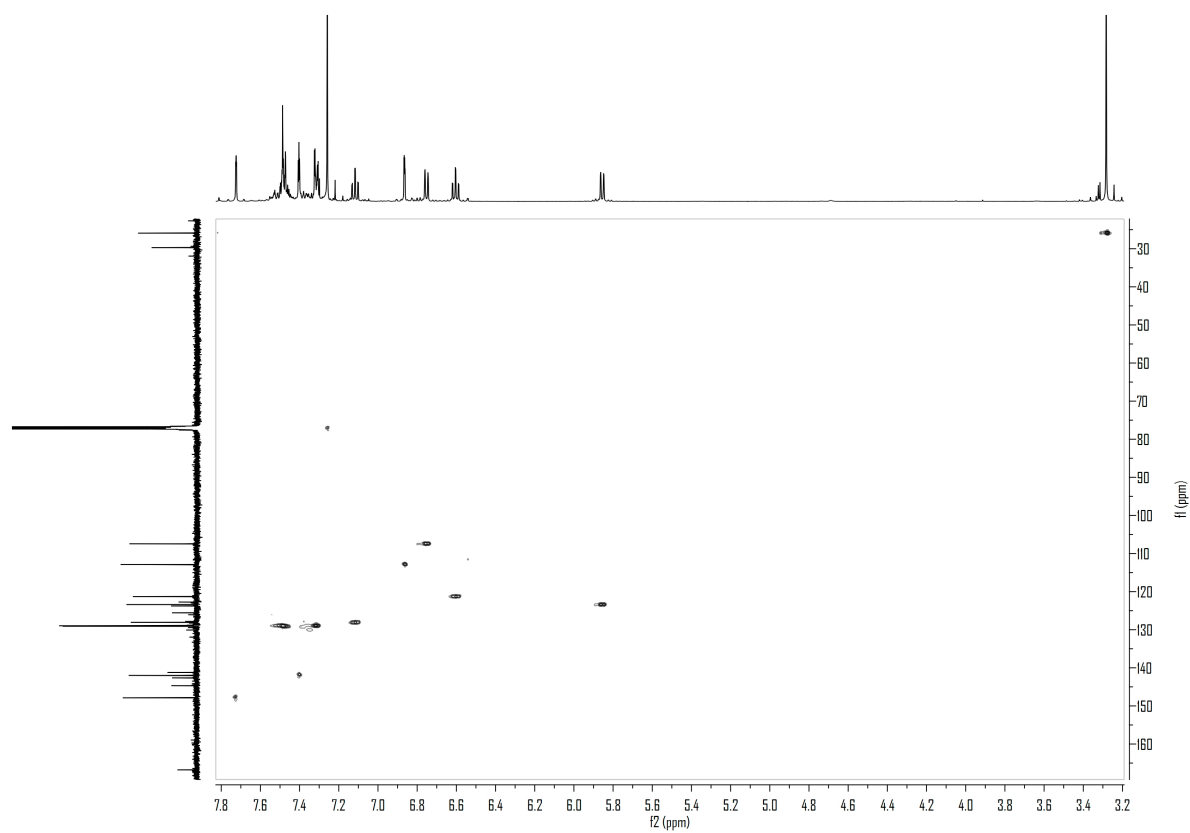
¹H NMR spectrum of (Z)-3s



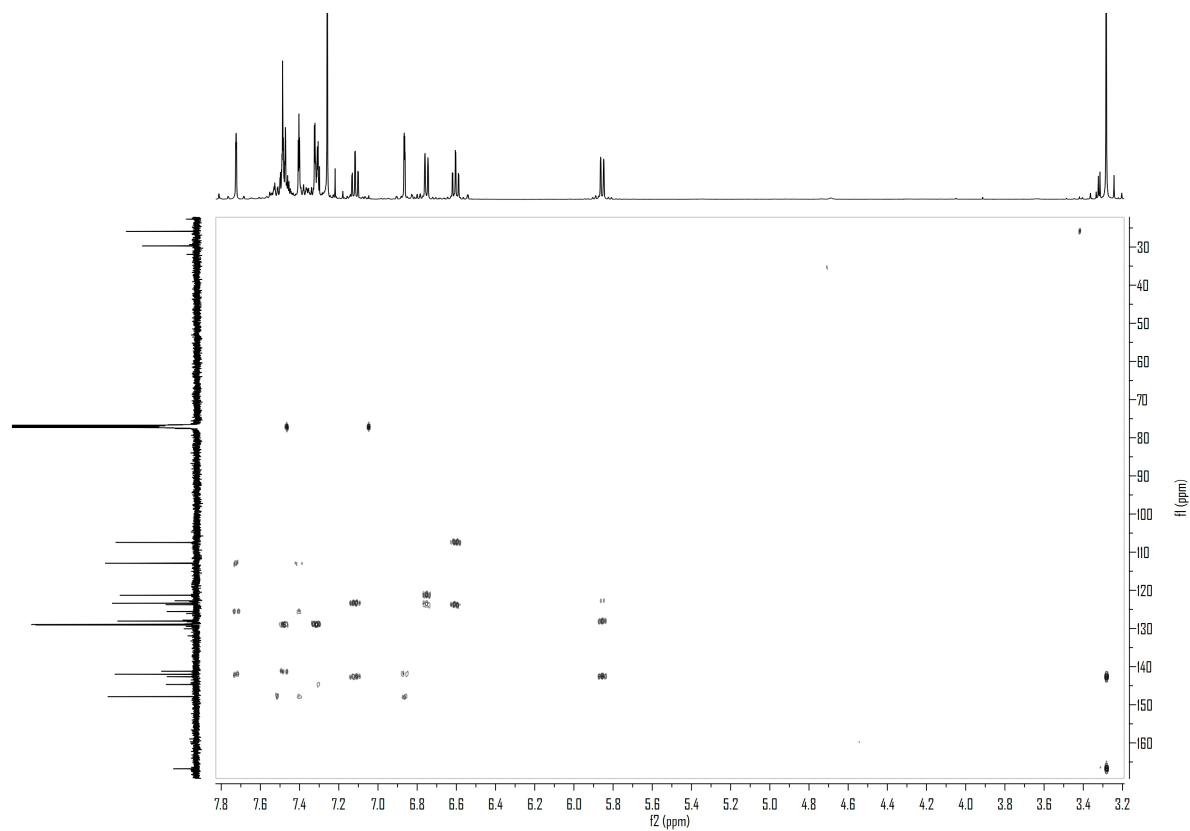
¹³C NMR spectrum of (Z)-3s



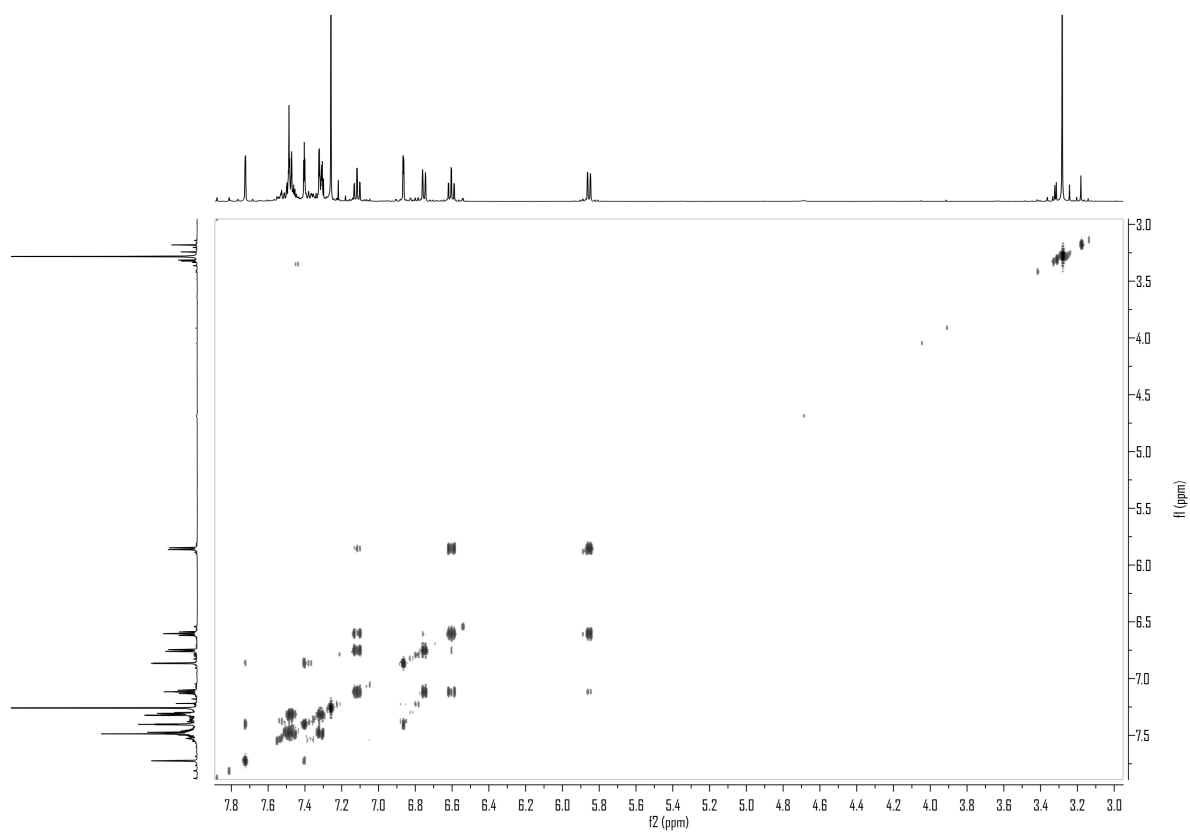
HSQC spectrum of (Z)-3s



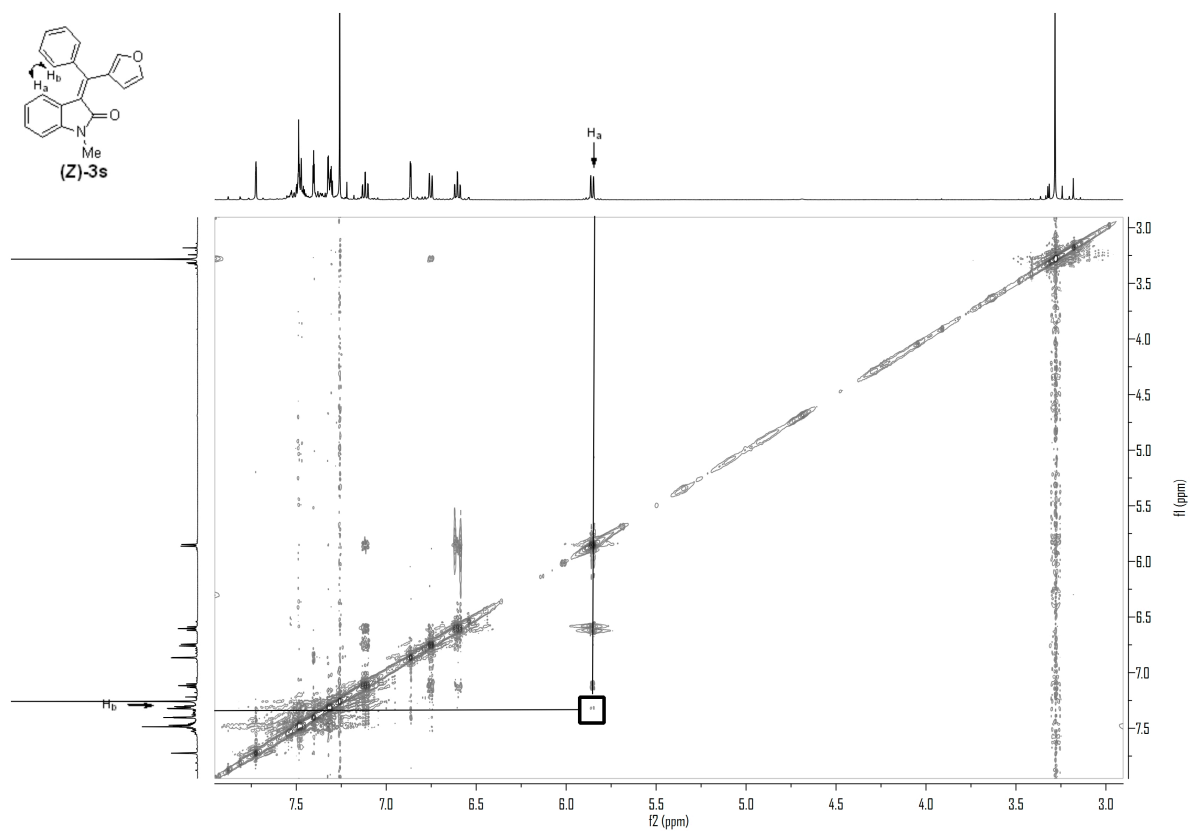
HMBC spectrum of (Z)-3s



COSY spectrum of (Z)-3s

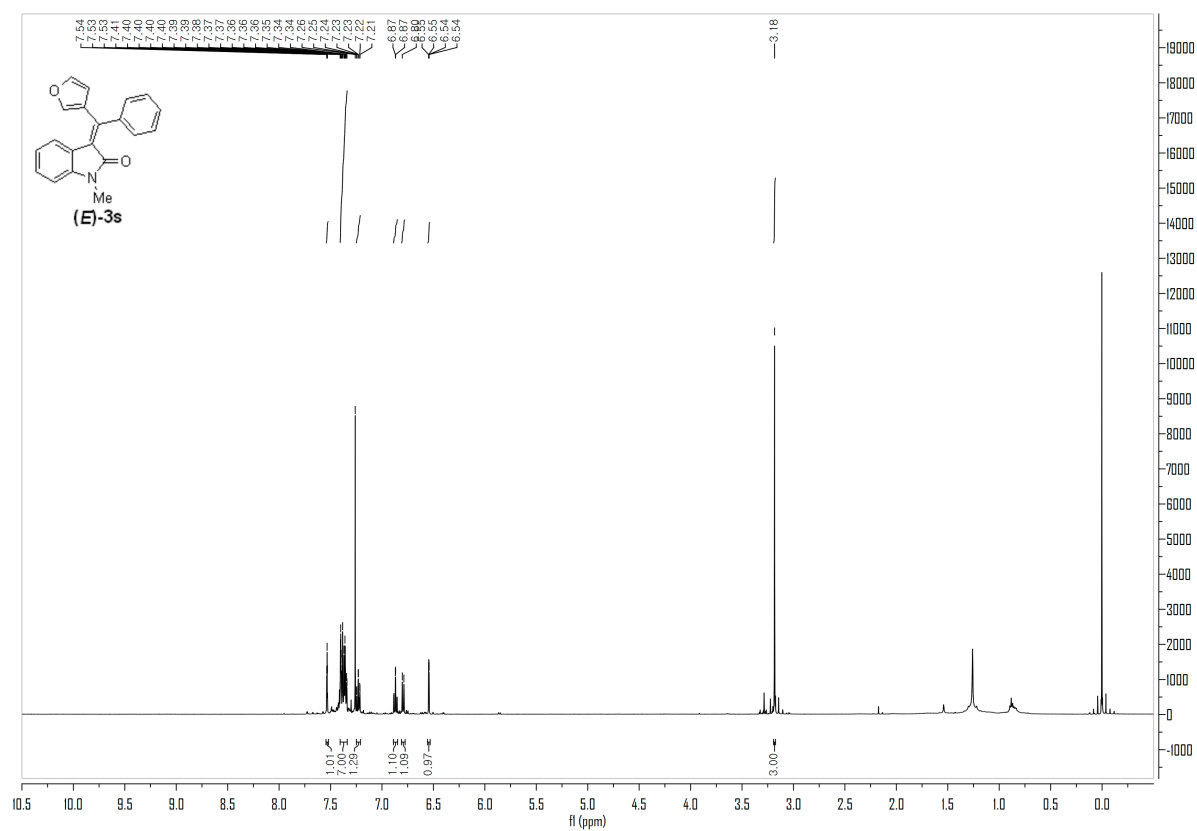


ROESY spectrum of (Z)-3s

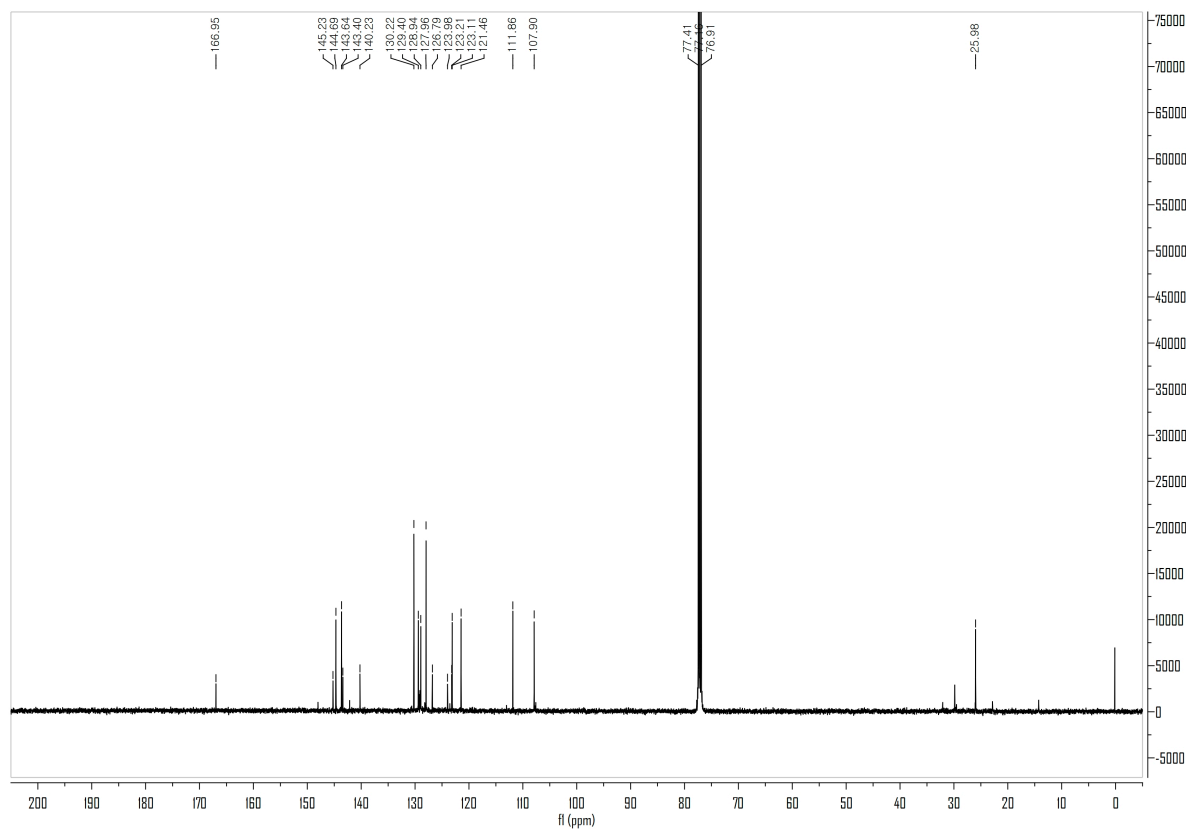


(*E*)-3-(furan-3-yl(phenyl)methylene)-1-methylindolin-2-one ((*E*)-3s)

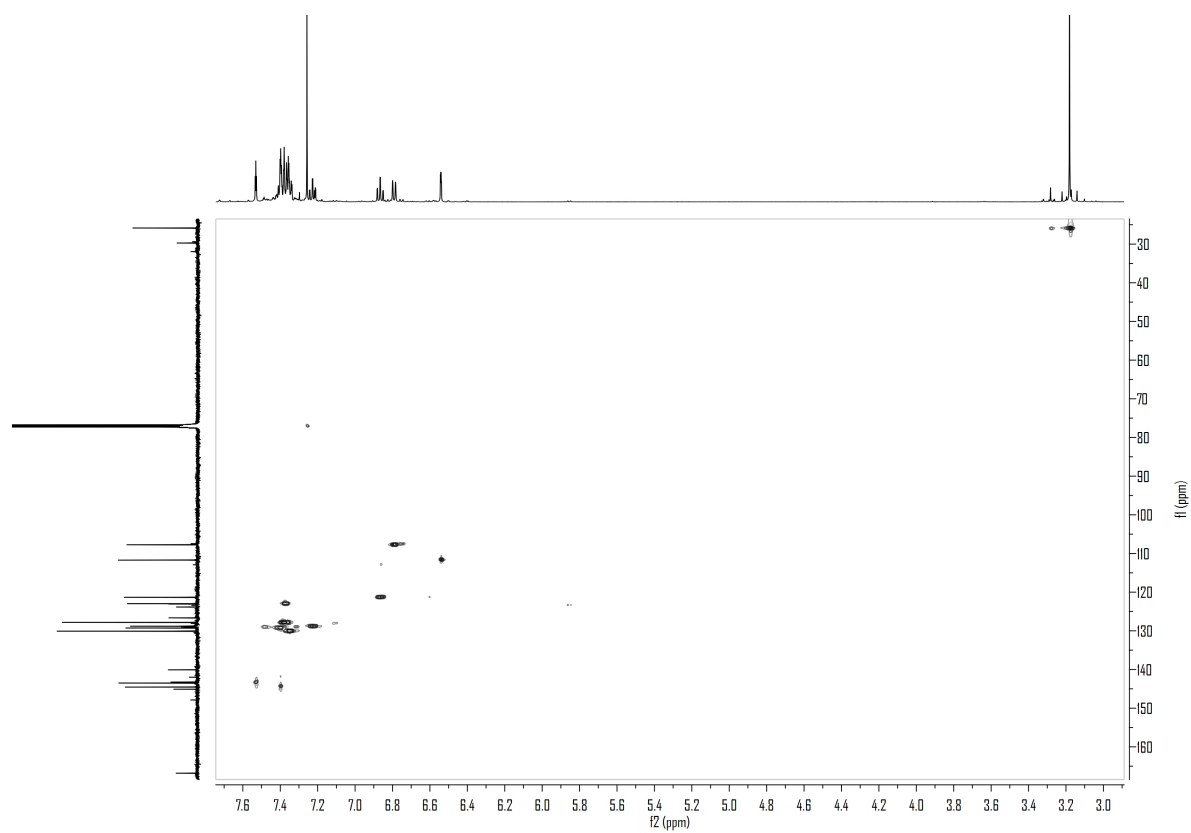
¹H NMR spectrum of (*E*)-3s



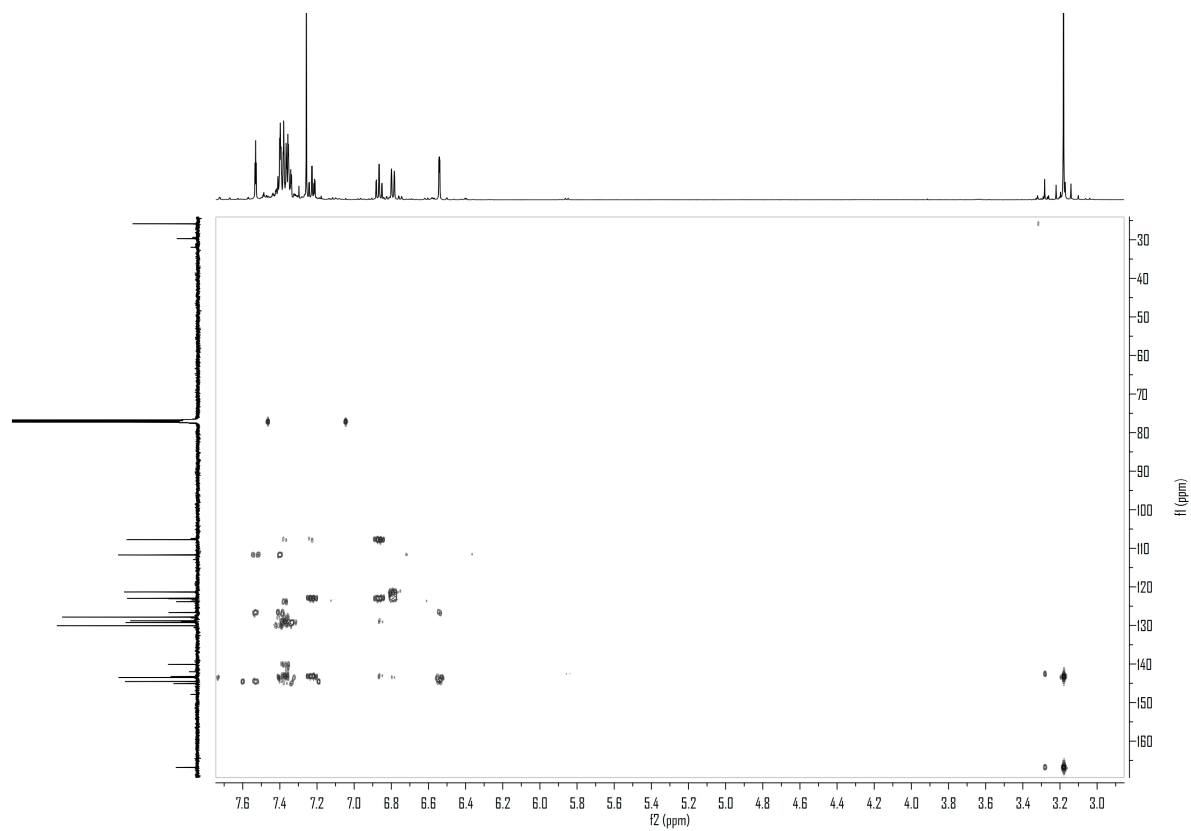
¹³C NMR spectrum of (*E*)-3s



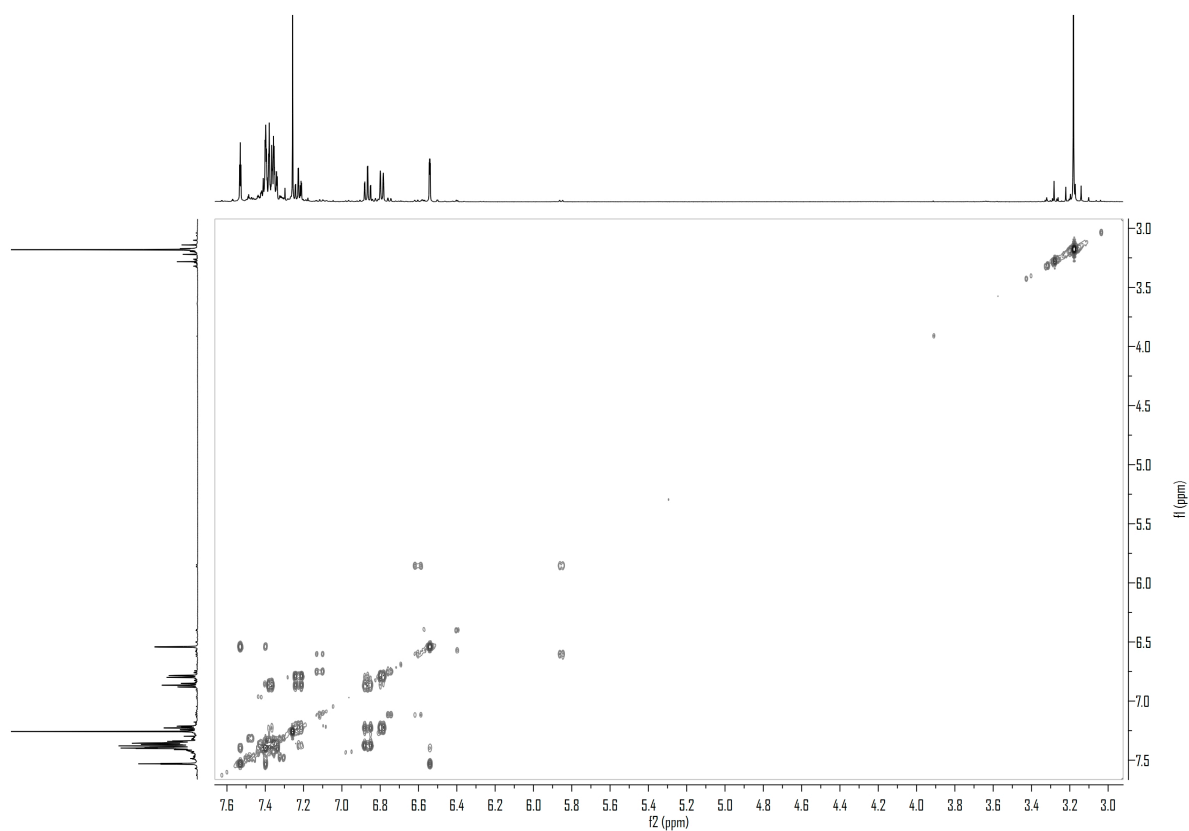
HSQC spectrum of (*E*)-3s



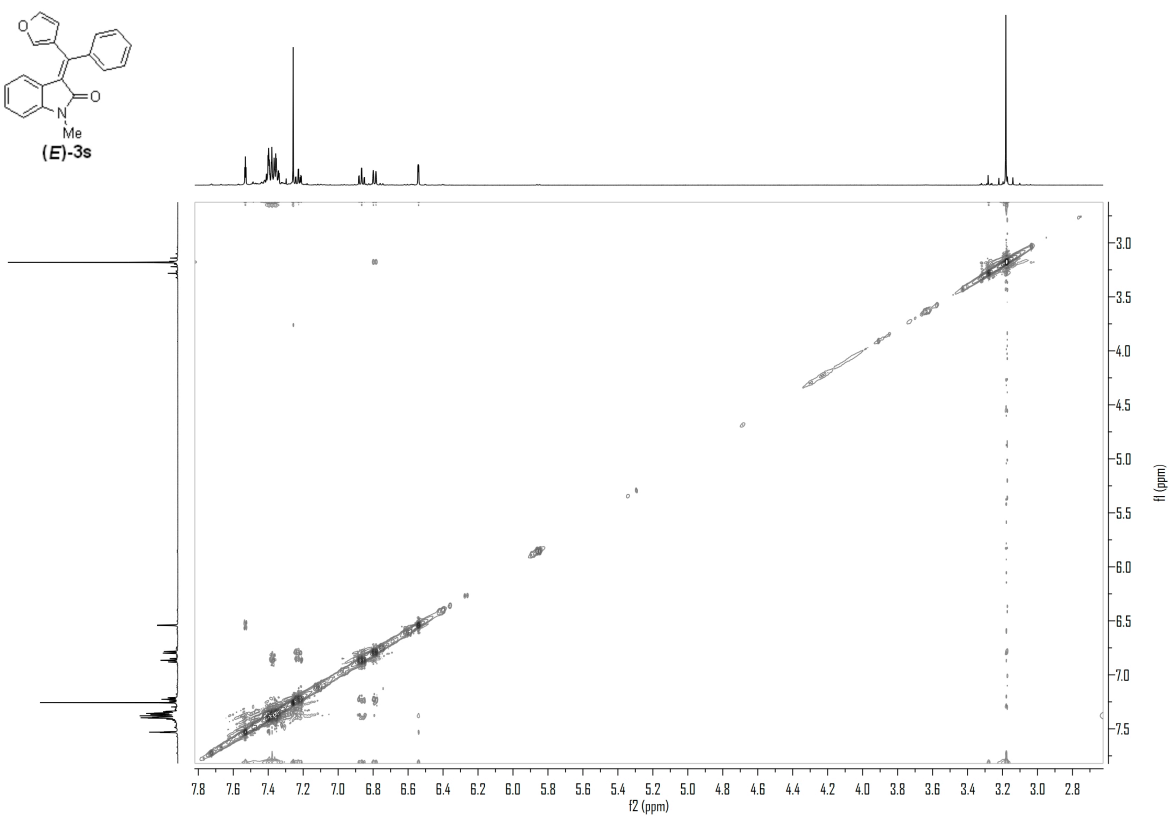
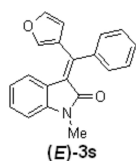
HMBC spectrum of (*E*)-3s



