

Supplementary Material

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

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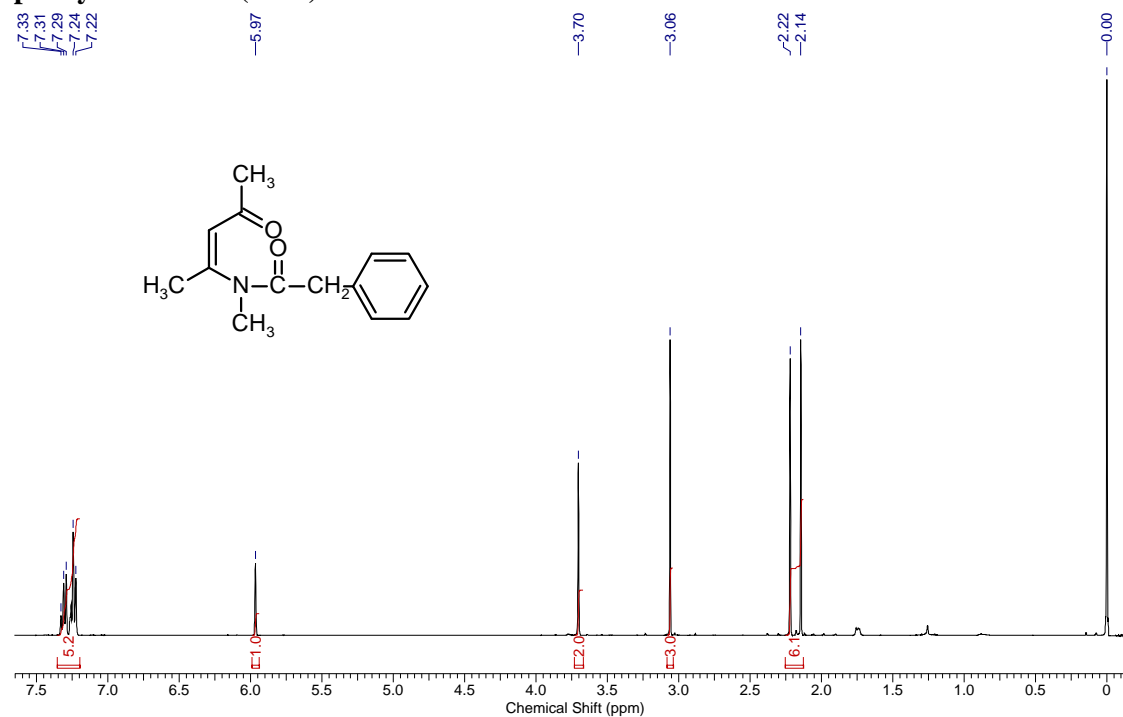
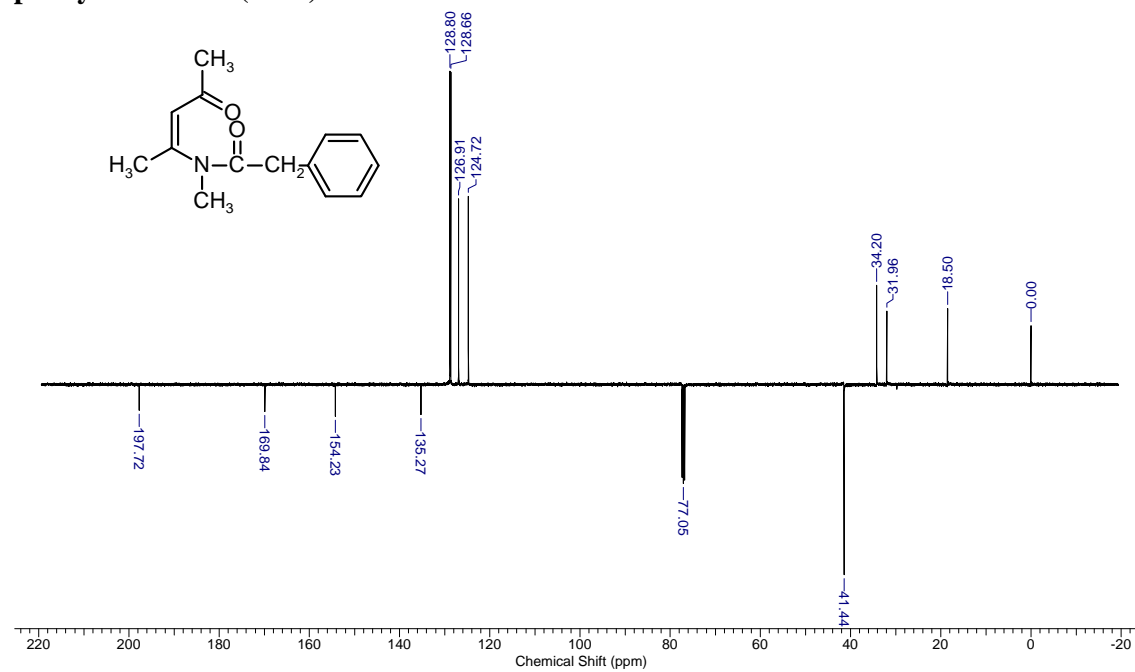
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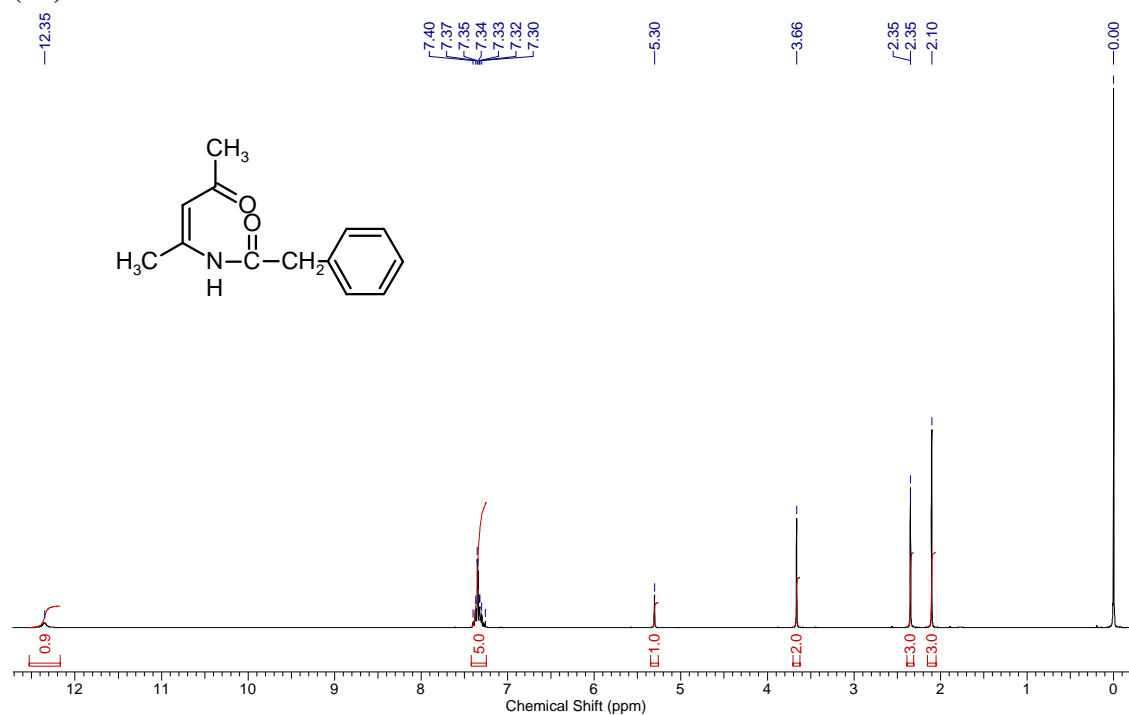
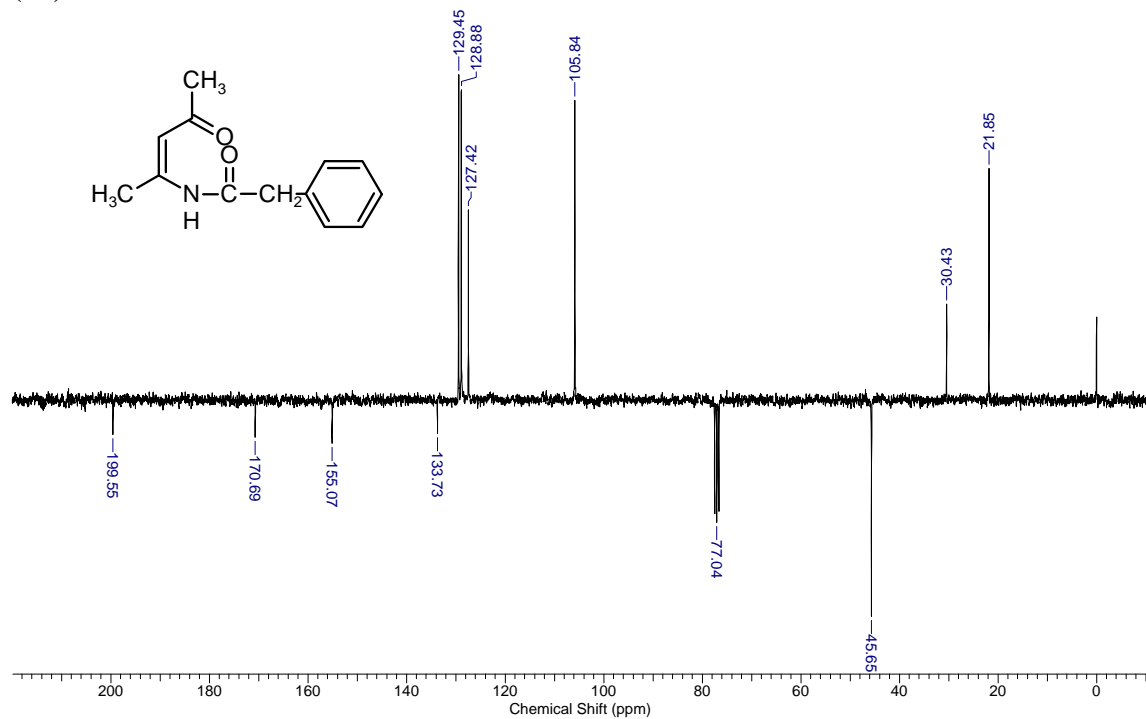
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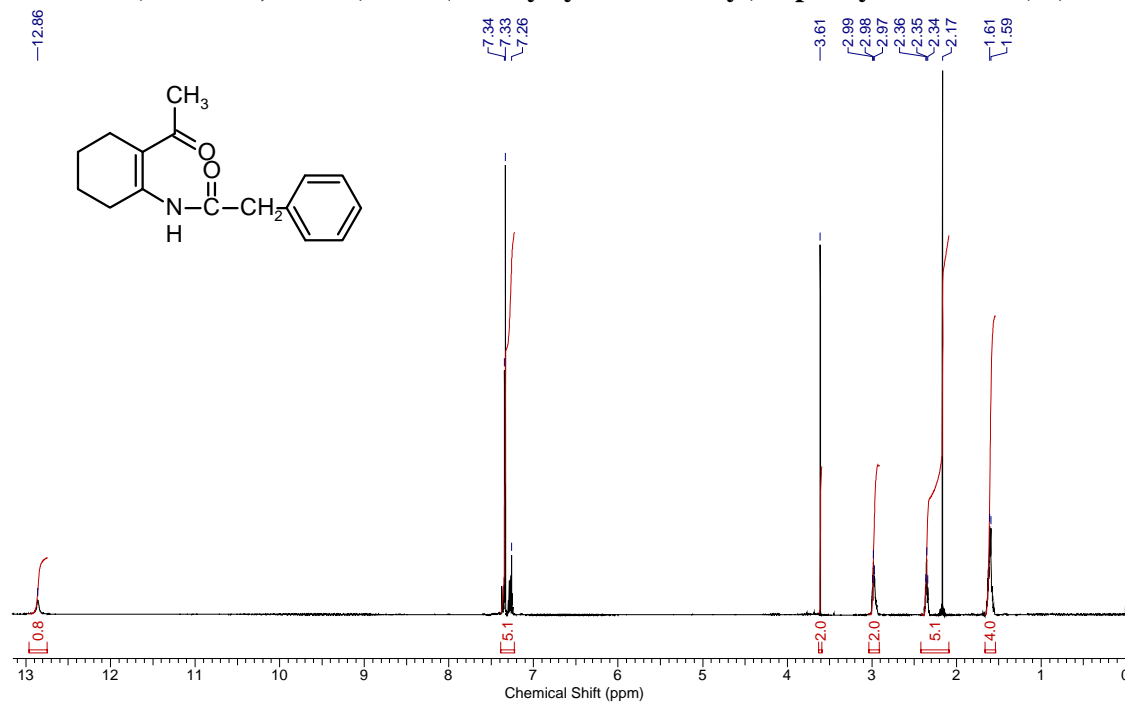
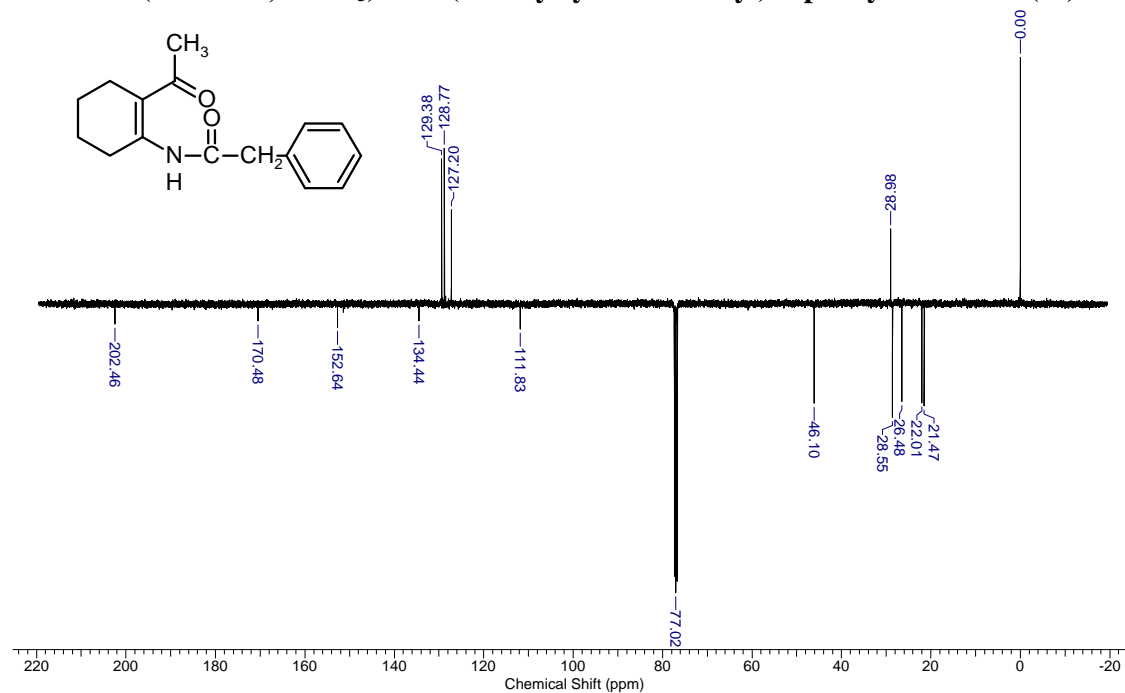
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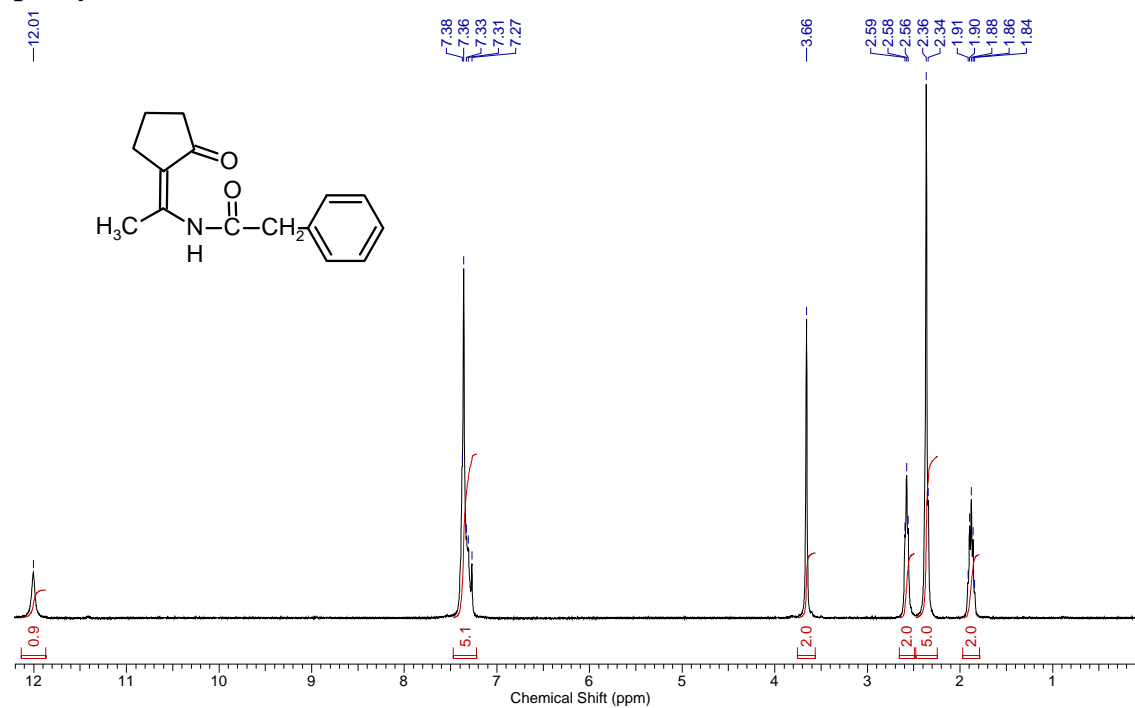
