

Supplementary Material

Intramolecular cyclization of *N*-(3-oxoalkenyl)phenylacetamides: synthesis of 3-phenyl-2(1*H*)-pyridones

Dmitry S. Goncharov,^a Anna K. Garkushenko,^b Alina P. Savelieva^b and Alexander S. Fisyuk^{b,c,*}

^a Department of Pharmaceutical Chemistry, Omsk State Medical Academy, Lenin str., 12,
644043 Omsk, Russian Federation

^b Department of Organic Chemistry, Omsk F.M. Dostoevsky State University, 55a Mira Ave,
644077 Omsk, Russian Federation

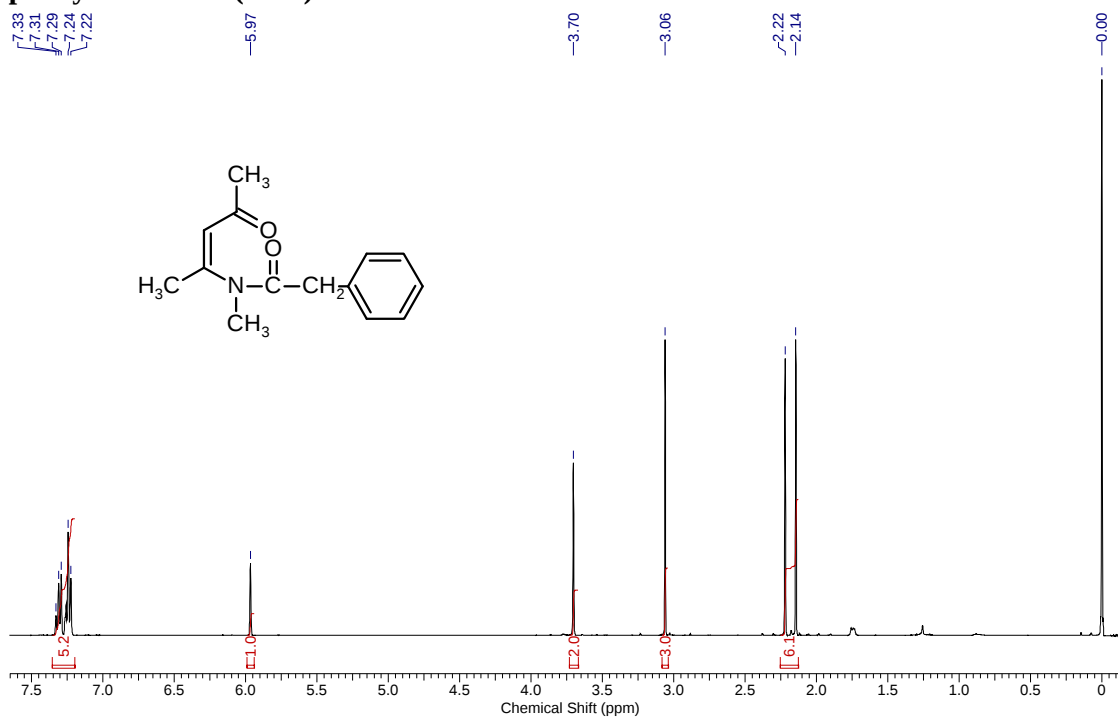
^c Laboratory of New Organic Materials, Omsk State Technical University, 11 Mira Ave,
644050 Omsk, Russian Federation

E-mail: fisyuk@chemomsu.ru

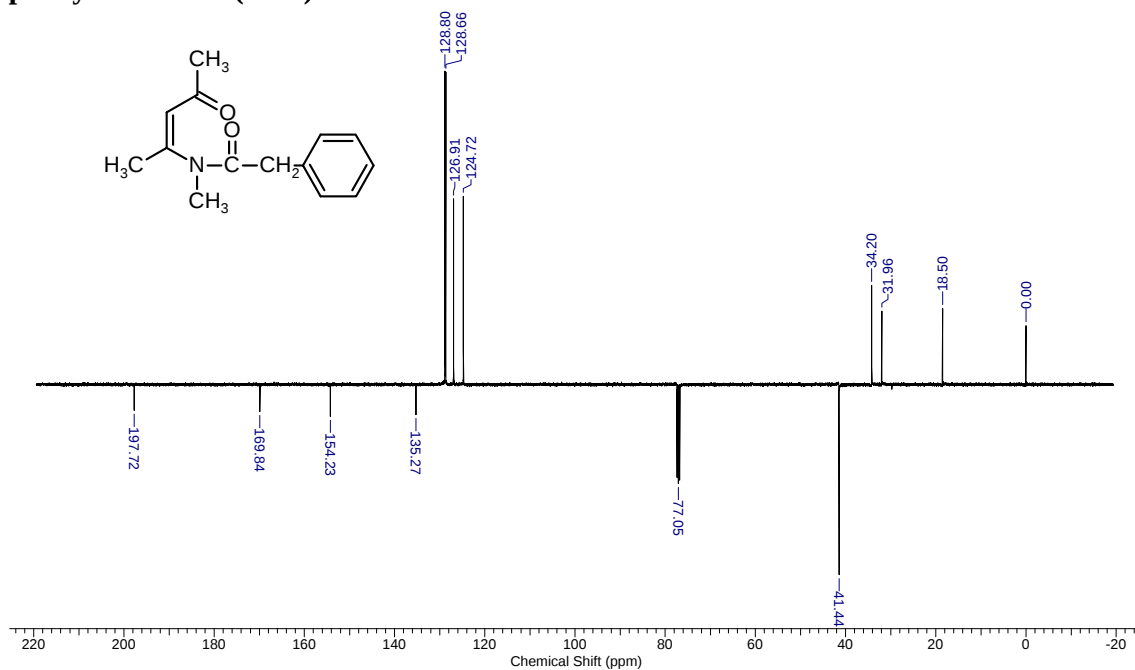
Table of Contents

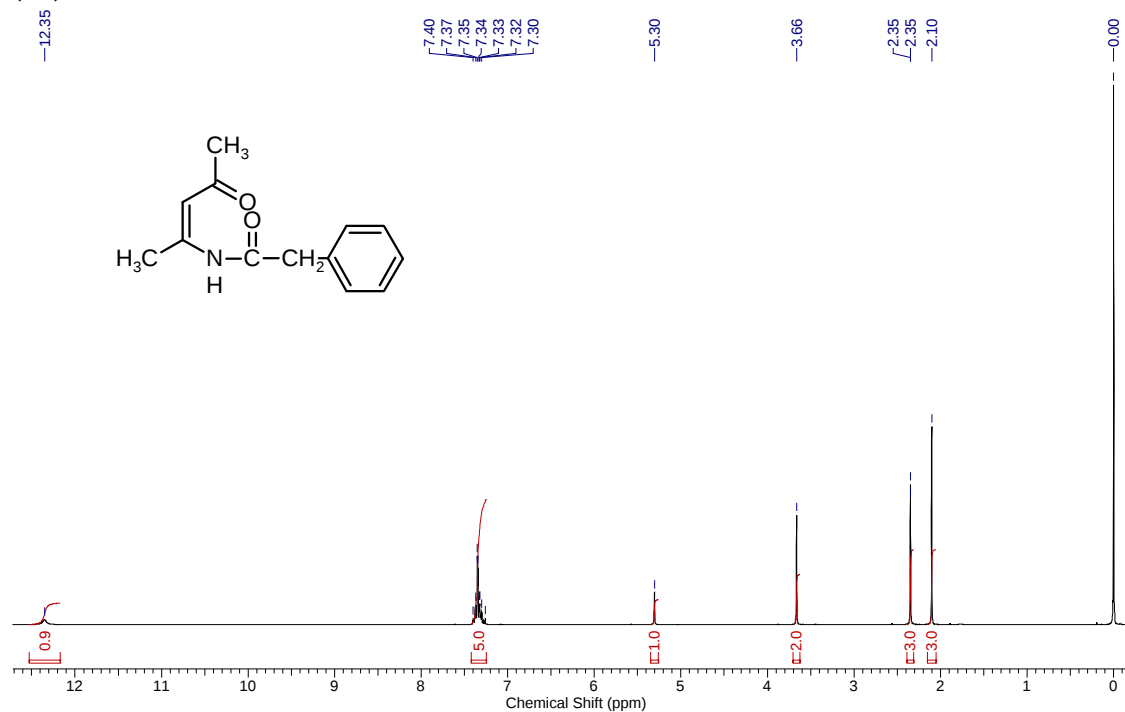
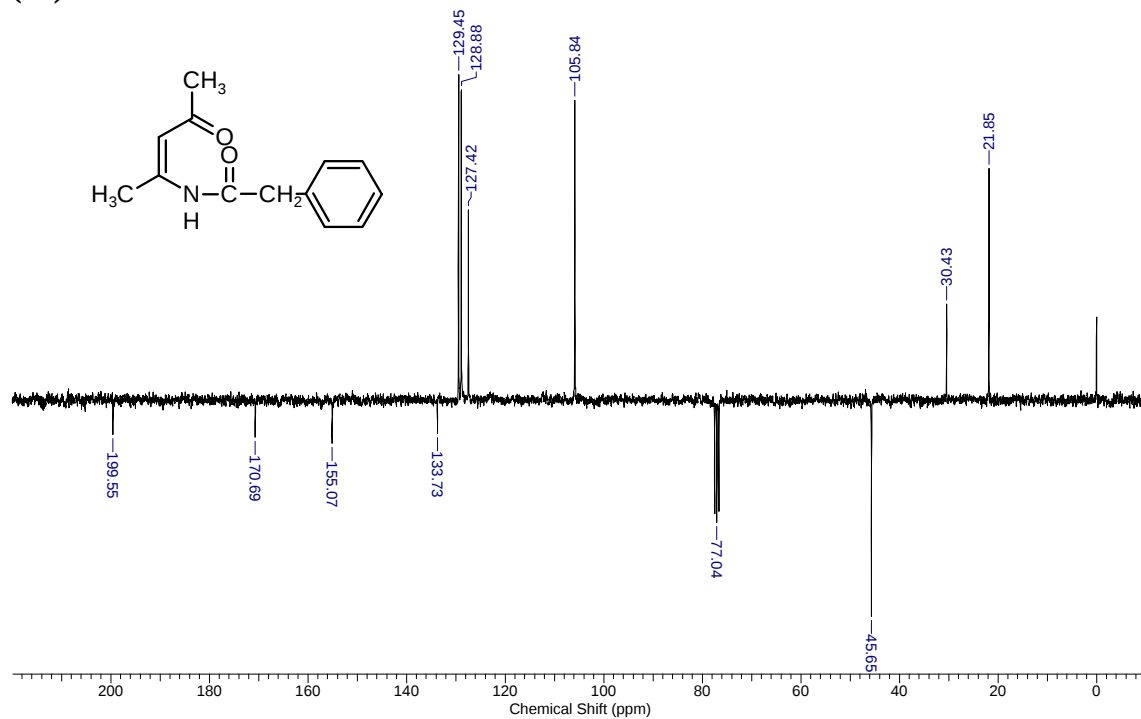
1. ¹ H NMR and ¹³ C NMR spectra of <i>N</i> -(3-oxoalkenyl)phenylacetamides 3	S2
2. ¹ H NMR and ¹³ C NMR spectra of 3-phenyl-2-pyridones 7	S13