COSY spectrum of (*E*)-3s

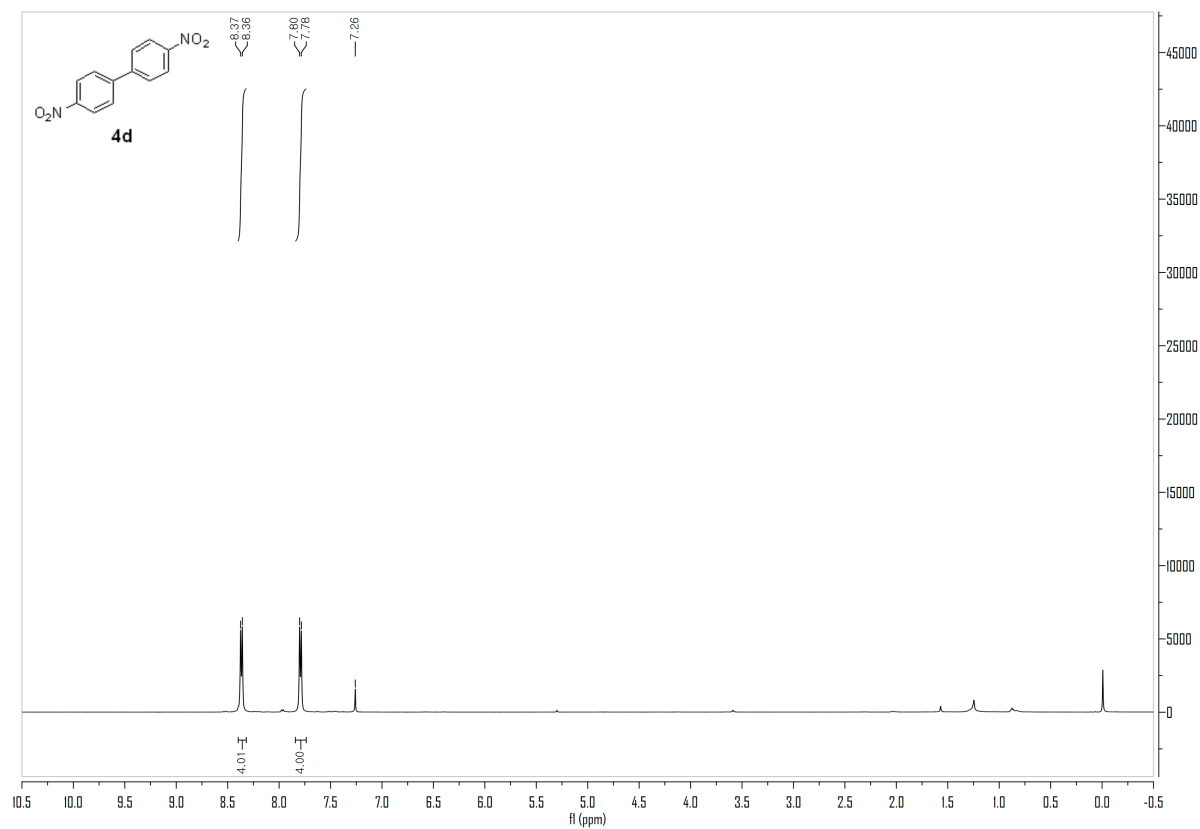


ROESY spectrum of (*E*)-3s

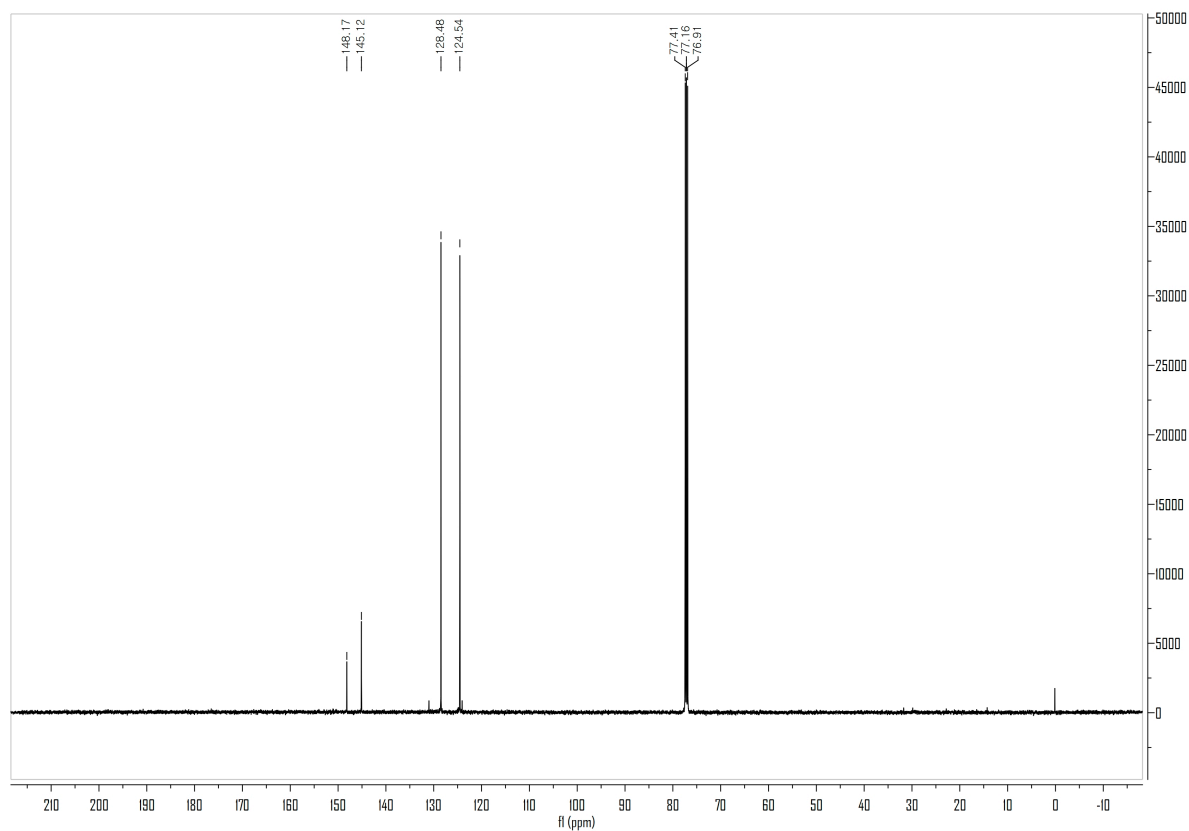


4,4'-dinitro-1,1'-biphenyl (4d)

^1H NMR spectrum of 4d

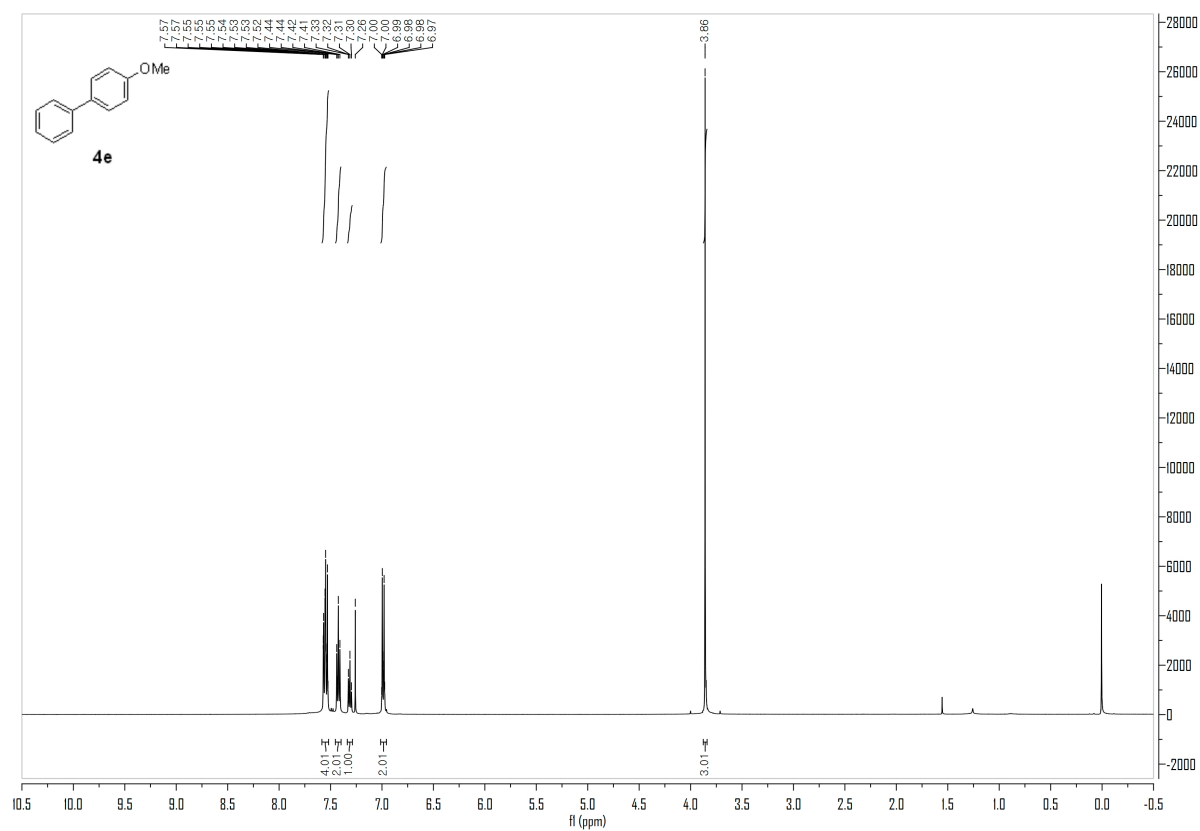


^{13}C NMR spectrum of 4d

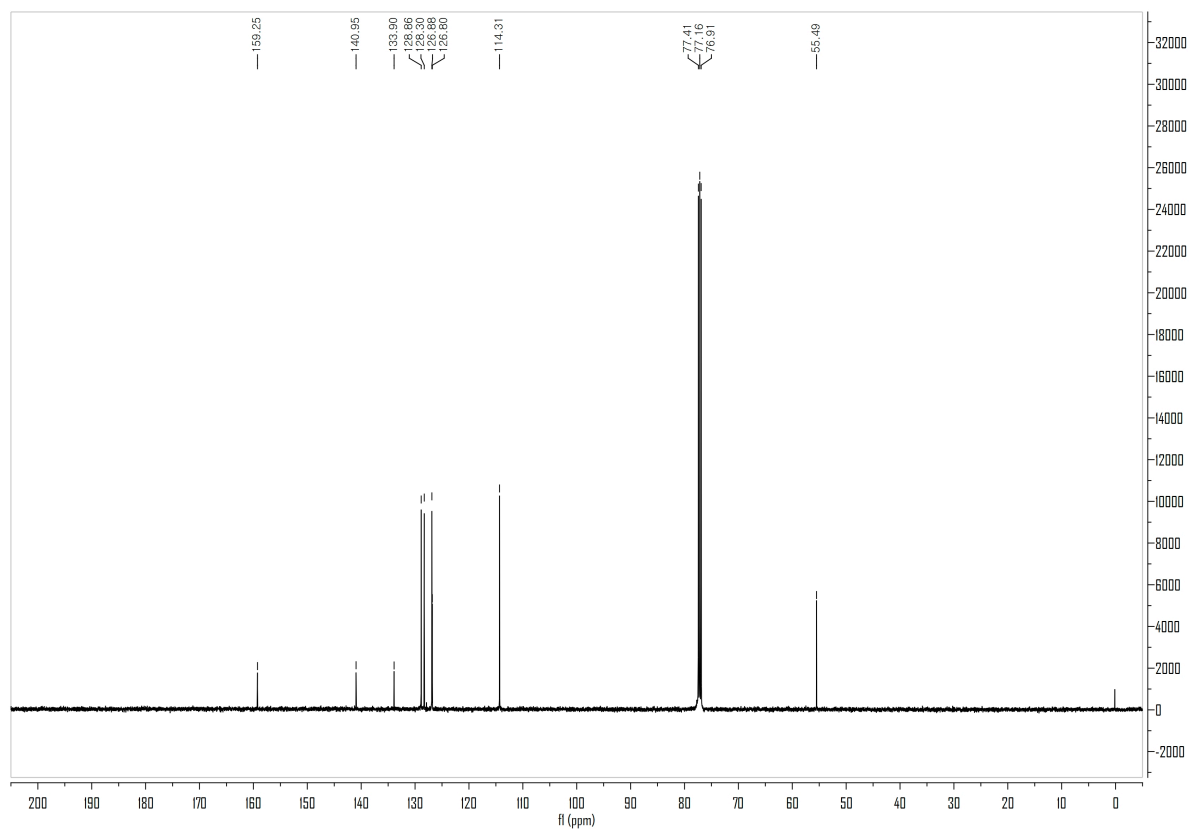


4-methoxy-1,1'-biphenyl (4e)

^1H NMR spectrum of 4e

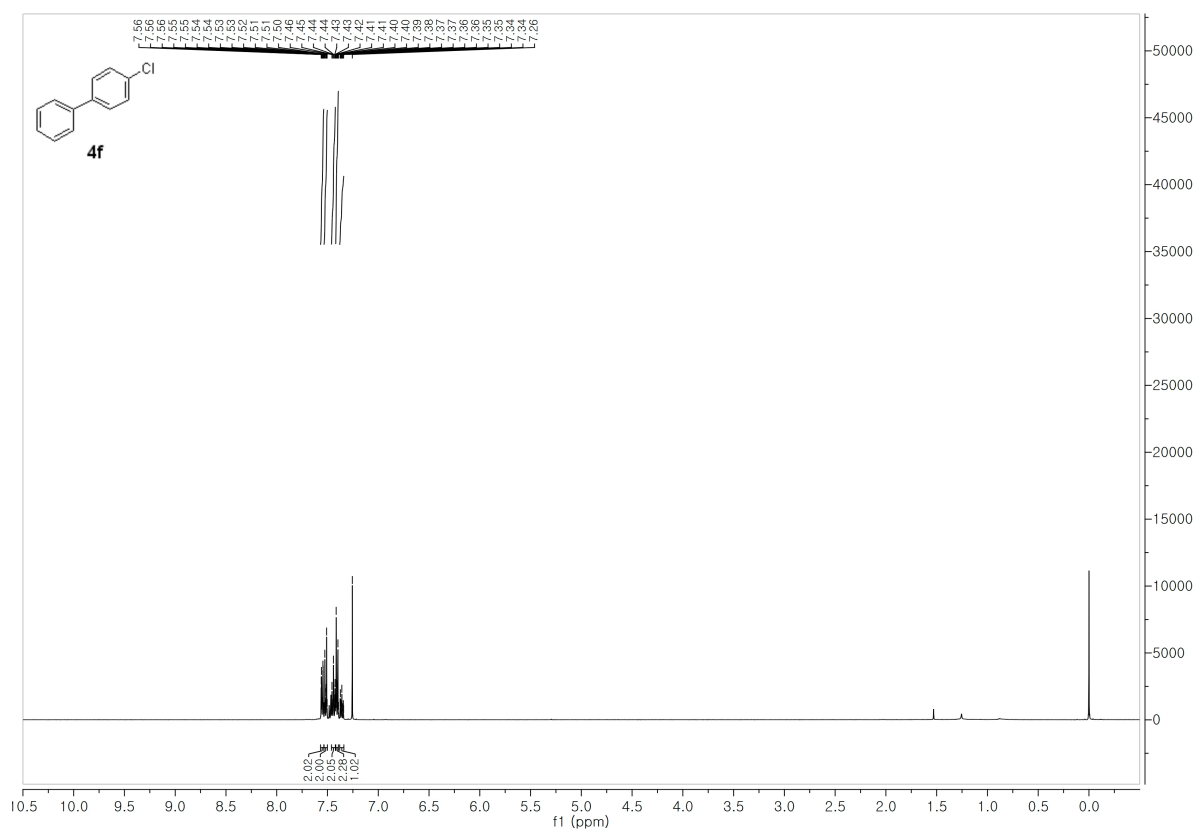


^{13}C NMR spectrum of 4e

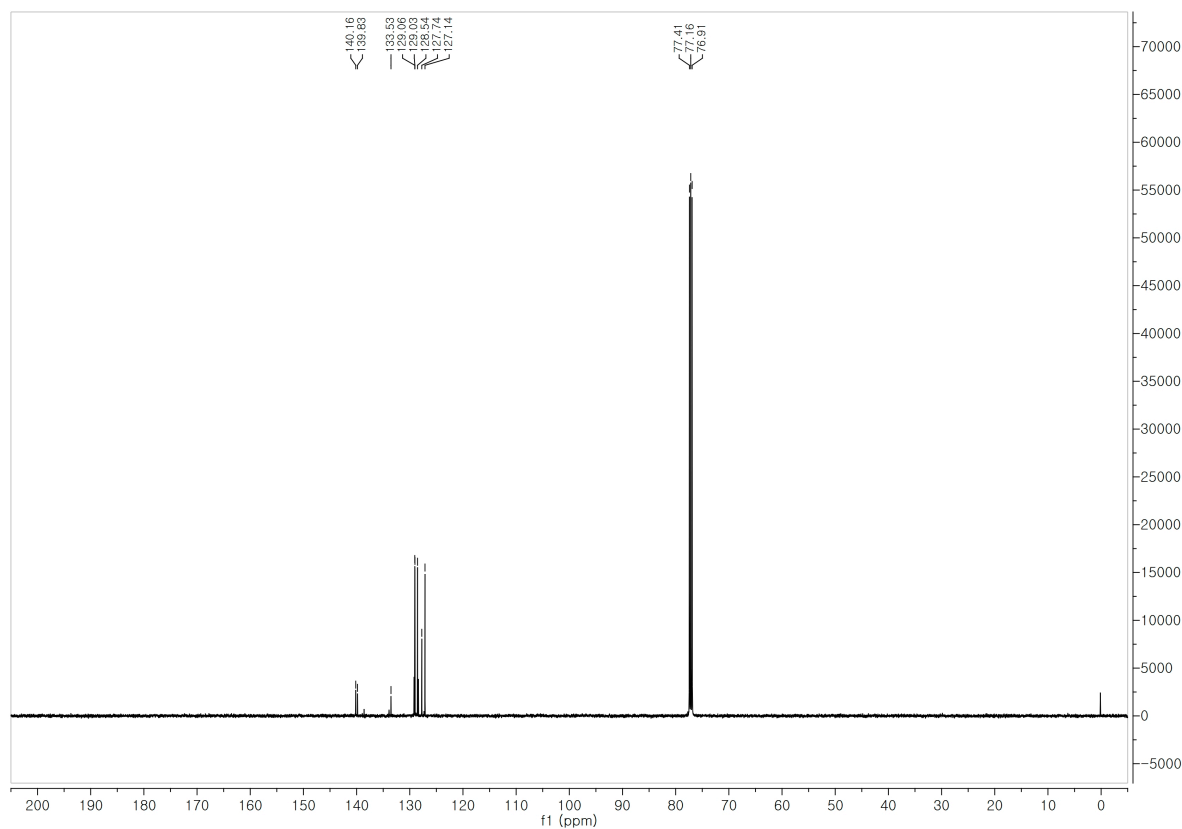


4-chloro-1,1'-biphenyl (4f)

^1H NMR spectrum of 4f

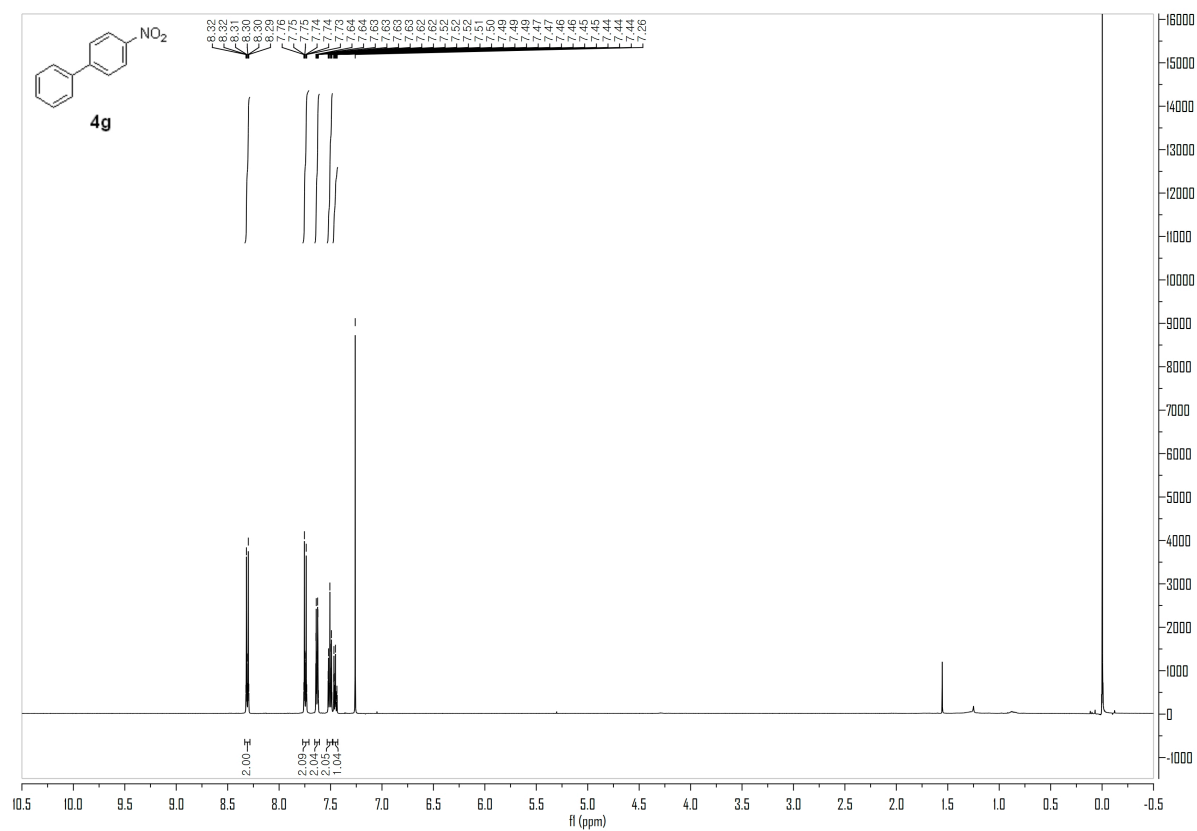


^{13}C NMR spectrum of 4f

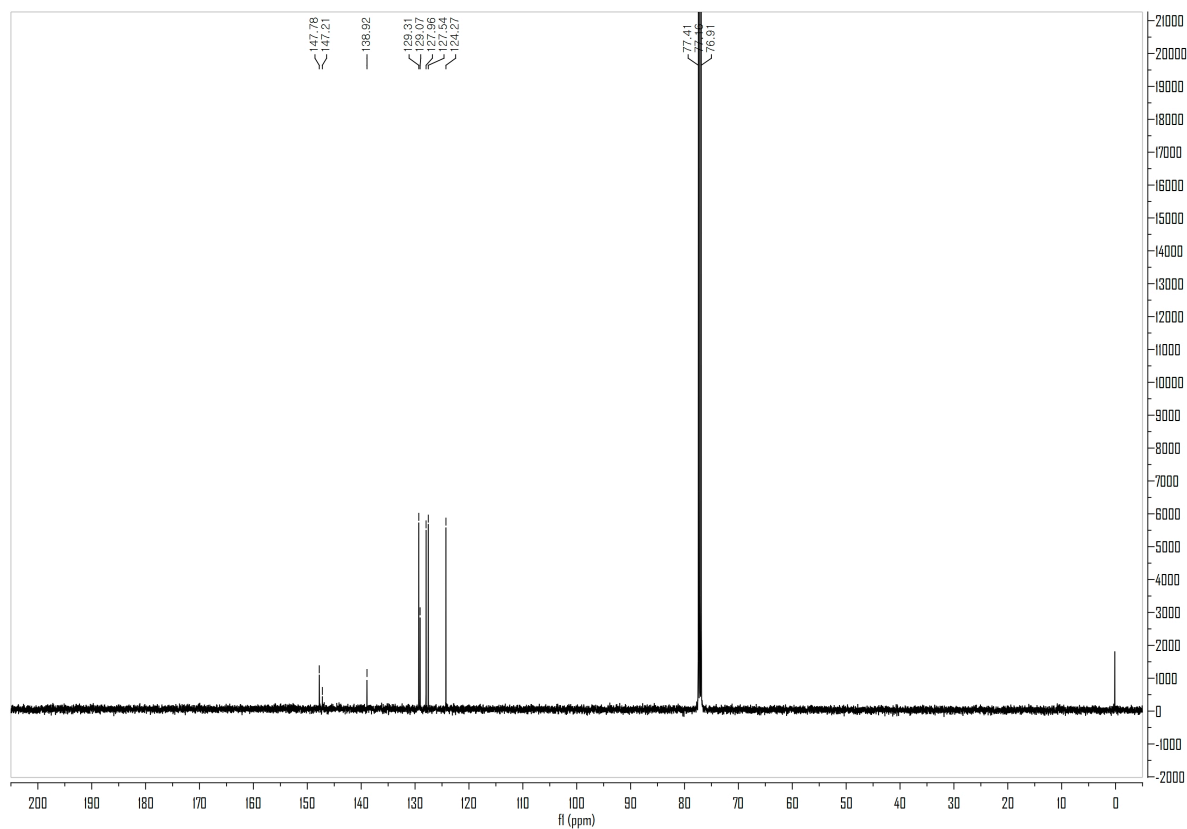


4-nitro-1,1'-biphenyl (4g)

¹H NMR spectrum of 4g

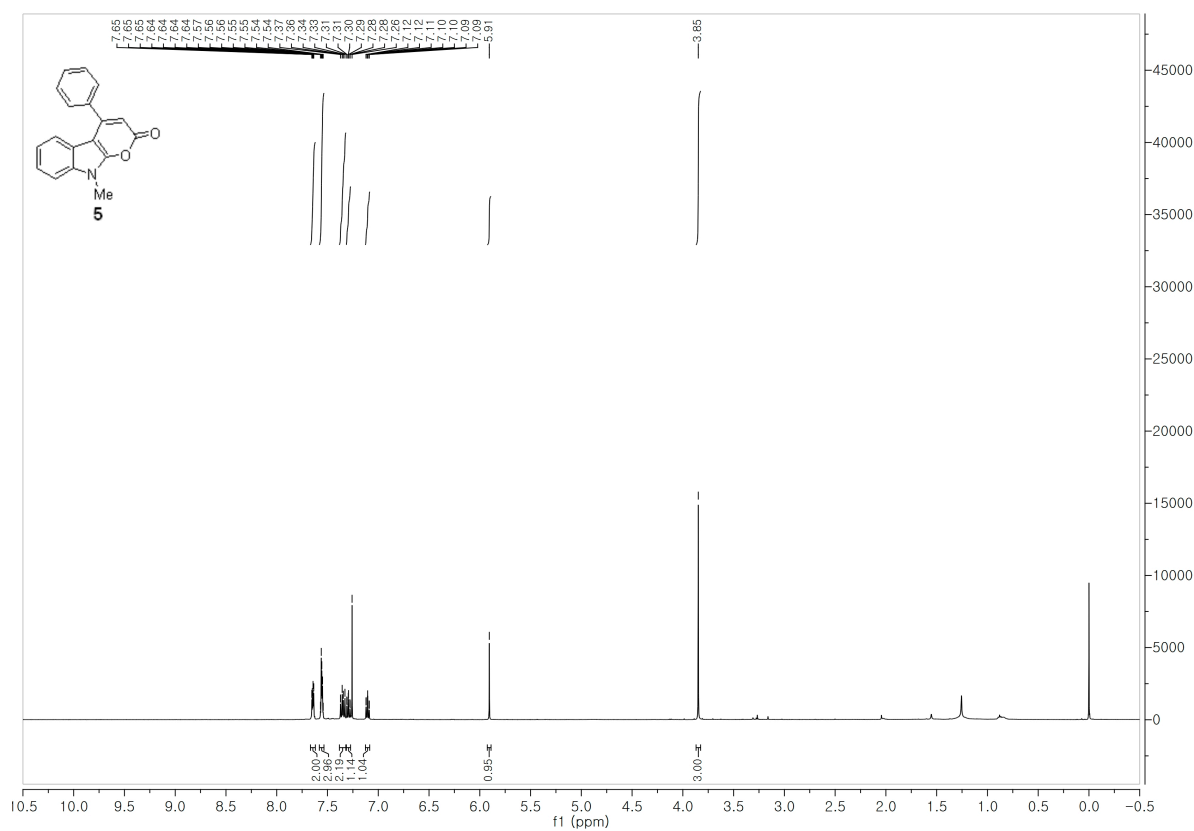


¹³C NMR spectrum of 4g

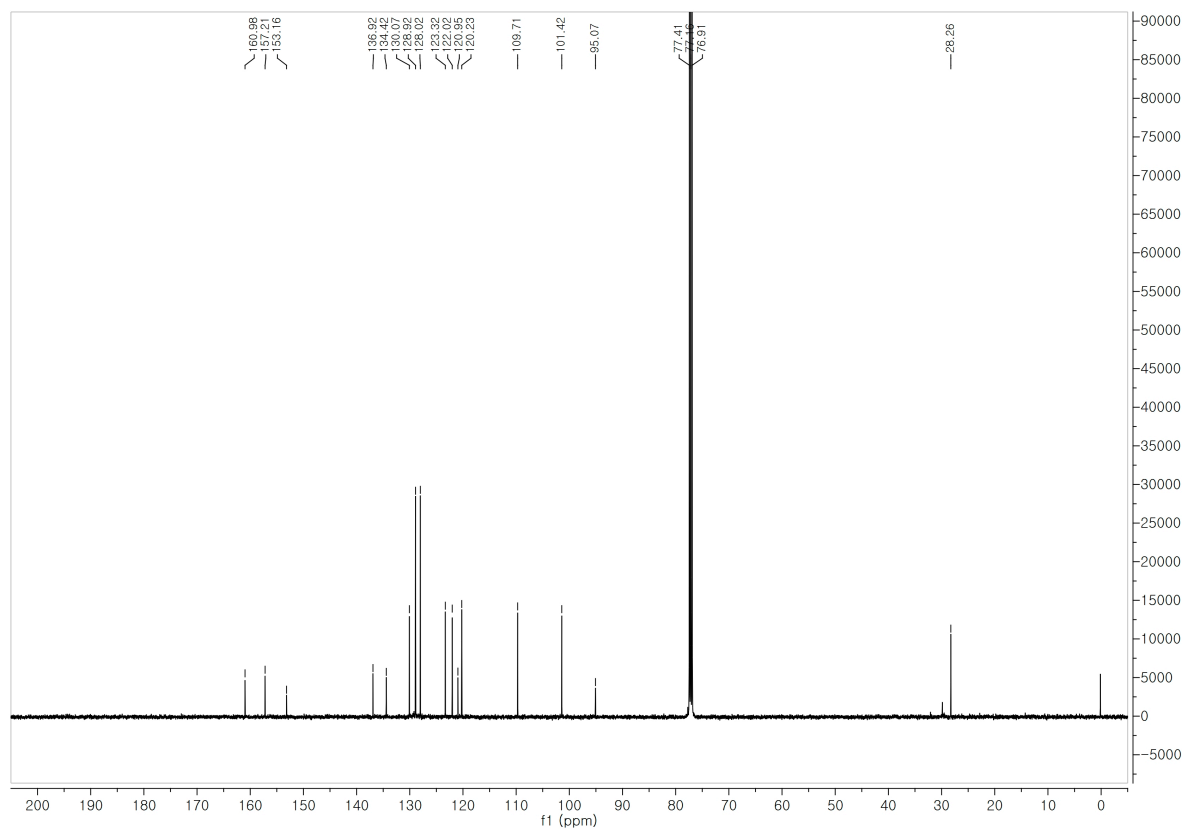


9-methyl-4-phenylpyrano[2,3-b]indol-2(9H)-one (5)