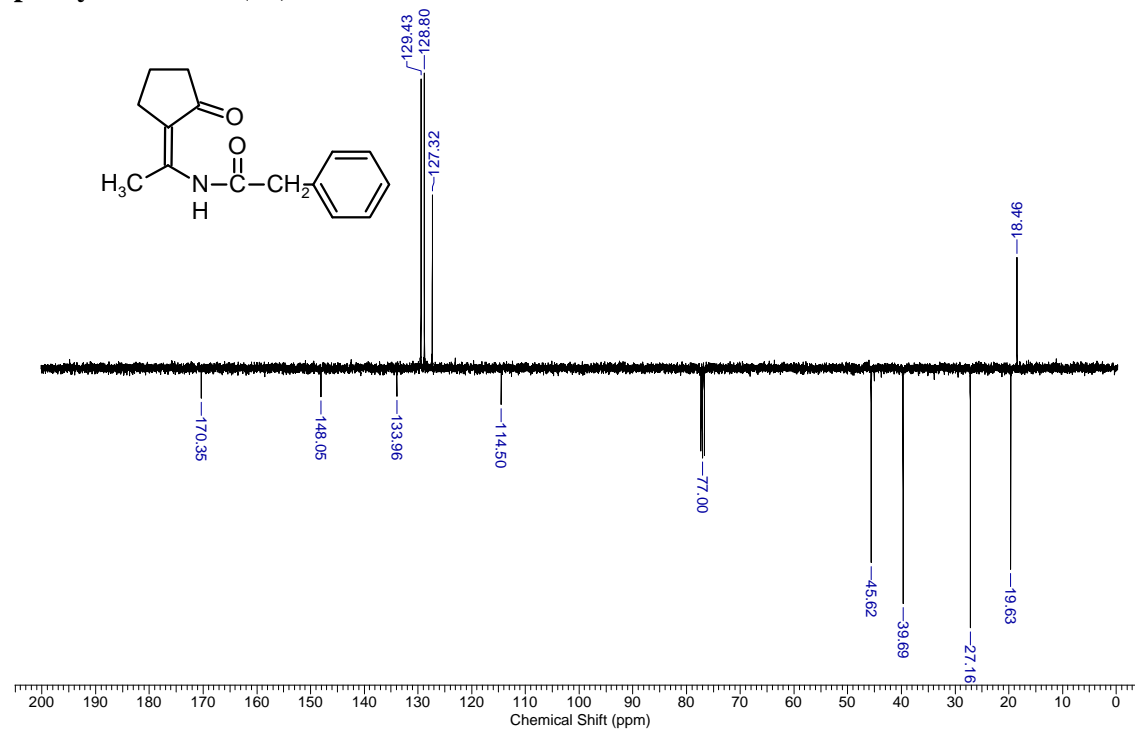
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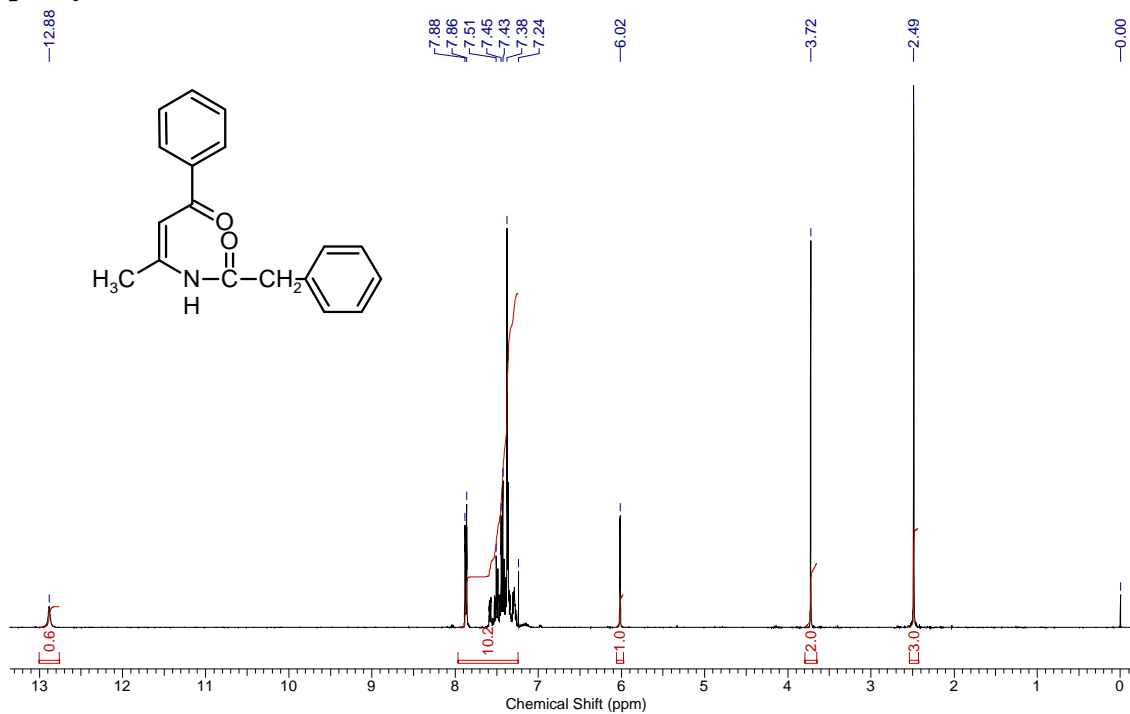
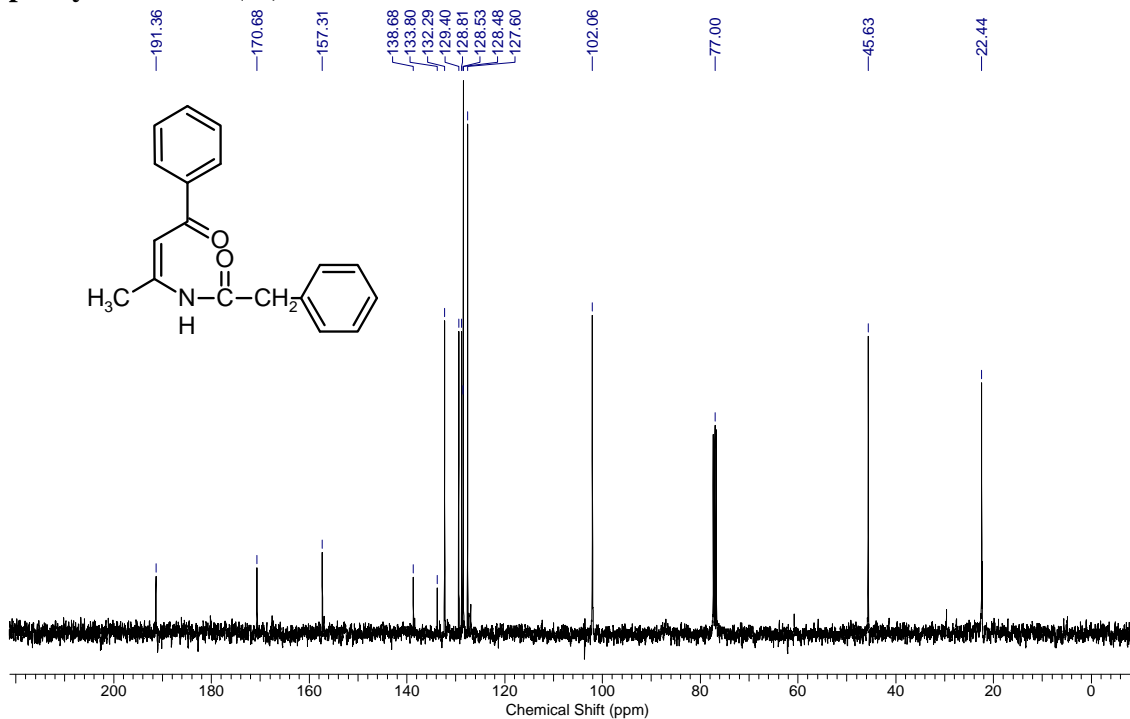
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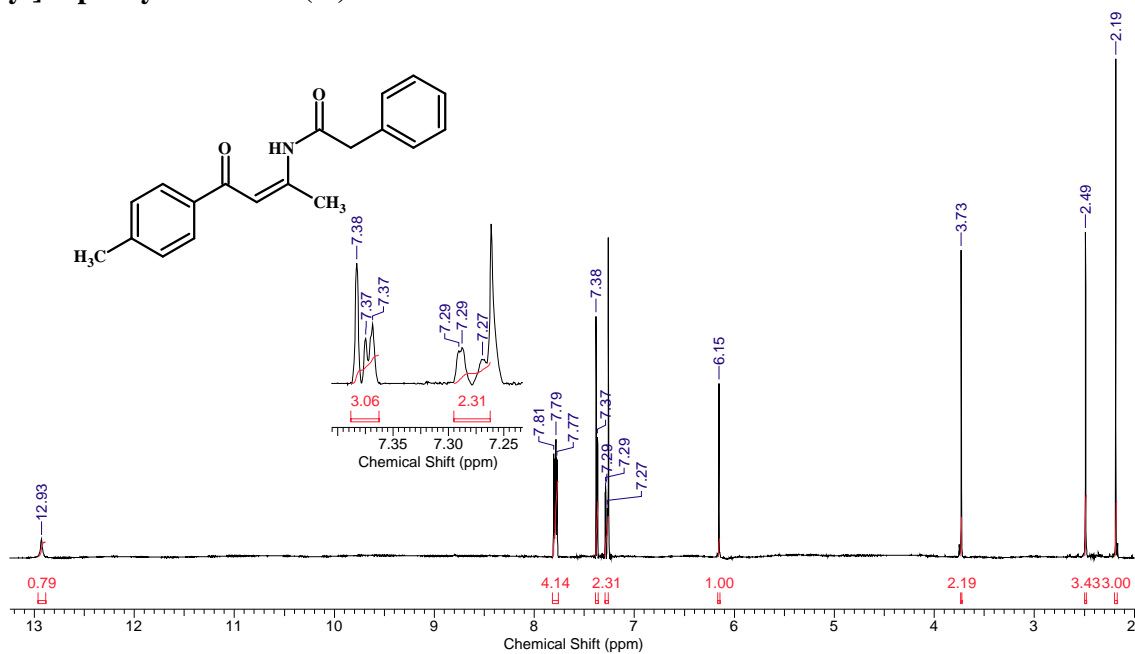
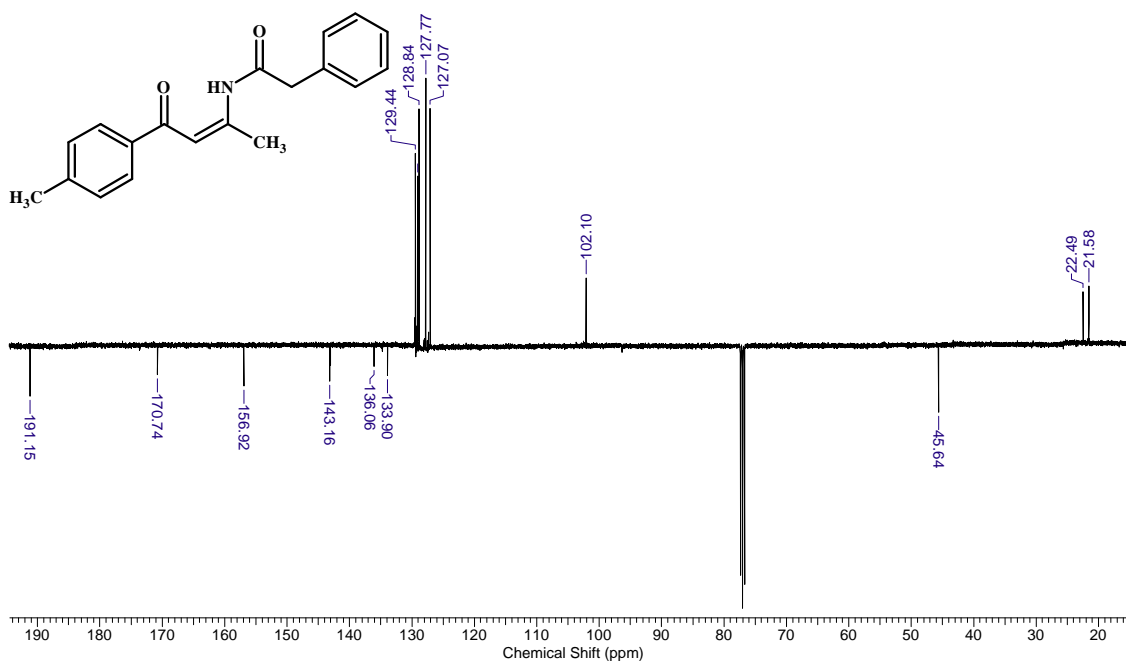
¹H NMR (400 MHz, CDCl₃) of N-methyl-N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (Z-3a)**¹³C NMR (100 MHz, CDCl₃) of N-methyl-N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (Z-3a)**