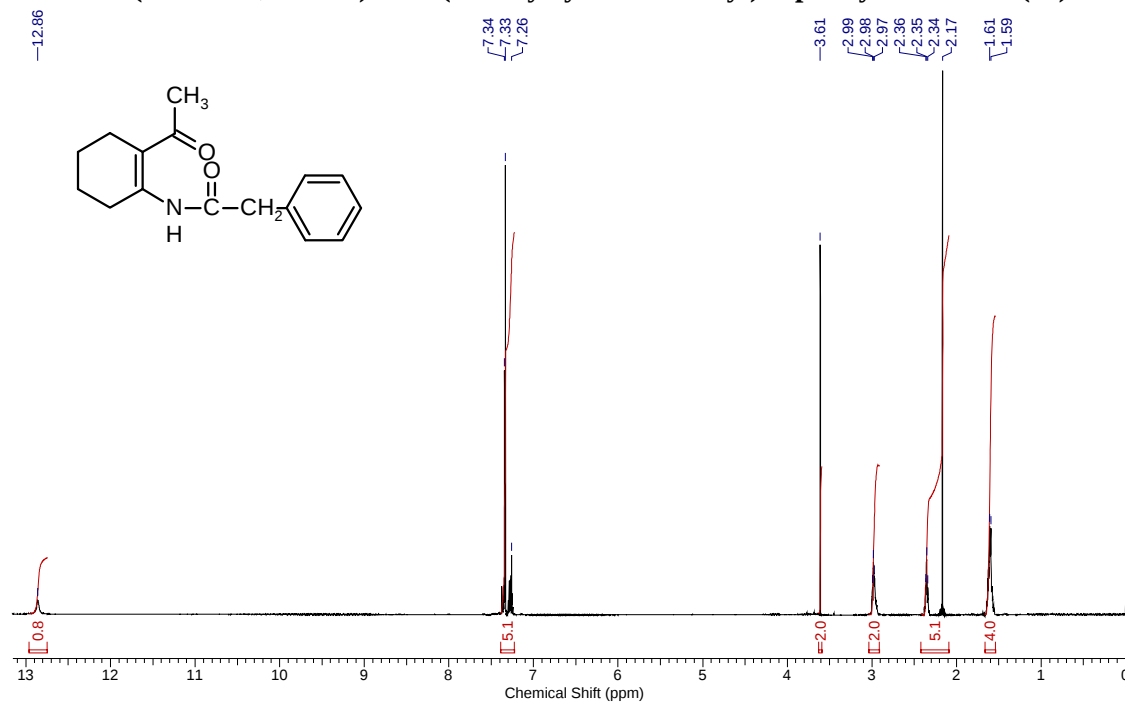
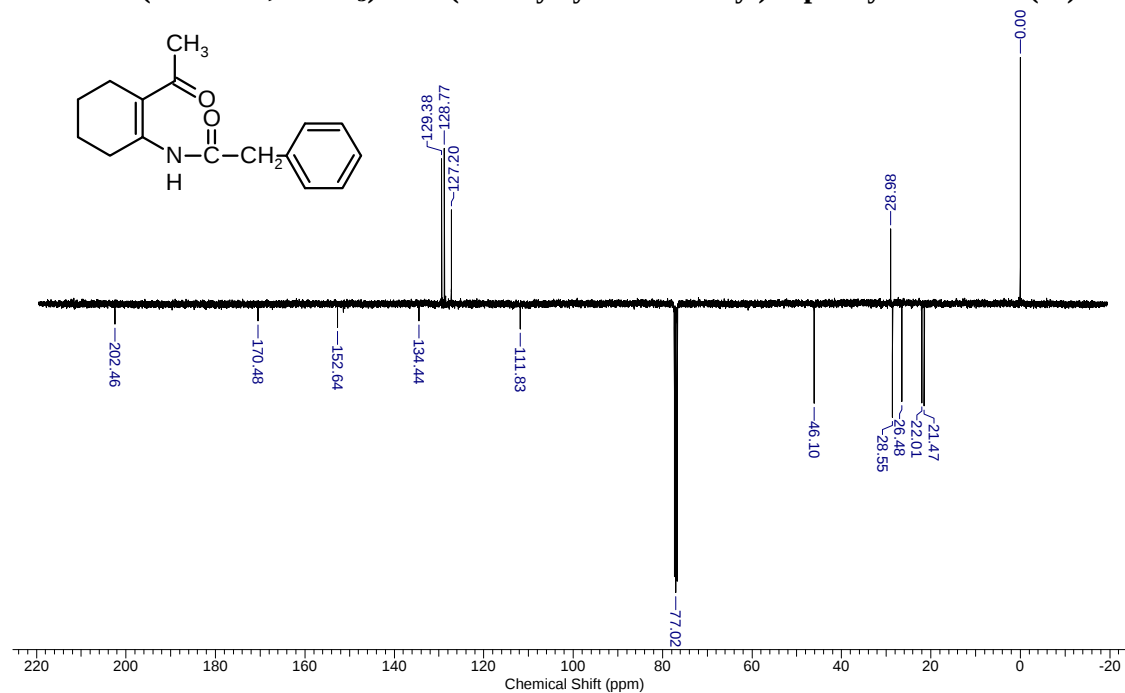
¹H NMR (400 MHz, CDCl₃) of N-methyl-N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (Z-3a)



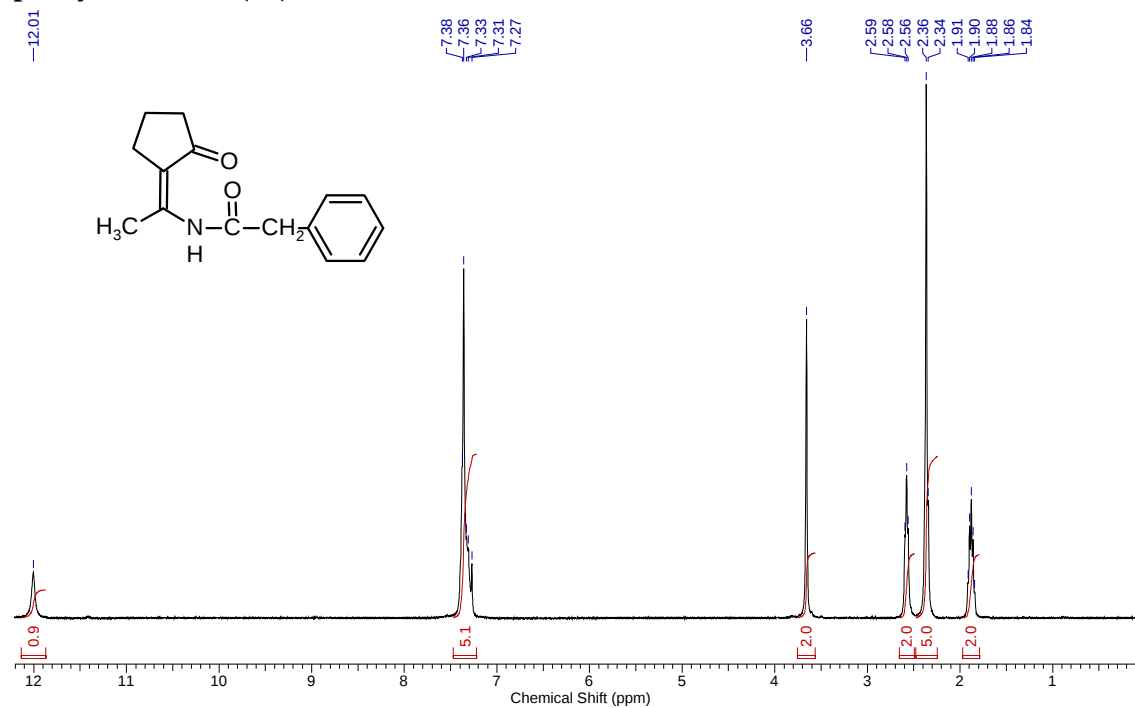
¹³C NMR (100 MHz, CDCl₃) of N-methyl-N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (Z-3a)



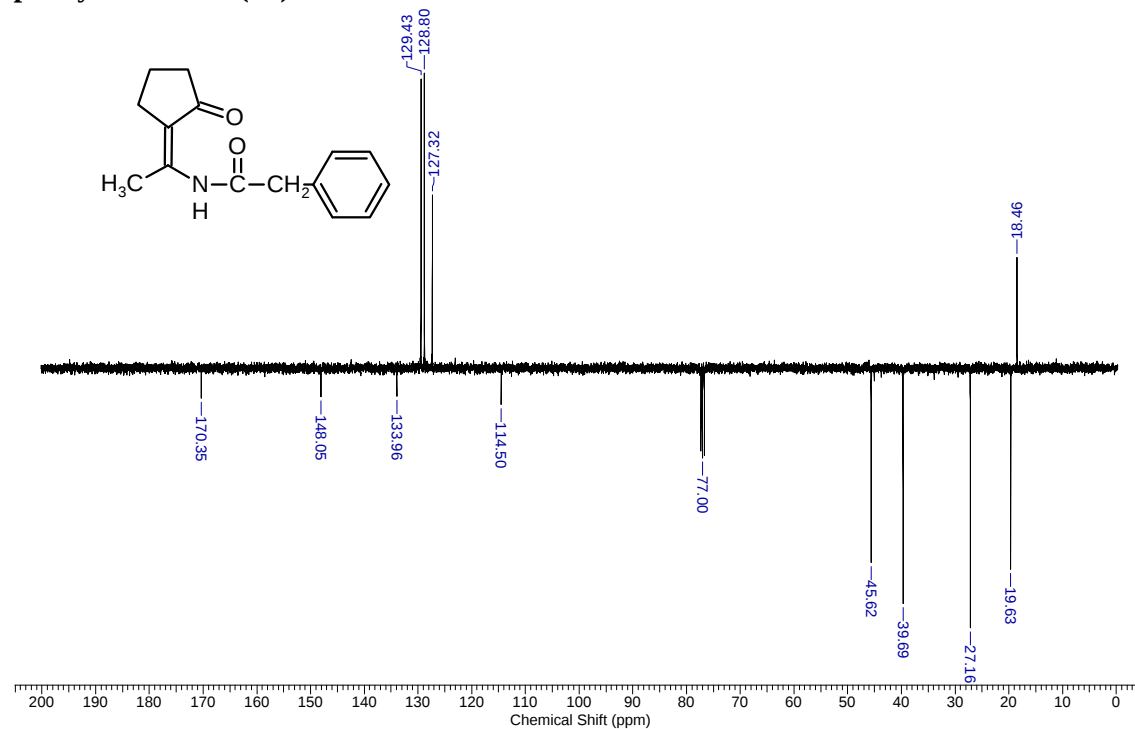
¹H NMR (300 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (3b)**¹³C NMR (75 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (3b)**

^1H NMR (400 MHz, CDCl_3) of N-(2-acetylcyclohex-1-enyl)-2-phenylacetamide (3c) **^{13}C NMR (100 MHz, CDCl_3) of N-(2-acetylcyclohex-1-enyl)-2-phenylacetamide (3c)**

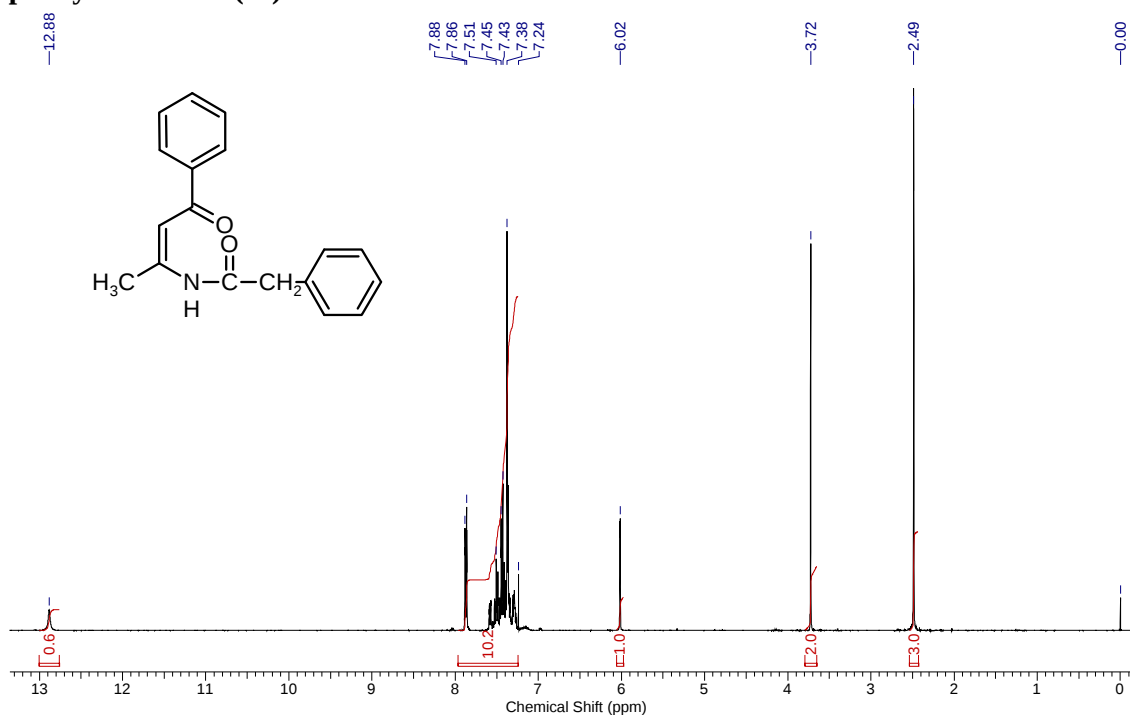
¹H NMR (400 MHz, CDCl₃) of N-{1-[2-oxocyclopent-(Z)-ylidene]-ethyl}-2-phenylacetamide (3d)