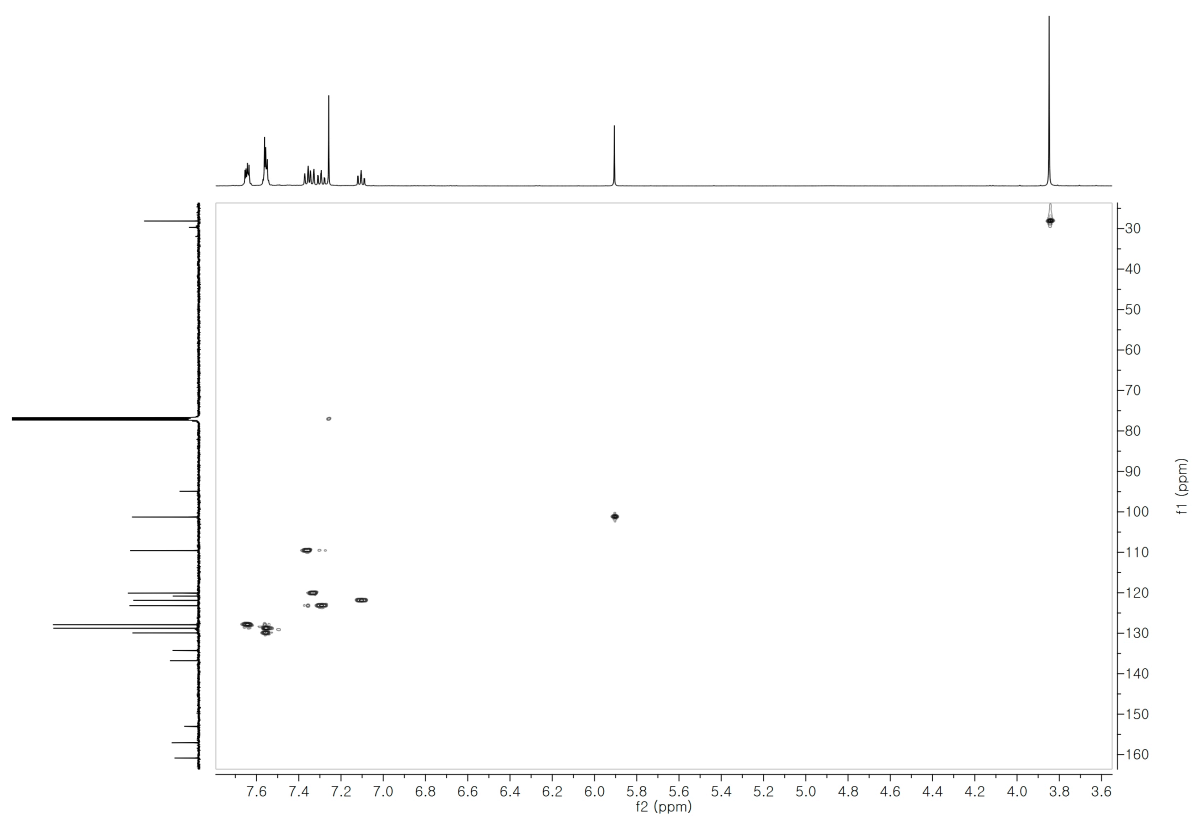
^1H NMR spectrum of 5



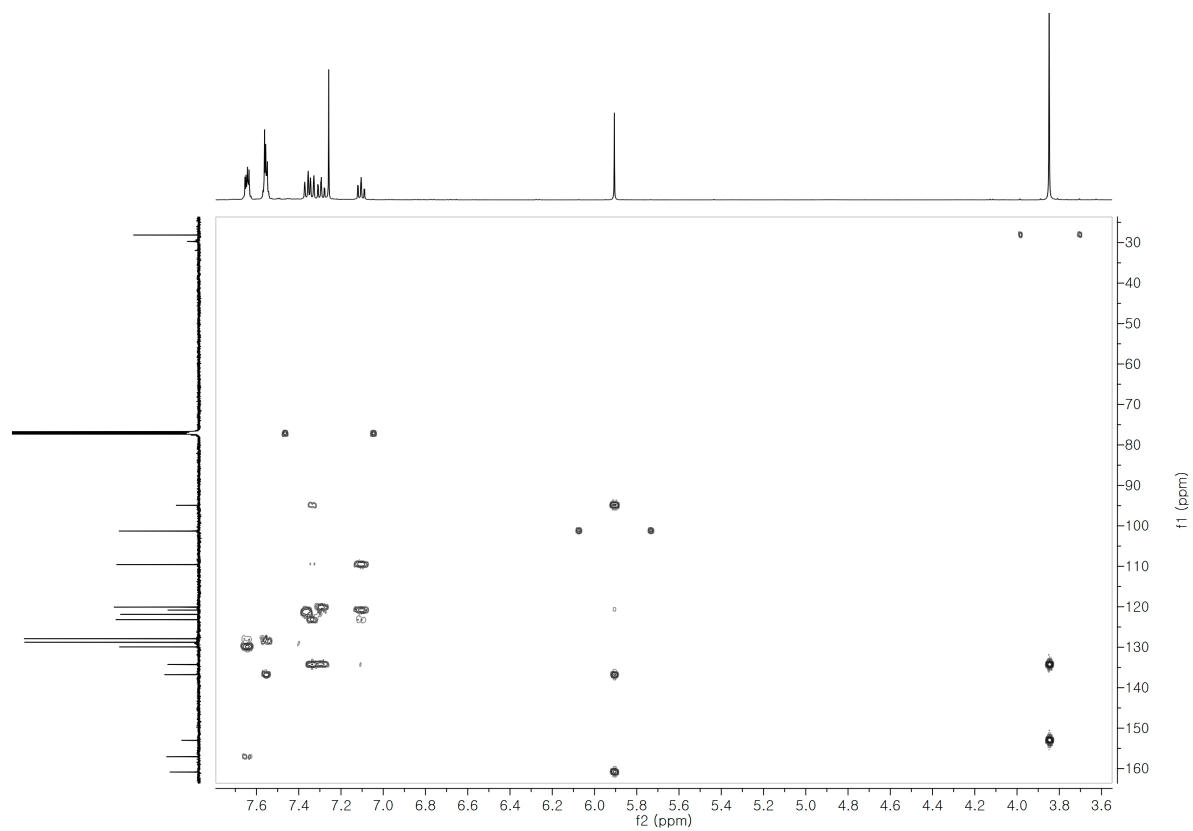
^{13}C NMR spectrum of 5



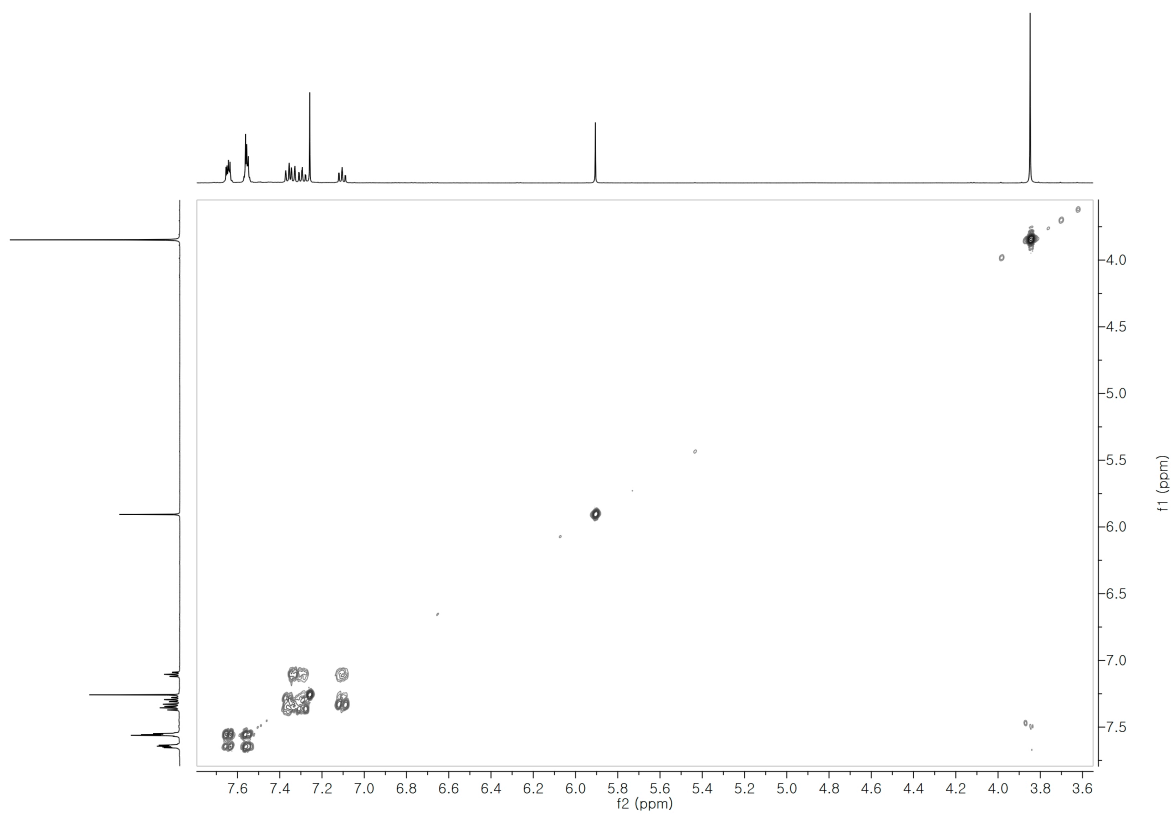
HSQC spectrum of 5



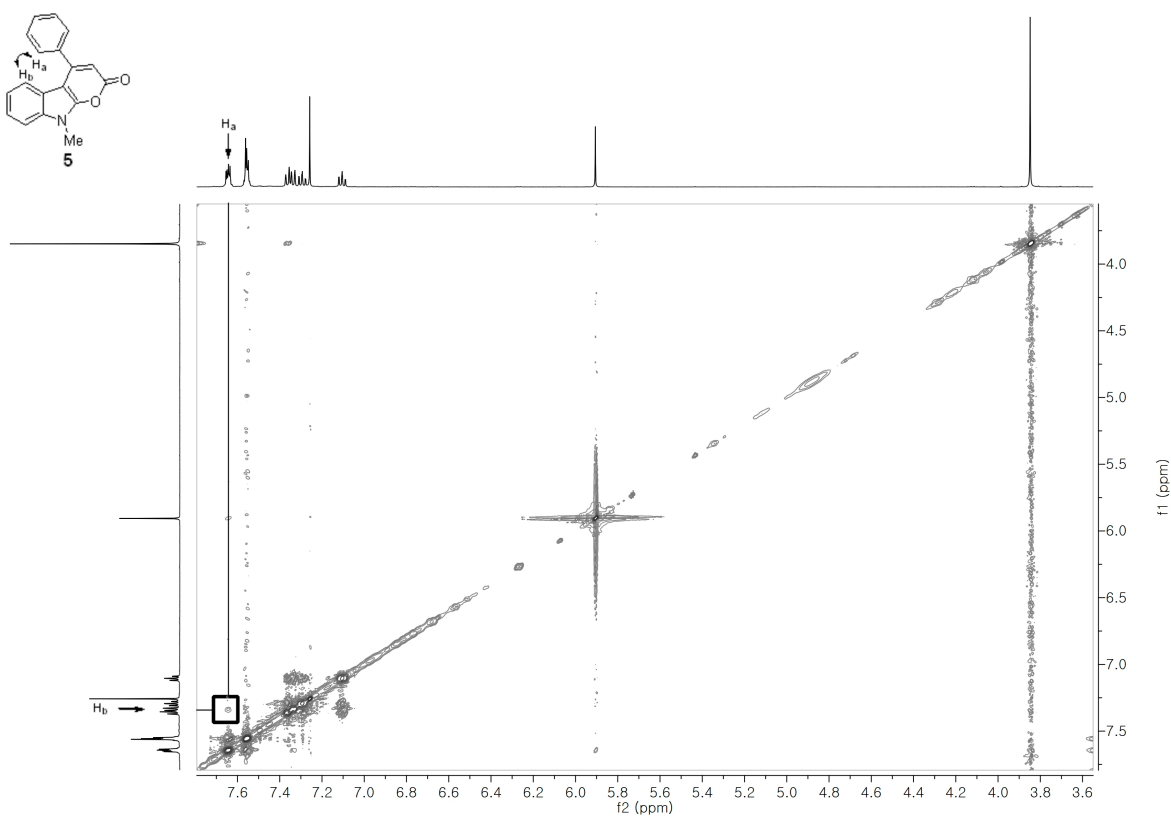
HMBC spectrum of 5



COSY spectrum of **5**

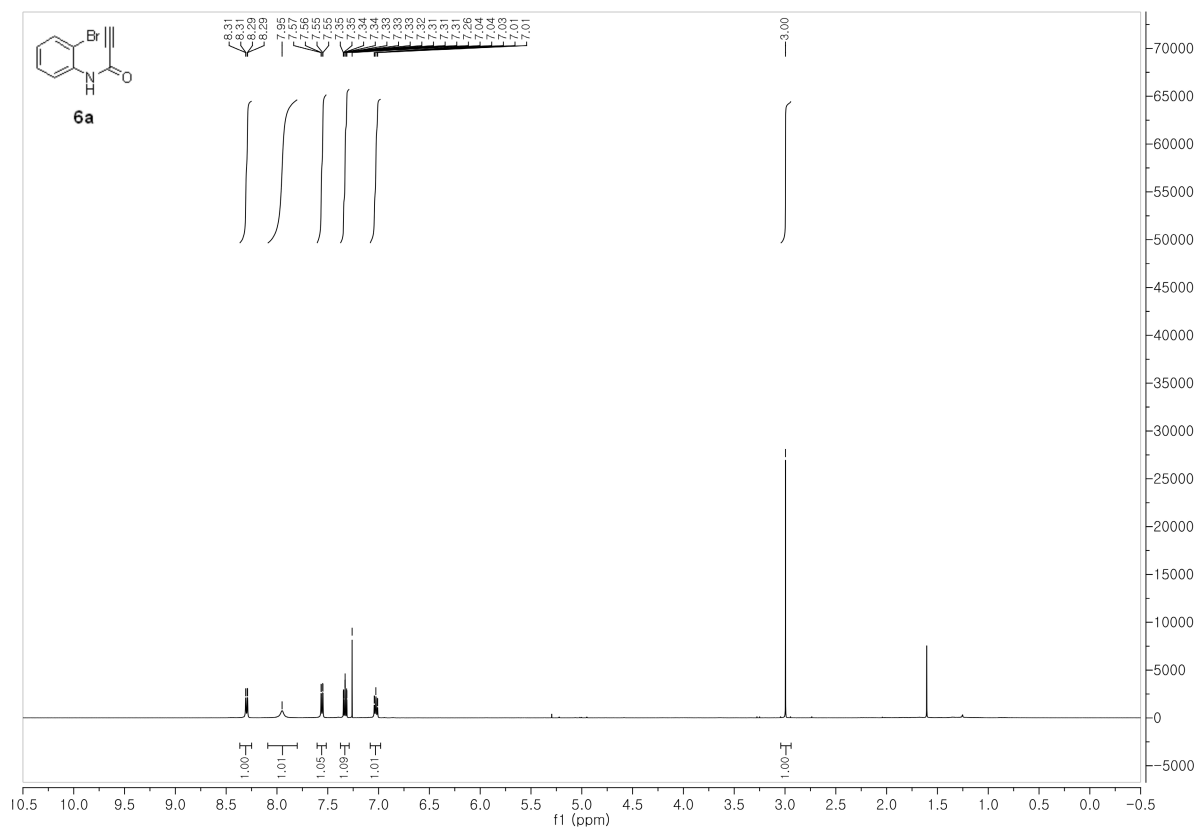


ROESY spectrum of **5**

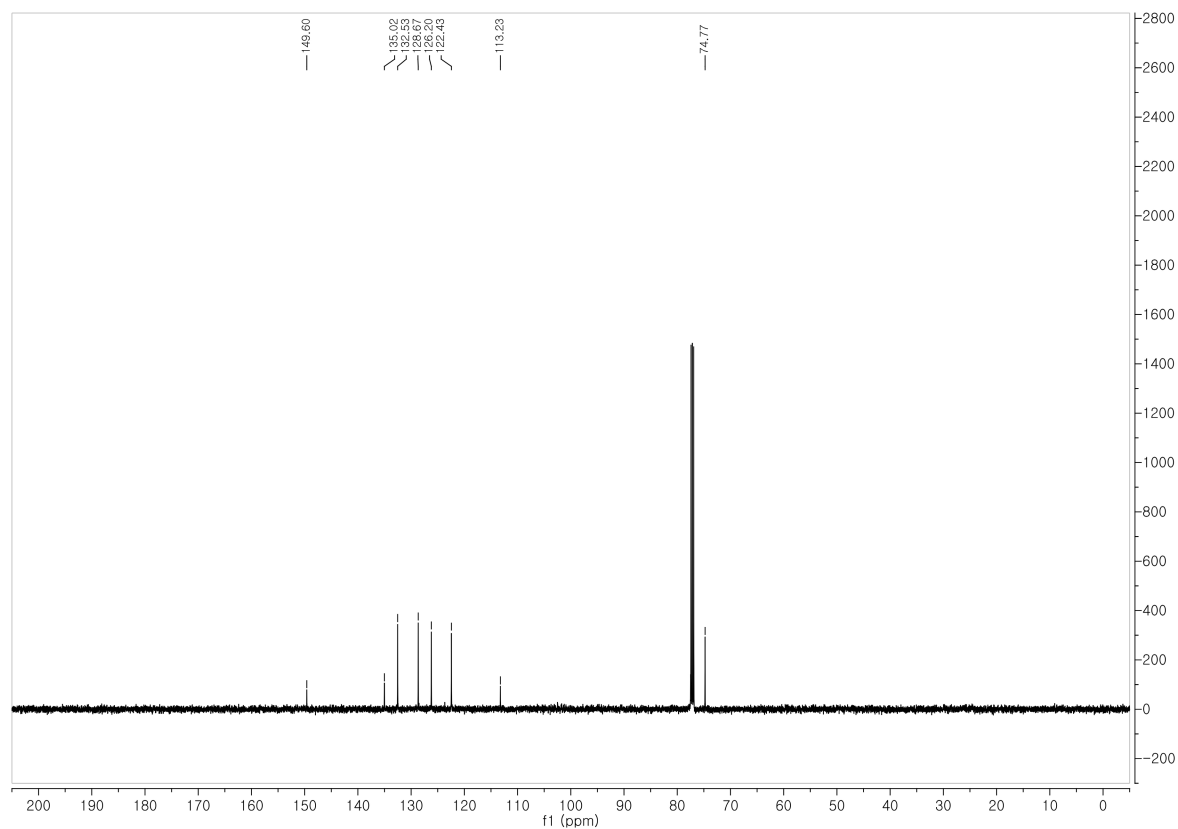


N-(2-bromophenyl)propiolamide (6a)

¹H NMR spectrum of 6a

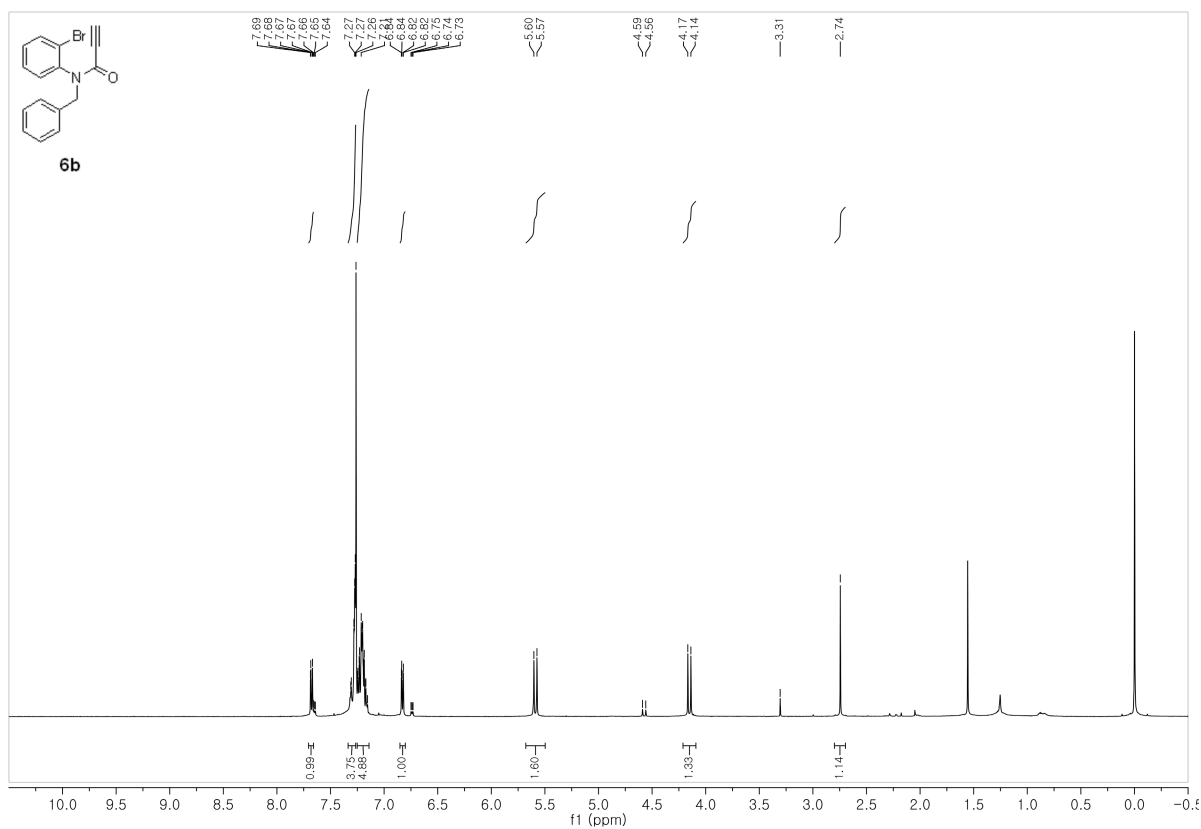


¹³C NMR spectrum of 6a

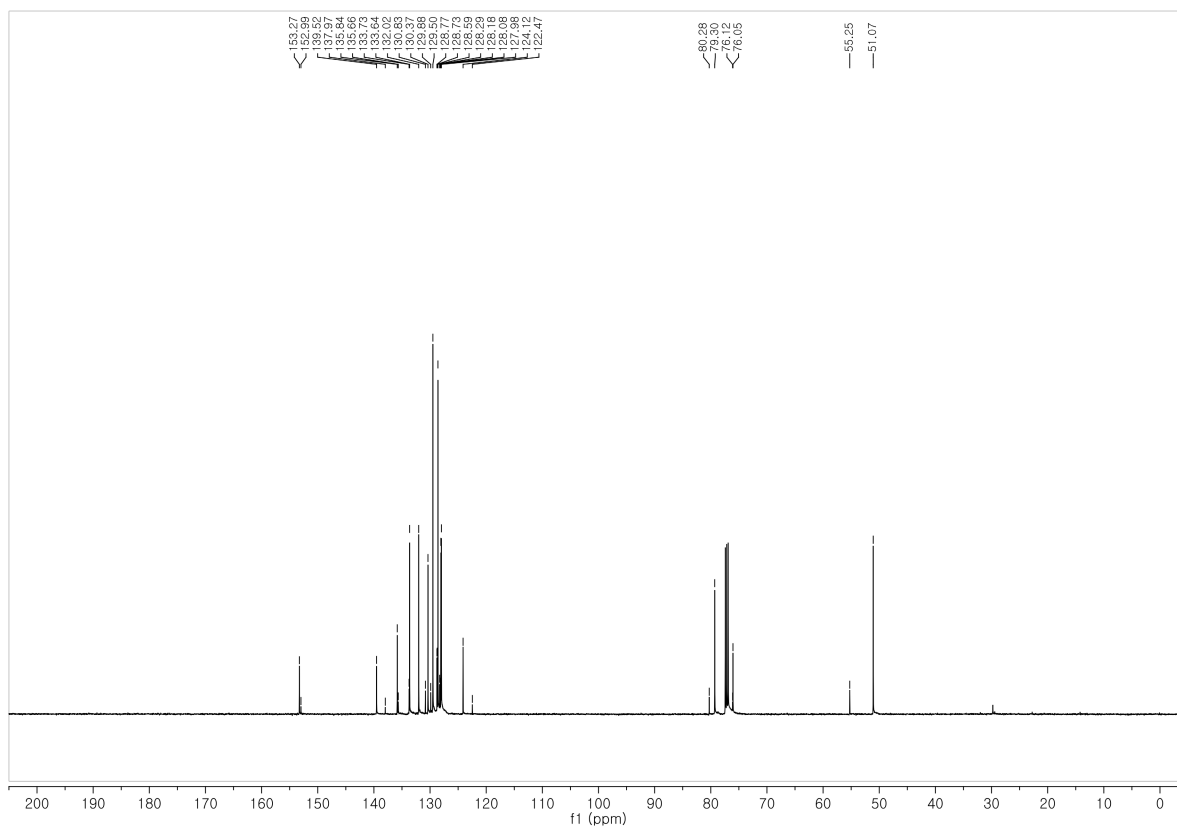


***N*-benzyl-*N*-(2-bromophenyl)propiolamide (6b)**

¹H NMR spectrum of 6b

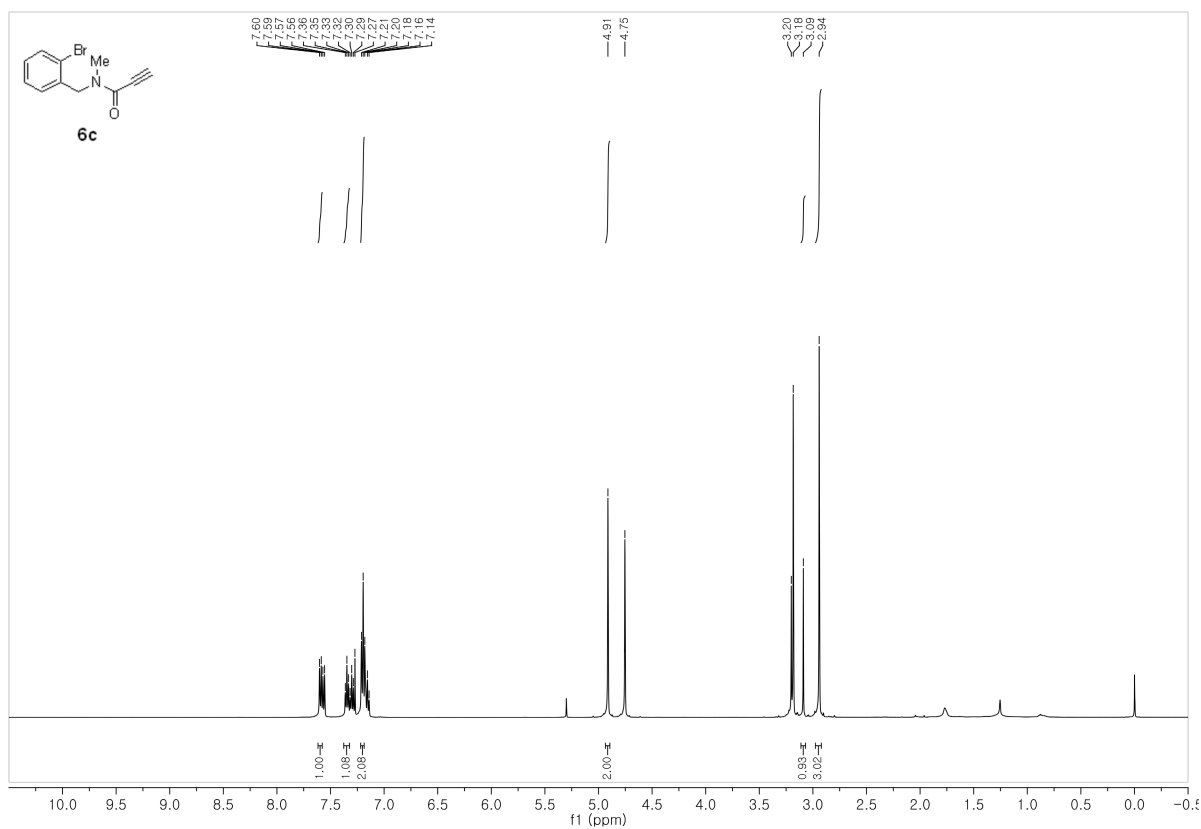


^{13}C NMR spectrum of 6b

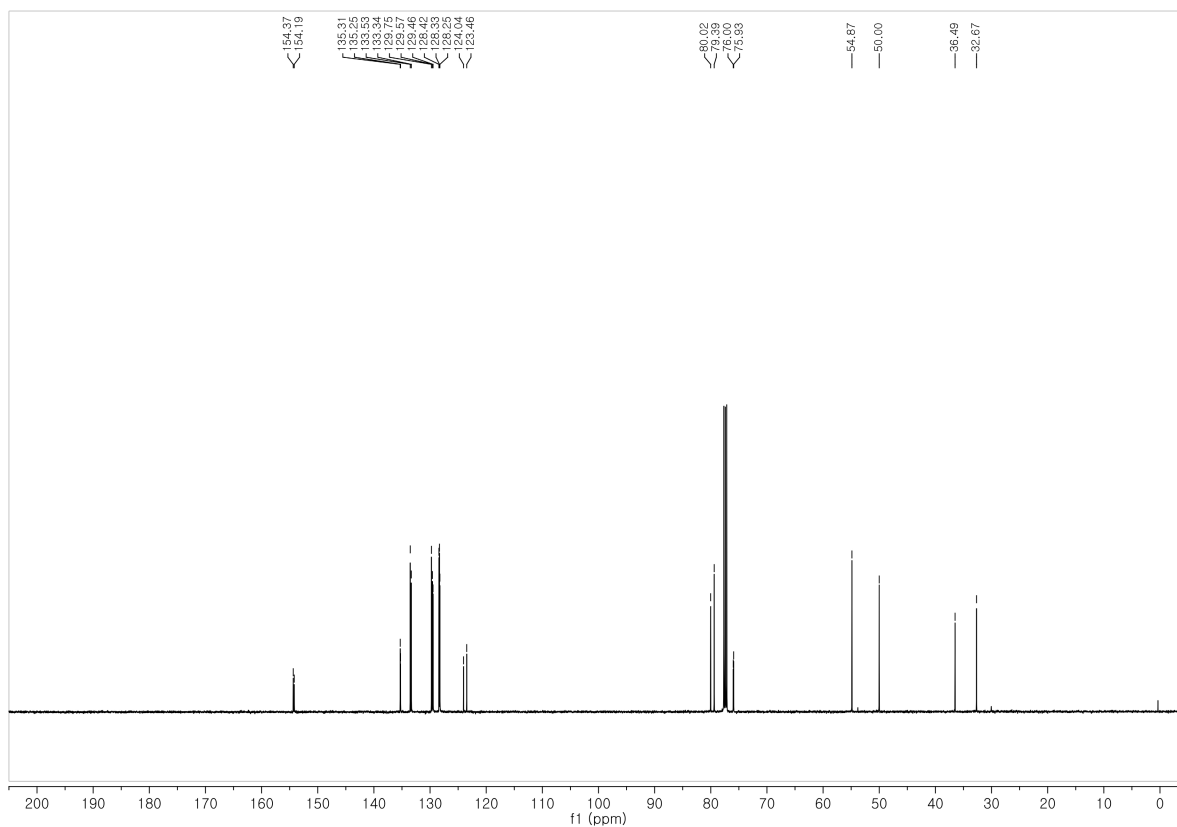


N-(2-bromobenzyl)-*N*-methylpropiolamide (6c)