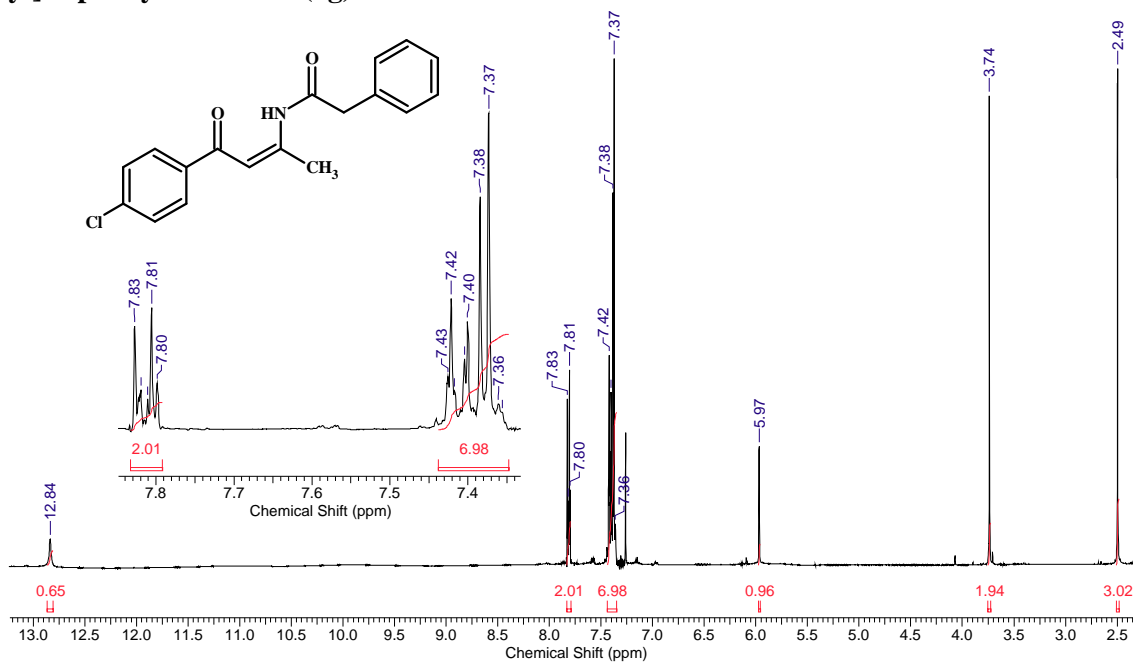
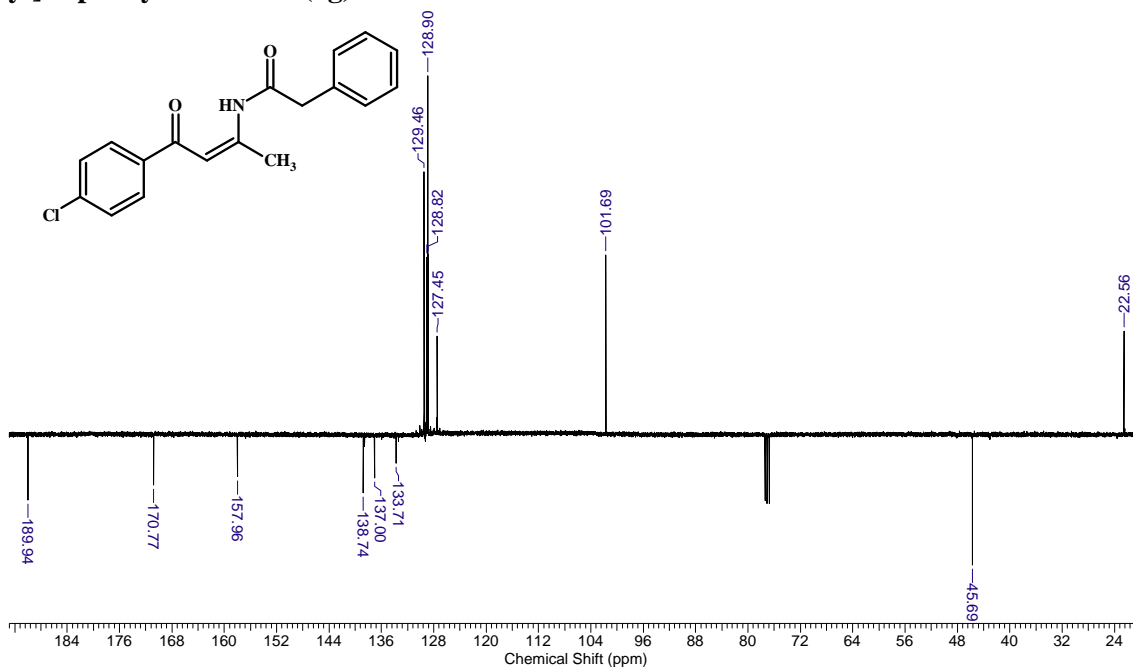
¹H NMR (300 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (3b)**¹³C NMR (75 MHz, CDCl₃) of N-((Z)-1-methyl-3-oxo-but-1-enyl)-2-phenylacetamide (3b)**