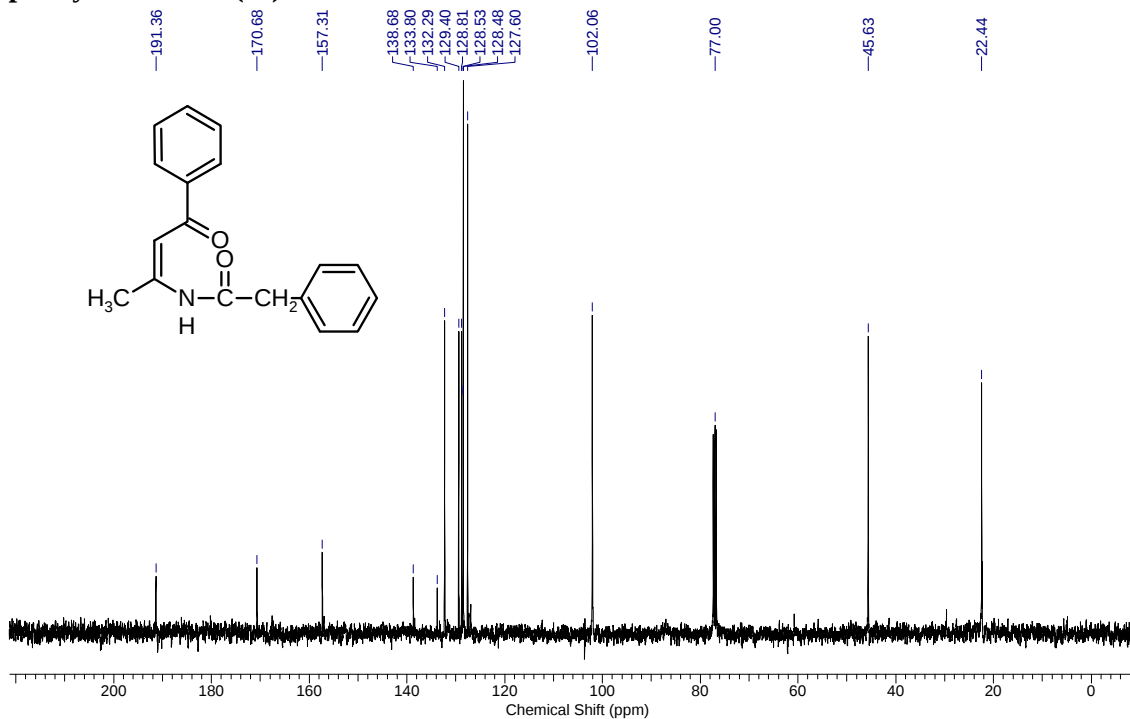
¹³C NMR (100 MHz, CDCl₃) of N-{1-[2-oxocyclopent-(Z)-ylidene]-ethyl}-2-phenylacetamide (3d)



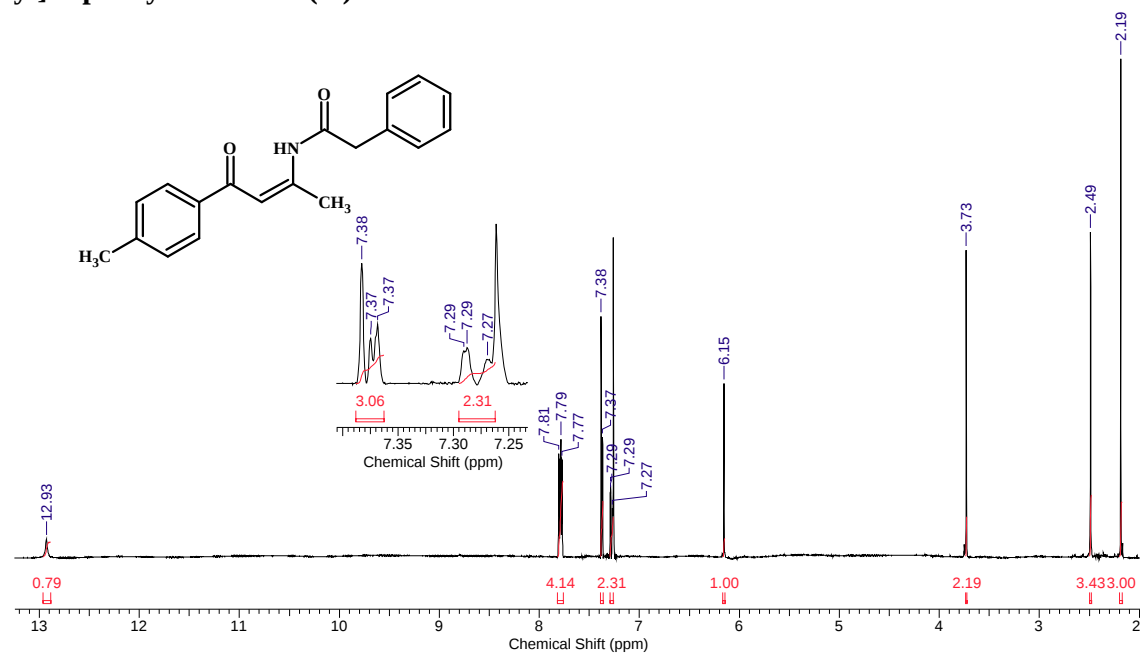
¹H NMR (400 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-3-phenyl-propenyl)-2-phenylacetamide (3e)



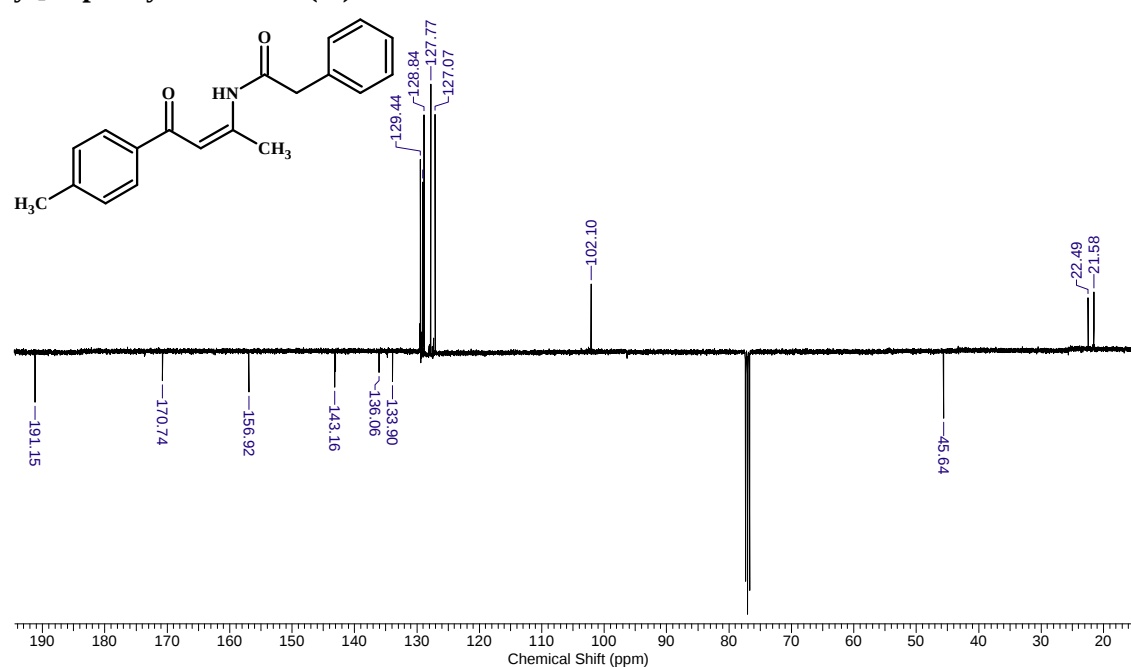
¹³C NMR (100 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-3-phenyl-propenyl)-2-phenylacetamide (3e)



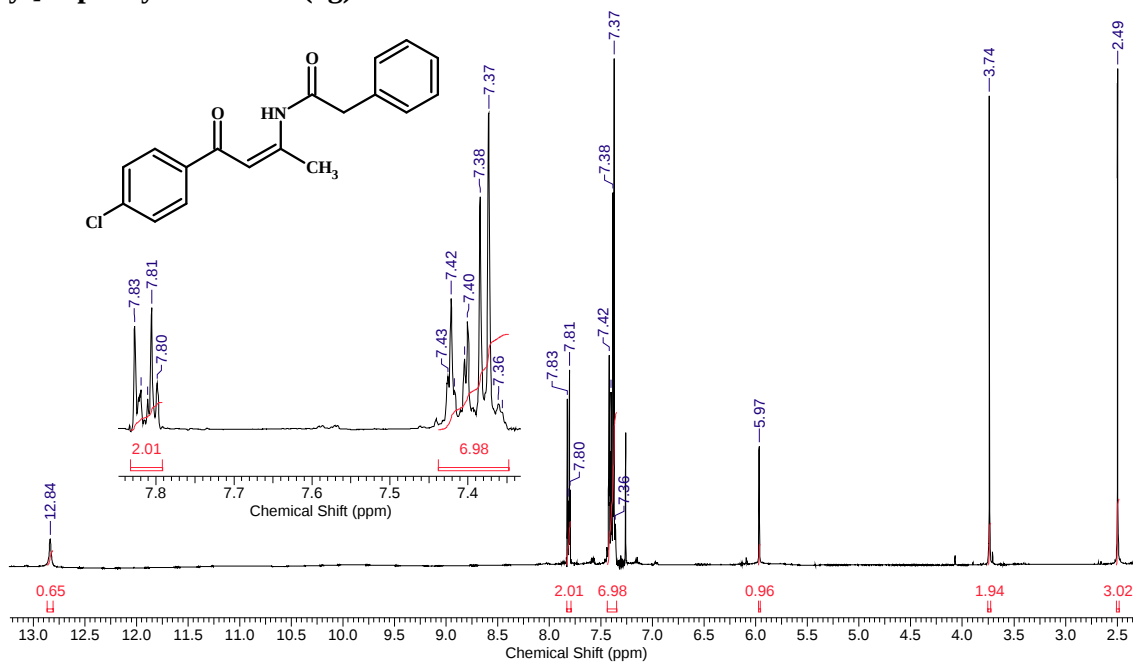
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(4-methylphenyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3f)



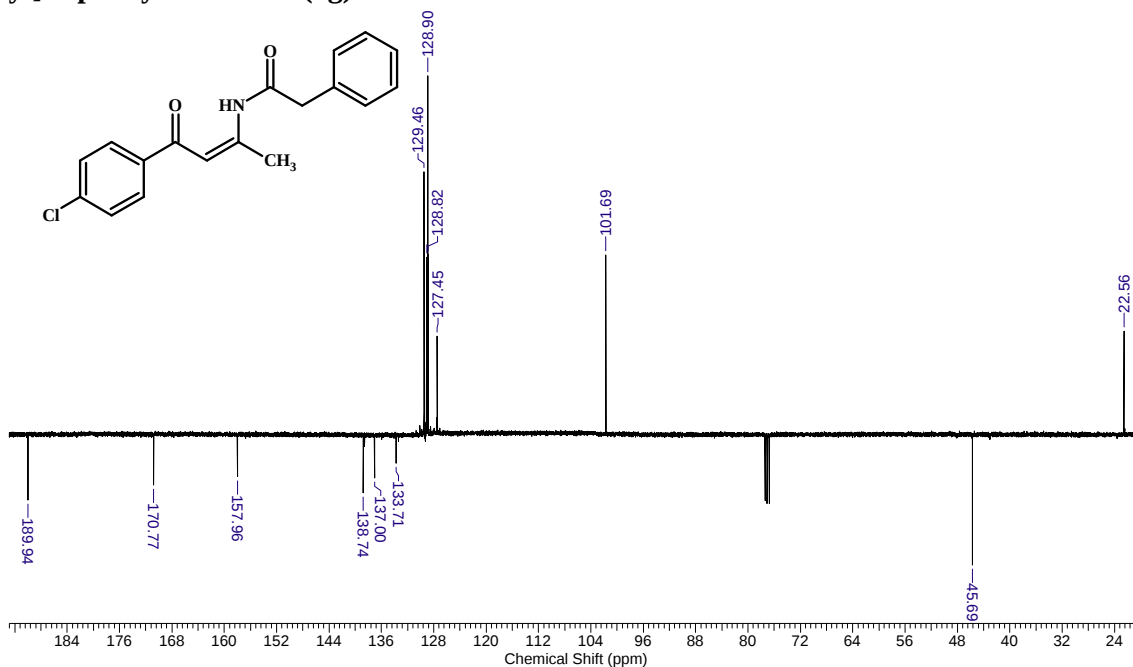
¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(4-methylphenyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3f)