¹H NMR spectrum of 6c

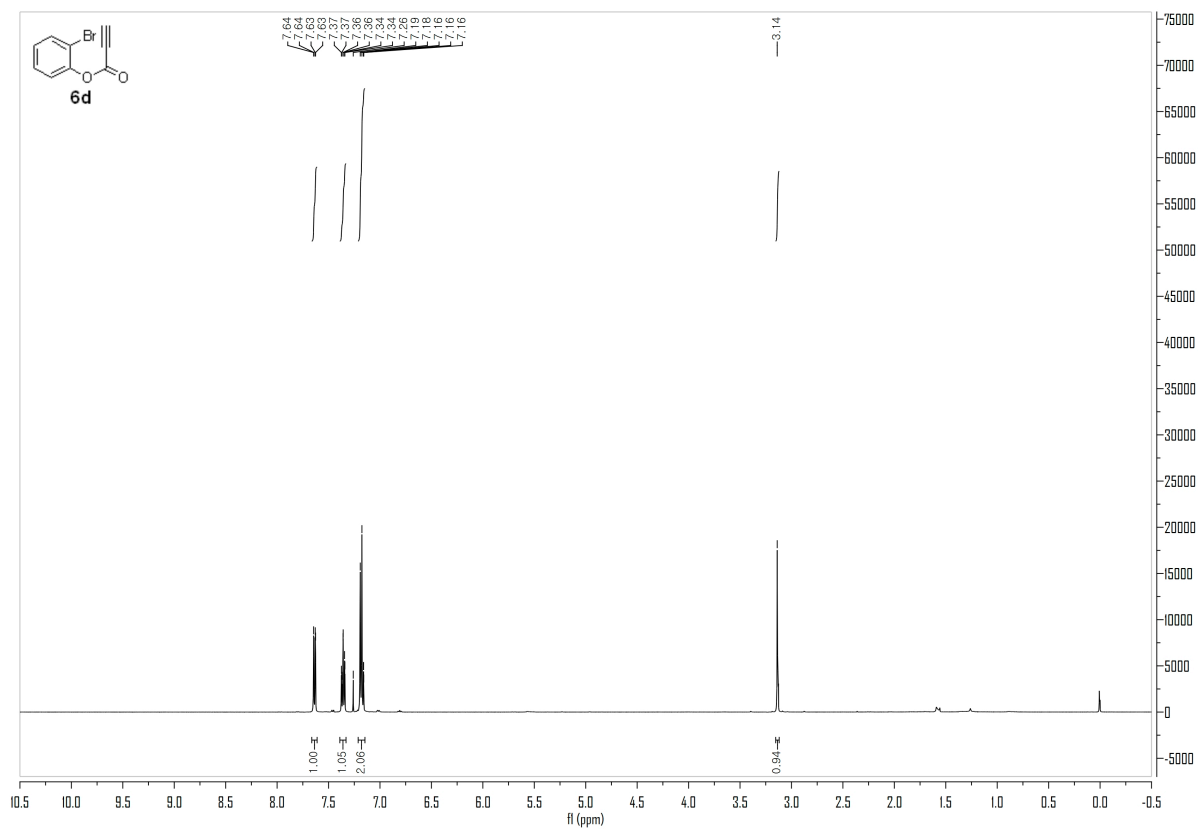


¹³C NMR spectrum of 6c

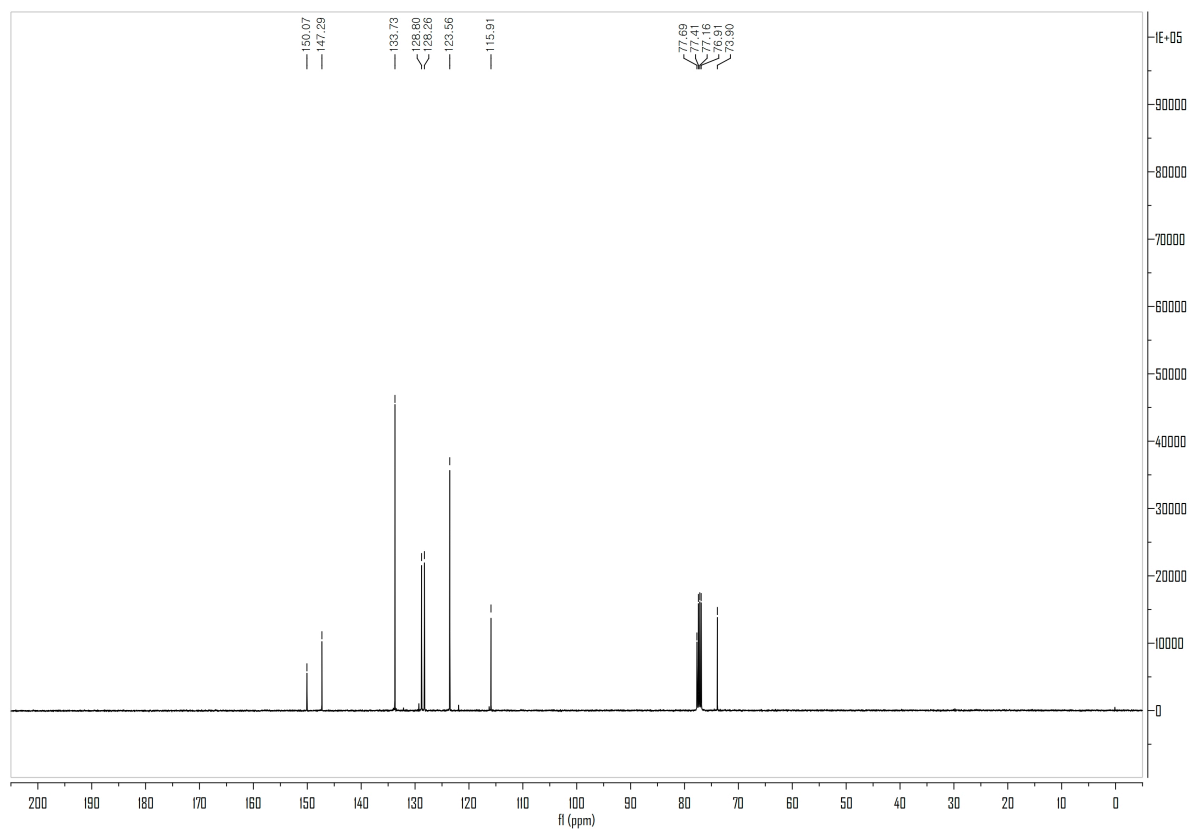


2-bromophenyl propiolate (6d)

^1H NMR spectrum of 6d

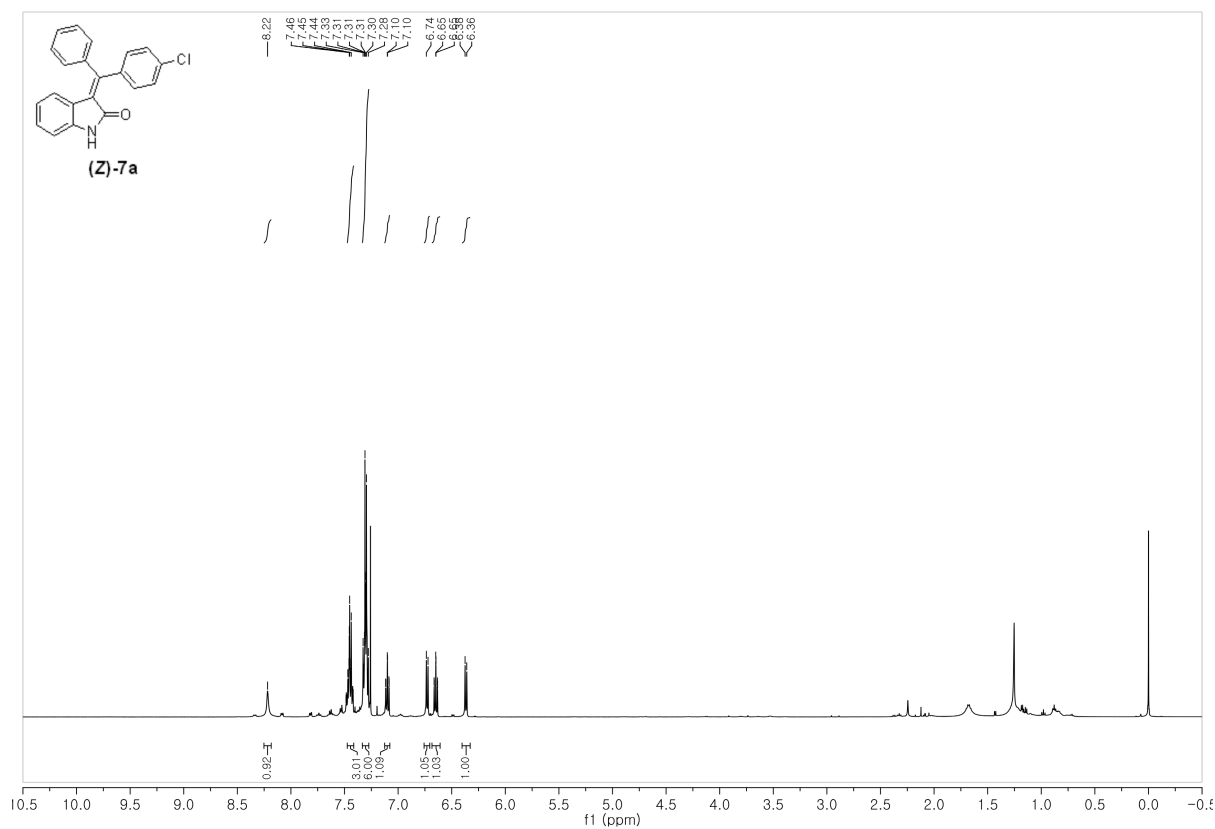


^{13}C NMR spectrum of 6d

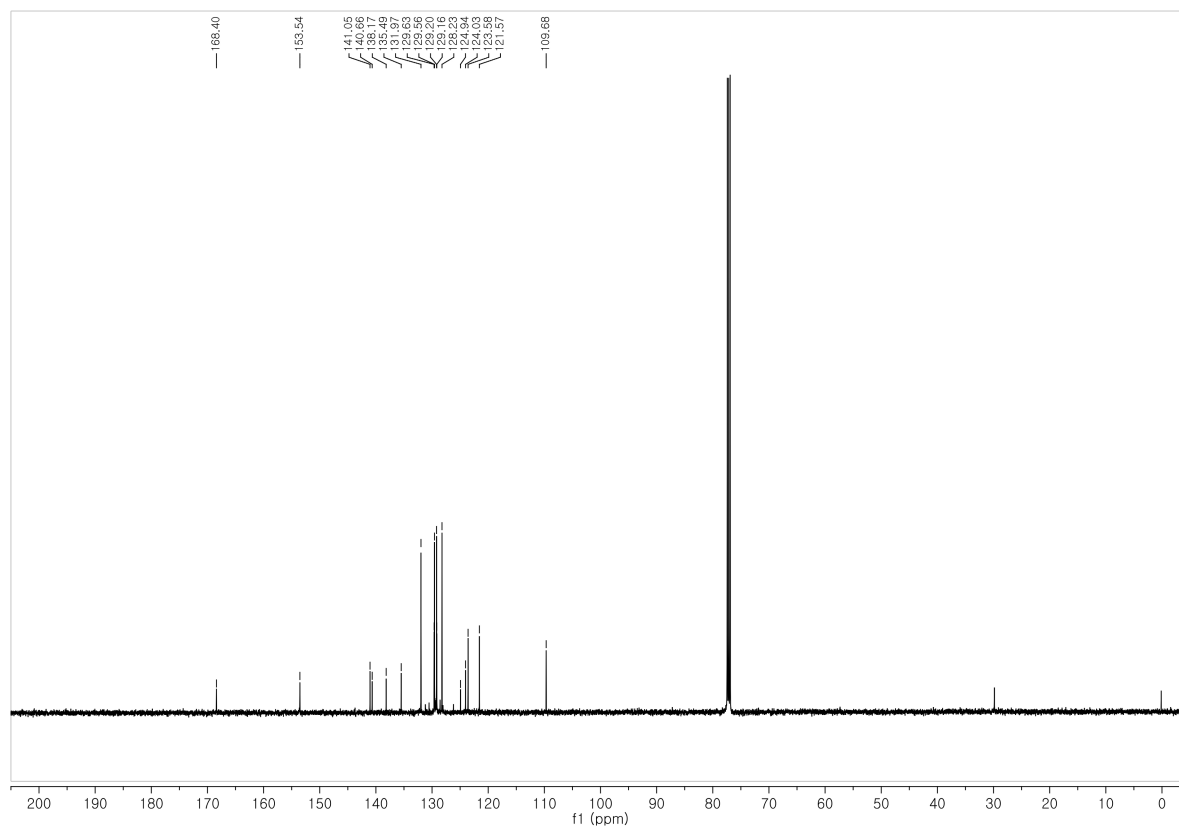


(Z)-3-((4-chlorophenyl)(phenyl)methylene)indolin-2-one one ((Z)-7a)

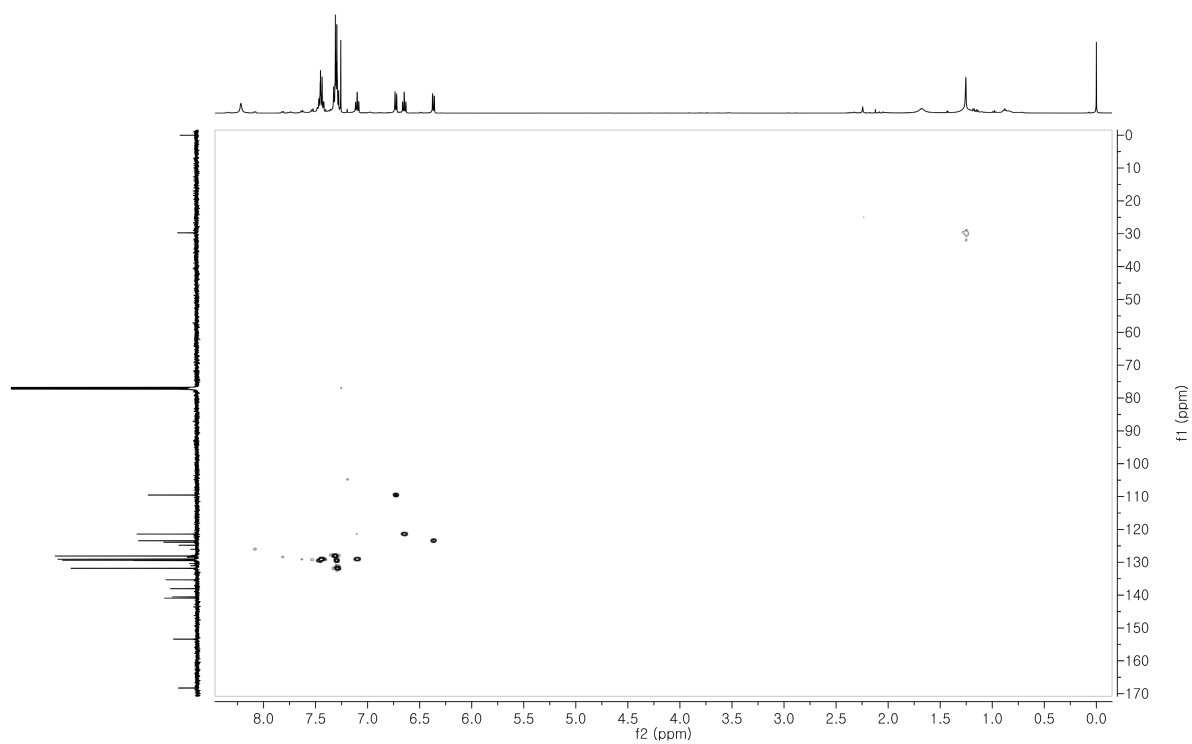
¹H NMR spectrum of (Z)-7a



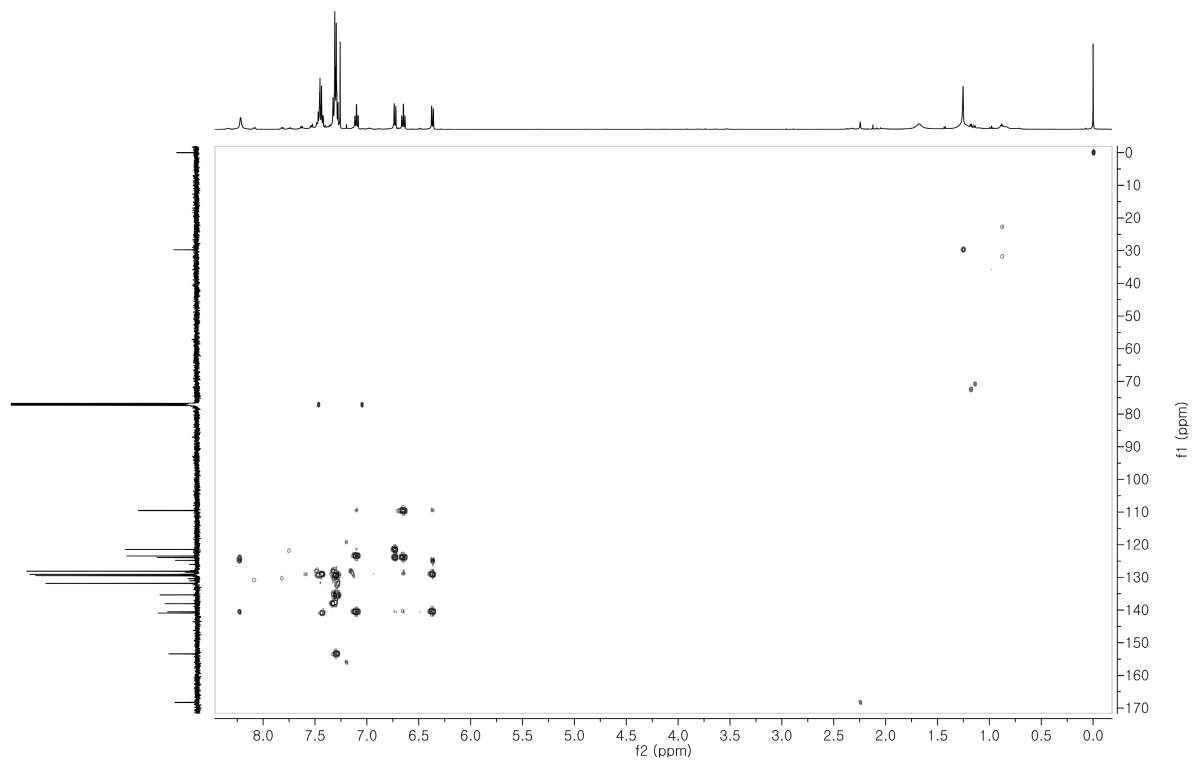
¹³C NMR spectrum of (Z)-7a



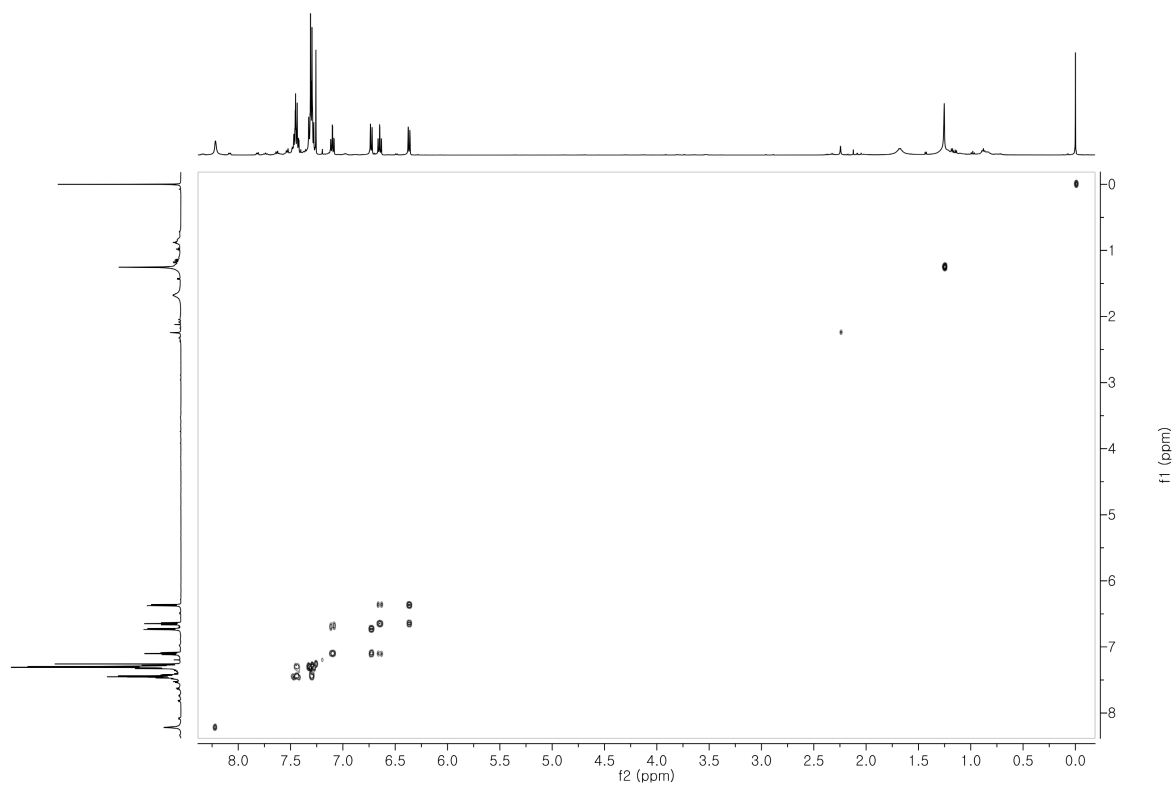
HSQC spectrum of (Z)-7a



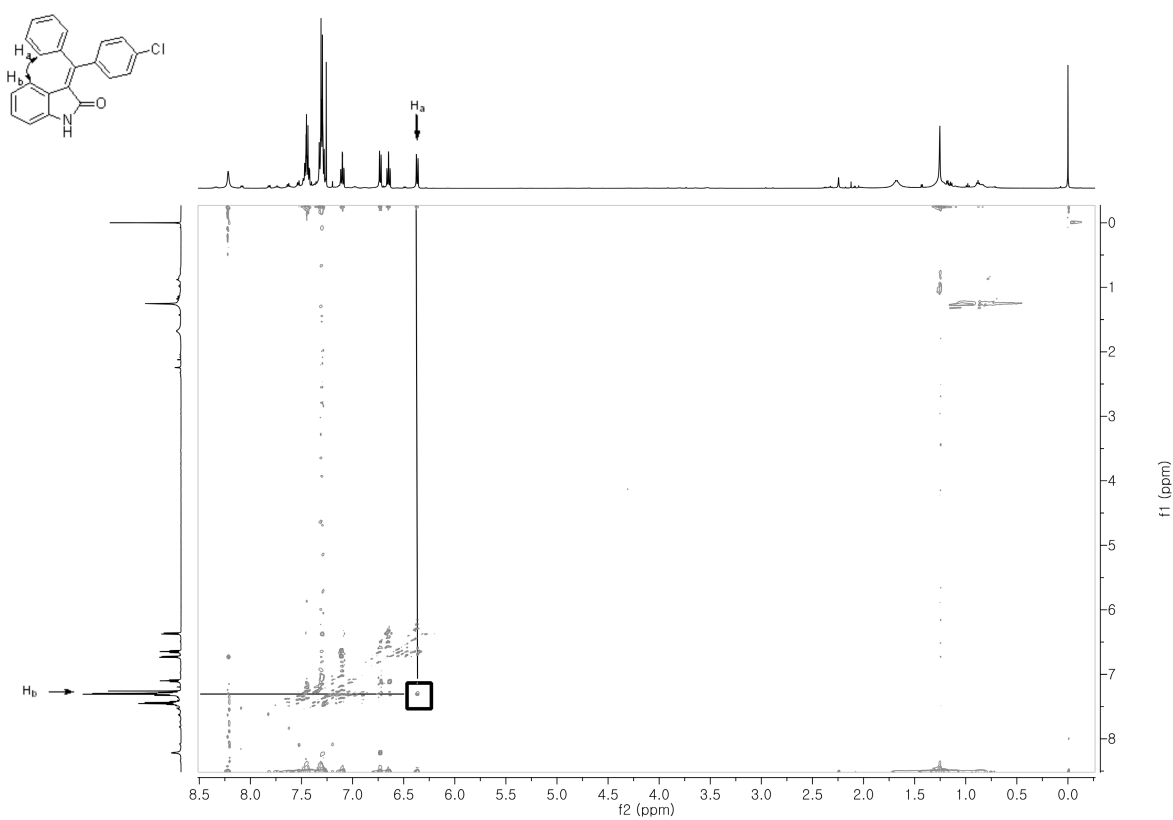
HMBC spectrum of (Z)-7a



COSY spectrum of (Z)-7a

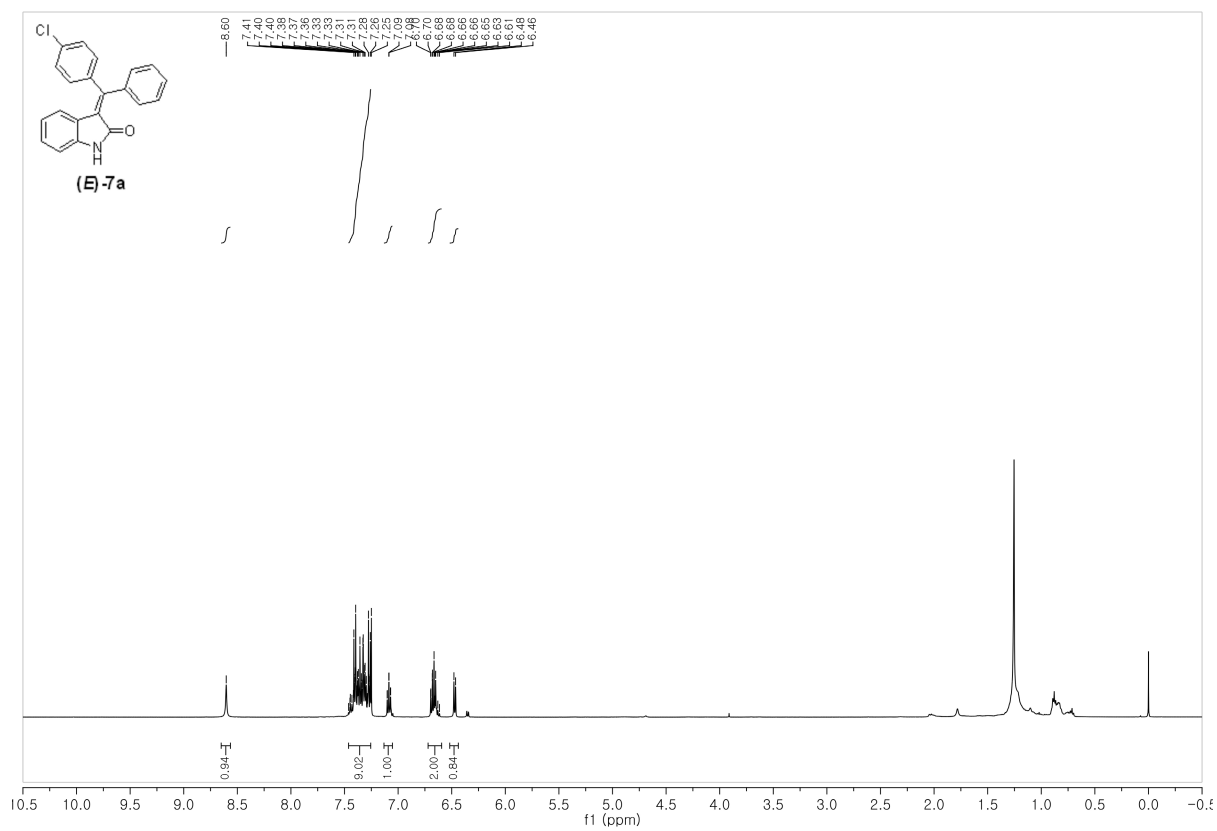


ROESY spectrum of (Z)-7a

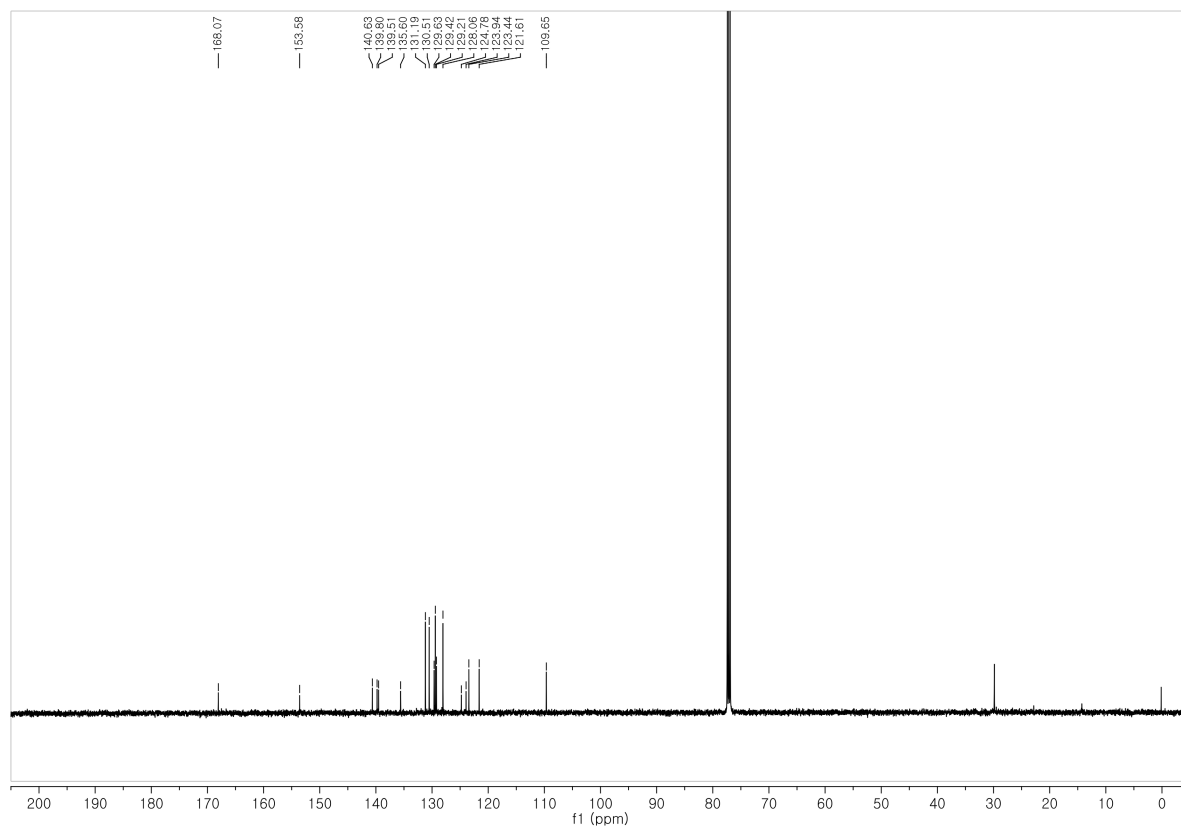


(E)-3-((4-chlorophenyl)(phenyl)methylene)indolin-2-one ((E)-7a)