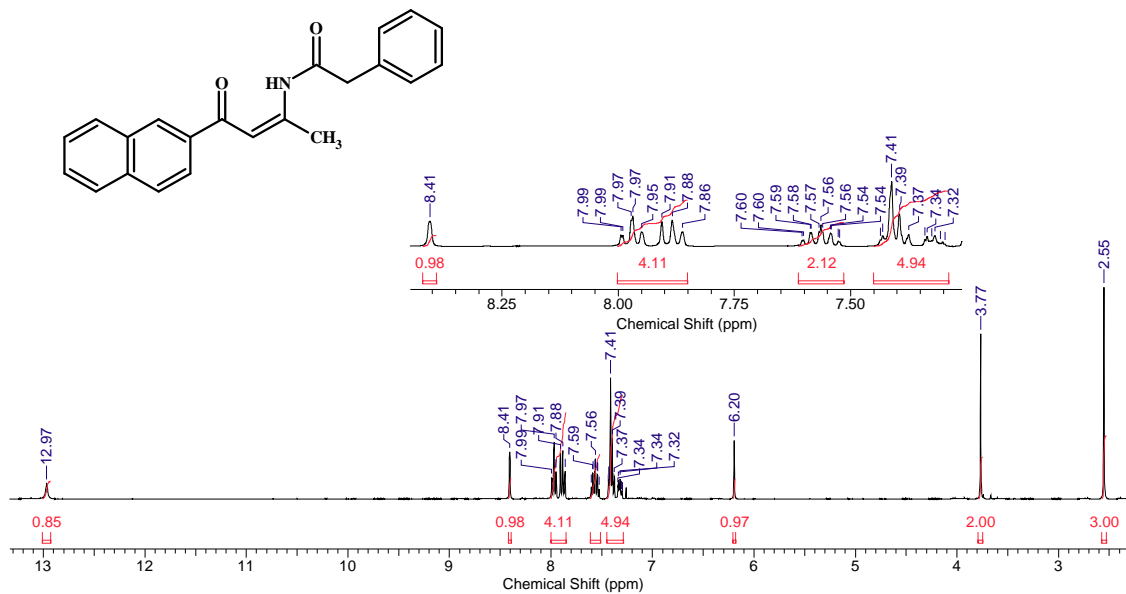
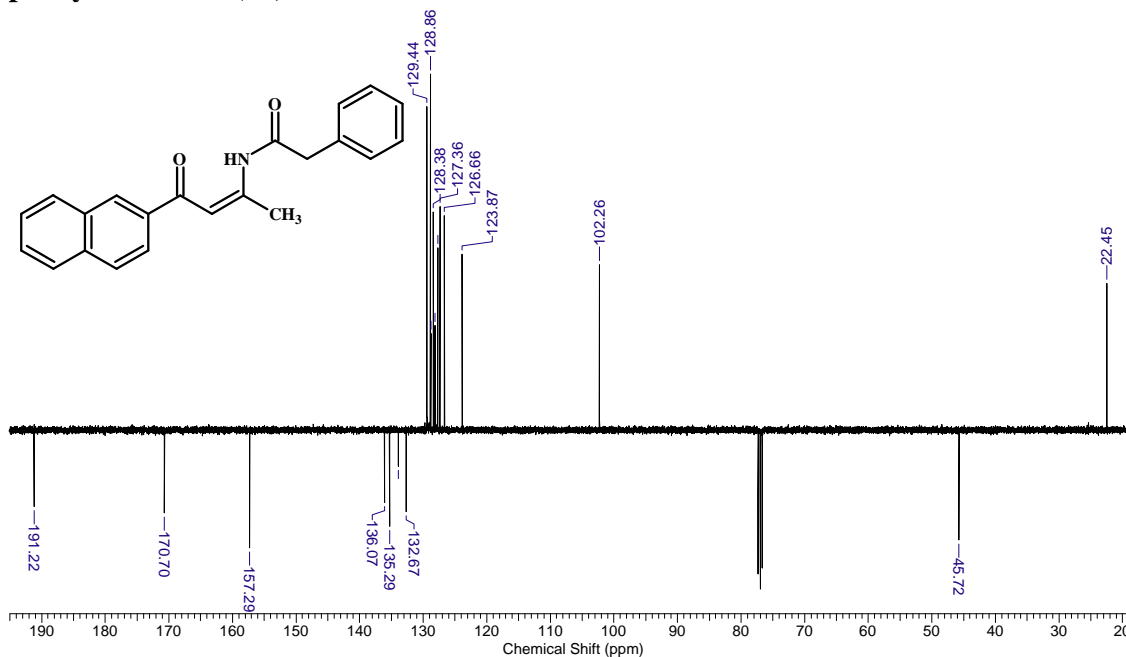
¹H NMR (400 MHz, CDCl₃) of N-(2-acetylcyclohex-1-enyl)-2-phenylacetamide (3c)**¹³C NMR (100 MHz, CDCl₃) of N-(2-acetylcyclohex-1-enyl)-2-phenylacetamide (3c)**

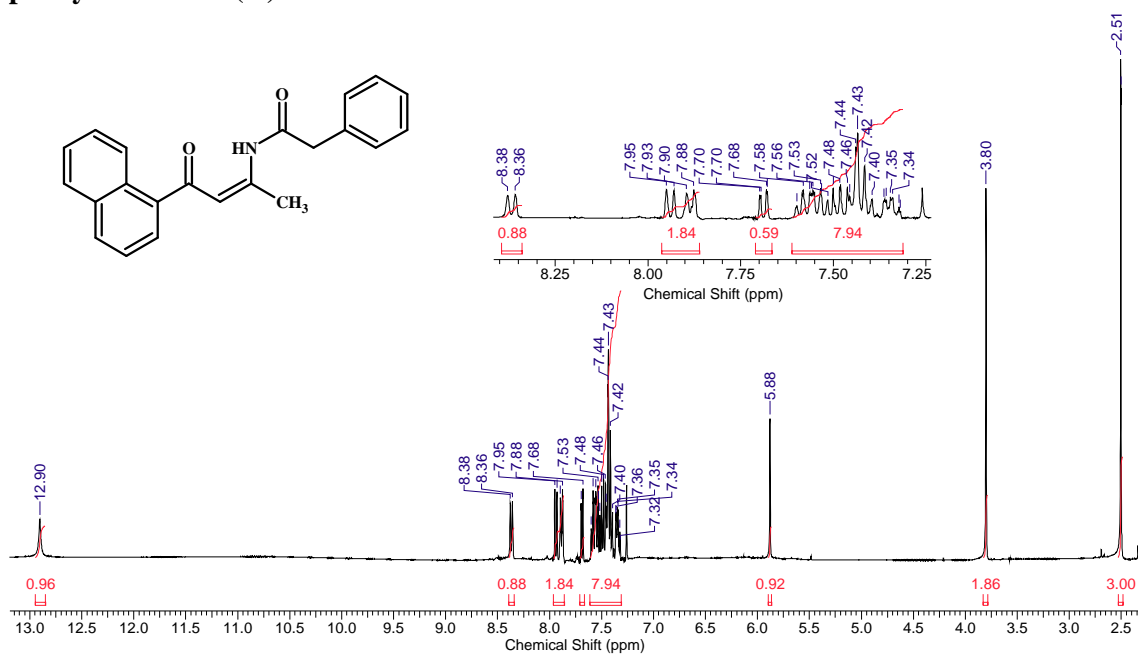
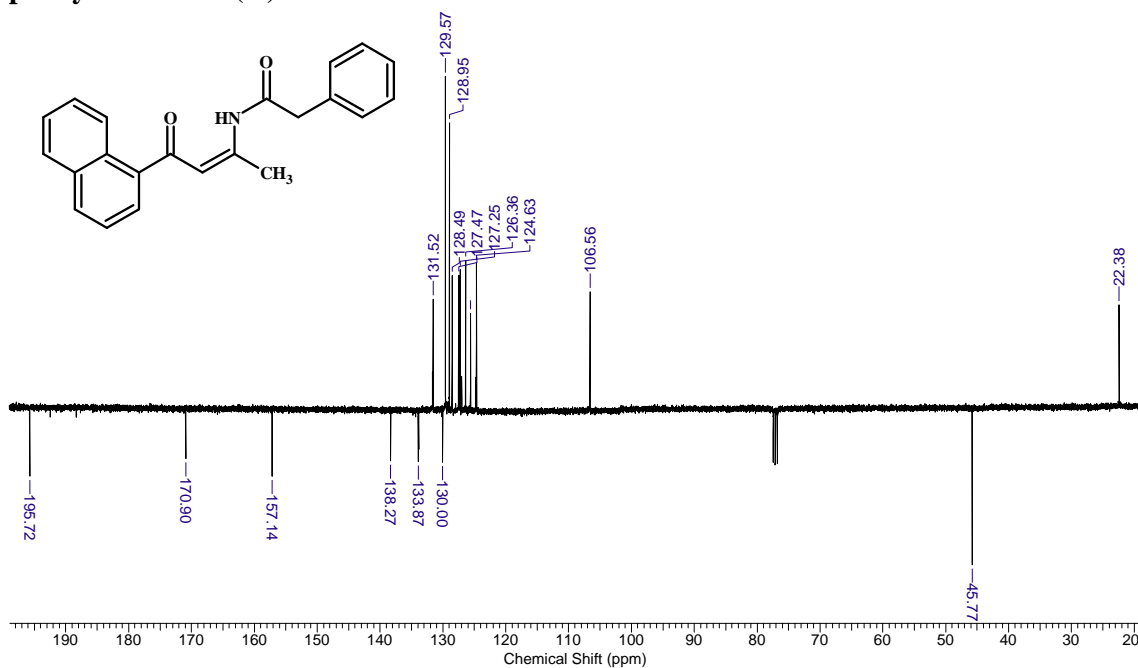
¹H NMR (400 MHz, CDCl₃) of N-{1-[2-oxocyclopent-(Z)-ylidene]-ethyl}-2-phenylacetamide (3d)**¹³C NMR (100 MHz, CDCl₃) of N-{1-[2-oxocyclopent-(Z)-ylidene]-ethyl}-2-phenylacetamide (3d)**