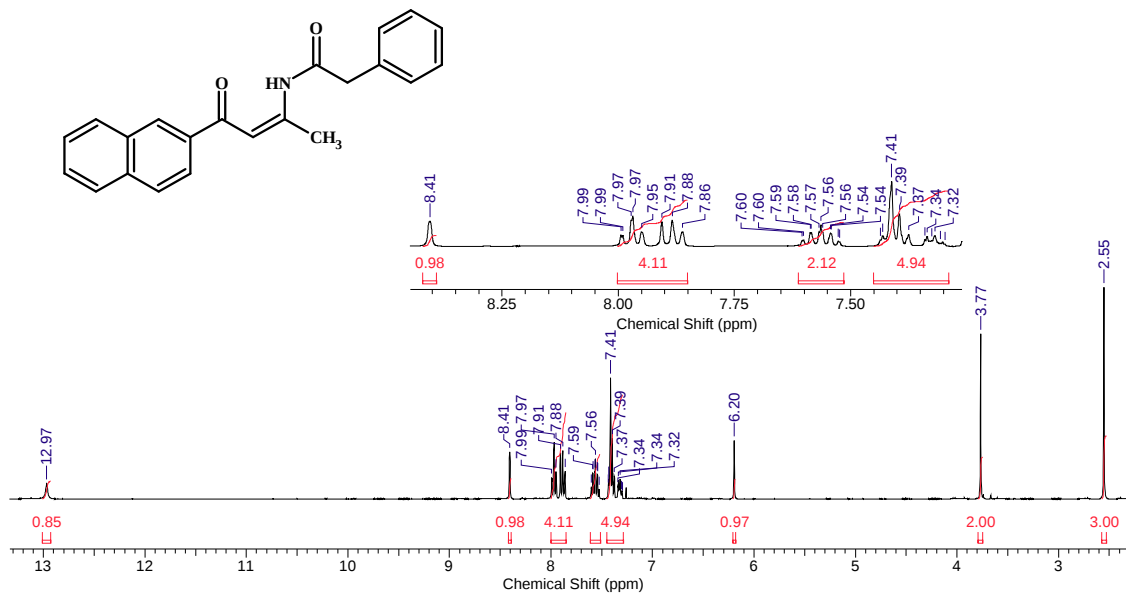
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-3-(4-chlorophenyl)-1-methyl-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3g)



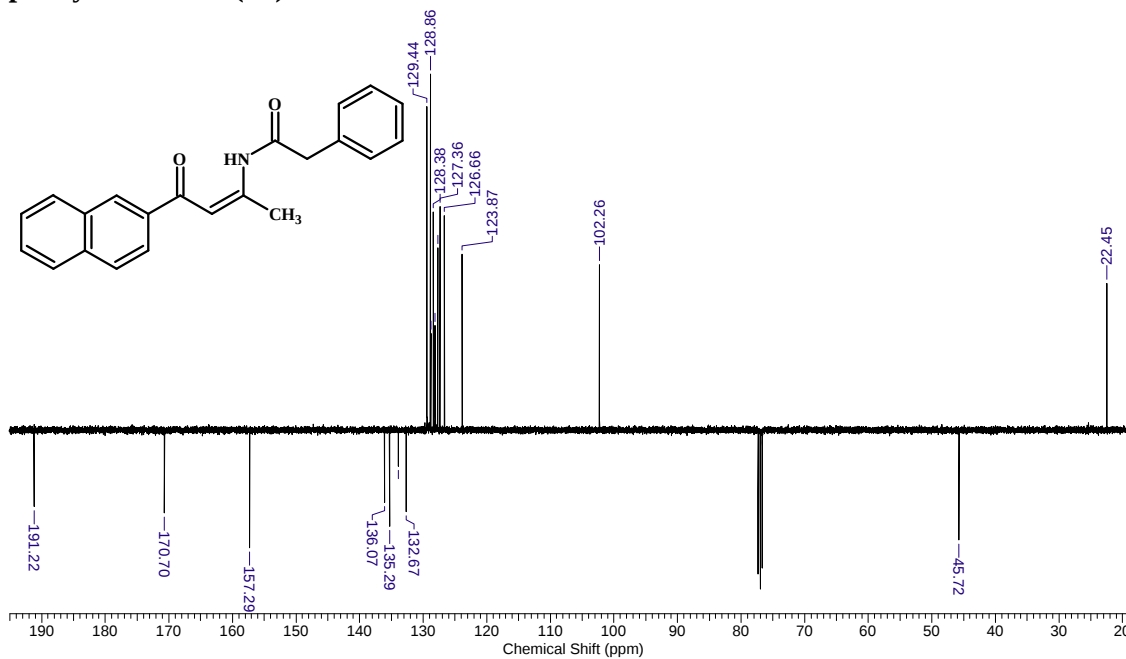
¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-3-(4-chlorophenyl)-1-methyl-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3g)



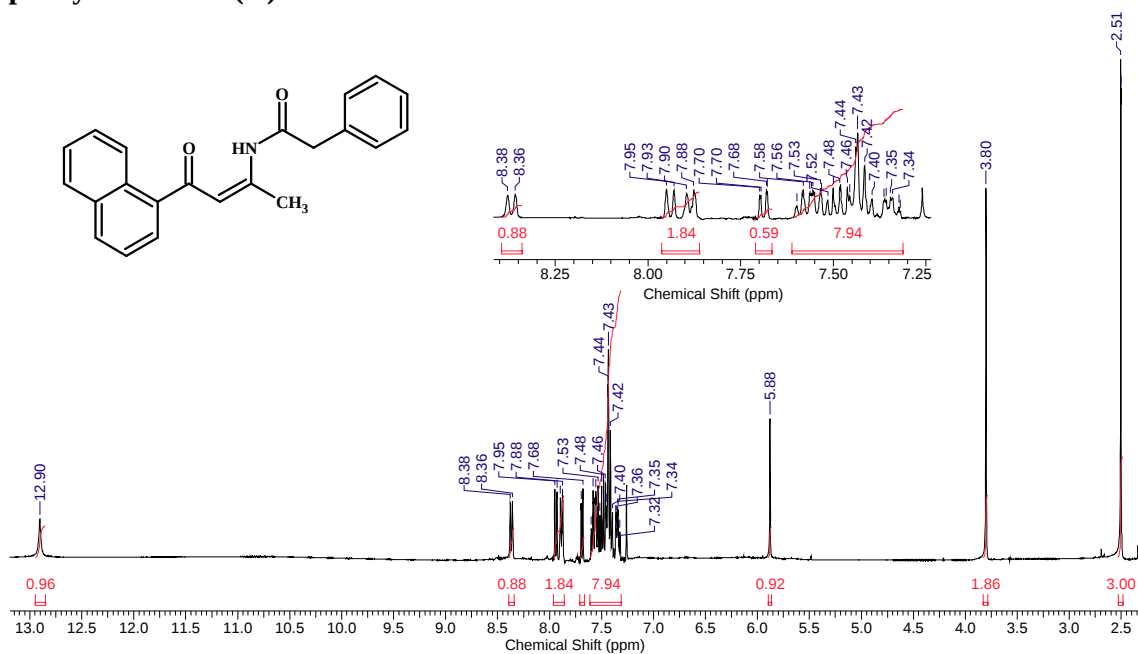
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(2-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3h)



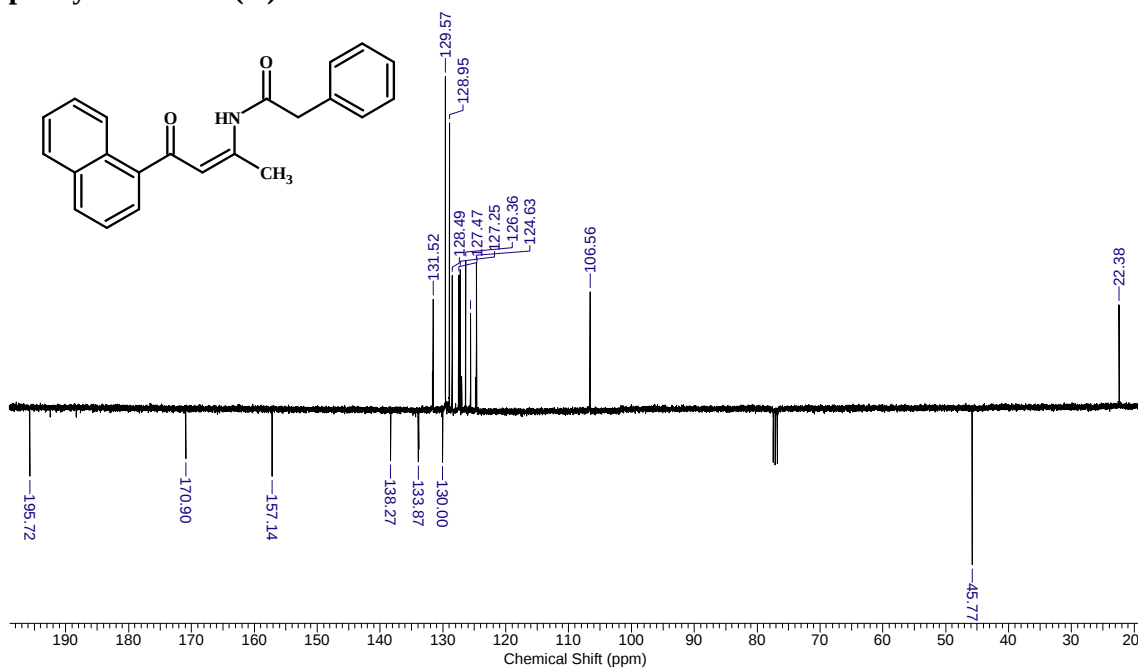
¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(2-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3h)

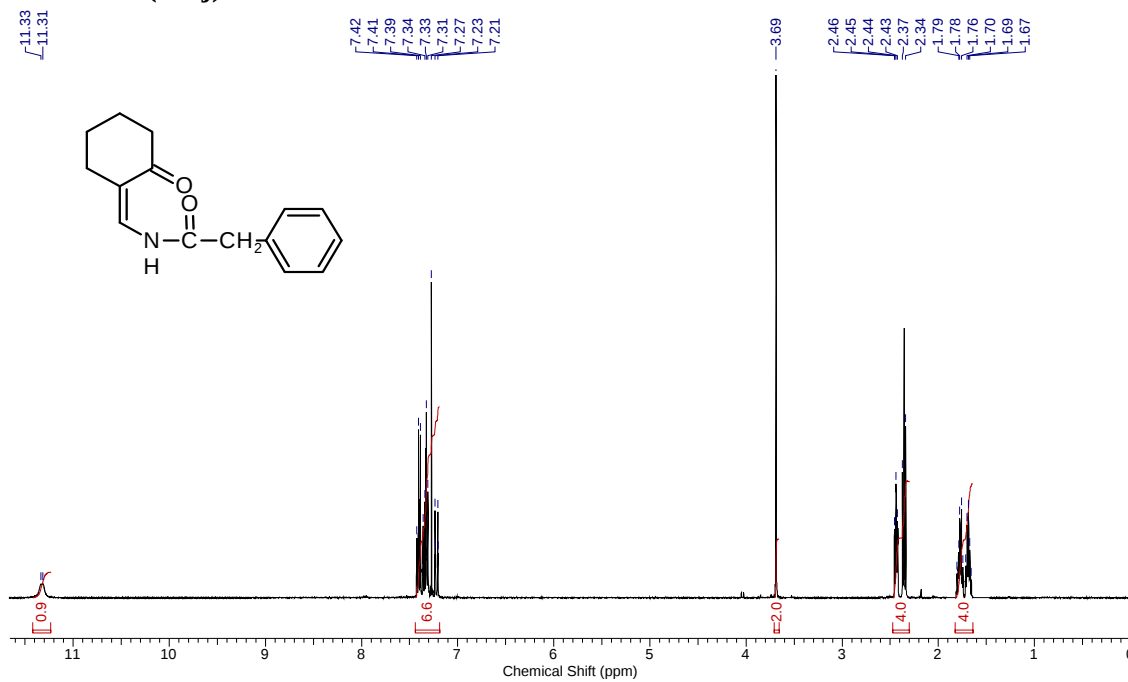
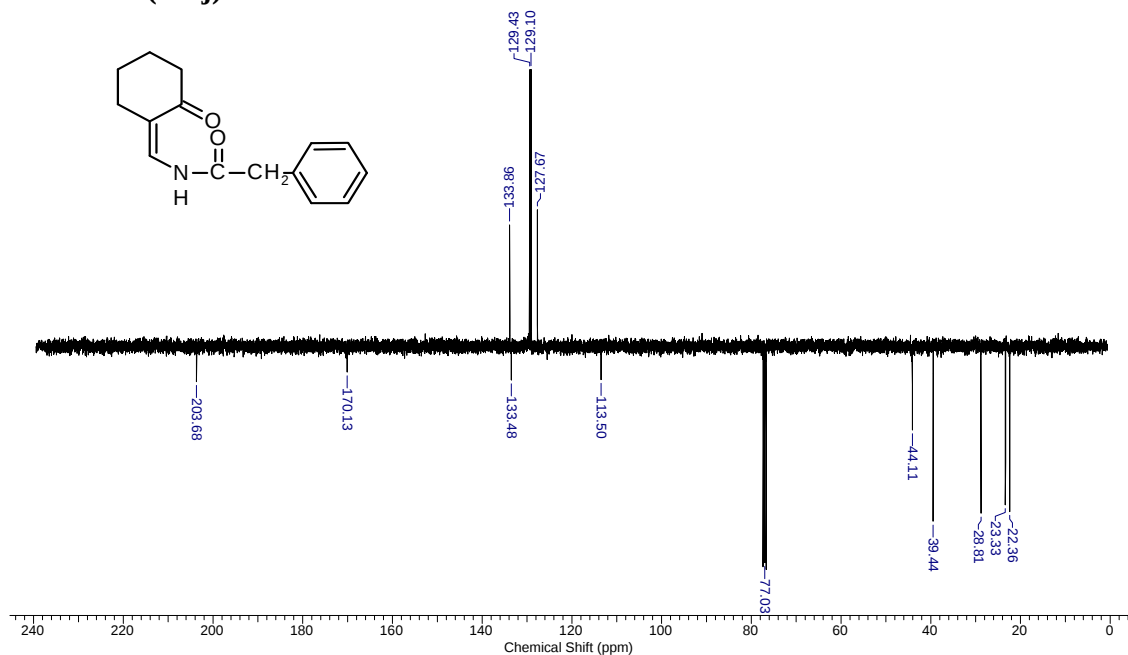


¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(1-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3i)

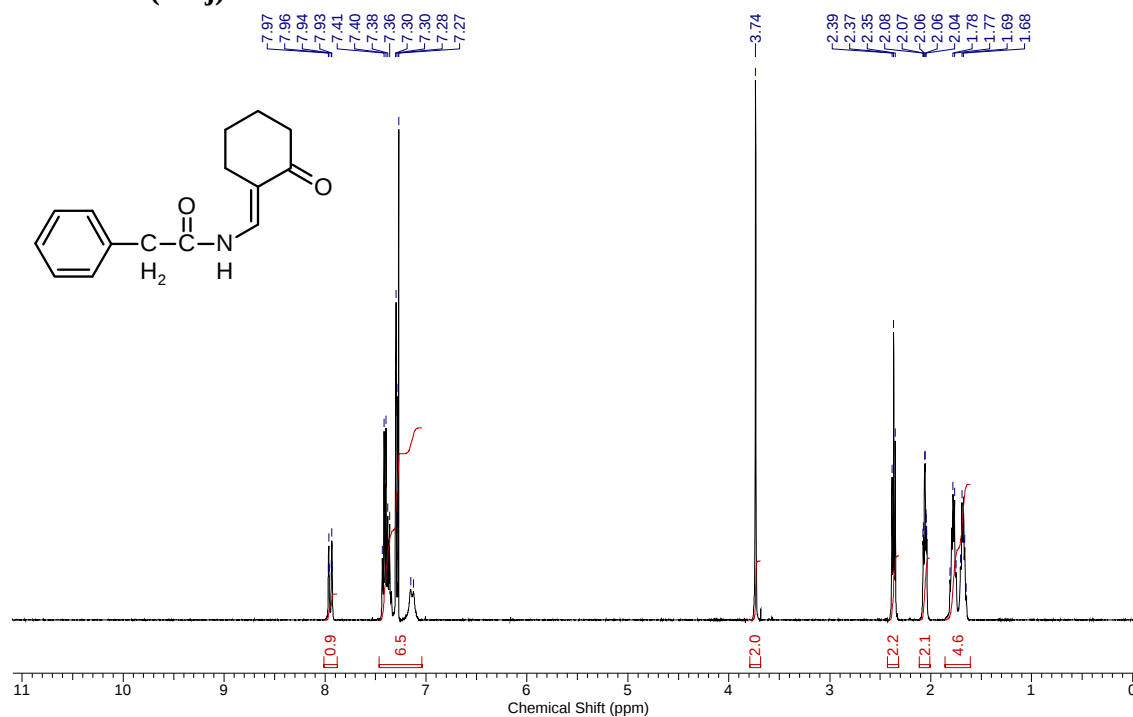


¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(1-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3i)

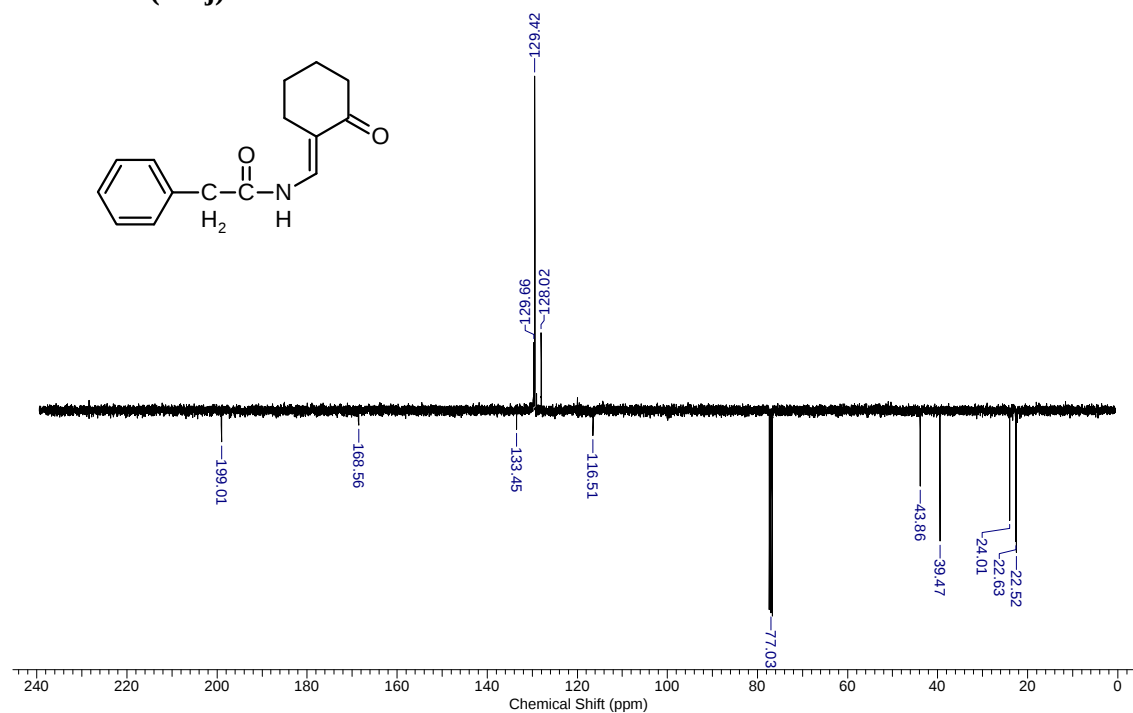


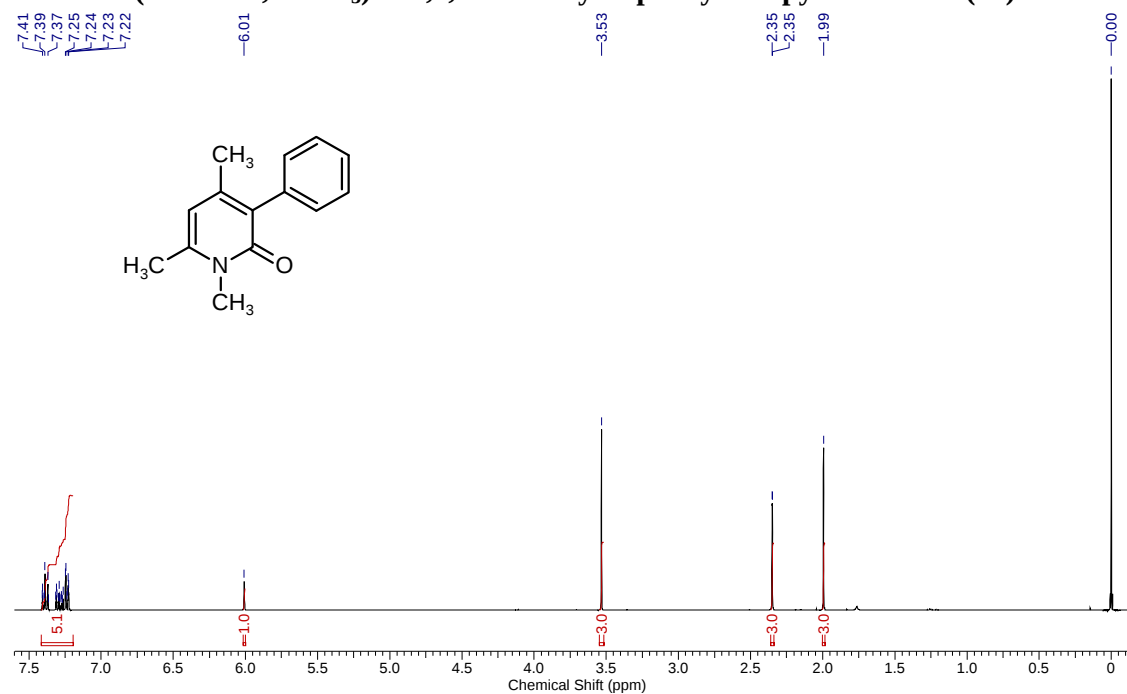
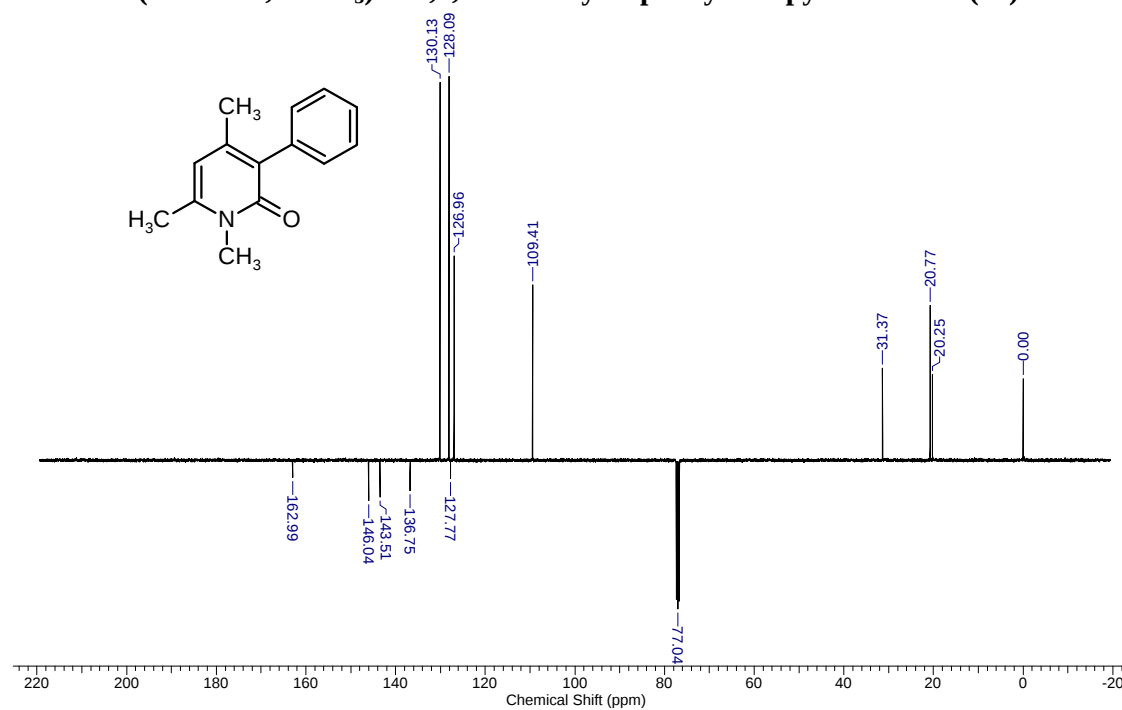
^1H NMR (400 MHz, CDCl_3) of N-[2-oxo-cyclohex-(Z)-ylidenemethyl]-2-phenylacetamide (Z-3j) **^{13}C NMR (100 MHz, CDCl_3) of N-[2-oxo-cyclohex-(Z)-ylidenemethyl]-2-phenylacetamide (Z-3j)**