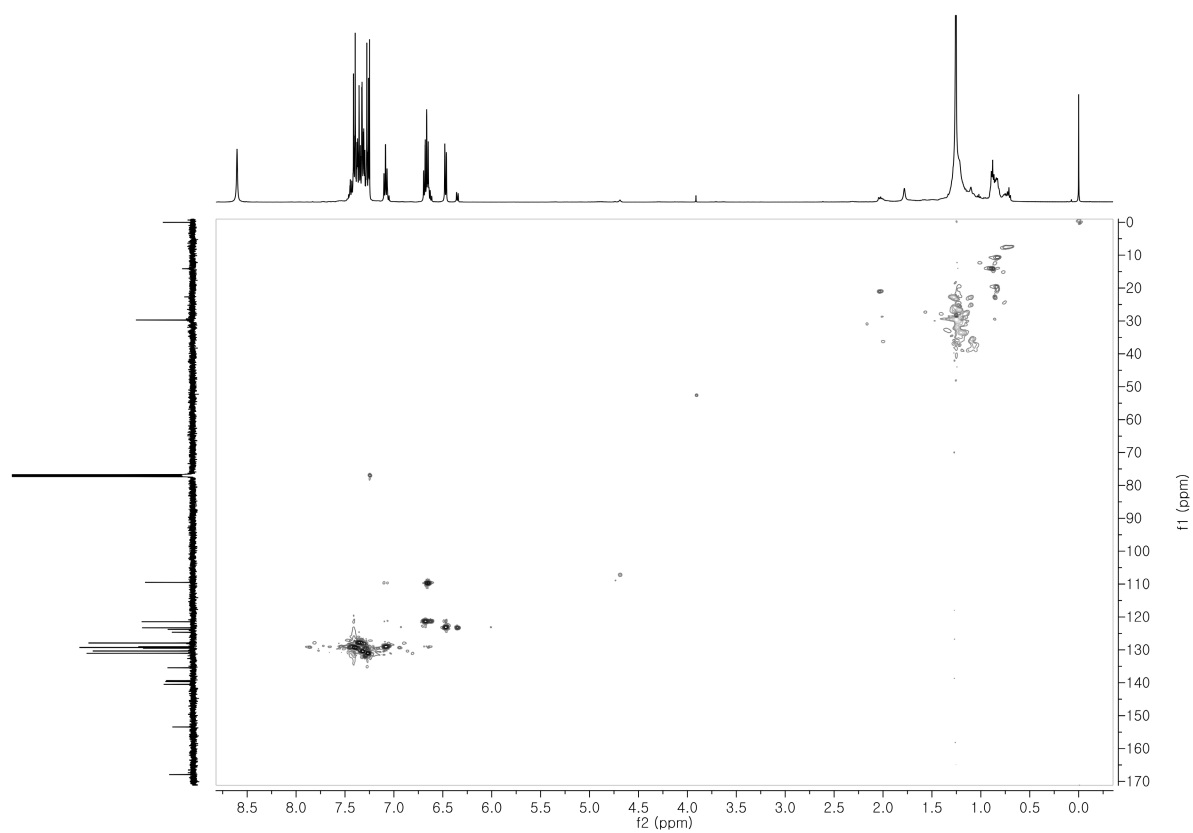
¹H NMR spectrum of (E)-7a



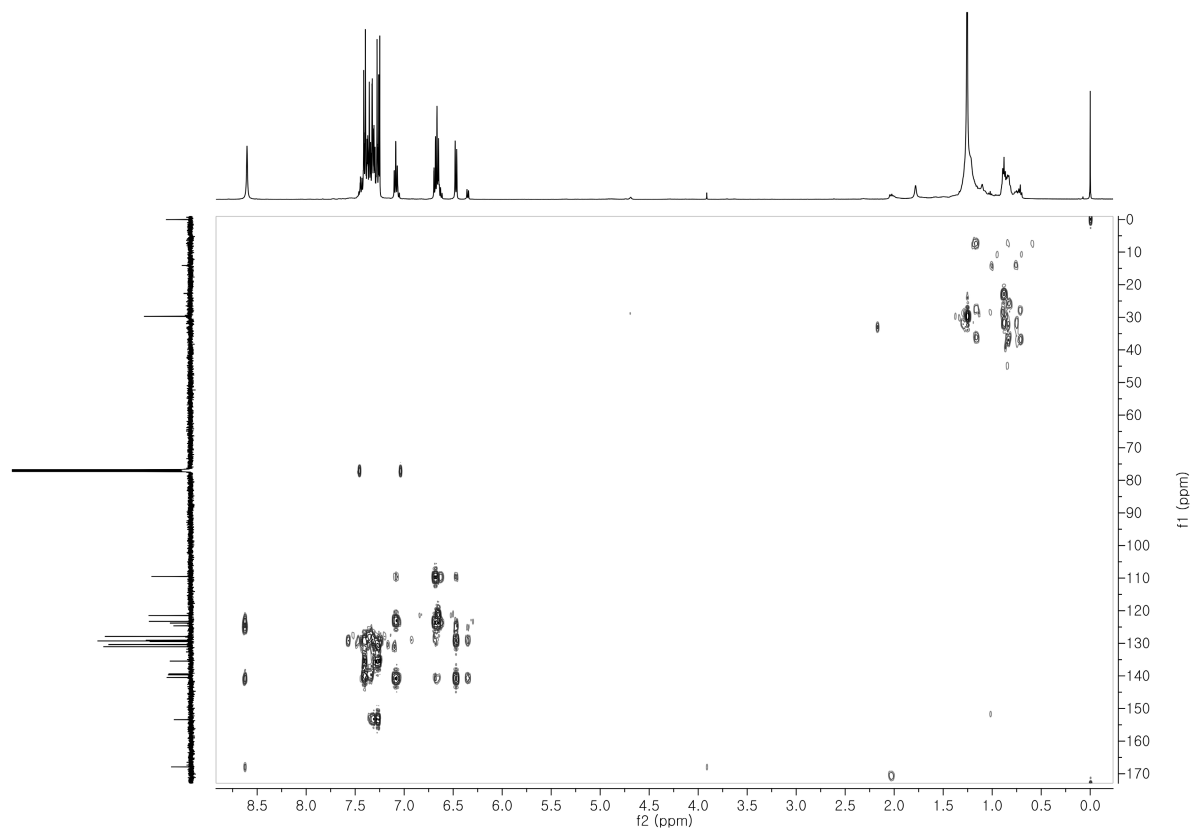
¹³C NMR spectrum of (E)-7a



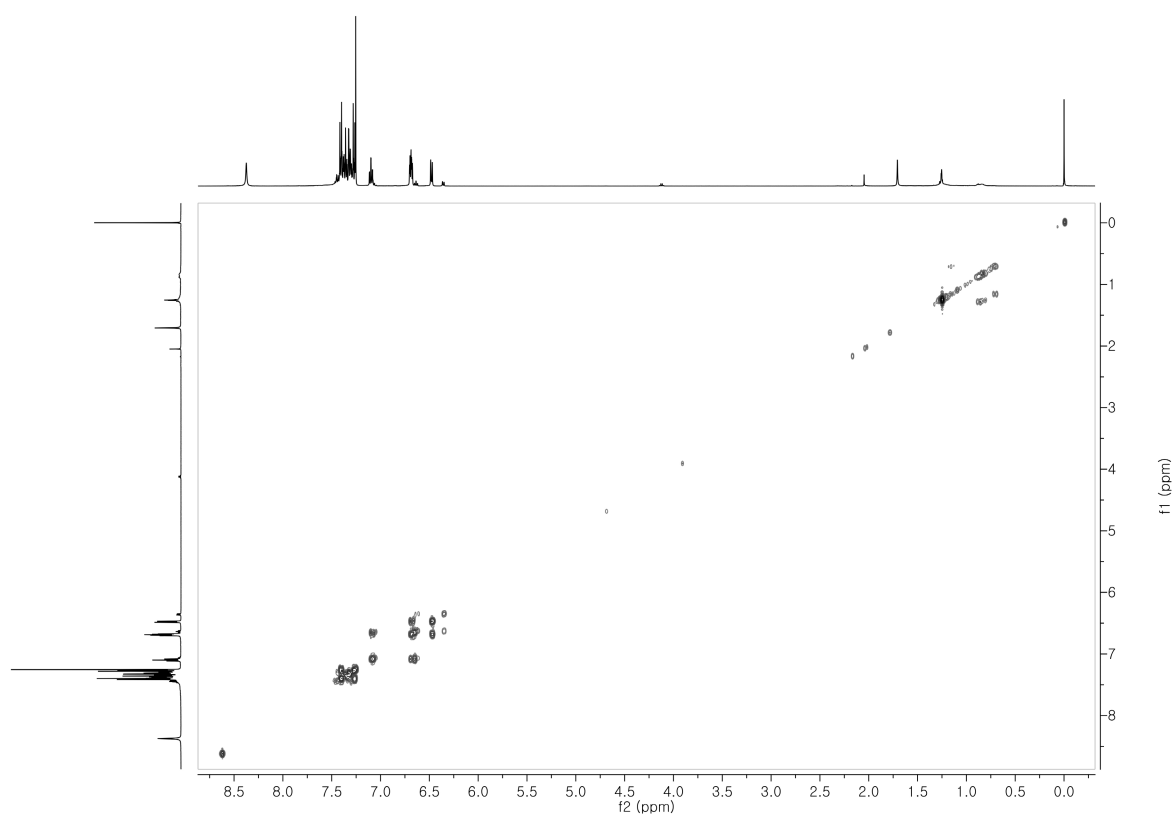
HSQC spectrum of (*E*)-7a



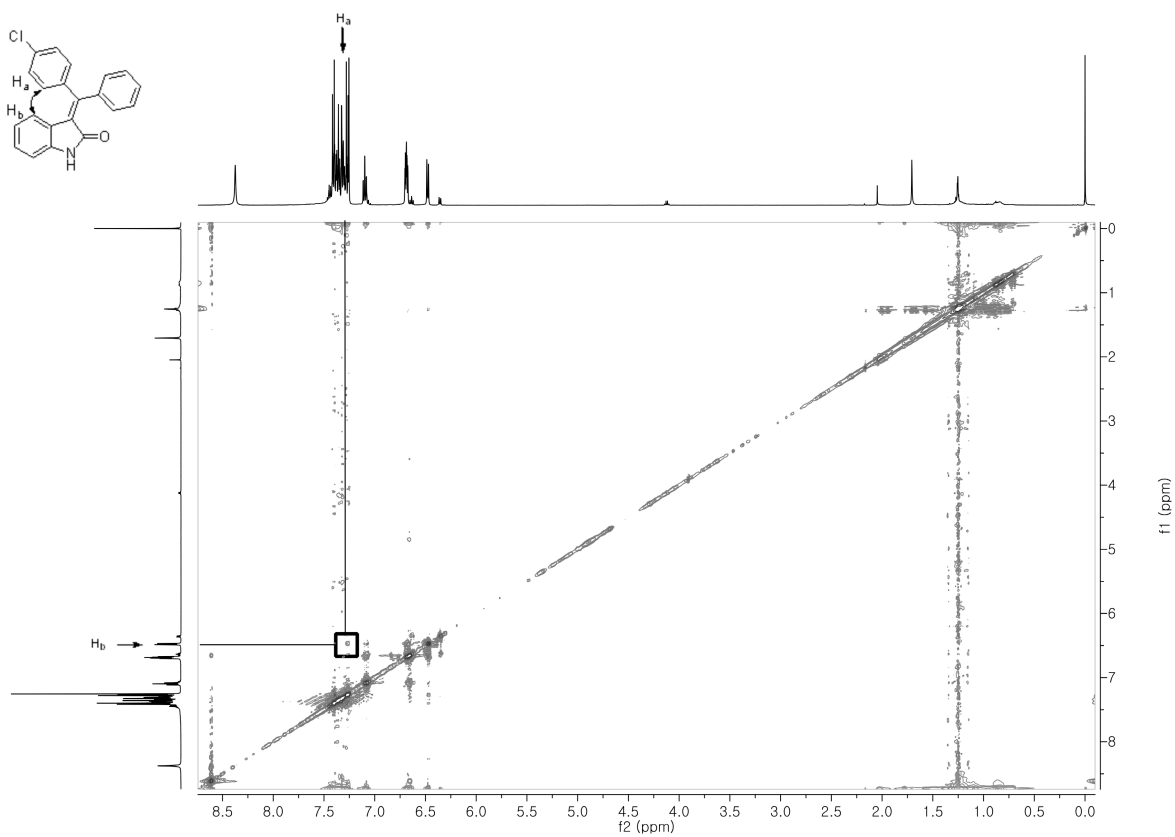
HMBC spectrum of (*E*)-7a



COSY spectrum of (*E*)-7a

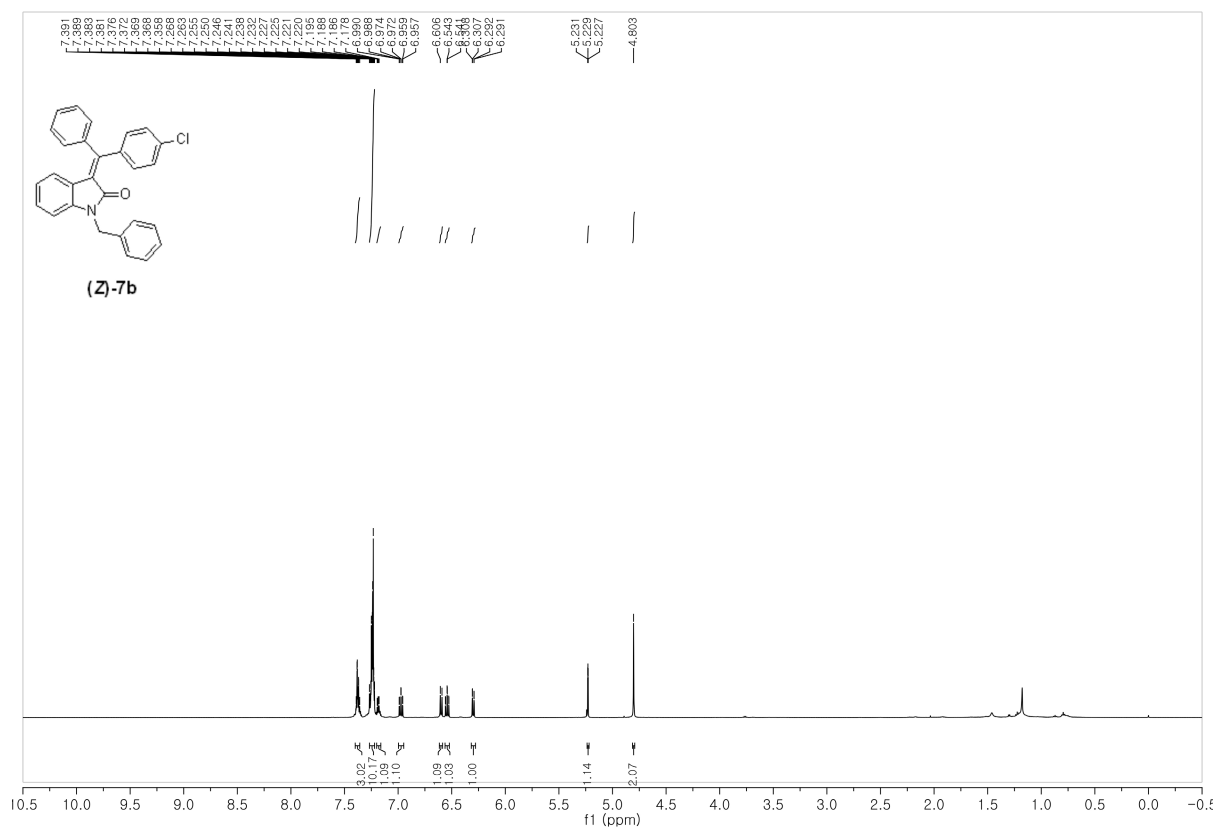


ROESY spectrum of (*E*)-7a

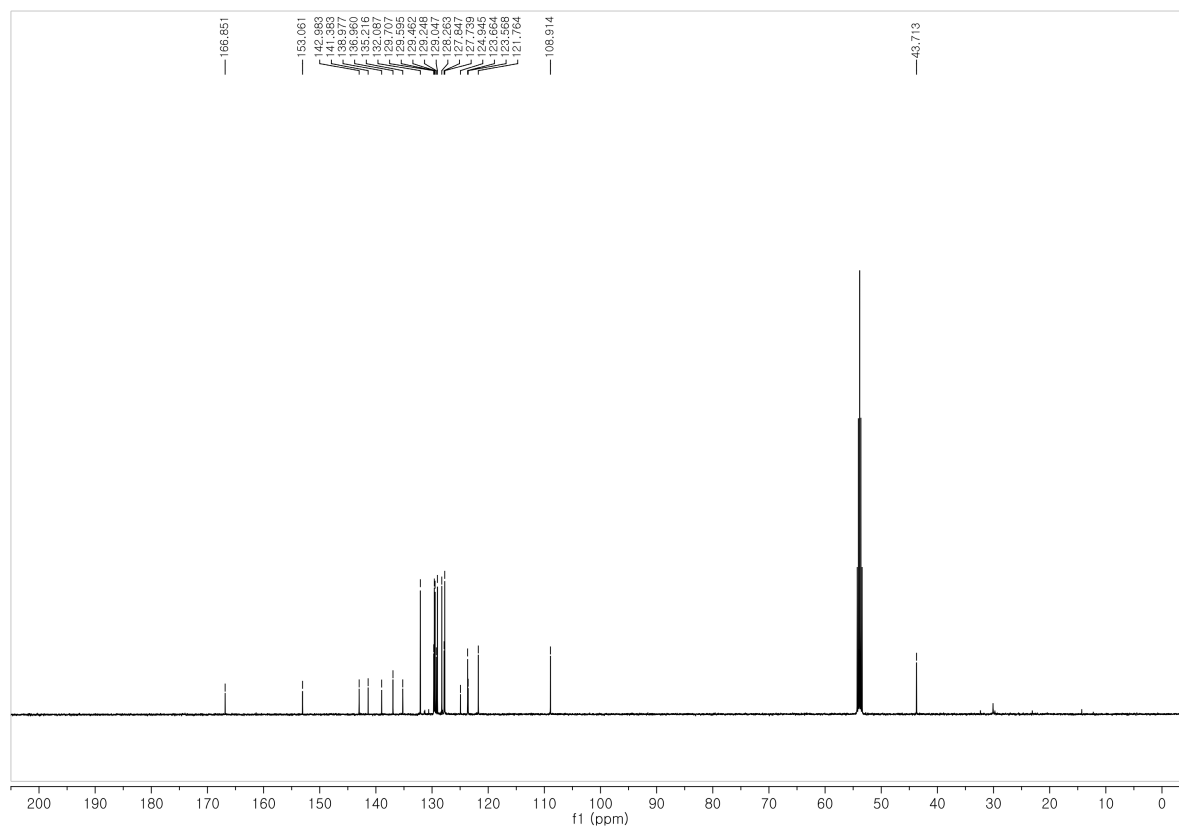


(Z)-1-benzyl-3-((4-chlorophenyl)(phenyl)methylene)indolin-2-one ((Z)-7b)