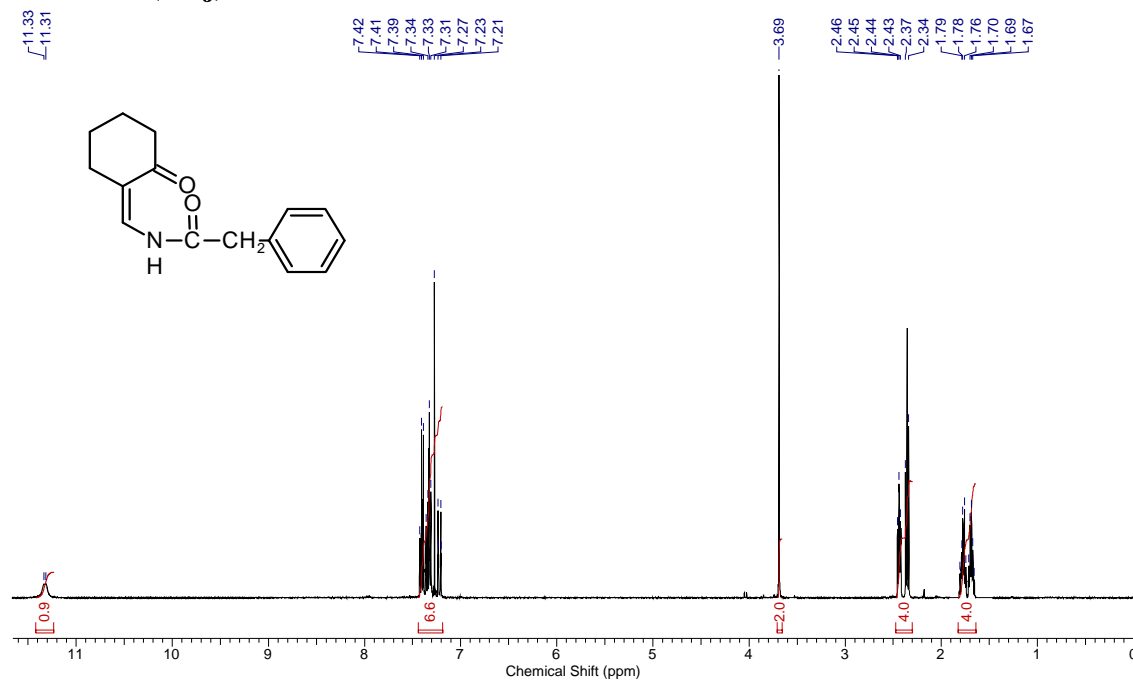
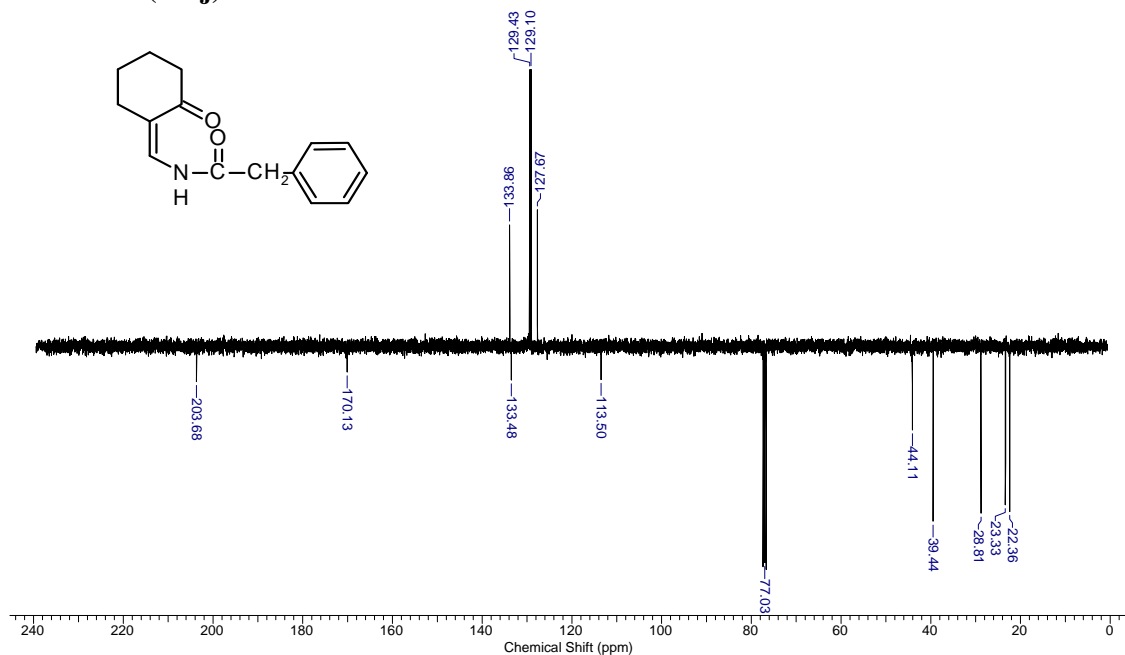
^1H NMR (400 MHz, CDCl_3) of N-((Z)-1-methyl-3-oxo-3-phenyl-propenyl)-2-phenylacetamide (3e) **^{13}C NMR (100 MHz, CDCl_3) of N-((Z)-1-methyl-3-oxo-3-phenyl-propenyl)-2-phenylacetamide (3e)**

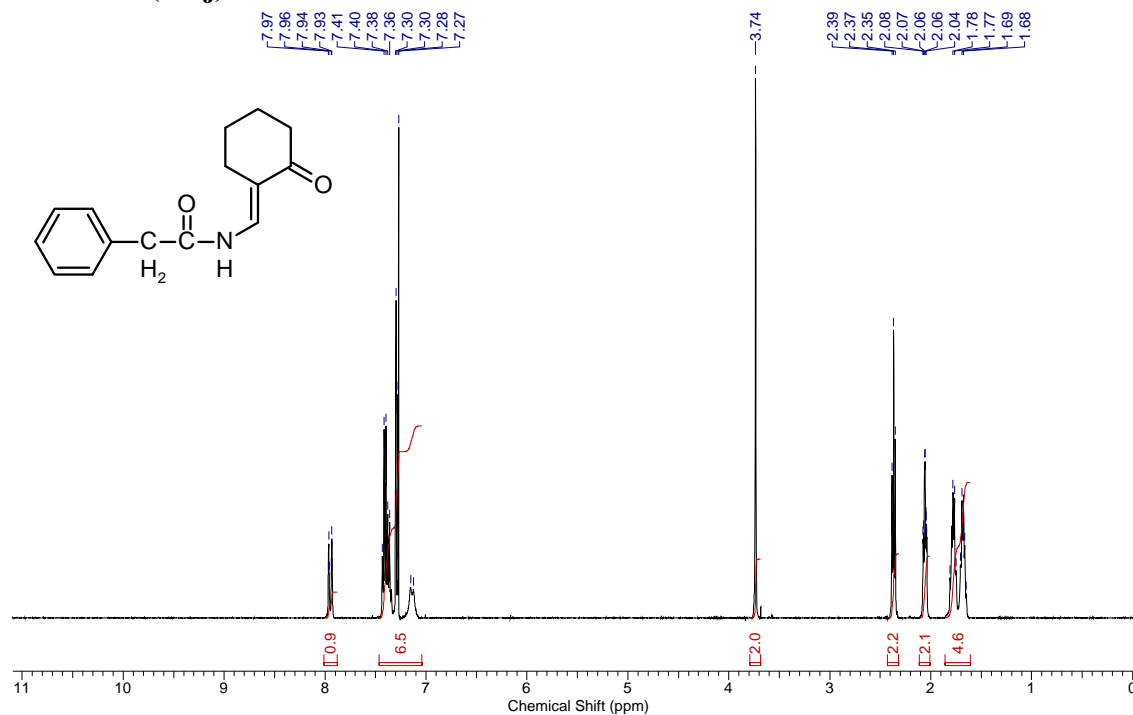
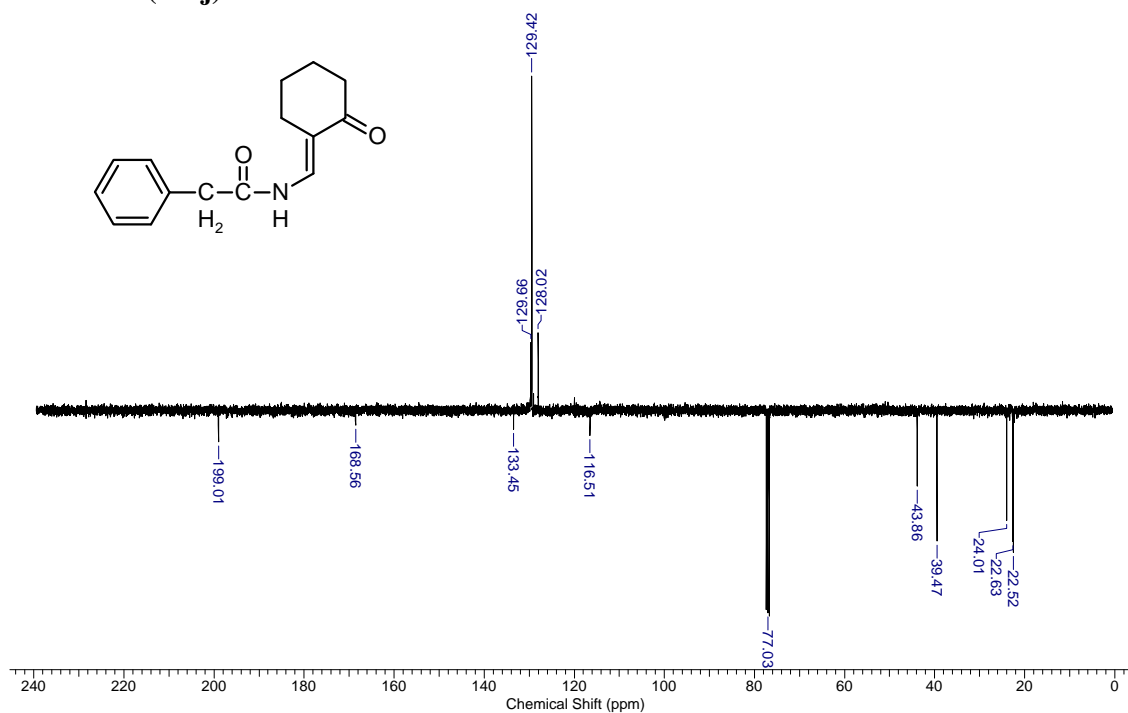
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(4-methylphenyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3f)**¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(4-methylphenyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3f)**