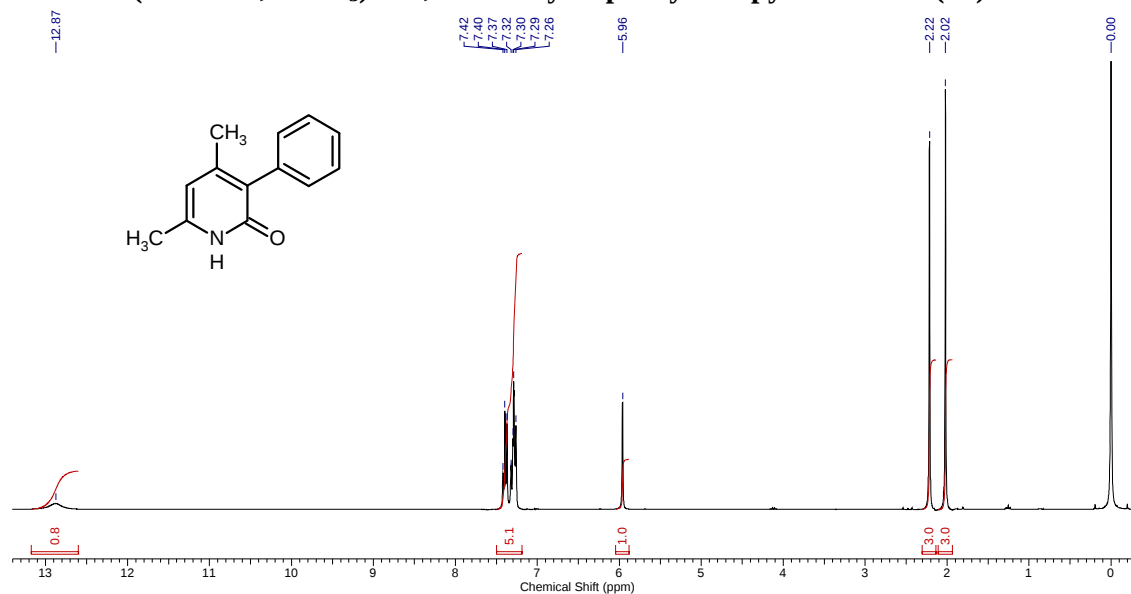
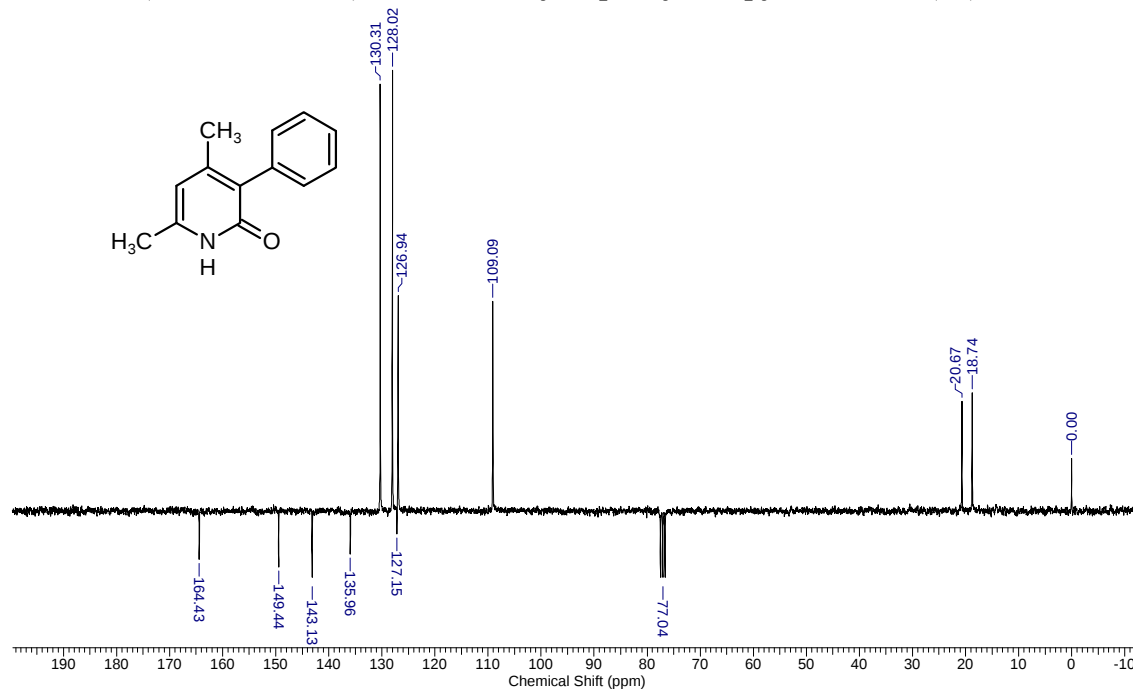
¹H NMR (400 MHz, CDCl₃) of N-[2-oxo-cyclohex-(E)-ylidenemethyl]-2-phenyl-acetamide (E-3j)



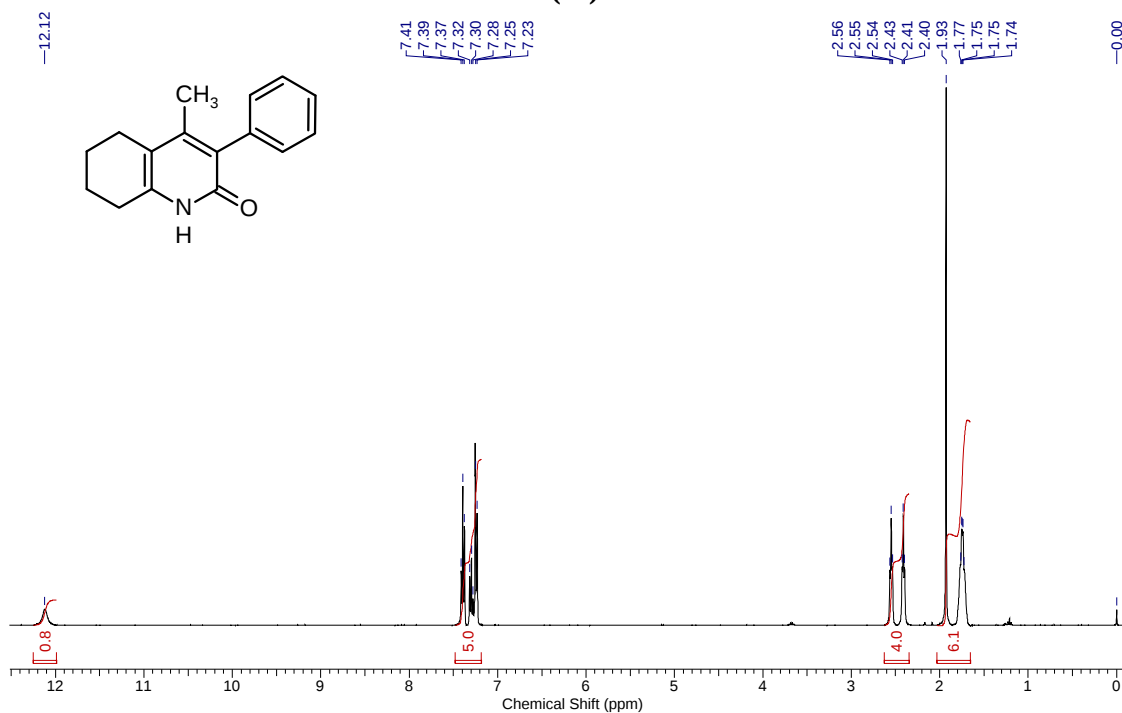
¹³C NMR (100 MHz, CDCl₃) of N-[2-oxo-cyclohex-(E)-ylidenemethyl]-2-phenyl-acetamide (E-3j)



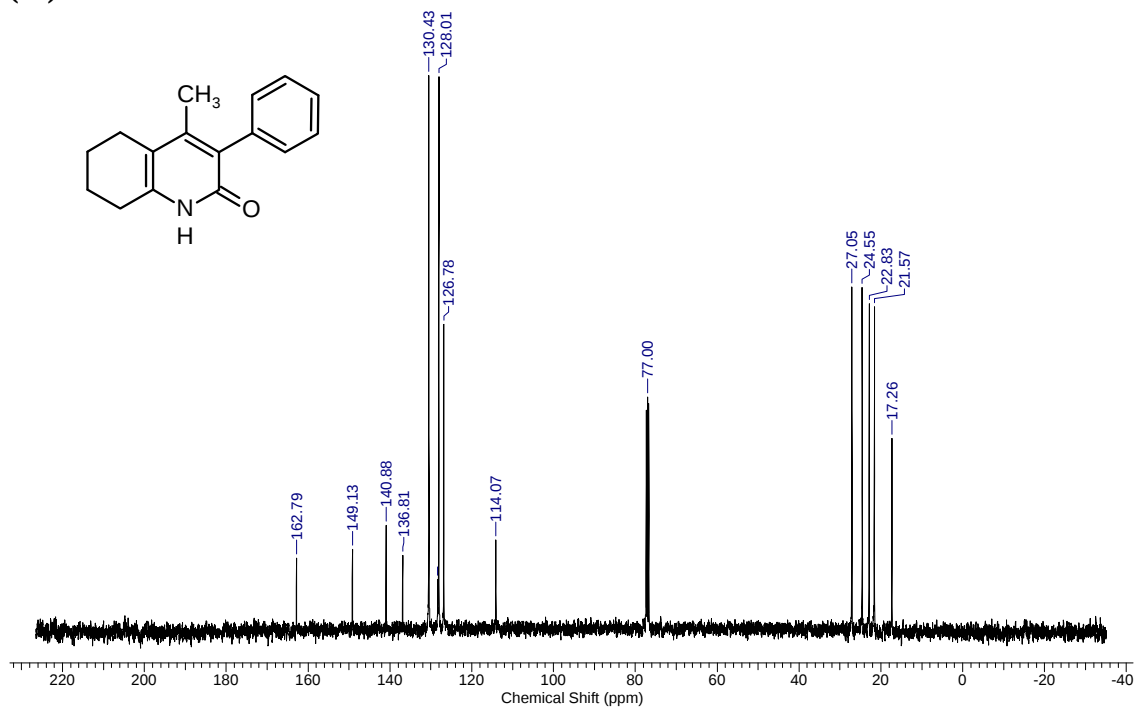
^1H NMR (400 MHz, CDCl_3) of 1,4,6-trimethyl-3-phenyl-1H-pyridin-2-one (8a) **^{13}C NMR (100 MHz, CDCl_3) of 1,4,6-trimethyl-3-phenyl-1H-pyridin-2-one (8a)**

^1H NMR (300 MHz, CDCl_3) of 4,6-dimethyl-3-phenyl-1H-pyridin-2-one (8b) **^{13}C NMR (75 MHz, CDCl_3) of 4,6-dimethyl-3-phenyl-1H-pyridin-2-one (8b)**

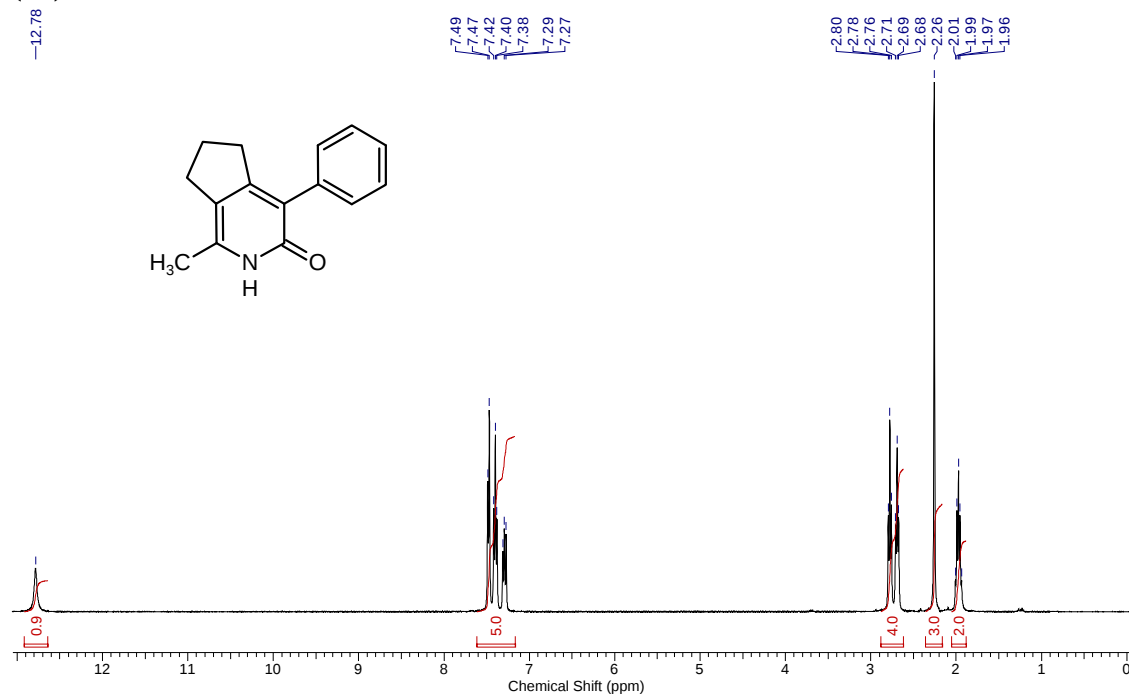
^1H NMR (400 MHz, CDCl_3) of 4-methyl-3-phenyl-5,6,7,8-tetrahydro-1H-quinolin-2-one (8c)