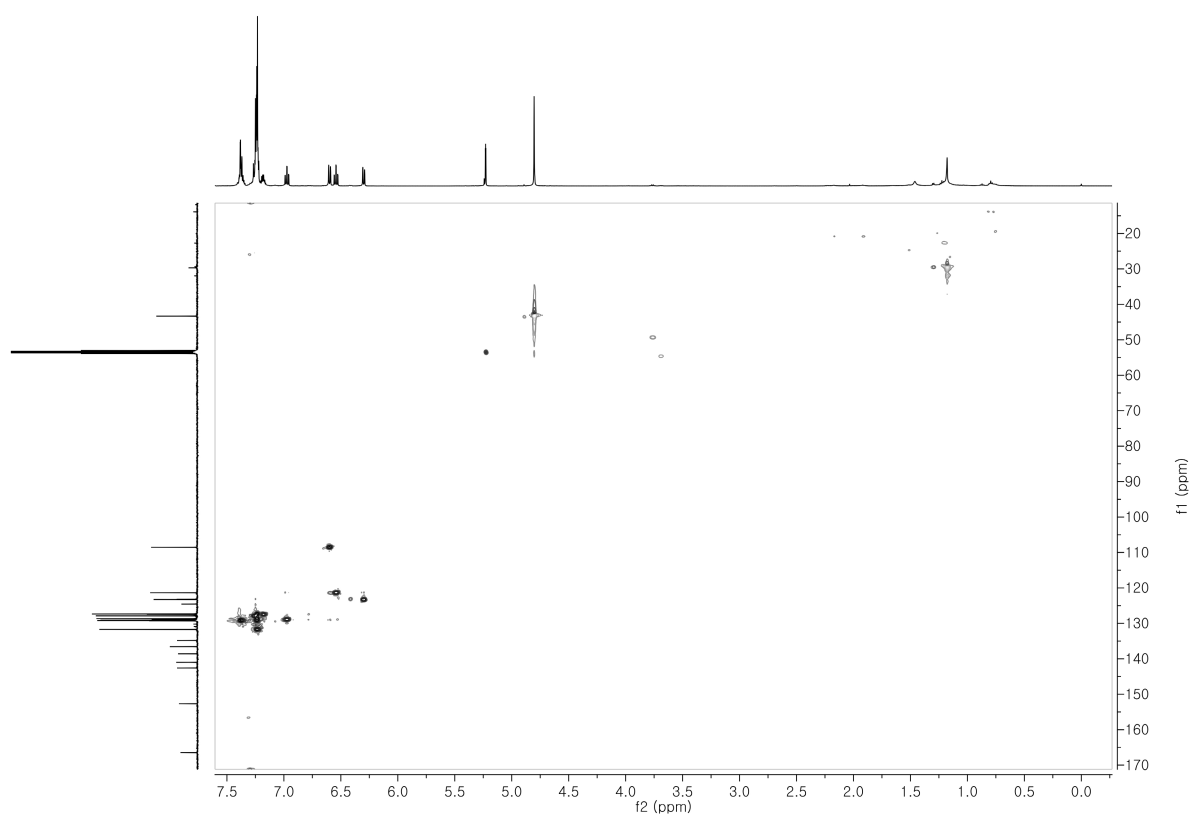
¹H NMR spectrum of (Z)-7b



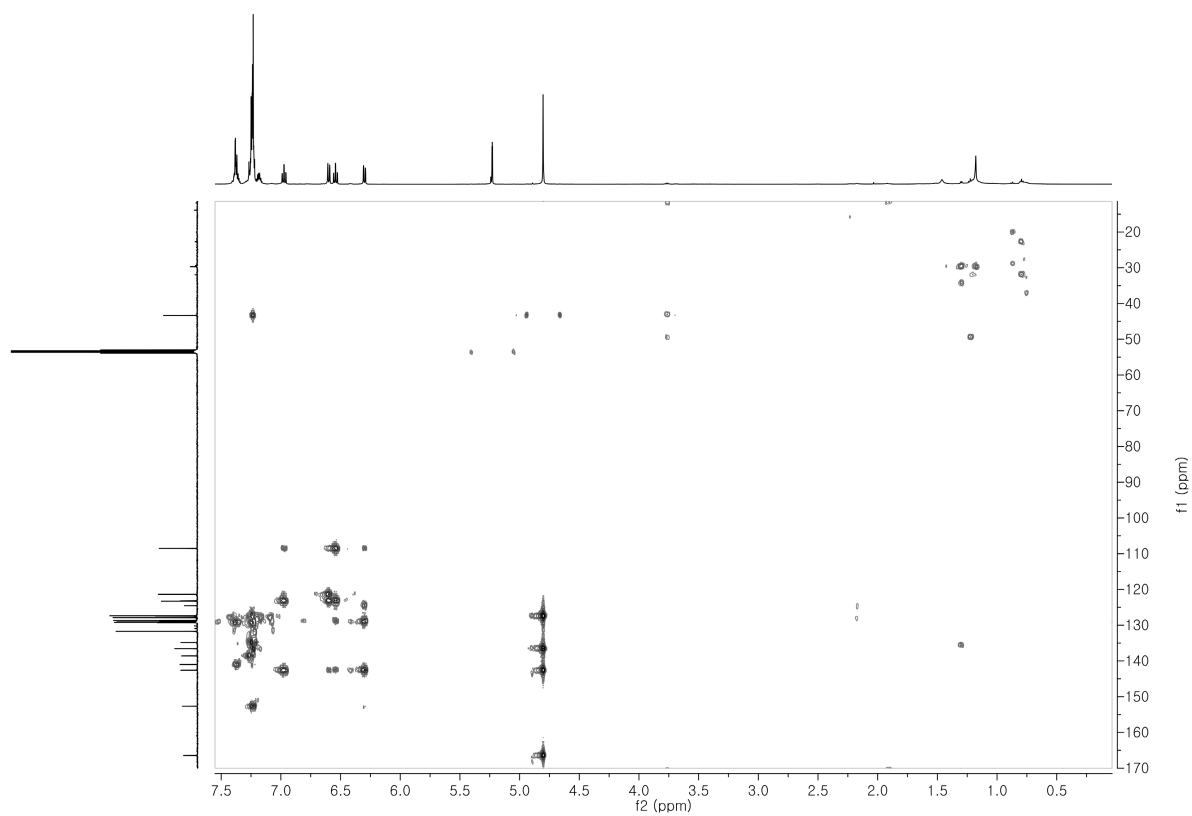
¹³C NMR spectrum of (Z)-7b



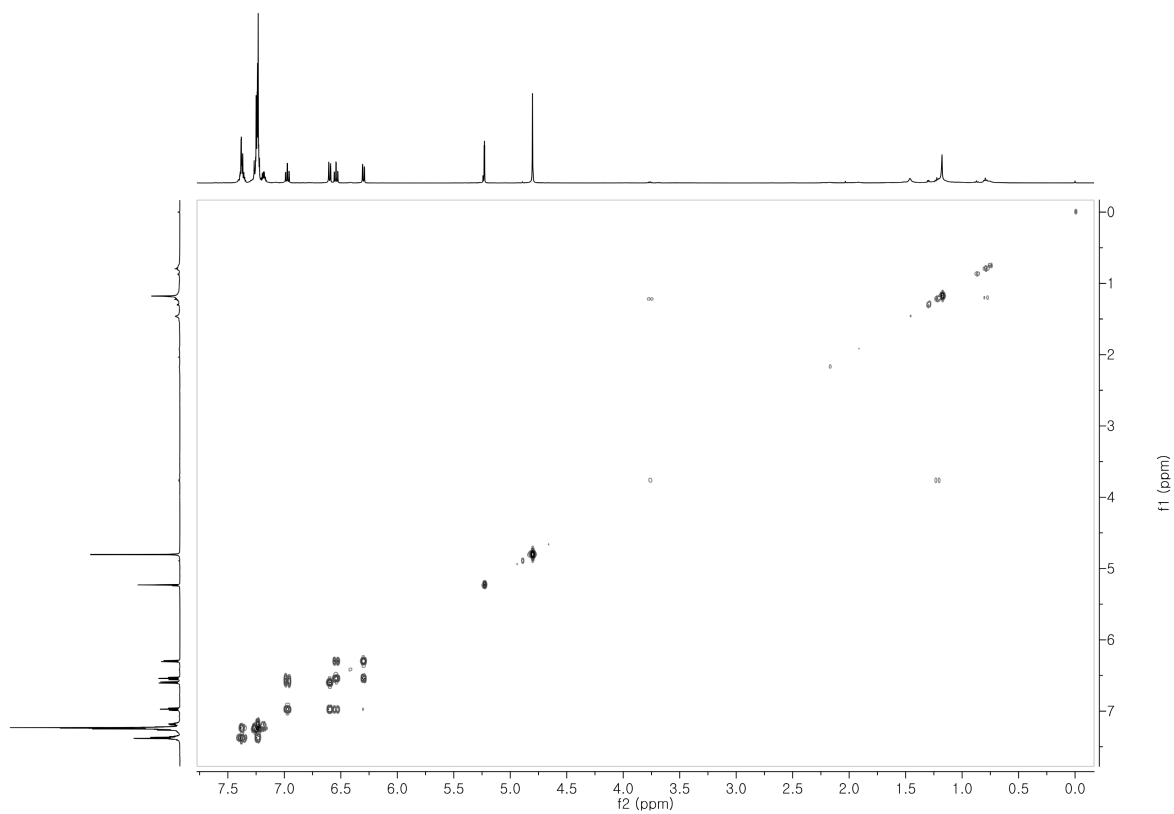
HSQC spectrum of (Z)-7b



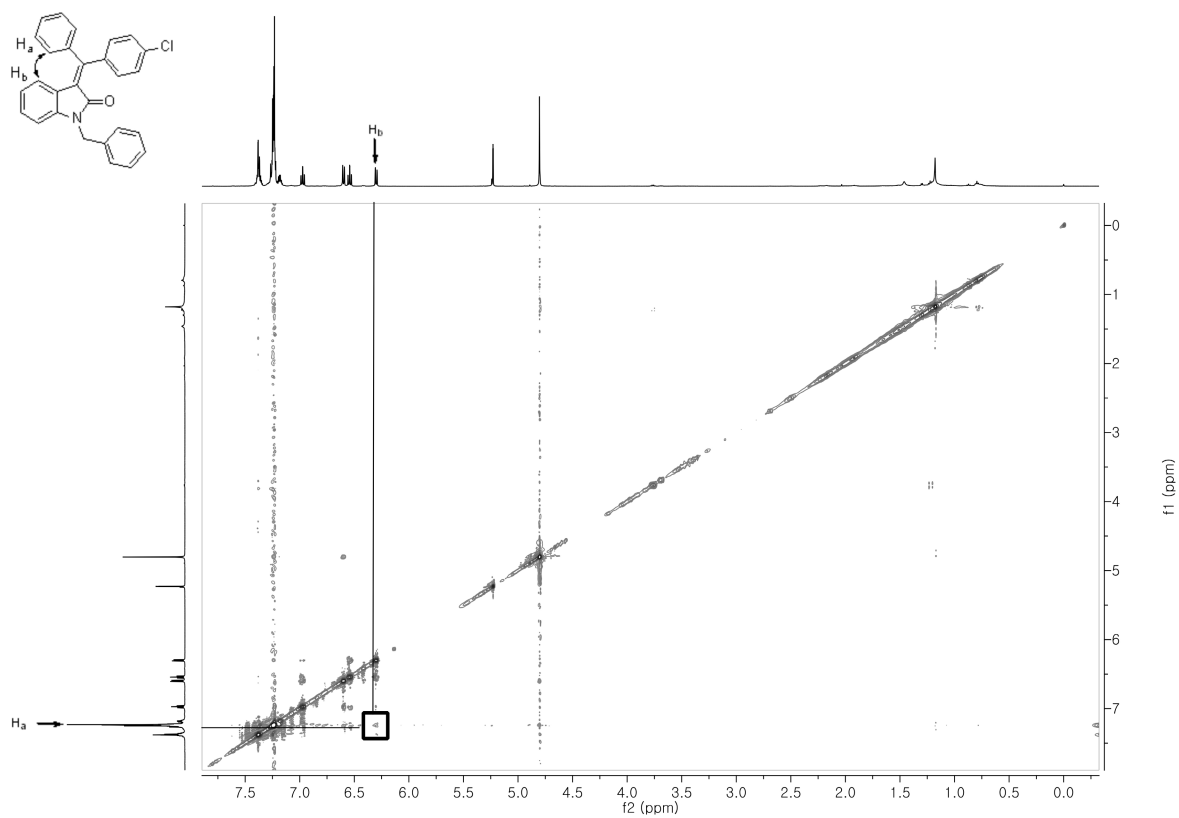
HMBC spectrum of (Z)-7b



COSY spectrum of (Z)-7b

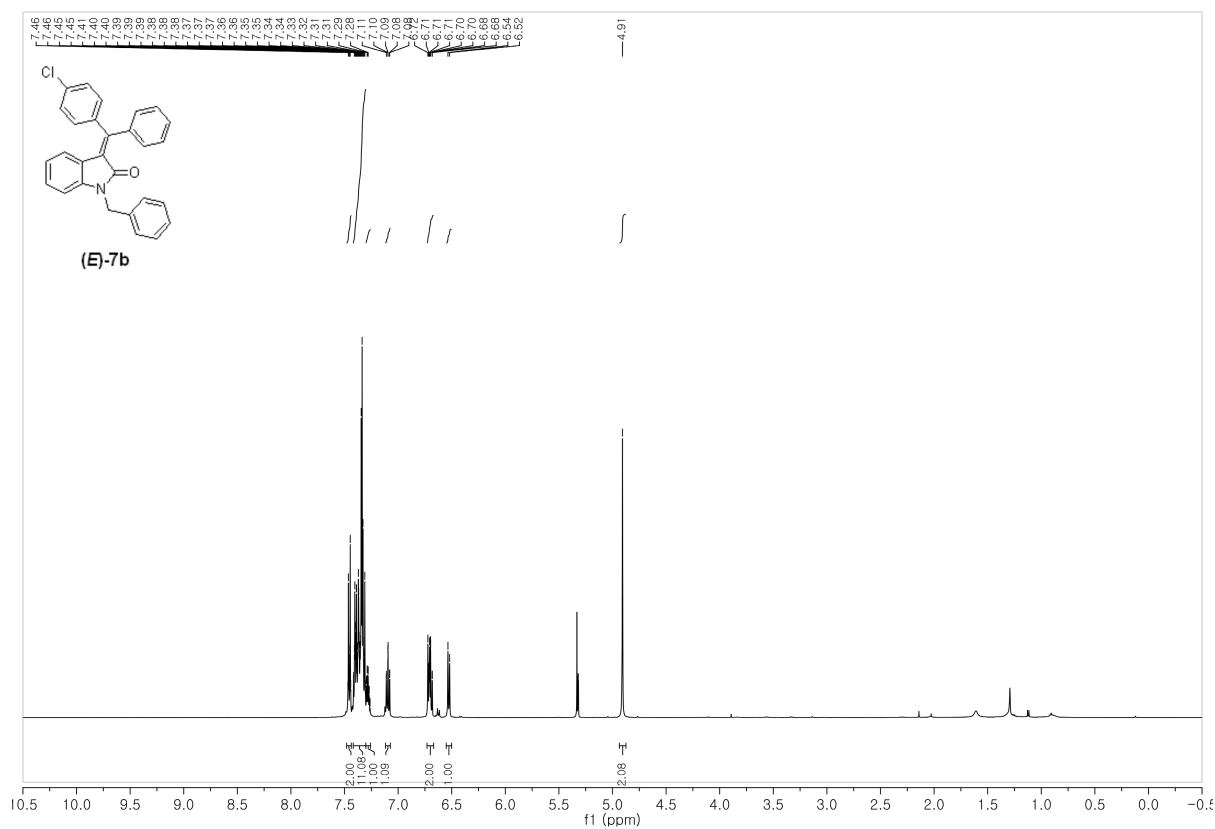


ROESY spectrum of (Z)-7b

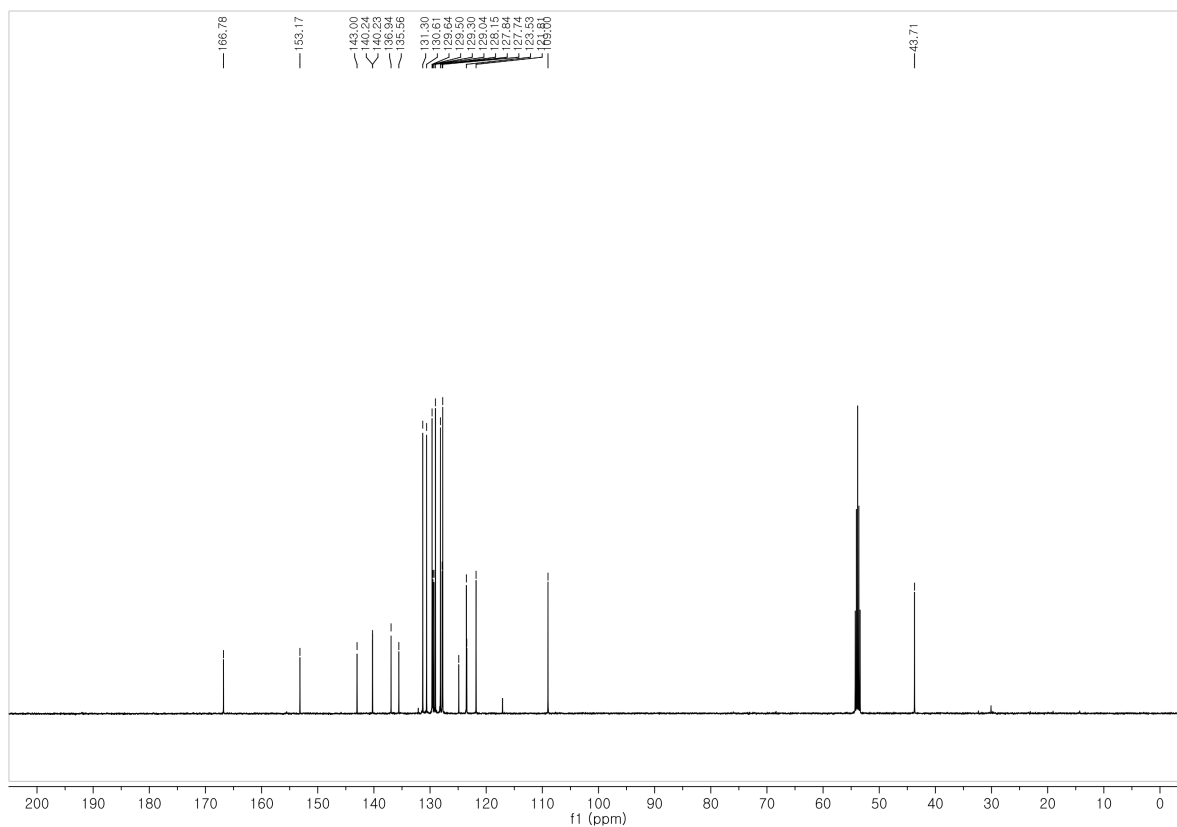


(E)-1-benzyl-3-((4-chlorophenyl)(phenyl)methylene)indolin-2-one ((E)-7b)

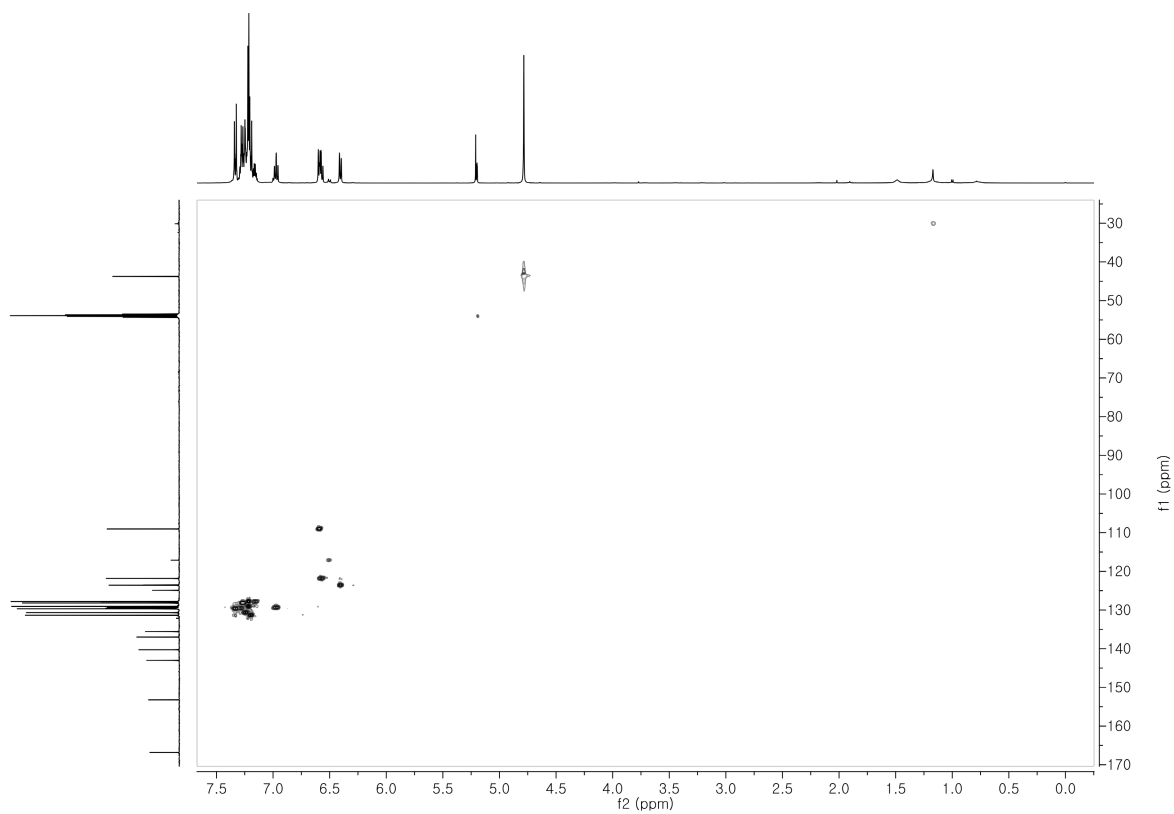
¹H NMR spectrum of (E)-7b



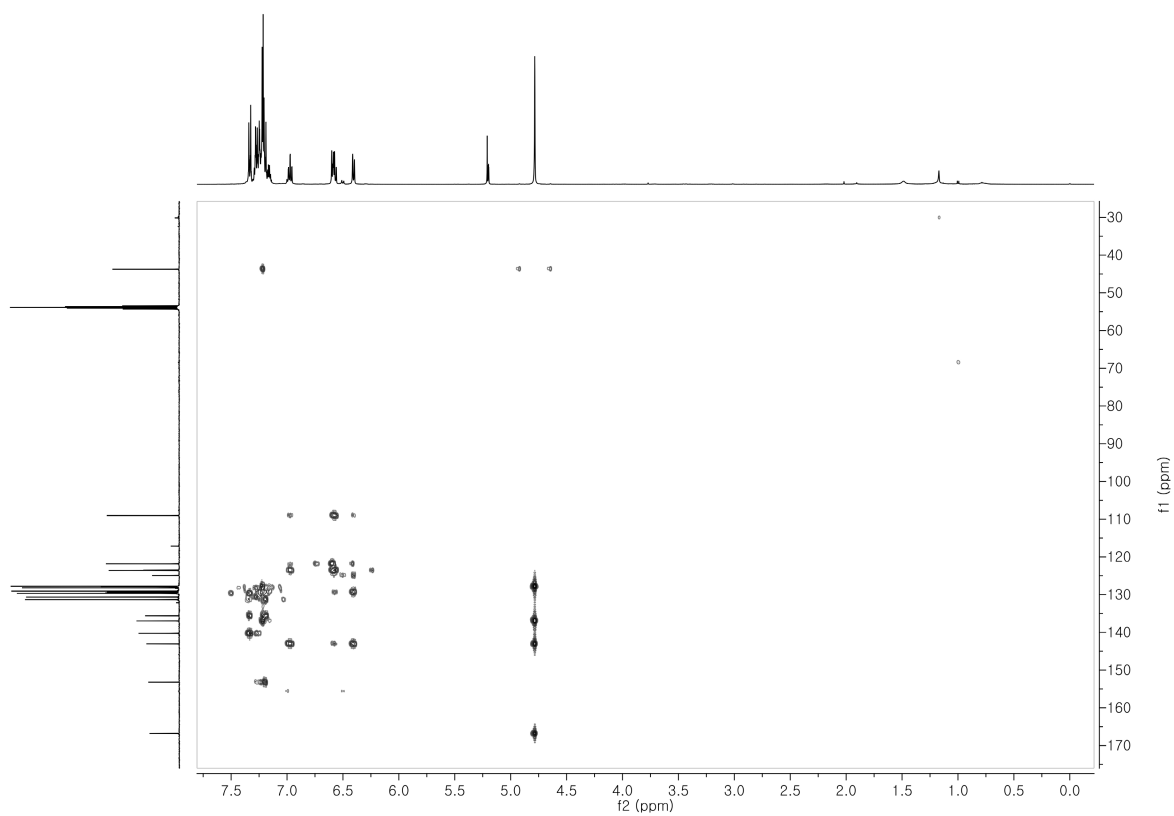
¹³C NMR spectrum of (E)-7b



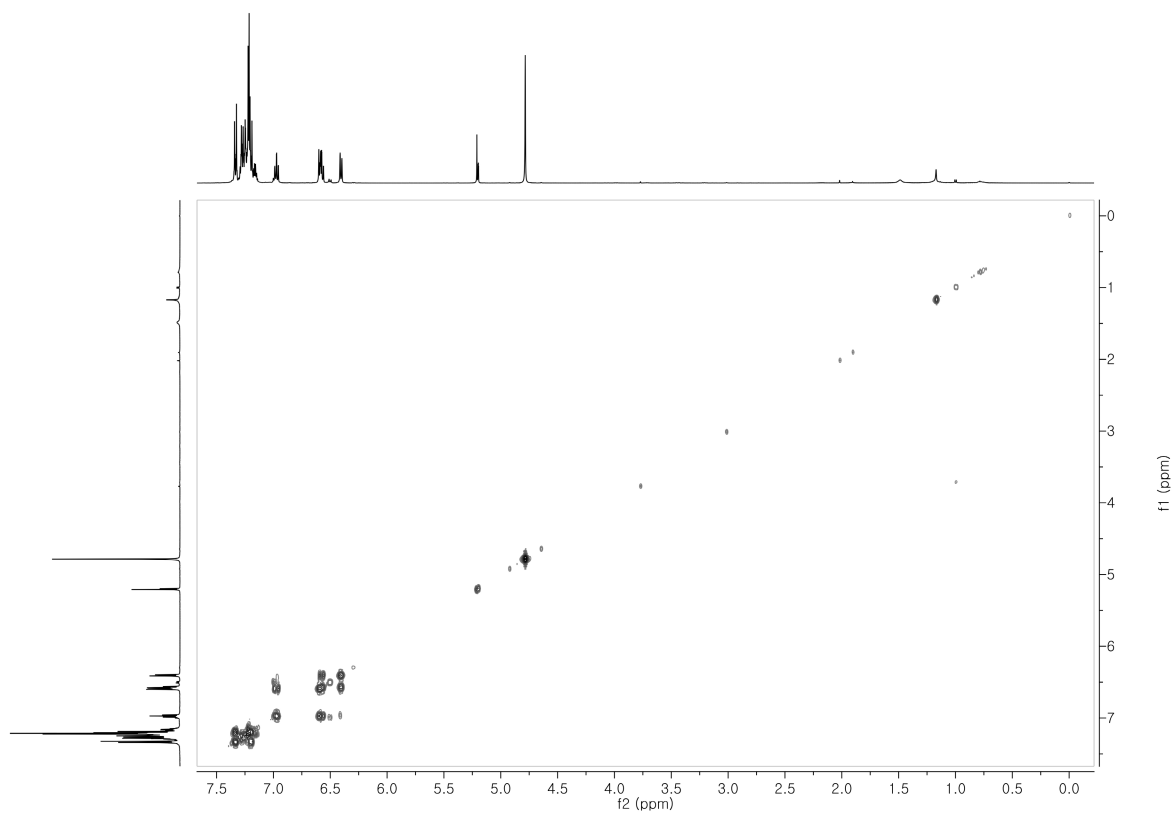
HSQC spectrum of (*E*)-7b



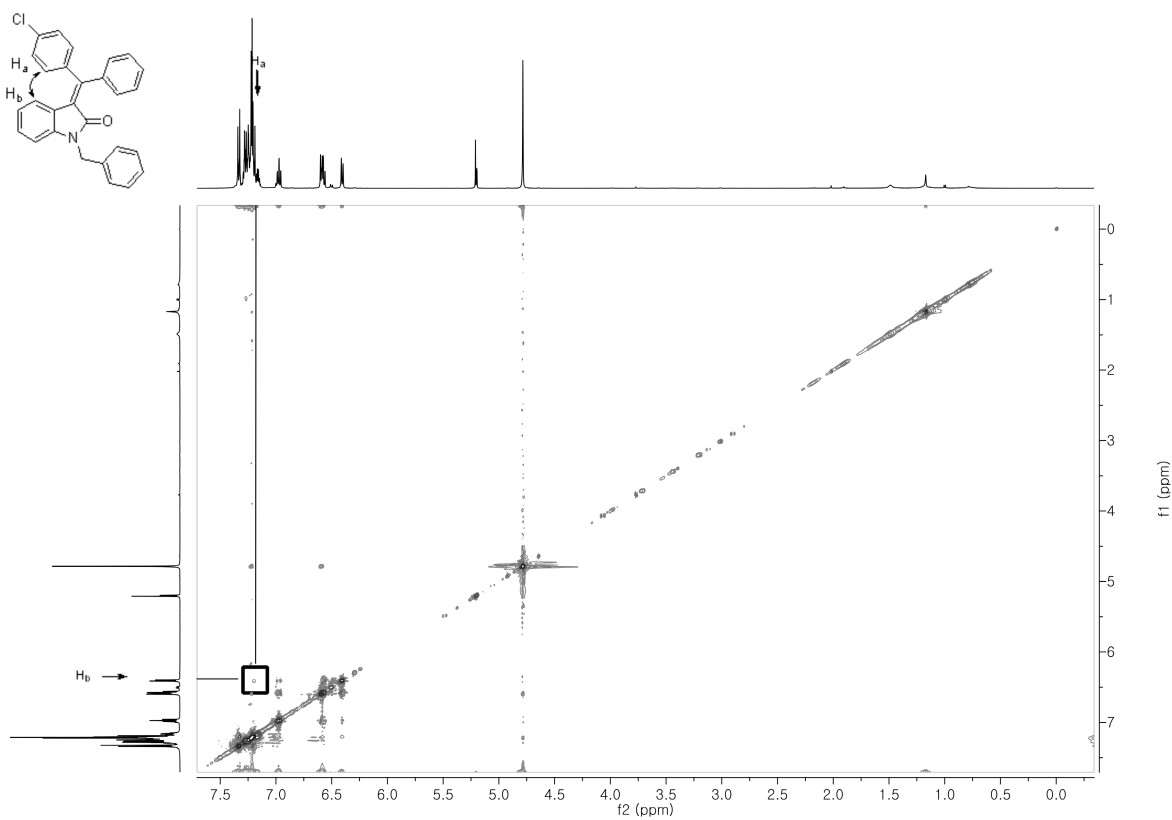
HMBC spectrum of (*E*)-7b



COSY spectrum of (*E*)-7b

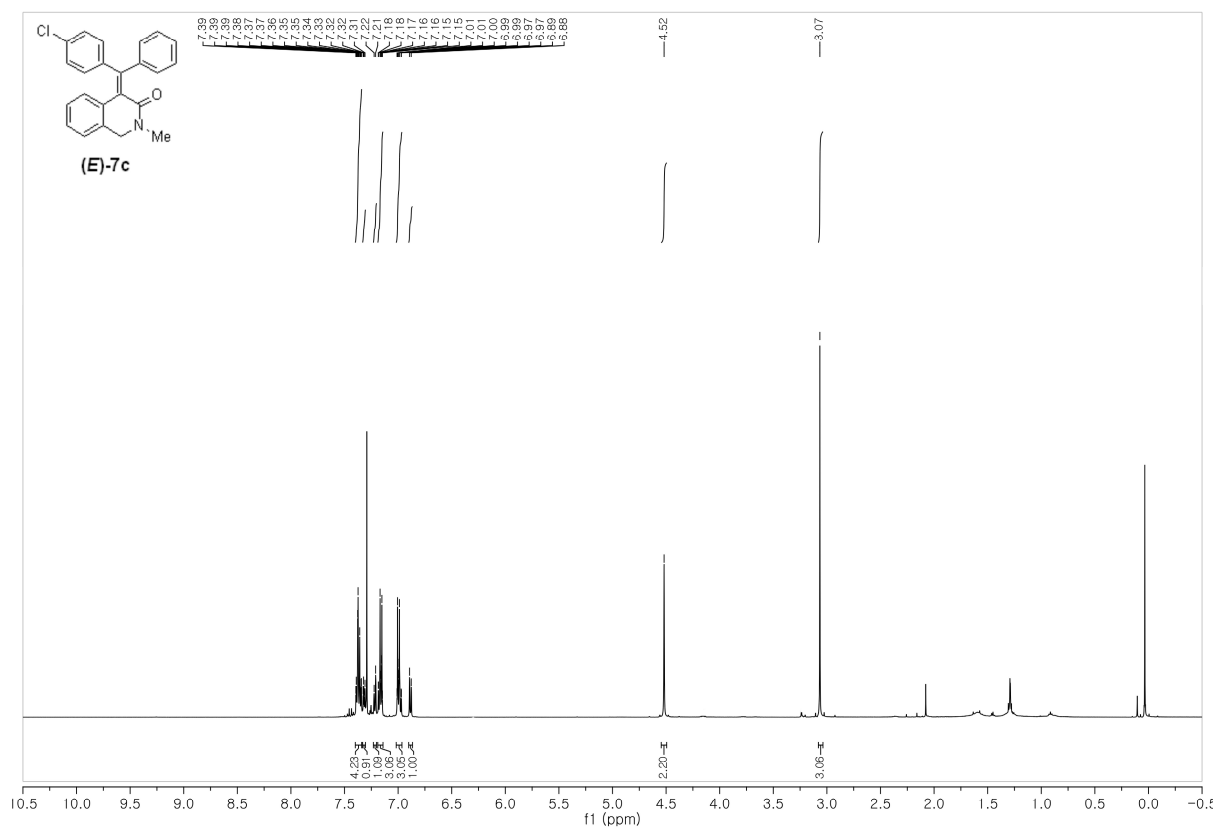


ROESY spectrum of (*E*)-7b

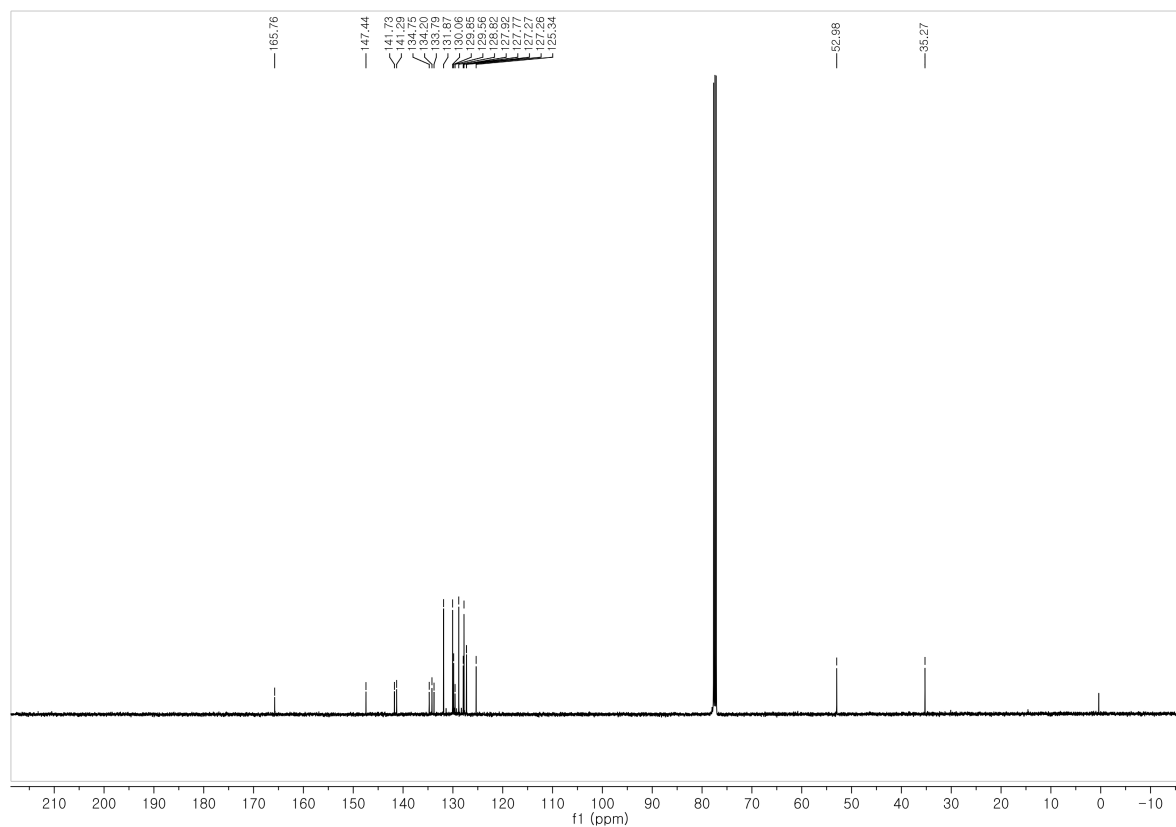


(*E*)-4-((4-chlorophenyl)(phenyl)methylene)-2-methyl-1,2-dihydroisoquinolin-3(4*H*)-one ((*E*)-7c)