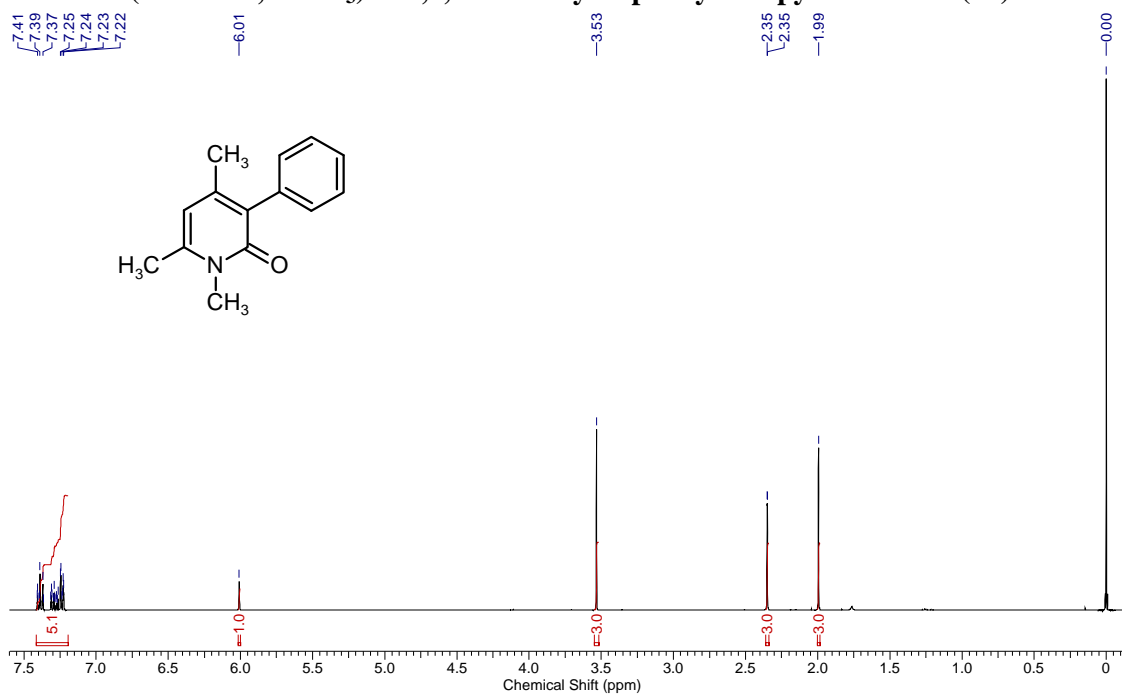
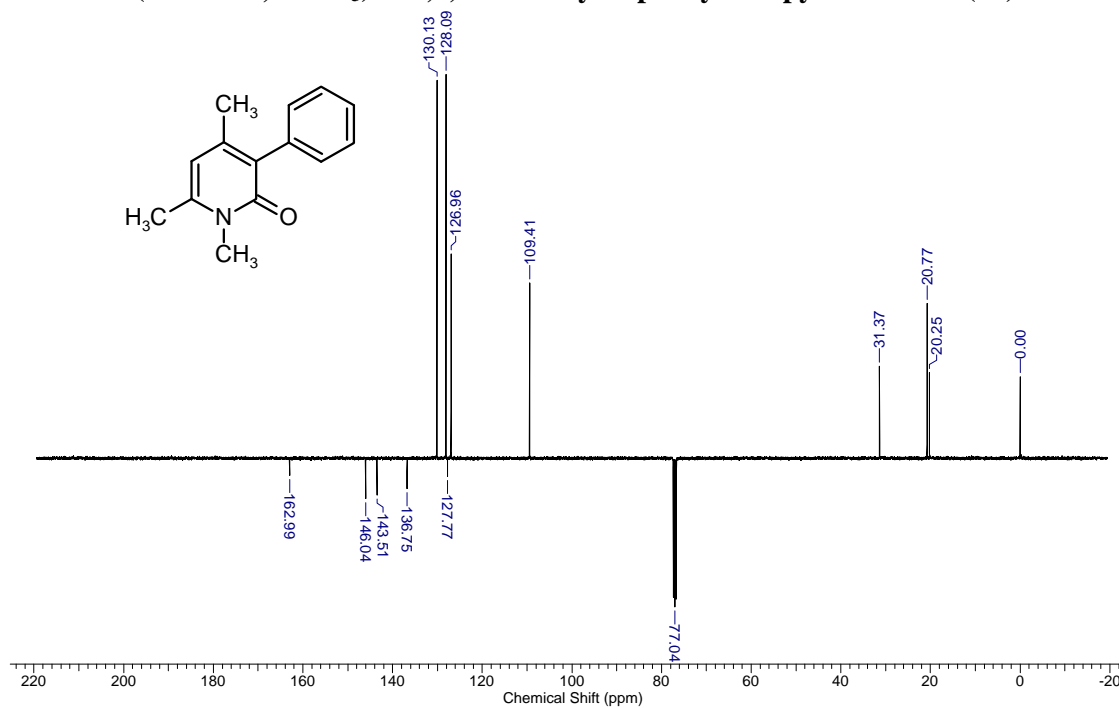
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-3-(4-chlorophenyl)-1-methyl-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3g)**¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-3-(4-chlorophenyl)-1-methyl-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3g)**

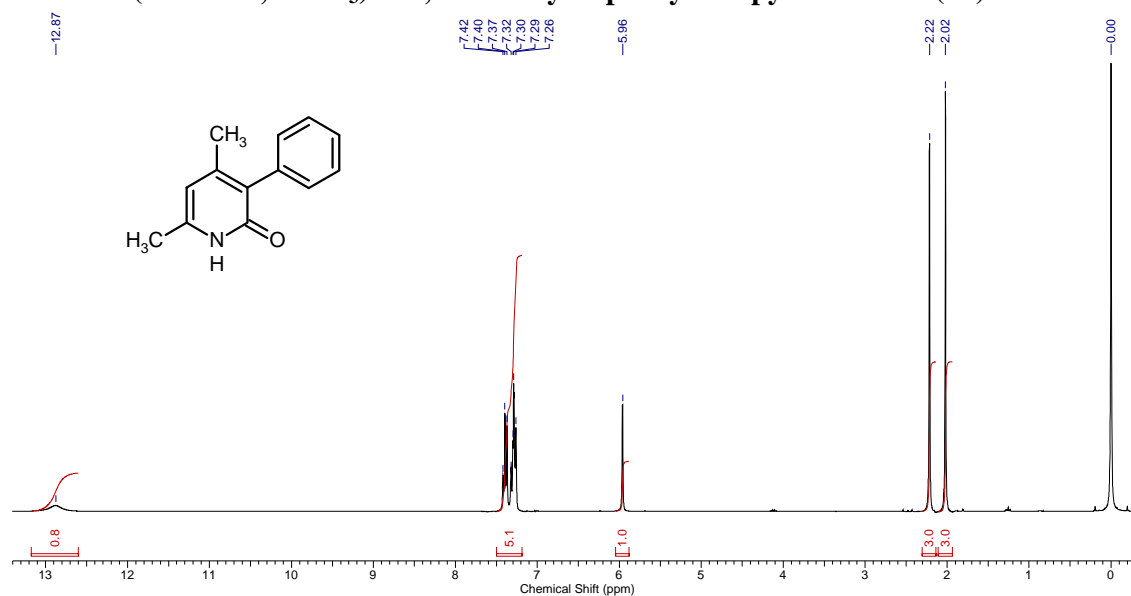
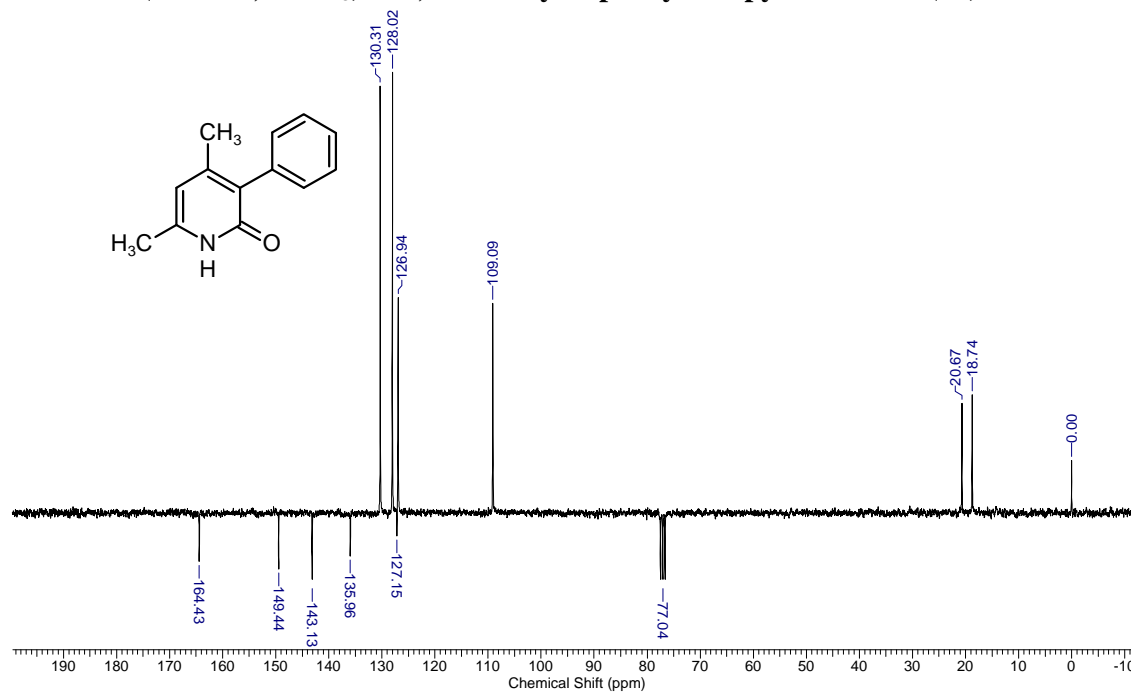
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(2-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3h)**¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(2-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3h)**

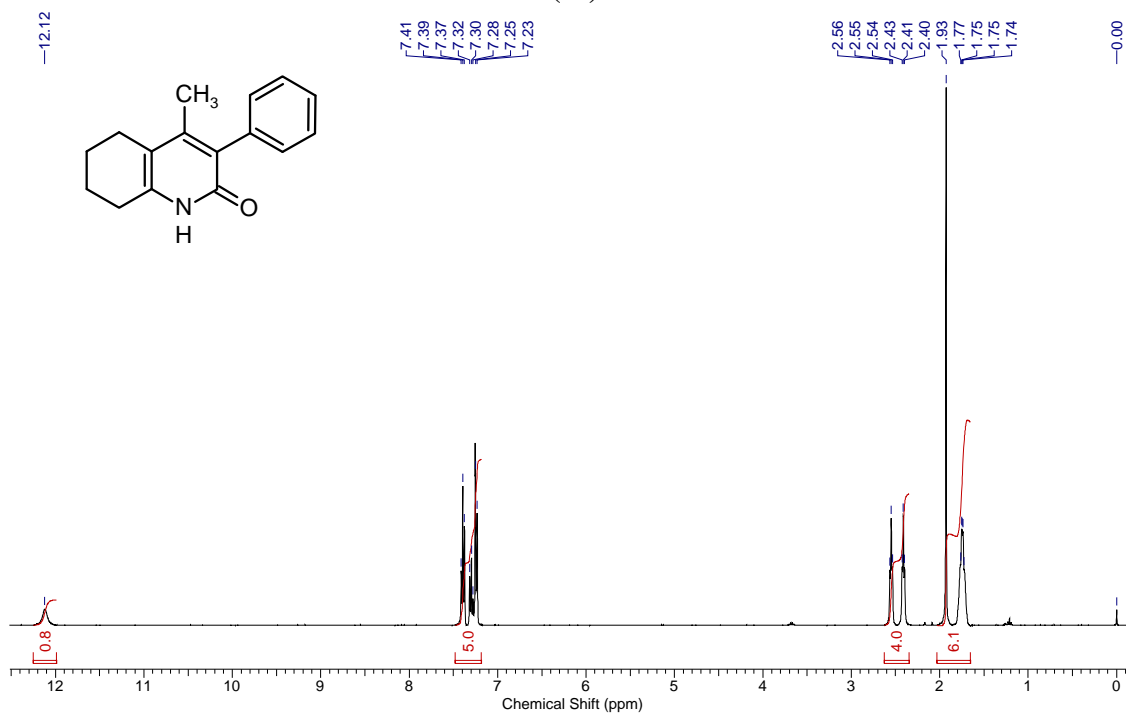
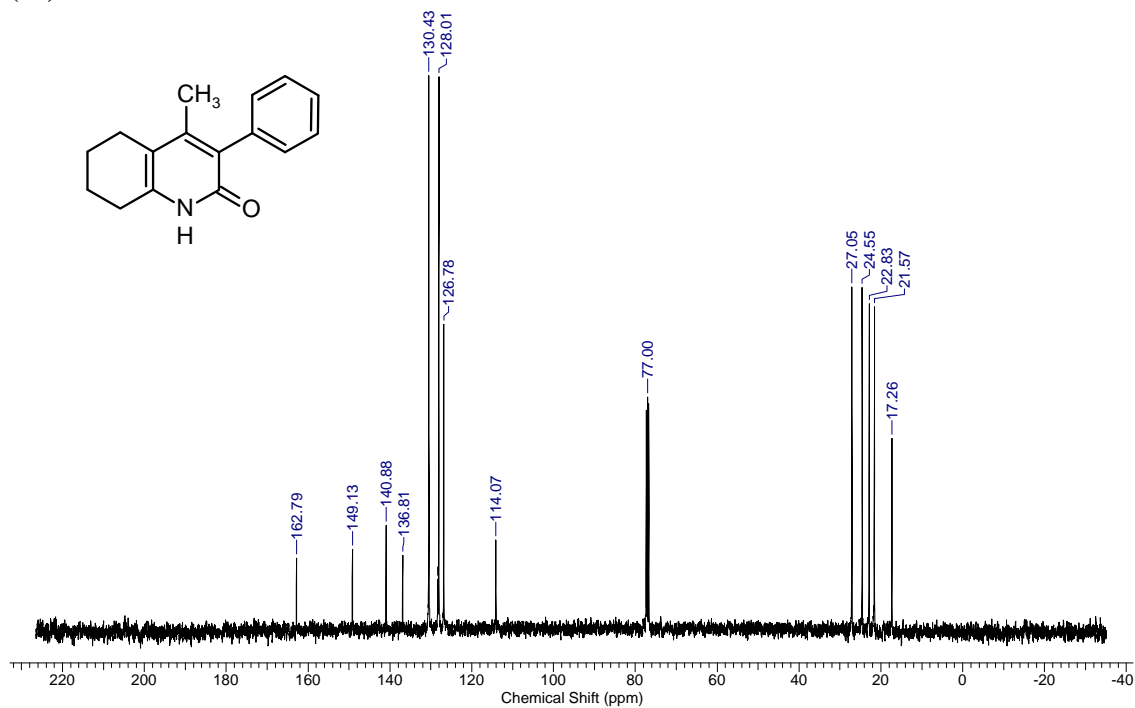
¹H NMR (400 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(1-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3i)**¹³C NMR (100 MHz, CDCl₃) of *N*-[(*Z*)-1-methyl-3-(1-naphthyl)-3-oxoprop-1-en-1-yl]-2-phenylacetamide (3i)**