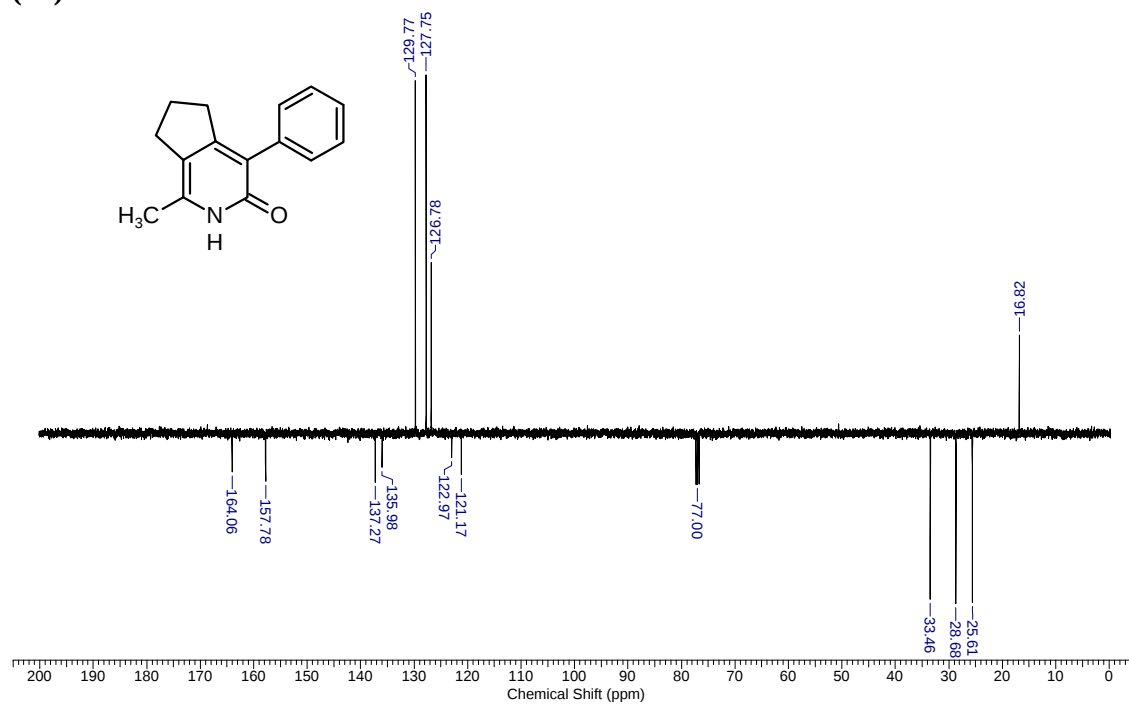
^{13}C NMR (100 MHz, CDCl_3) of 4-methyl-3-phenyl-5,6,7,8-tetrahydro-1H-quinolin-2-one (8c)

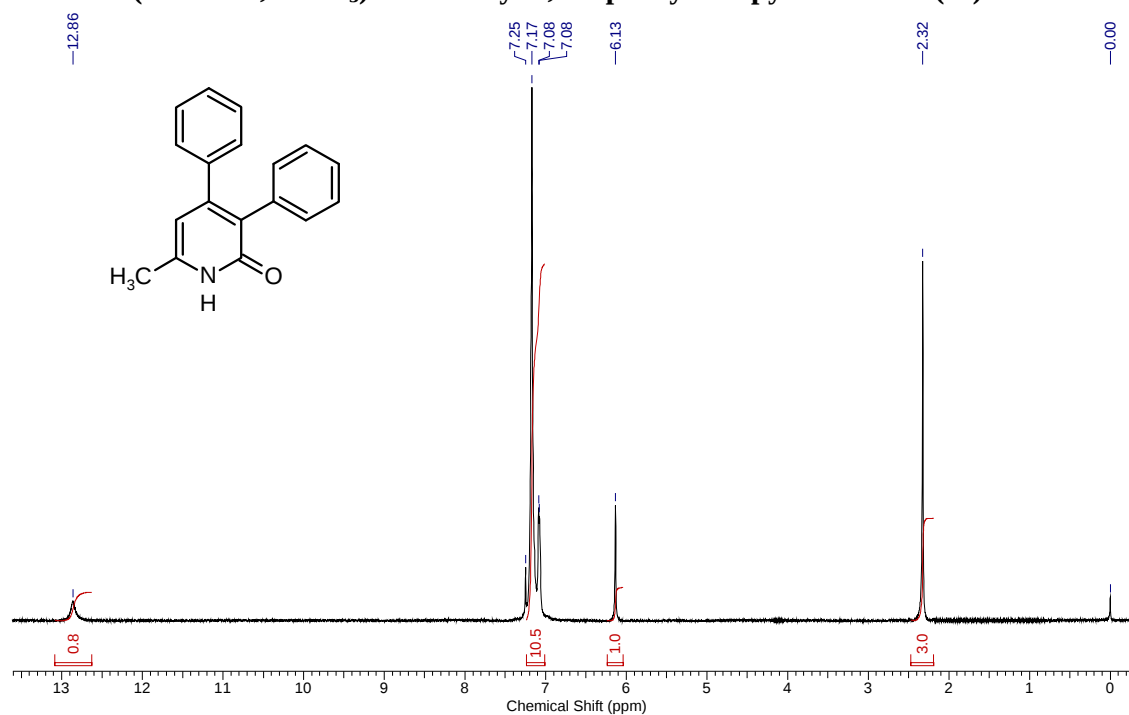
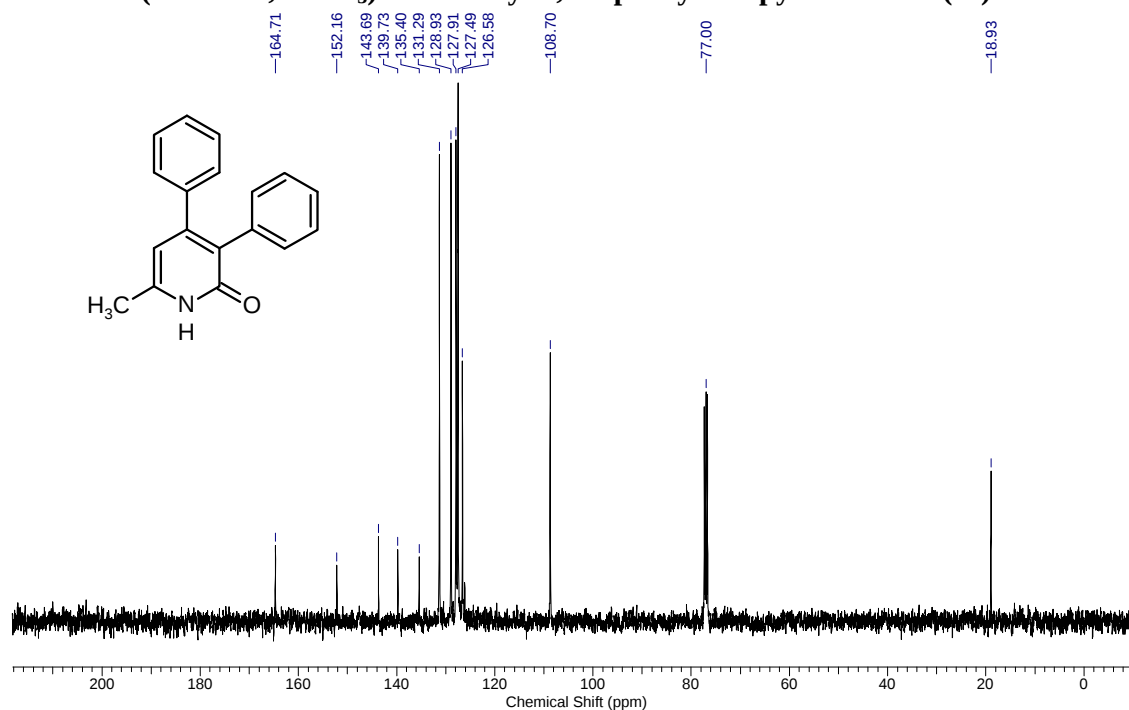


¹H NMR (400 MHz, CDCl₃) of 1-methyl-4-phenyl-2,5,6,7-tetrahydro-[2]pyrindin-3-one (8d)

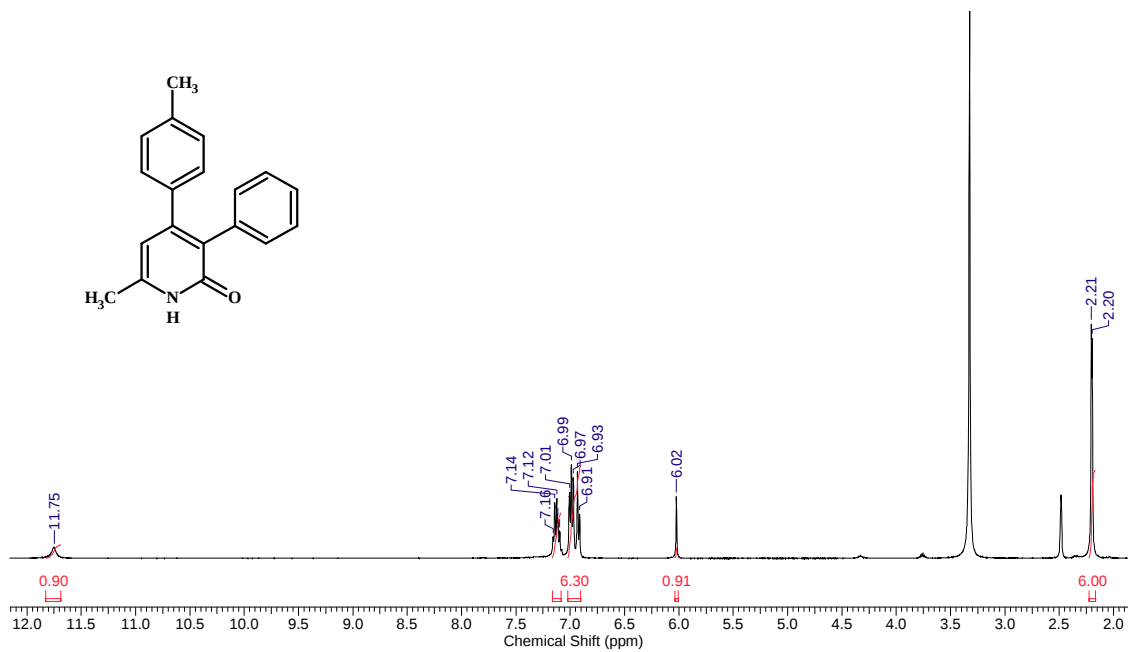


¹³C NMR (100 MHz, CDCl₃) of 1-methyl-4-phenyl-2,5,6,7-tetrahydro-[2]pyrindin-3-one (8d)

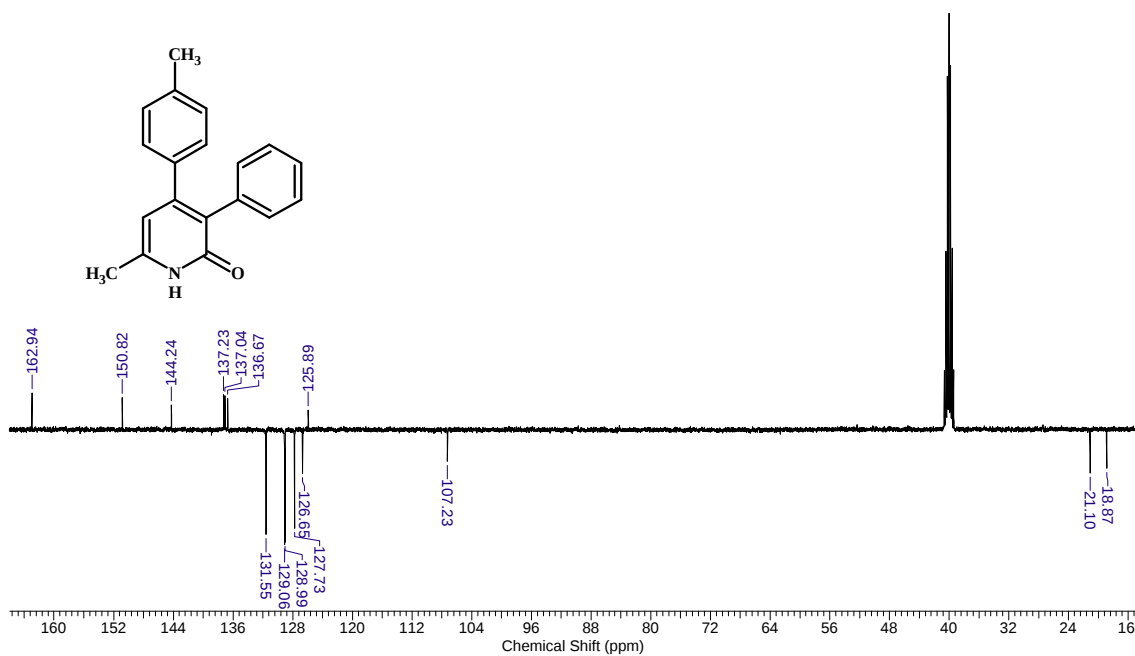


^1H NMR (400 MHz, CDCl_3) of 6-methyl-3,4-diphenyl-1H-pyridin-2-one (8e) **^{13}C NMR (100 MHz, CDCl_3) of 6-methyl-3,4-diphenyl-1H-pyridin-2-one (8e)**