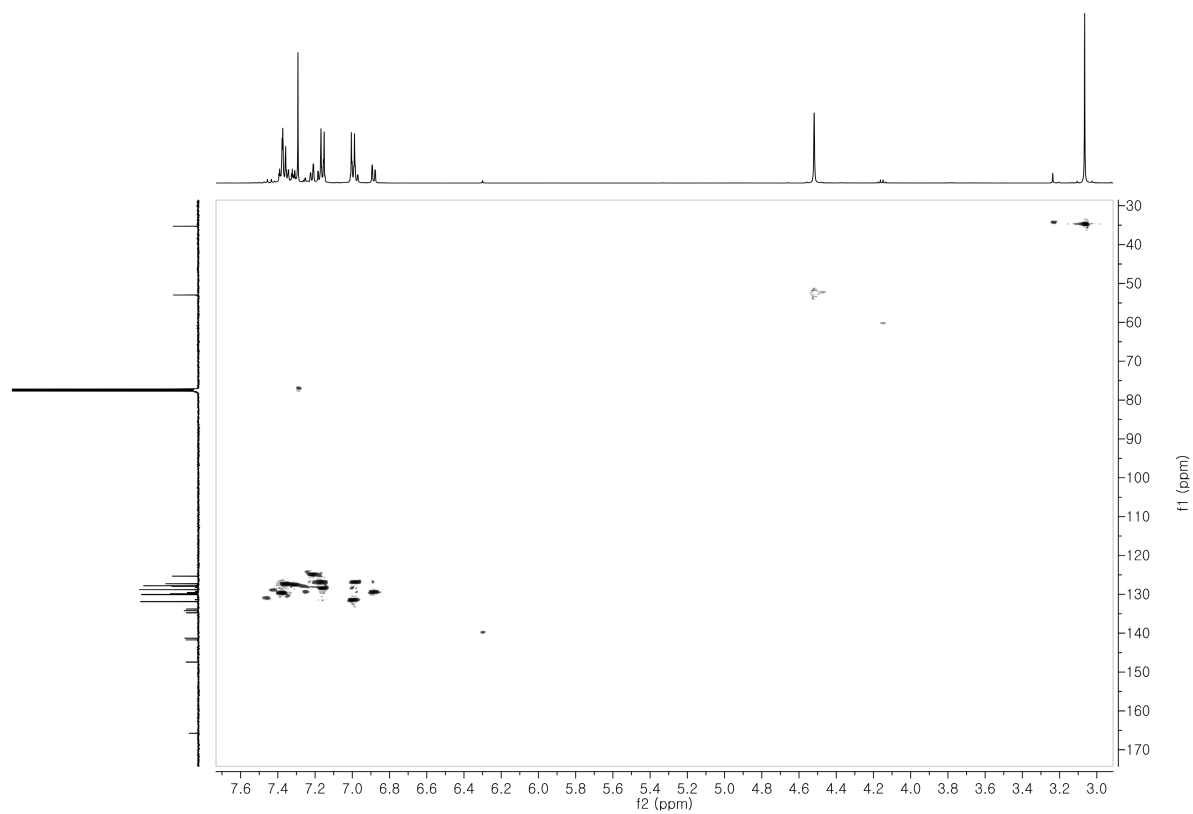
¹H NMR spectrum of (*E*)-7c



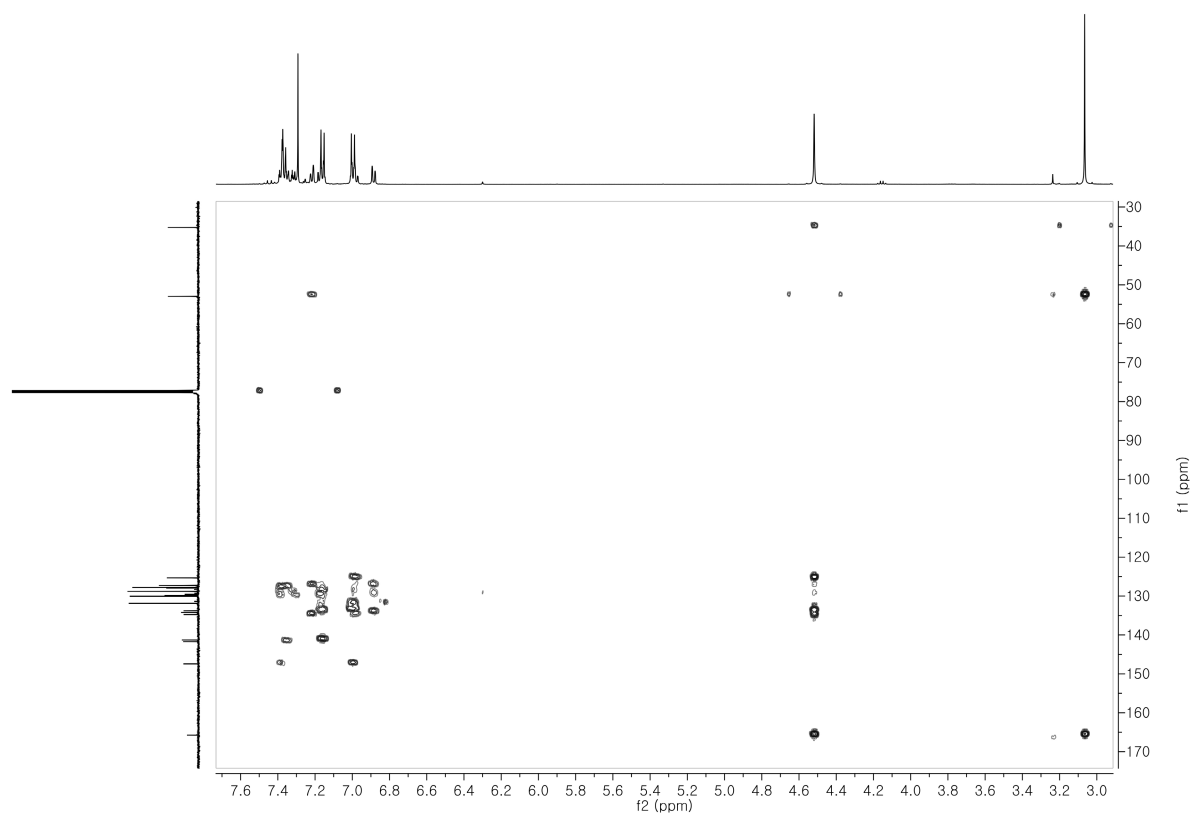
¹³C NMR spectrum of (*E*)-7c



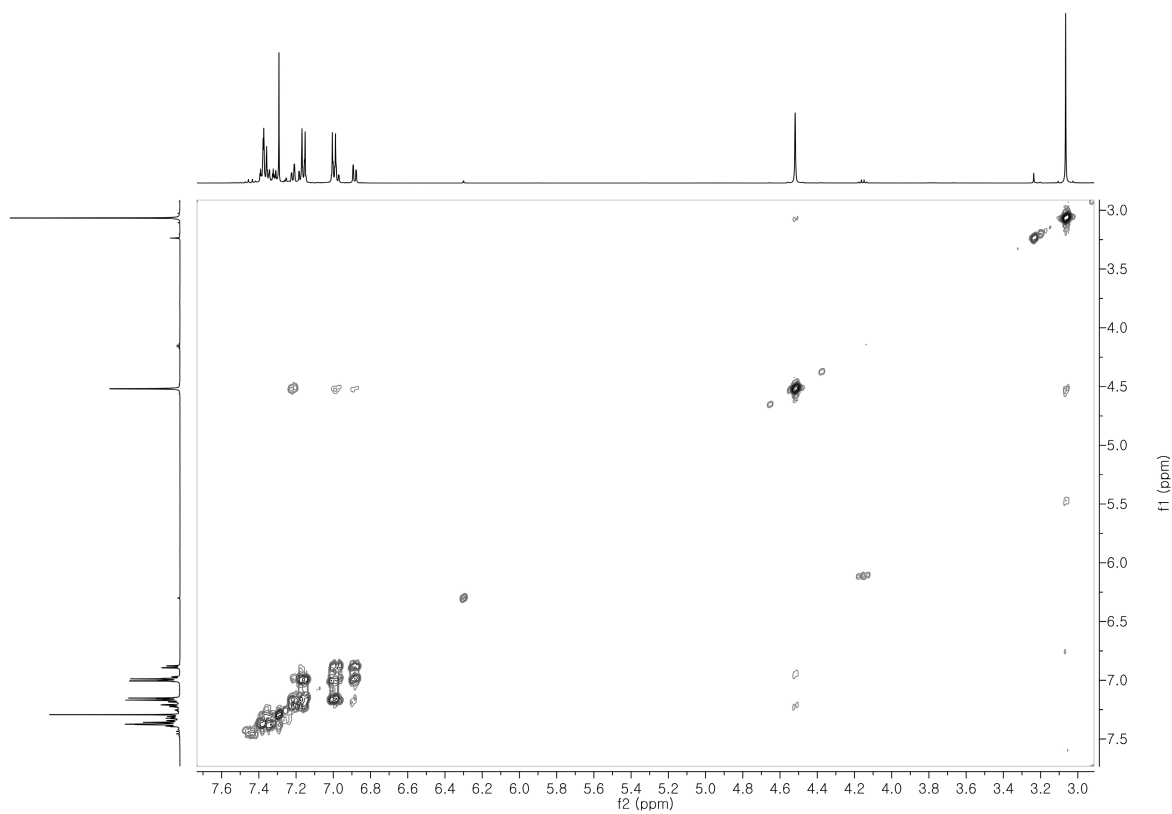
HSQC spectrum of (*E*)-7c



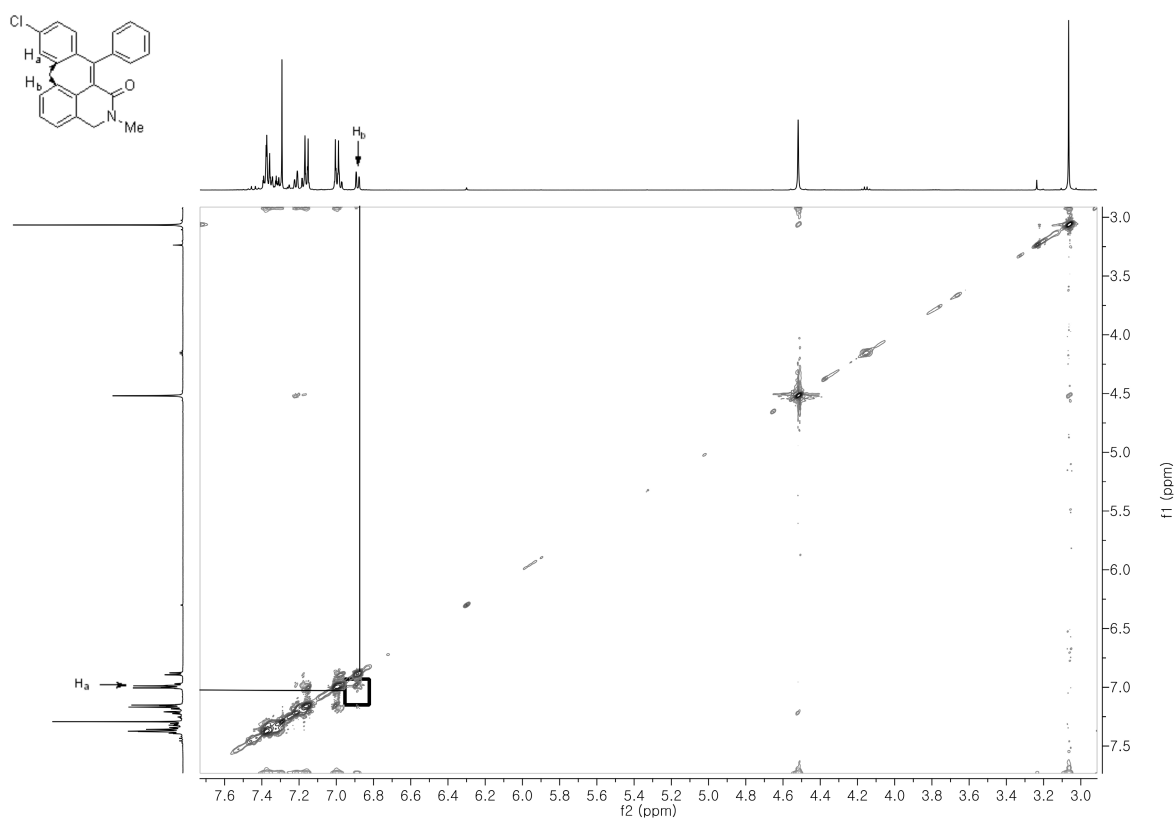
HMBC spectrum of (*E*)-7c



COSY spectrum of (*E*)-7c

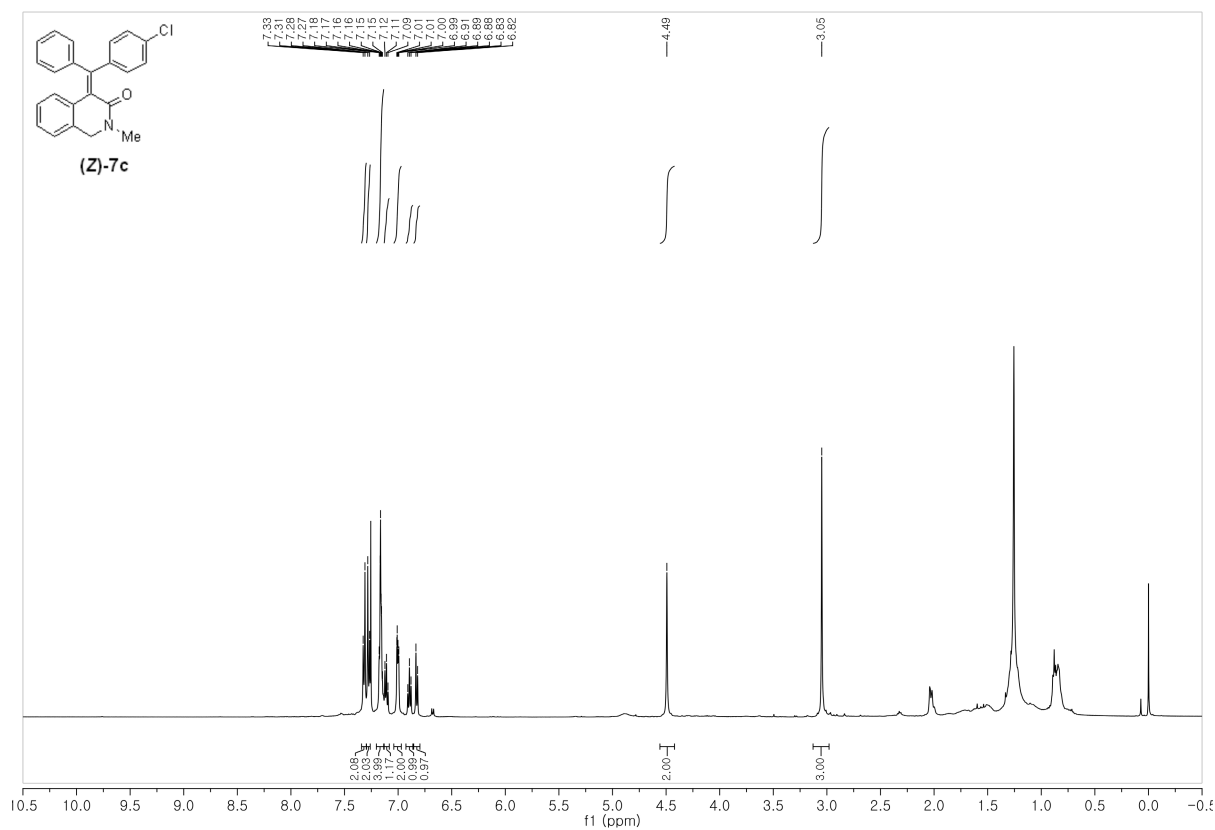


ROESY spectrum of (*E*)-7c

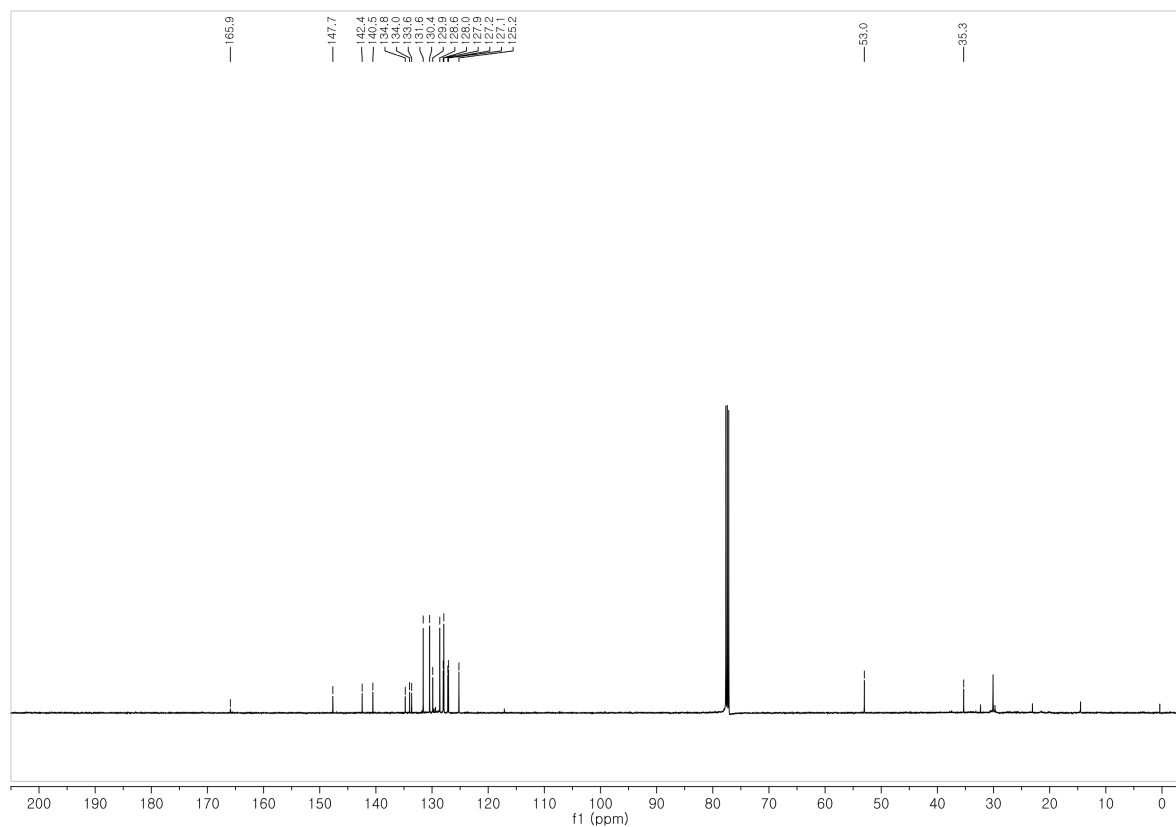


(Z)-4-((4-chlorophenyl)(phenyl)methylene)-2-methyl-1,2-dihydroisoquinolin-3(4H)-one ((Z)-7c)

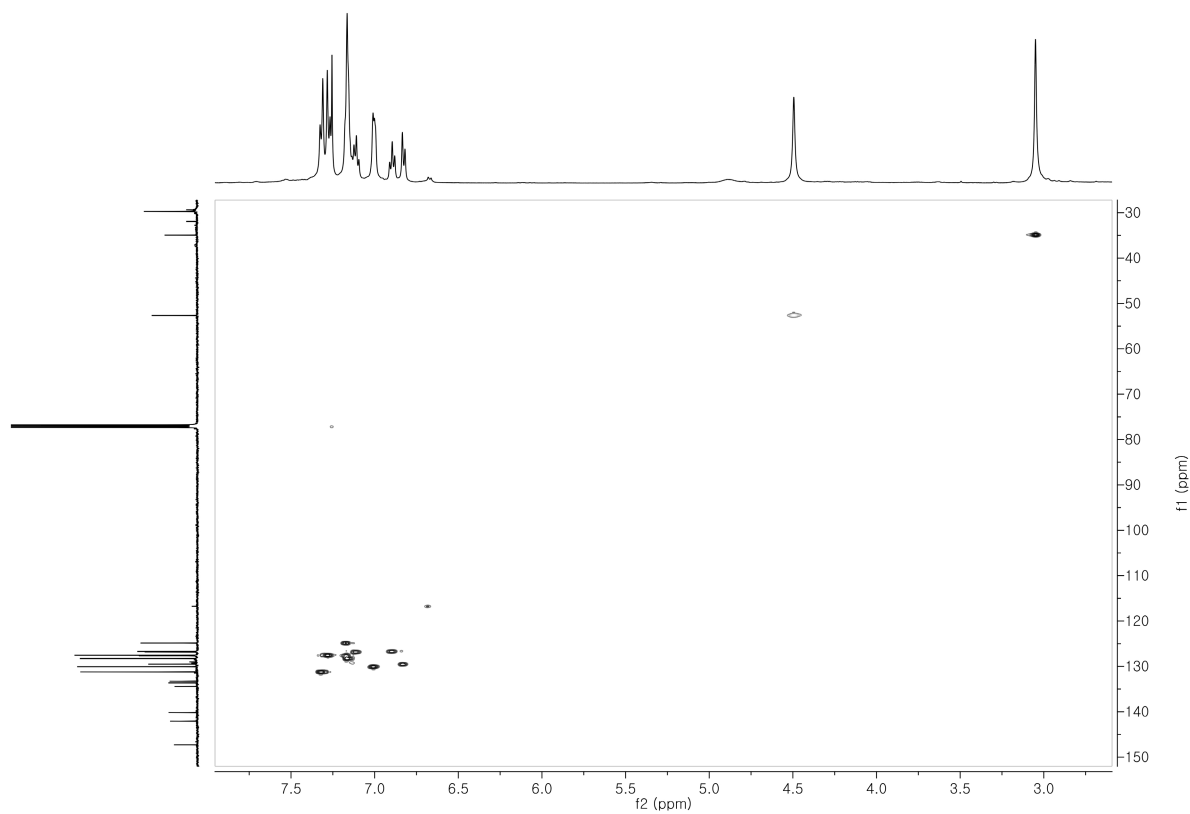
¹H NMR spectrum of (Z)-7c



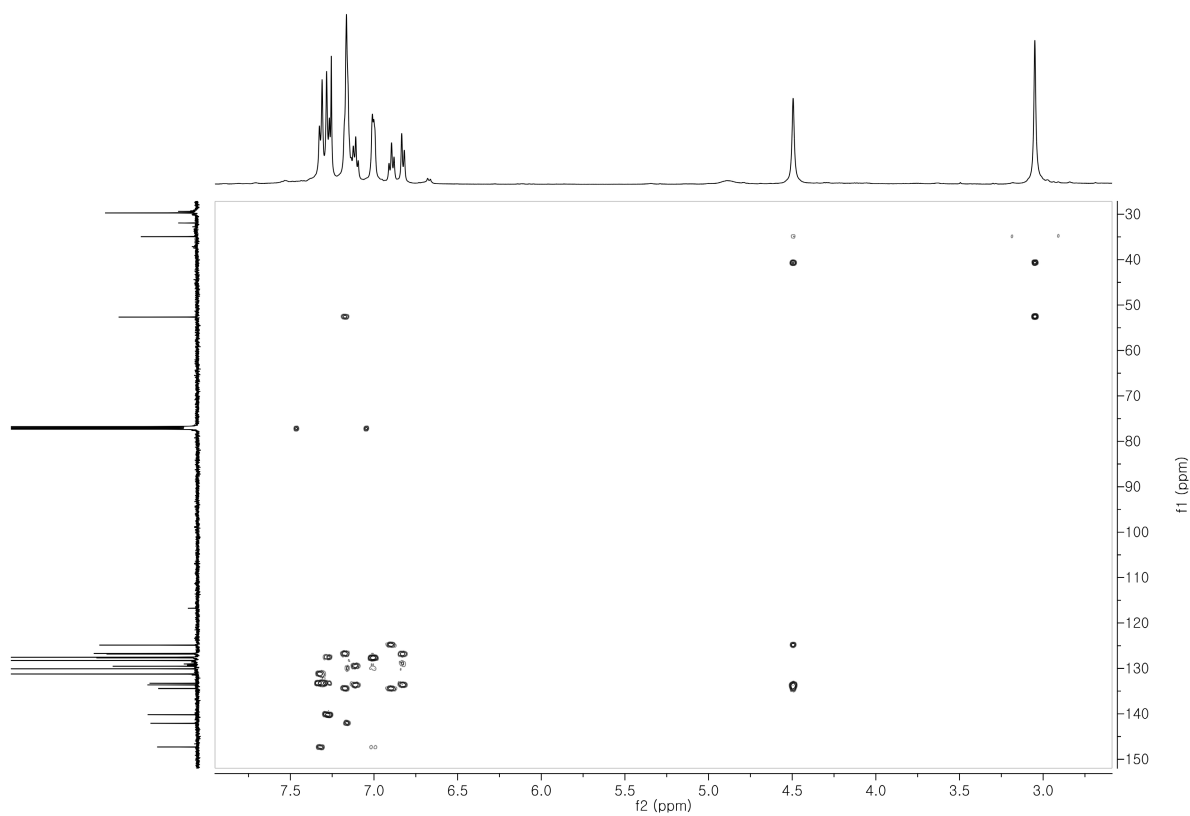
¹³C NMR spectrum of (Z)-7c



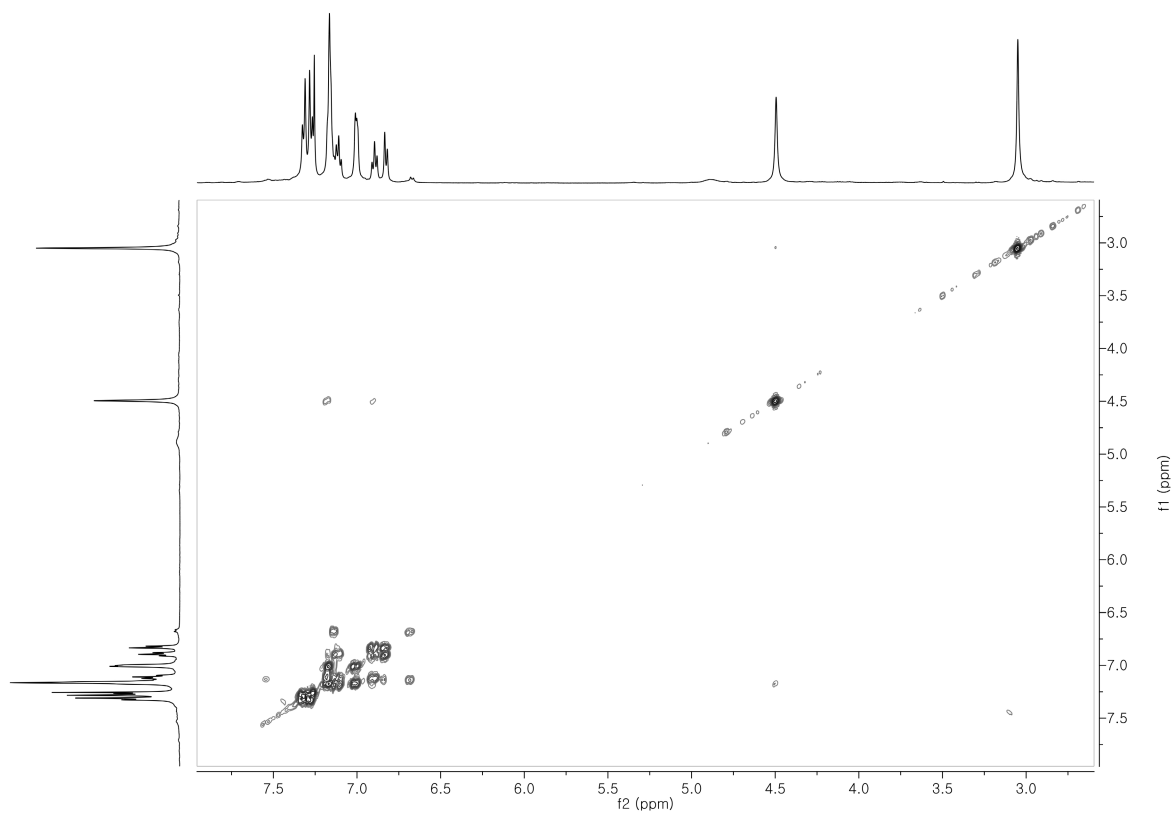
HSQC spectrum of (Z)-7c



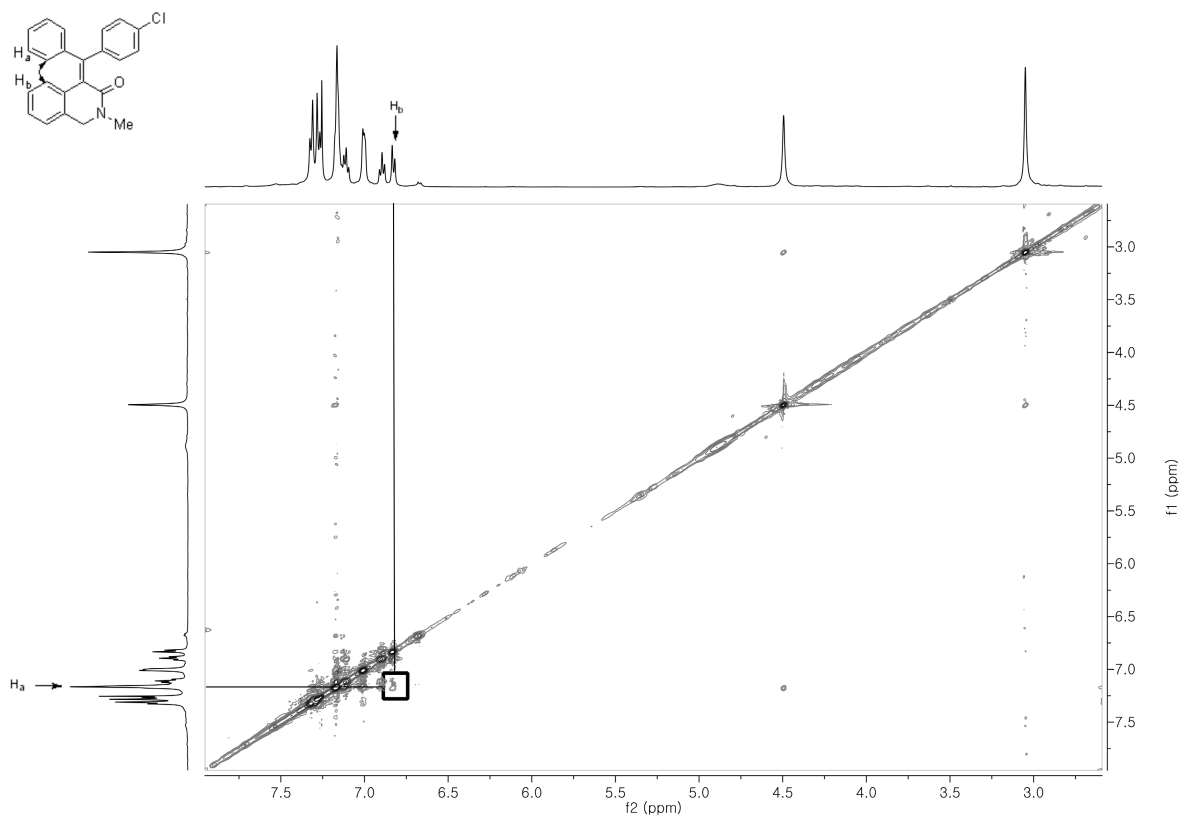
HMBC spectrum of (Z)-7c



COSY spectrum of (Z)-7c

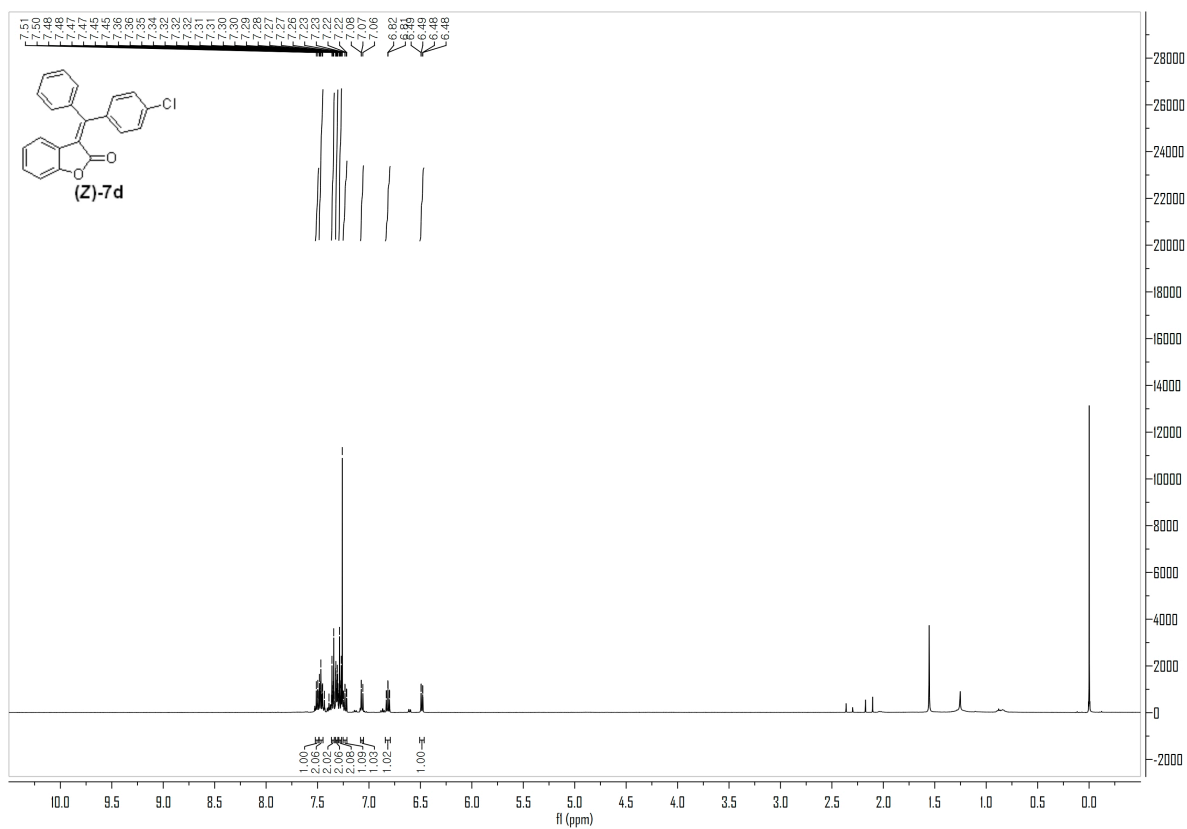


ROESY spectrum of (Z)-7c

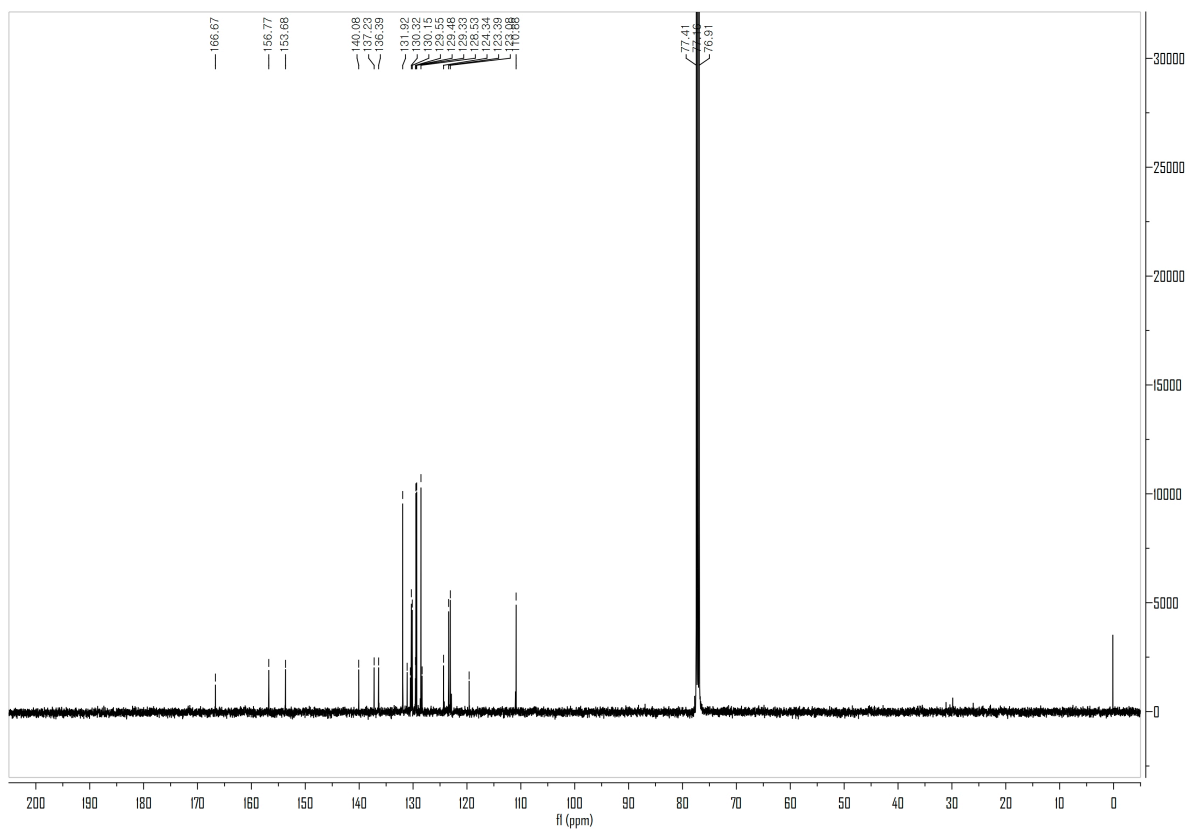


(Z)-3-((4-chlorophenyl)(phenyl)methylene)benzofuran-2(3H)-one ((Z)-7d)