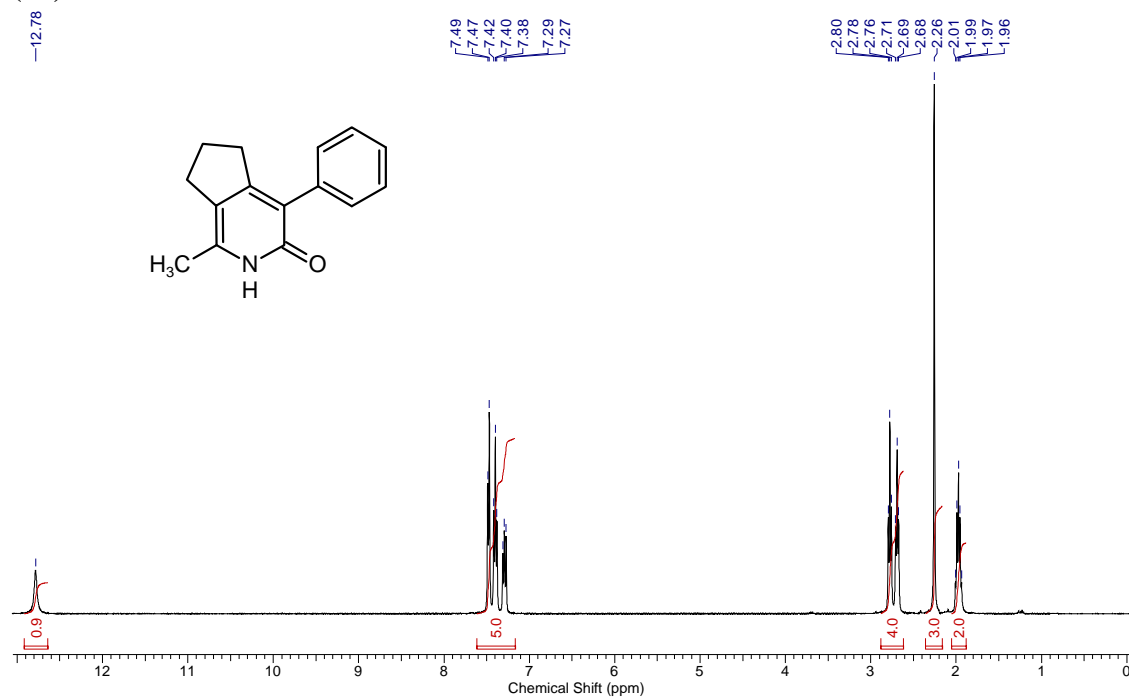
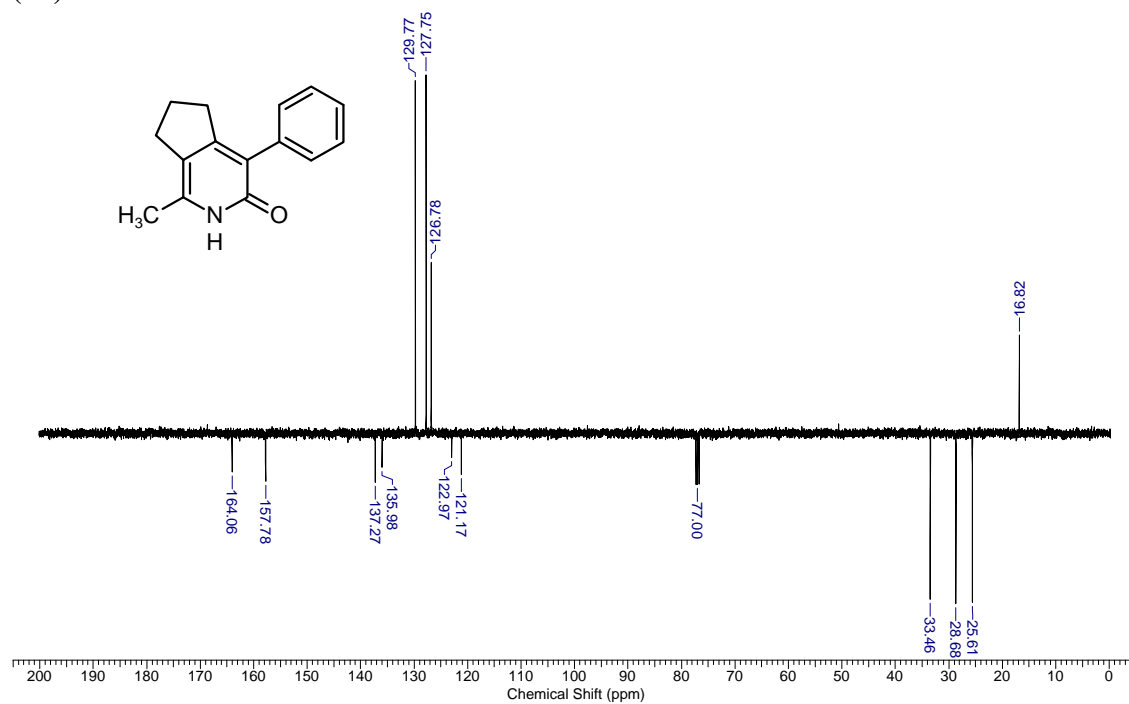
¹H NMR (400 MHz, CDCl₃) of N-[2-oxo-cyclohex-(Z)-ylidenemethyl]-2-phenylacetamide (Z-3j)**¹³C NMR (100 MHz, CDCl₃) of N-[2-oxo-cyclohex-(Z)-ylidenemethyl]-2-phenylacetamide (Z-3j)**

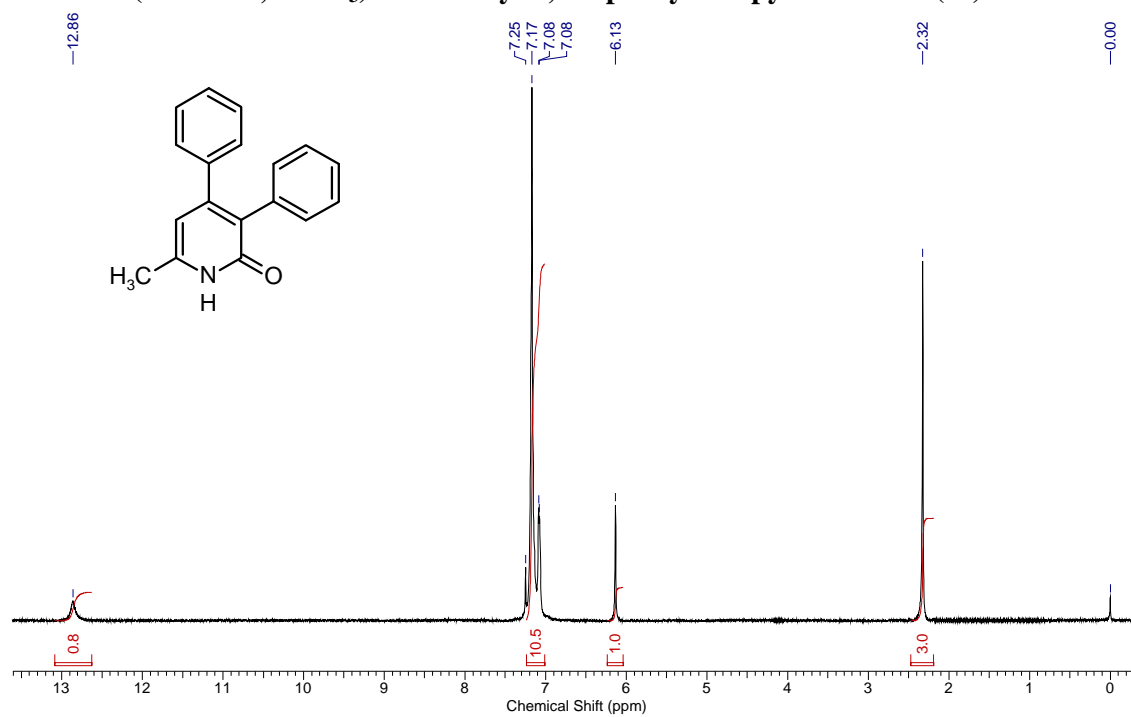
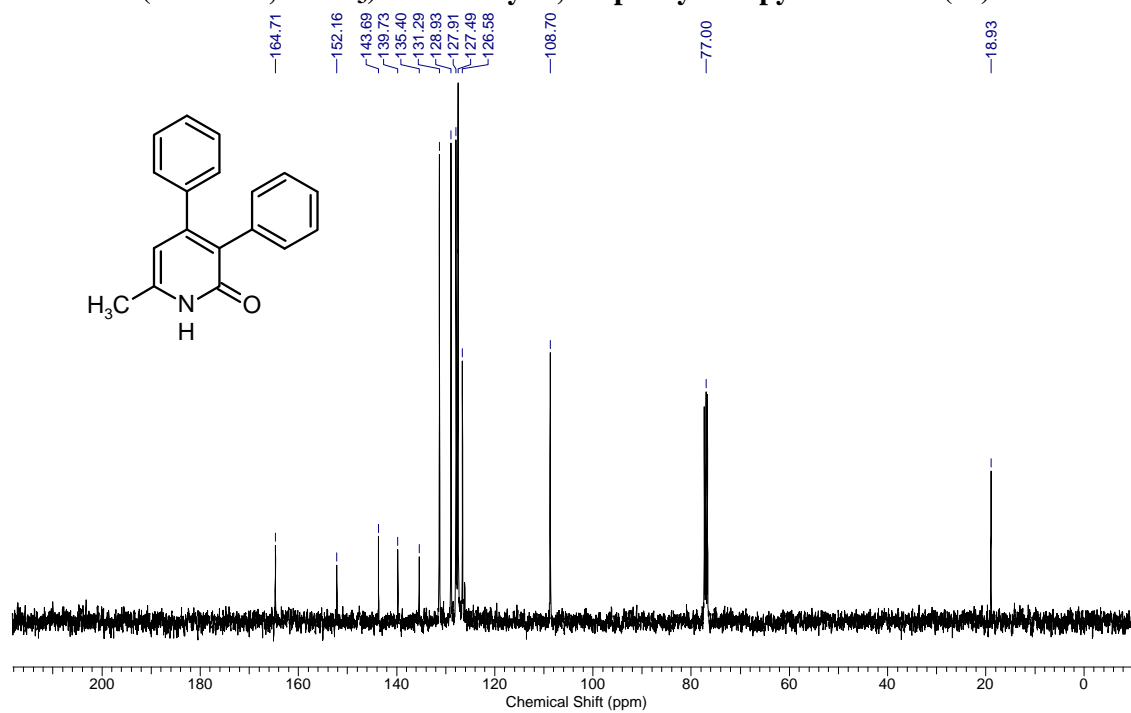
^1H NMR (400 MHz, CDCl_3) of N-[2-oxo-cyclohex-(E)-ylidenemethyl]-2-phenylacetamide (E-3j) **^{13}C NMR (100 MHz, CDCl_3) of N-[2-oxo-cyclohex-(E)-ylidenemethyl]-2-phenylacetamide (E-3j)**