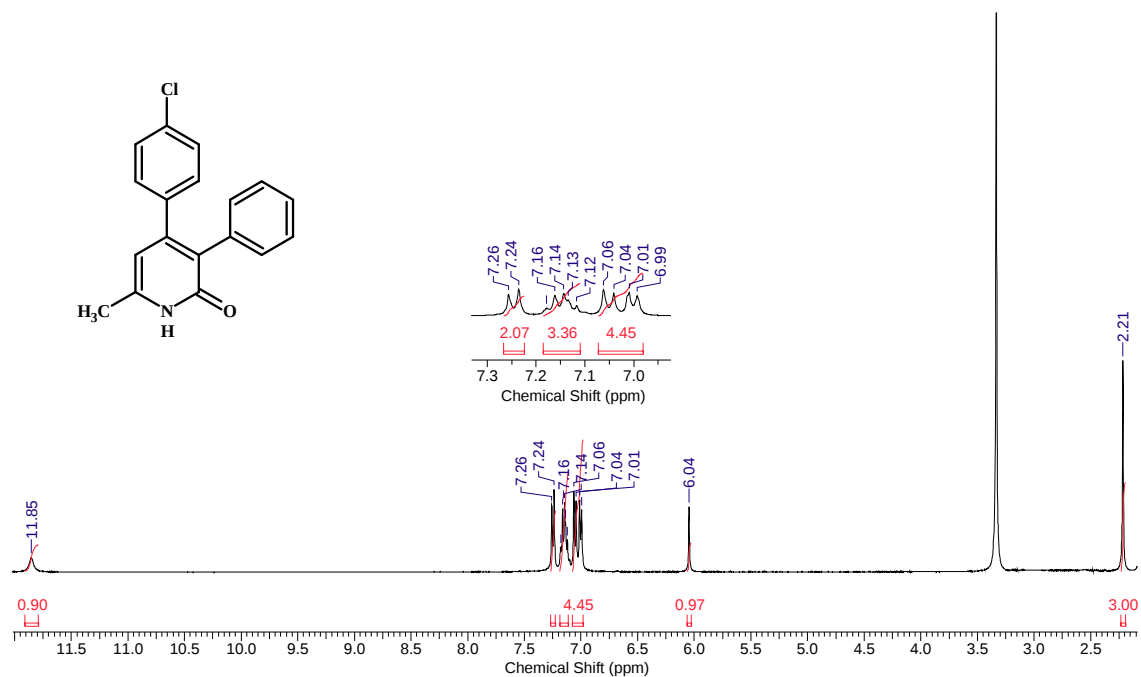
¹H NMR (400 MHz, DMSO-d₆) of 6-Methyl-4-(4-methylphenyl)-3-phenylpyridin-2(1H)-one (8f)



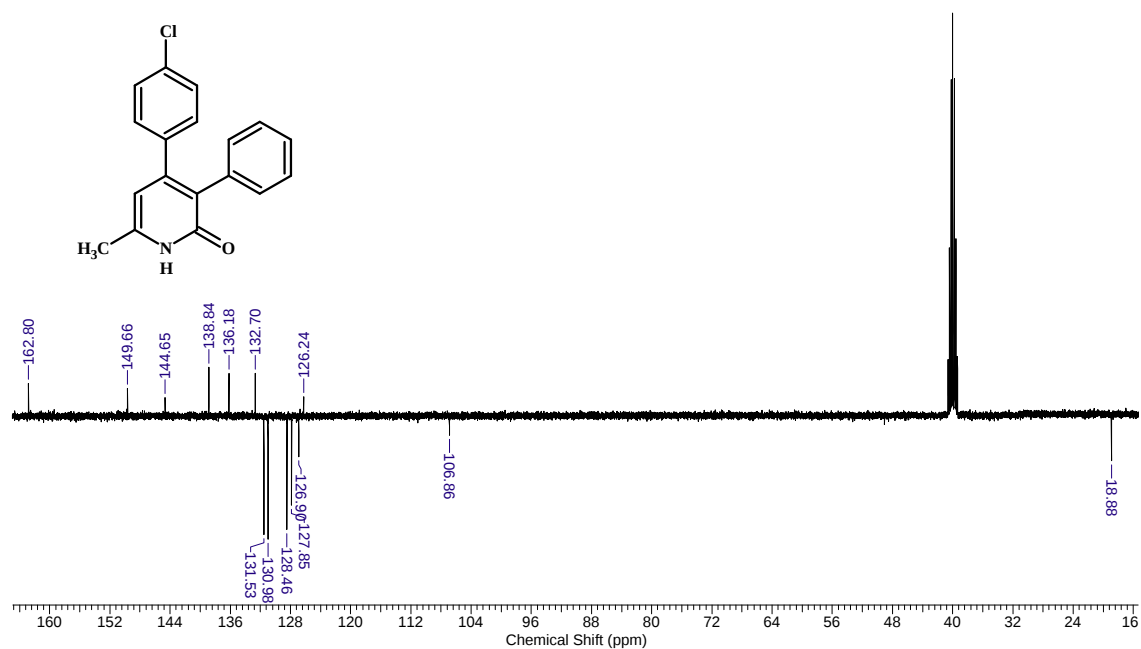
¹³C NMR (100 MHz, DMSO-d₆) of 6-methyl-4-(4-methylphenyl)-3-phenylpyridin-2(1H)-one (8f)



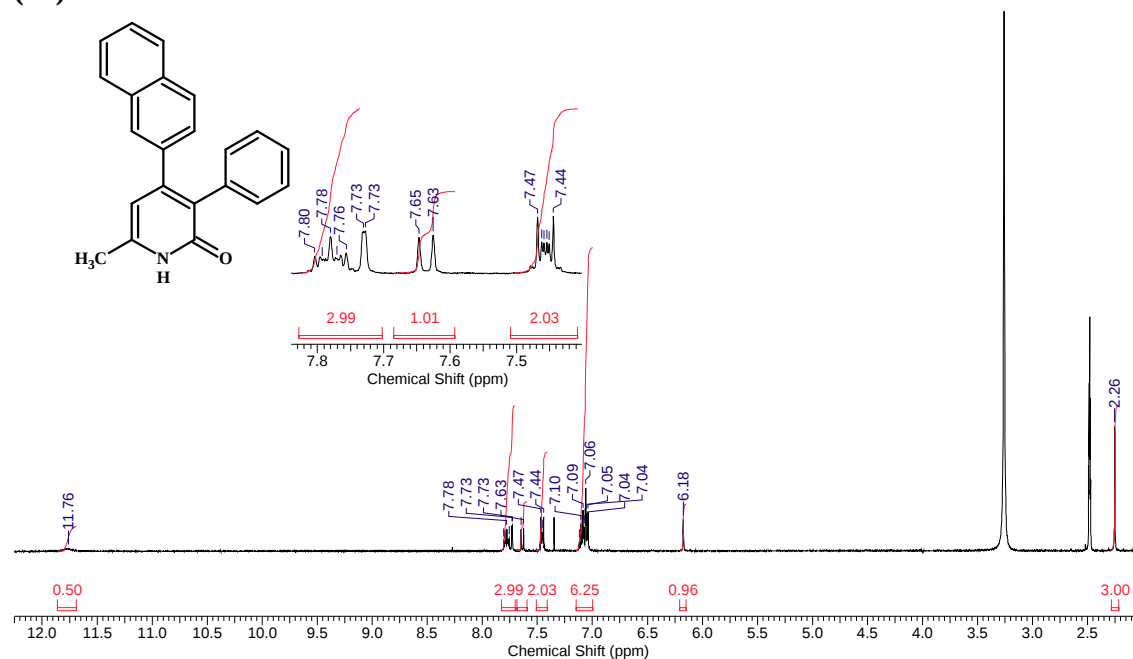
¹H NMR (400 MHz, DMSO-d₆) of 4-(4-chlorophenyl)-6-methyl-3-phenylpyridin-2(1H)-one (8g)



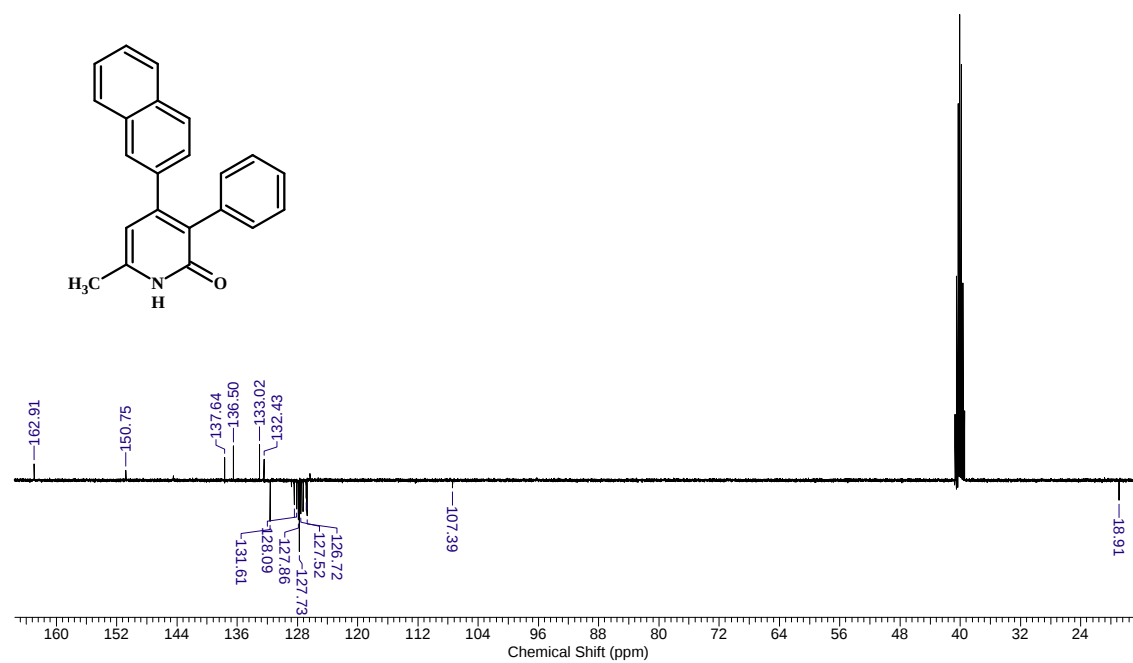
¹³C NMR (100 MHz, DMSO-d₆) of 4-(4-chlorophenyl)-6-methyl-3-phenylpyridin-2(1H)-one (8g)



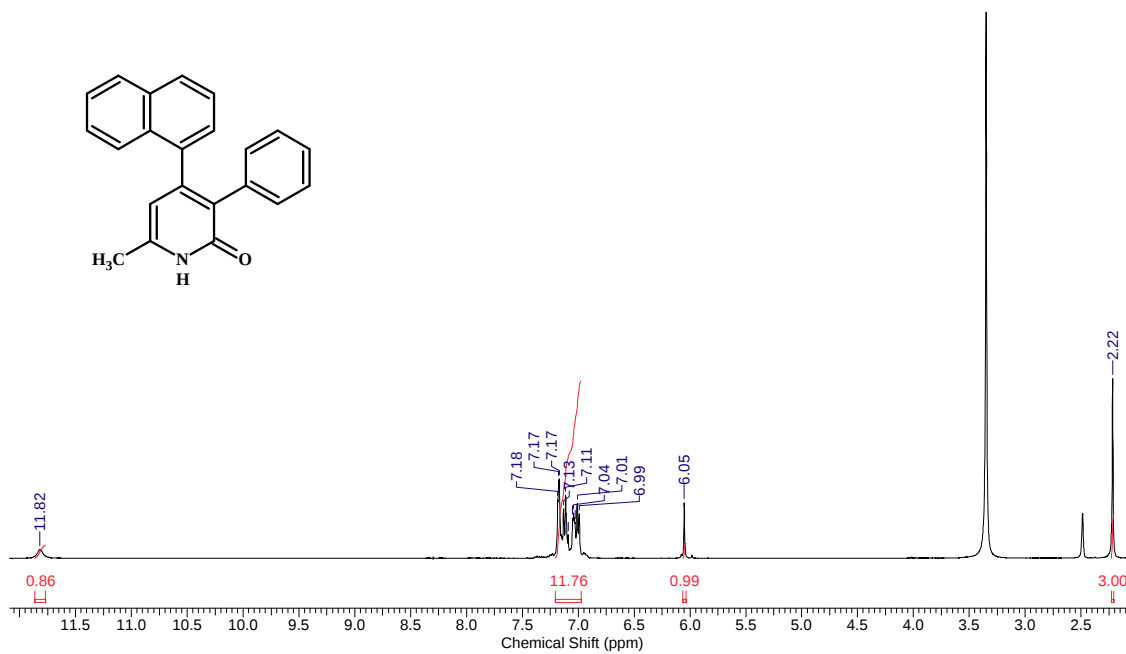
¹H NMR (400 MHz, DMSO-d₆) of 6-methyl-4-(2-naphthyl)-3-phenylpyridin-2(1H)-one (8h)



¹³C NMR (100 MHz, DMSO-d₆) of 6-methyl-4-(2-naphthyl)-3-phenylpyridin-2(1H)-one (8h)



¹H NMR (400 MHz, DMSO-d₆) of 6-methyl-4-(1-naphthyl)-3-phenylpyridin-2(1H)-one (8i)



¹³C NMR (100 MHz, DMSO-d₆) of 6-methyl-4-(1-naphthyl)-3-phenylpyridin-2(1H)-one (8i)