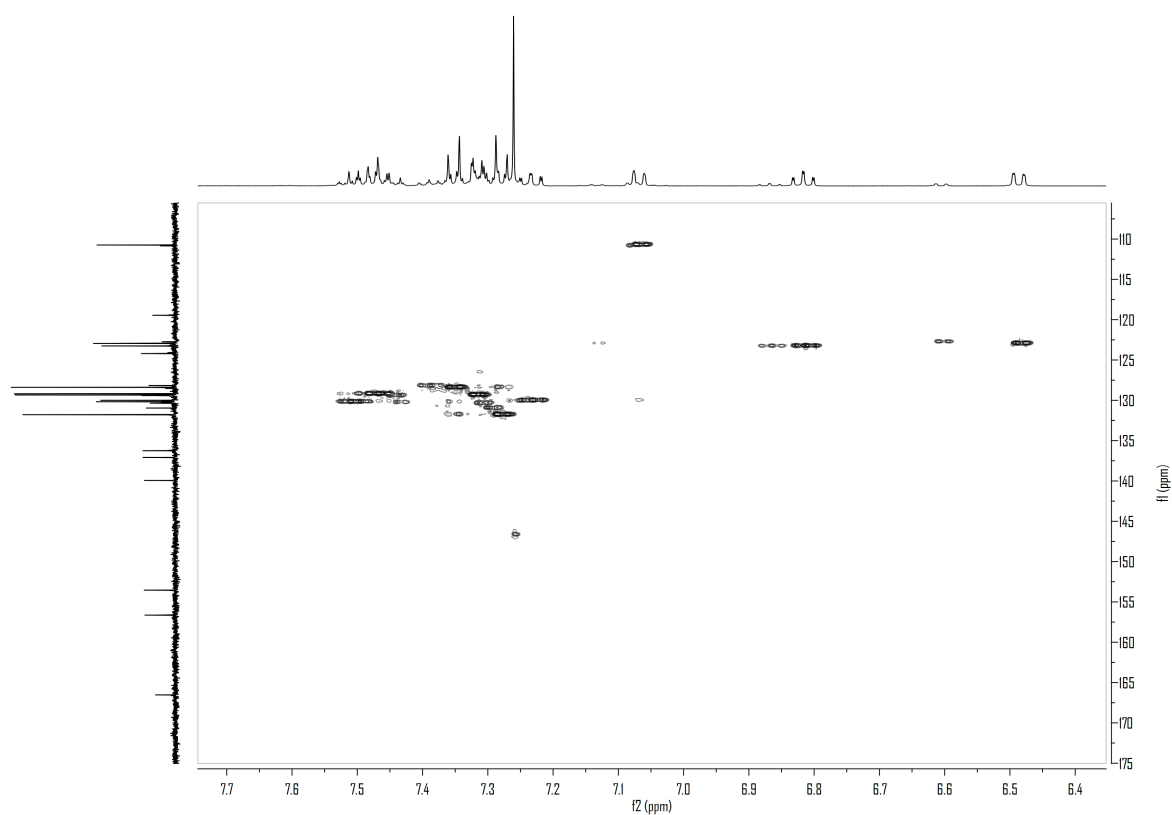
¹H NMR spectrum of (Z)-7d



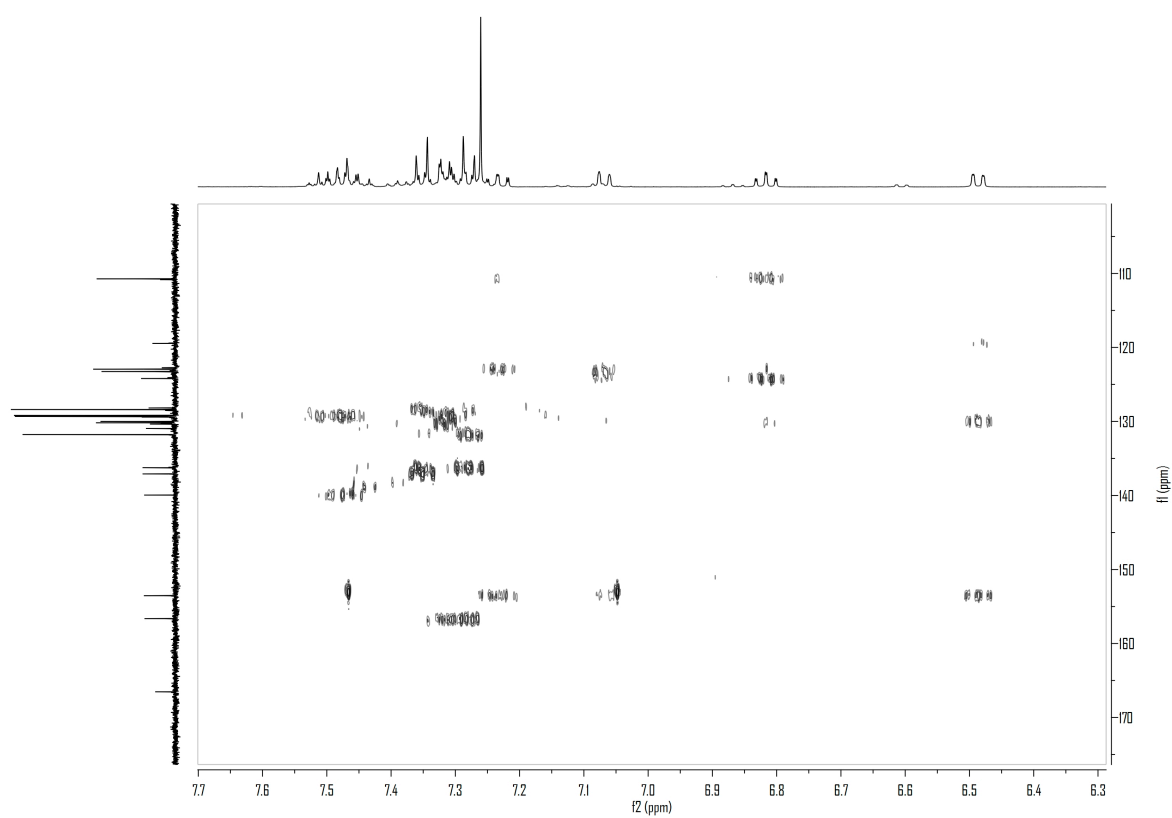
¹³C NMR spectrum of (Z)-7d



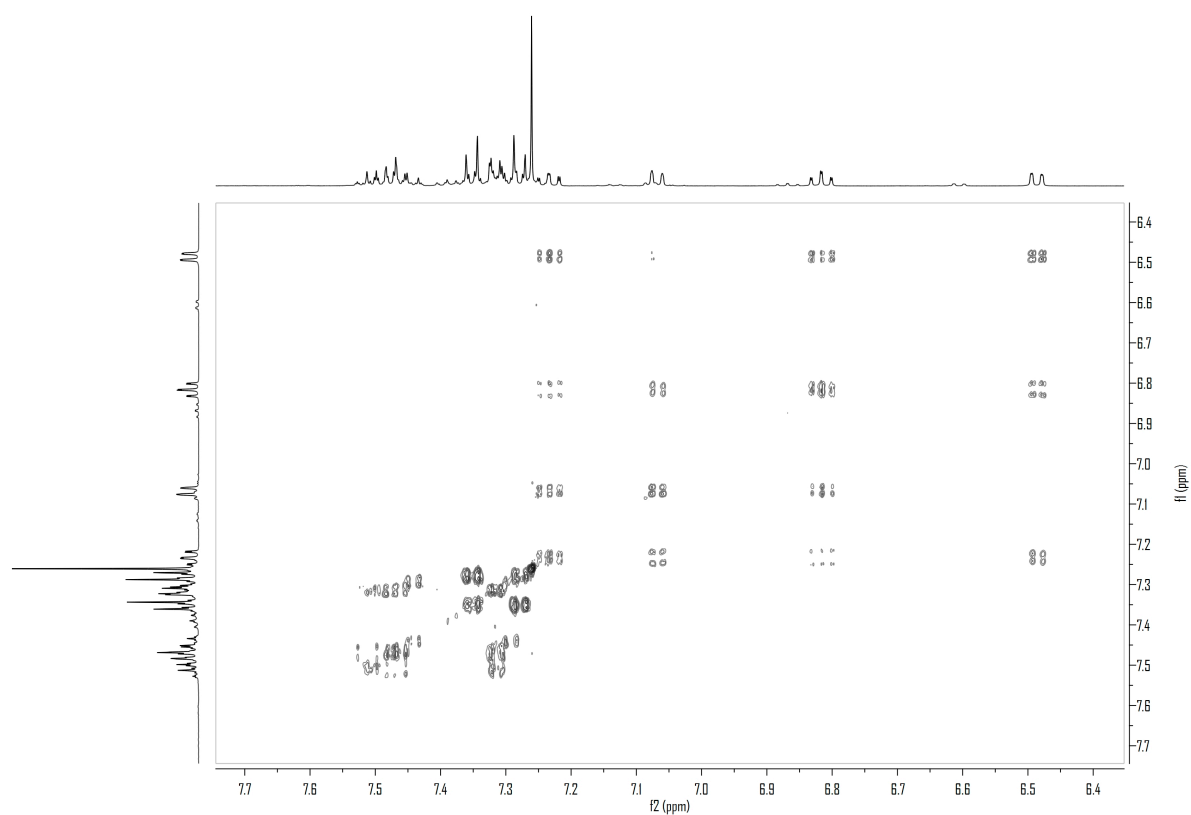
HSQC spectrum of (Z)-7d



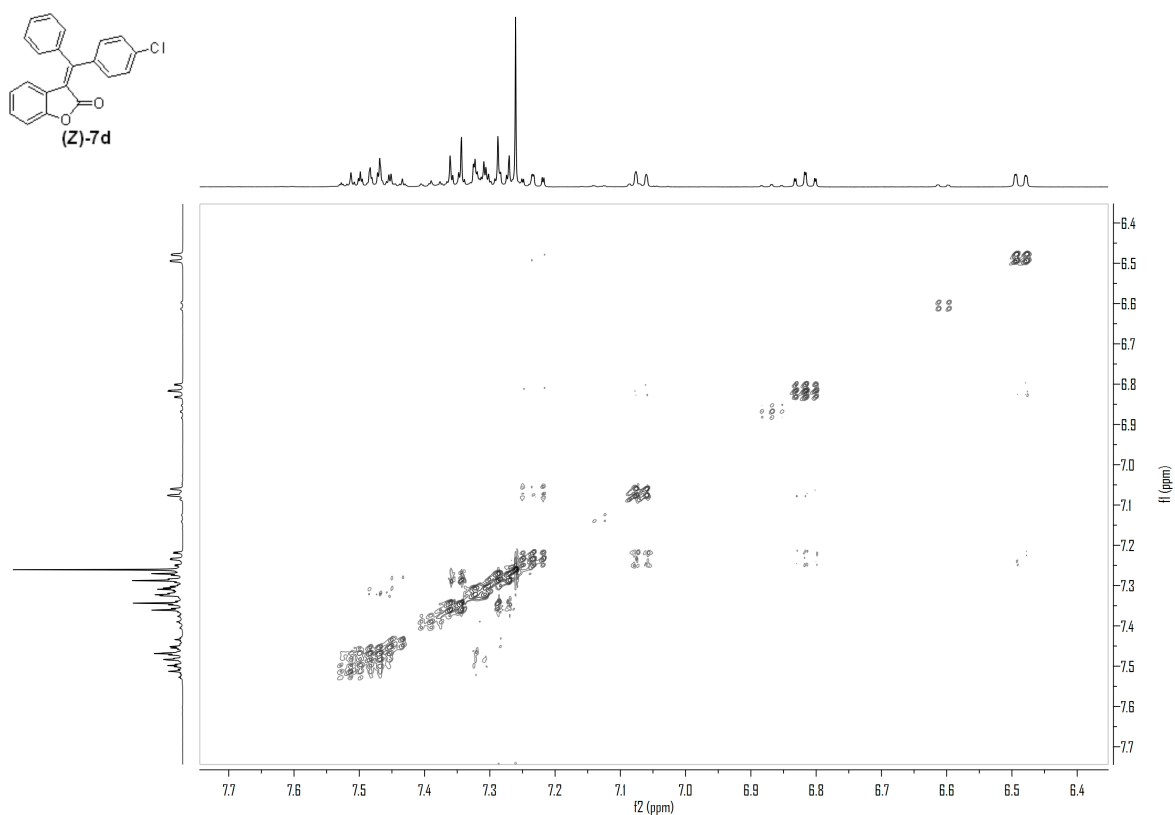
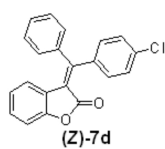
HMBC spectrum of (Z)-7d



COSY spectrum of (Z)-7d

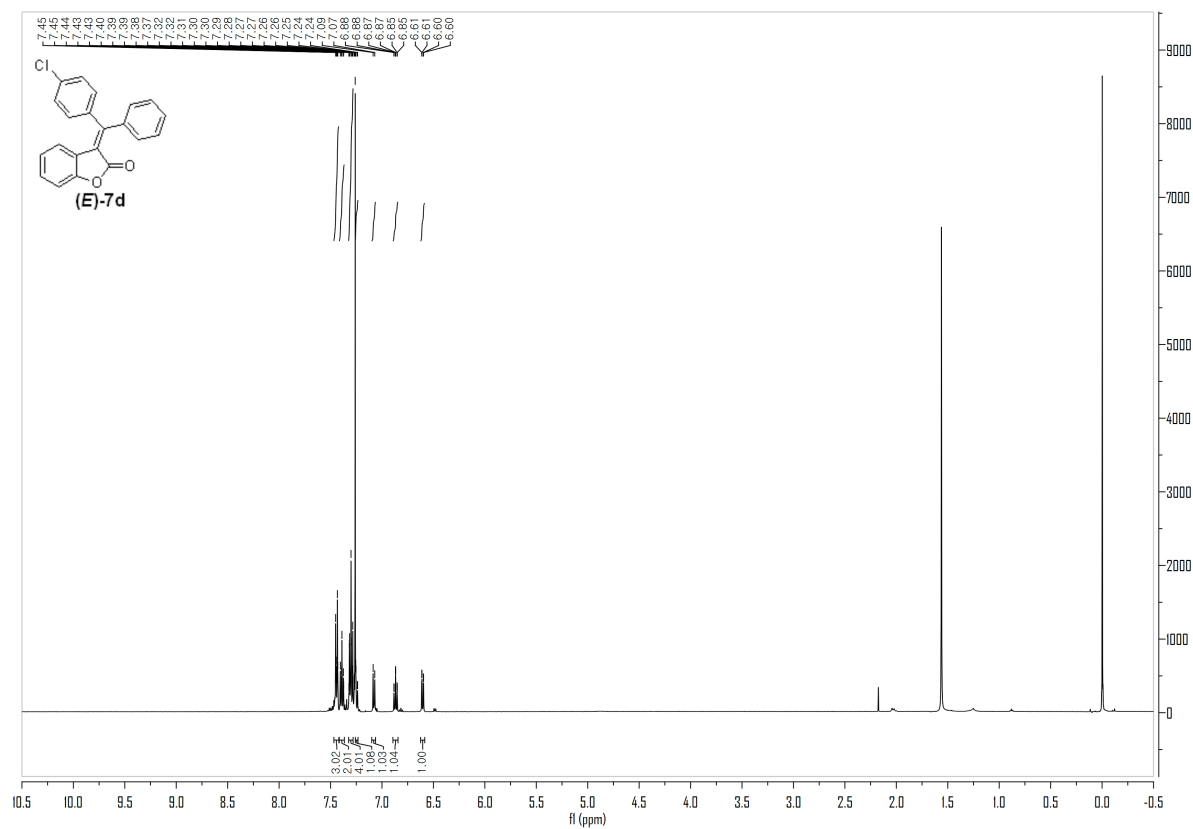


ROESY spectrum of (Z)-7d

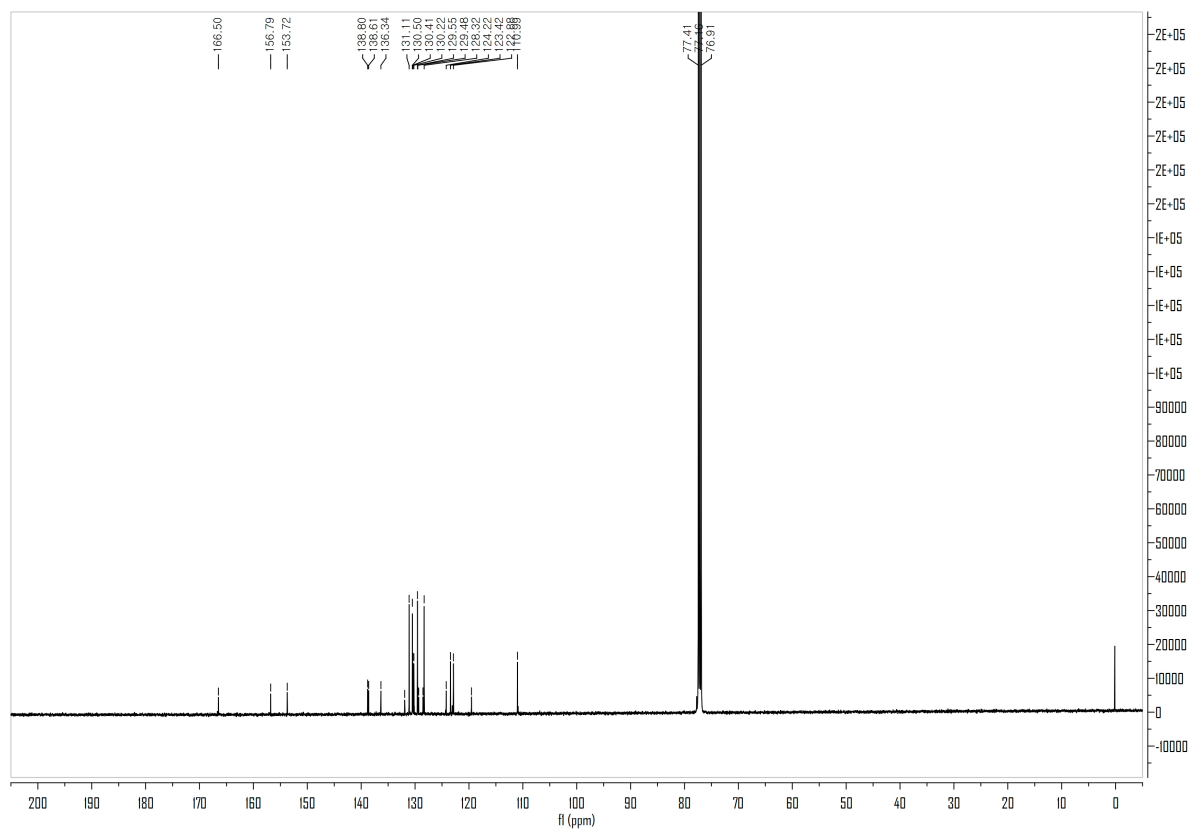


(*E*)-3-((4-chlorophenyl)(phenyl)methylene)benzofuran-2(3H)-one ((*E*)-7d)

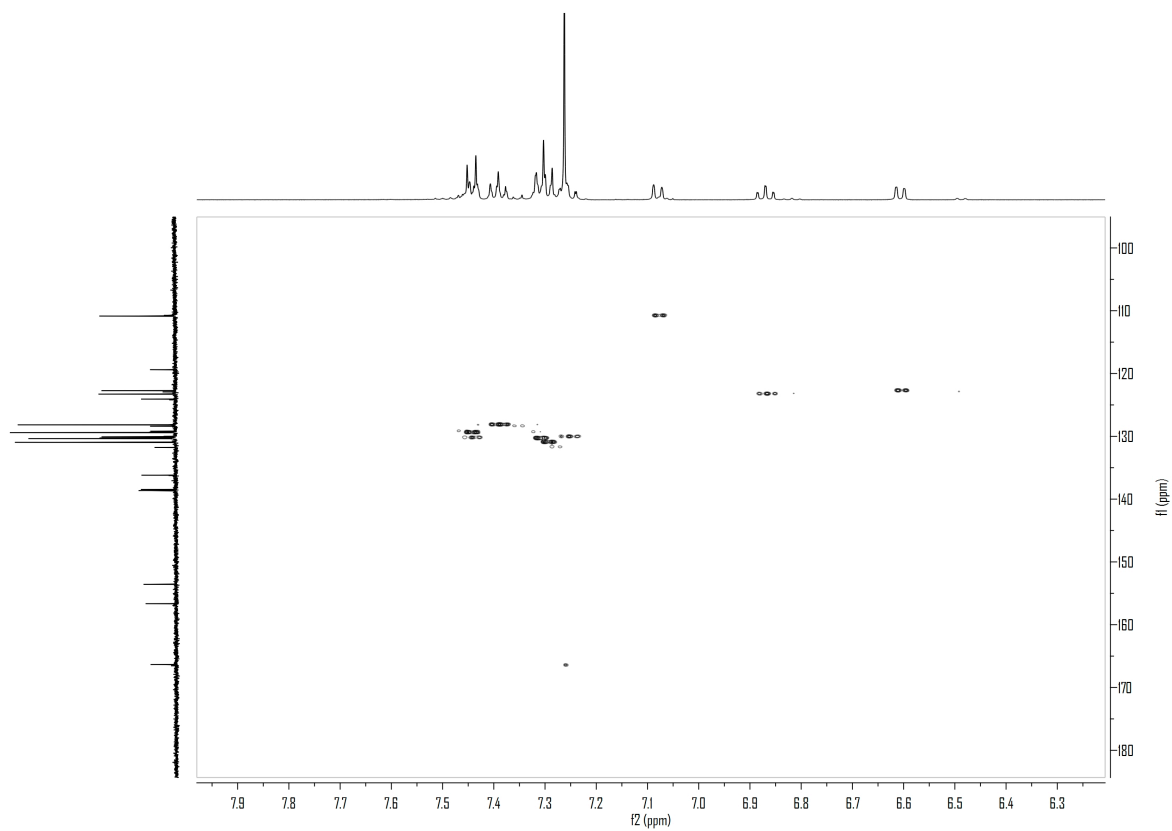
¹H NMR spectrum of (*E*)-7d



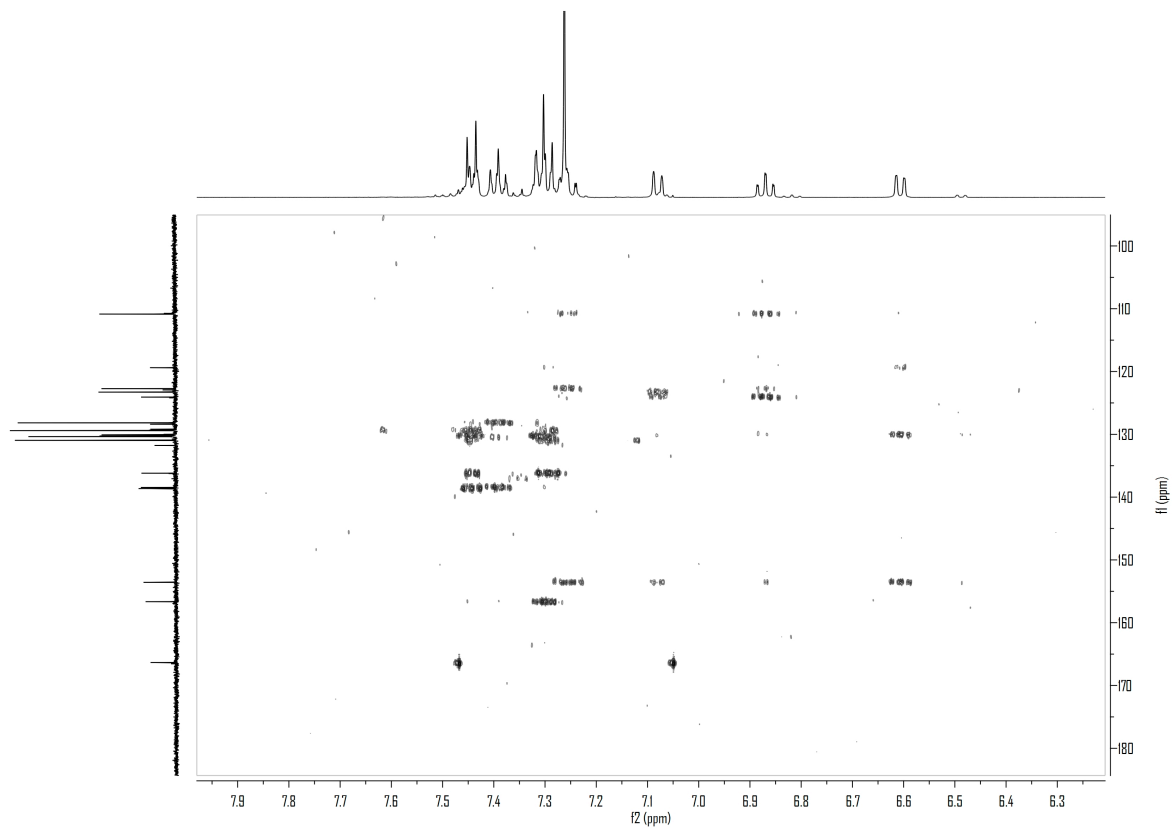
¹³C NMR spectrum of (*E*)-7d



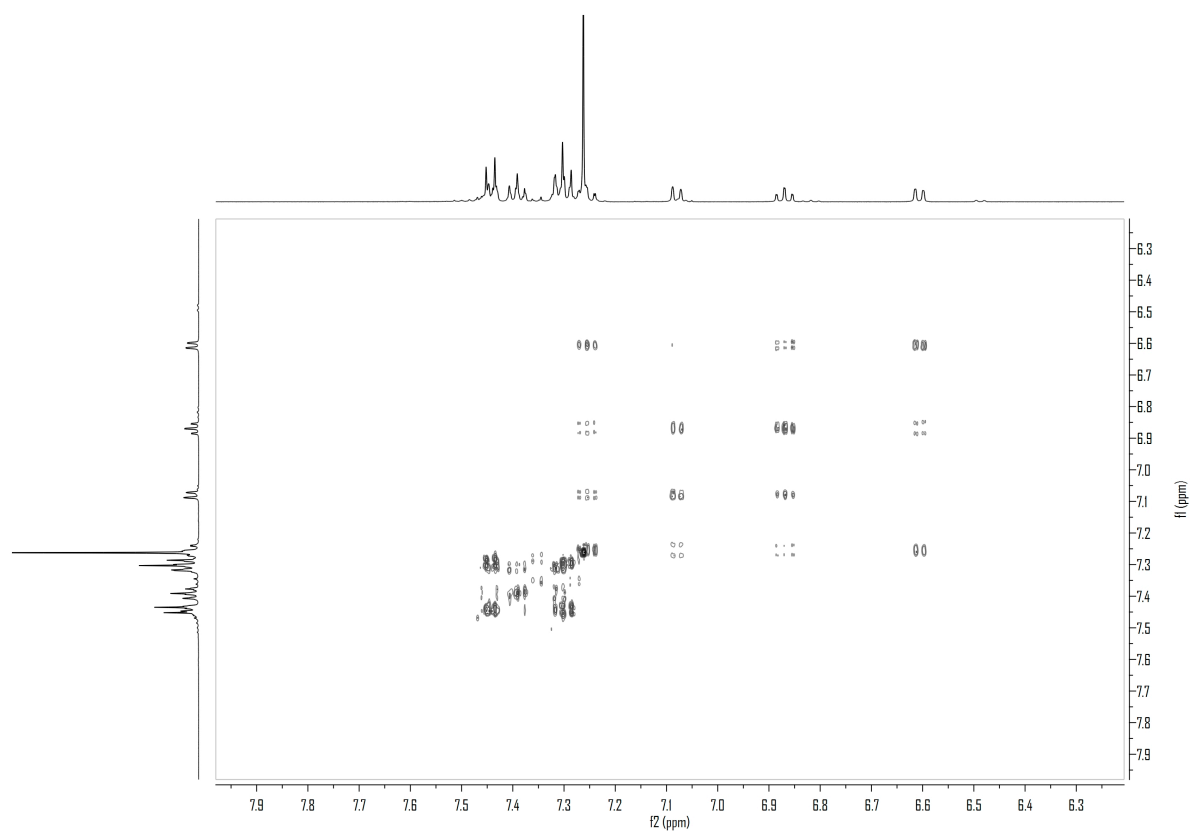
HSQC spectrum of (*E*)-7d



HMBC spectrum of (*E*)-7d



COSY spectrum of (*E*)-7d



ROESY spectrum of (*E*)-7d