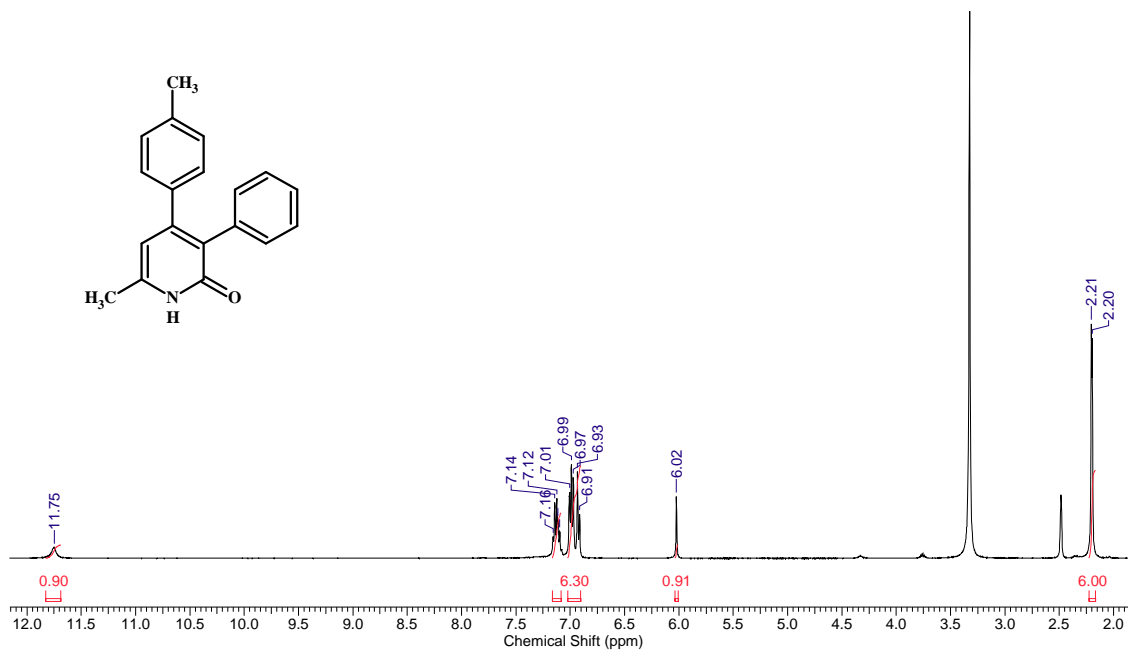
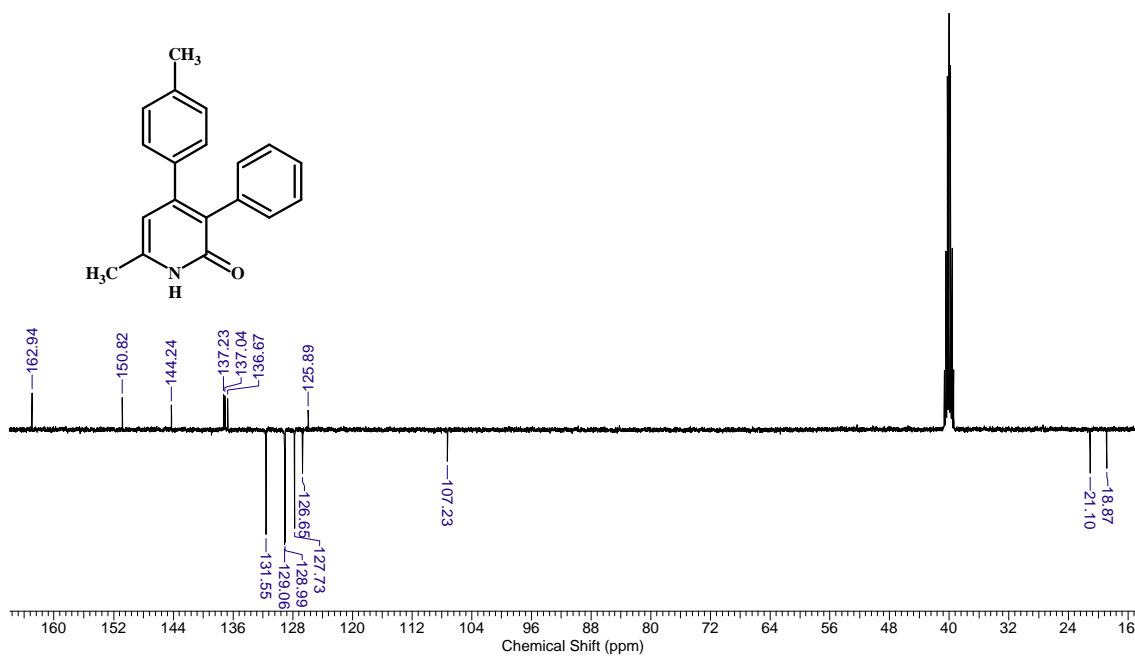
^1H NMR (400 MHz, CDCl_3) of 1,4,6-trimethyl-3-phenyl-1H-pyridin-2-one (8a) **^{13}C NMR (100 MHz, CDCl_3) of 1,4,6-trimethyl-3-phenyl-1H-pyridin-2-one (8a)**

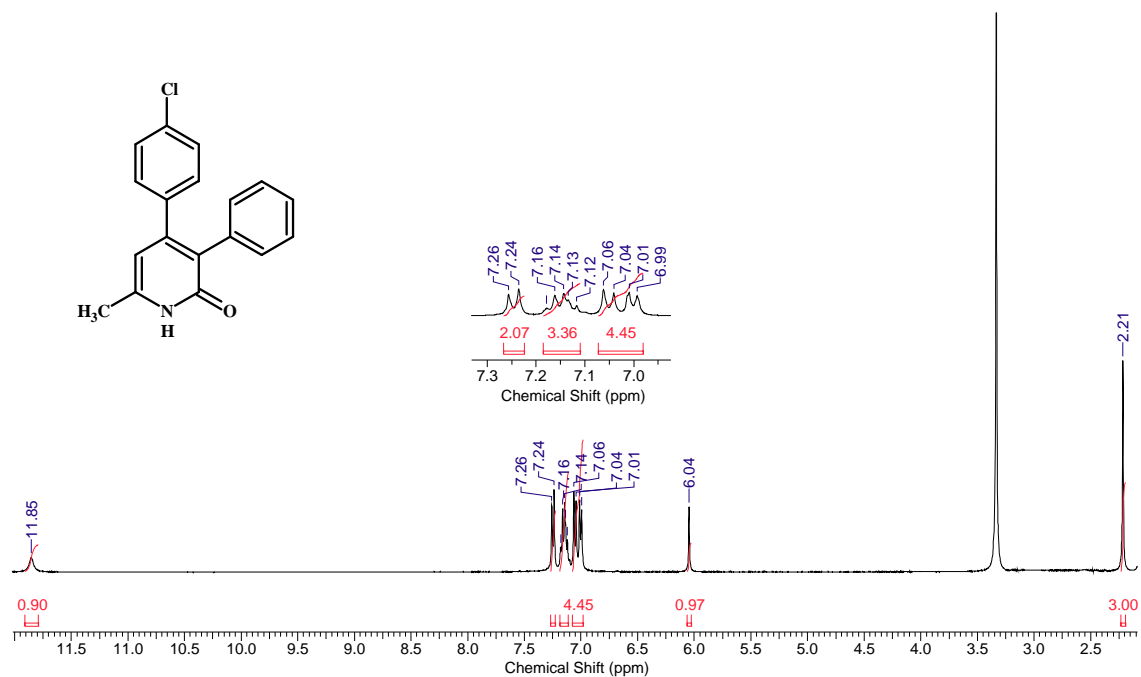
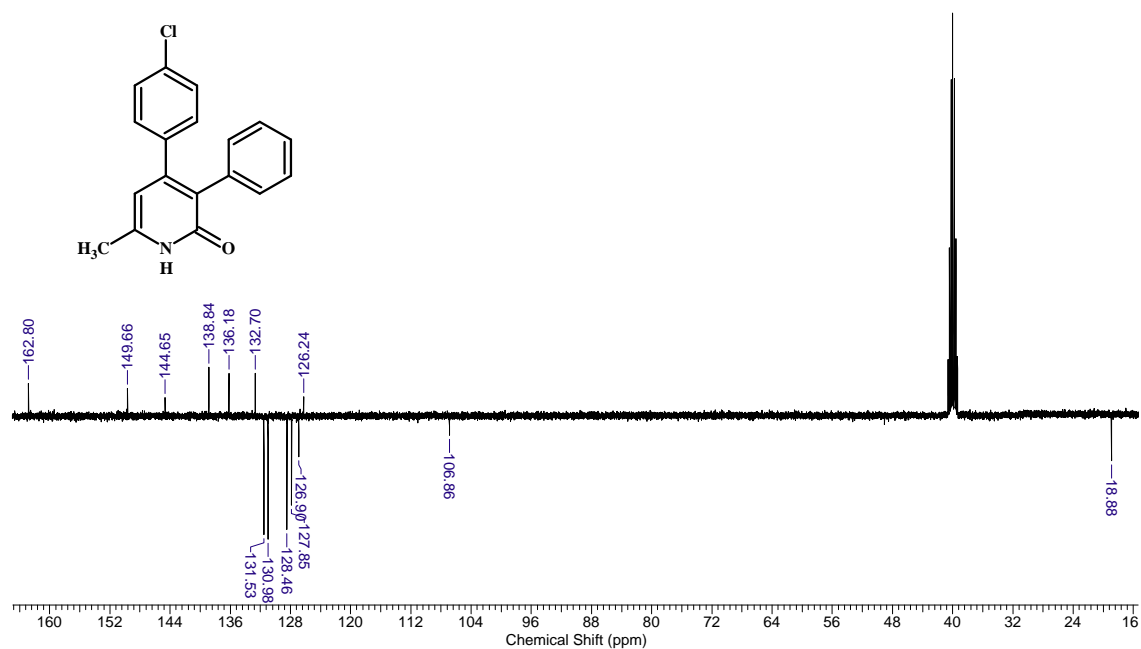
^1H NMR (300 MHz, CDCl_3) of 4,6-dimethyl-3-phenyl-1H-pyridin-2-one (8b) **^{13}C NMR (75 MHz, CDCl_3) of 4,6-dimethyl-3-phenyl-1H-pyridin-2-one (8b)**

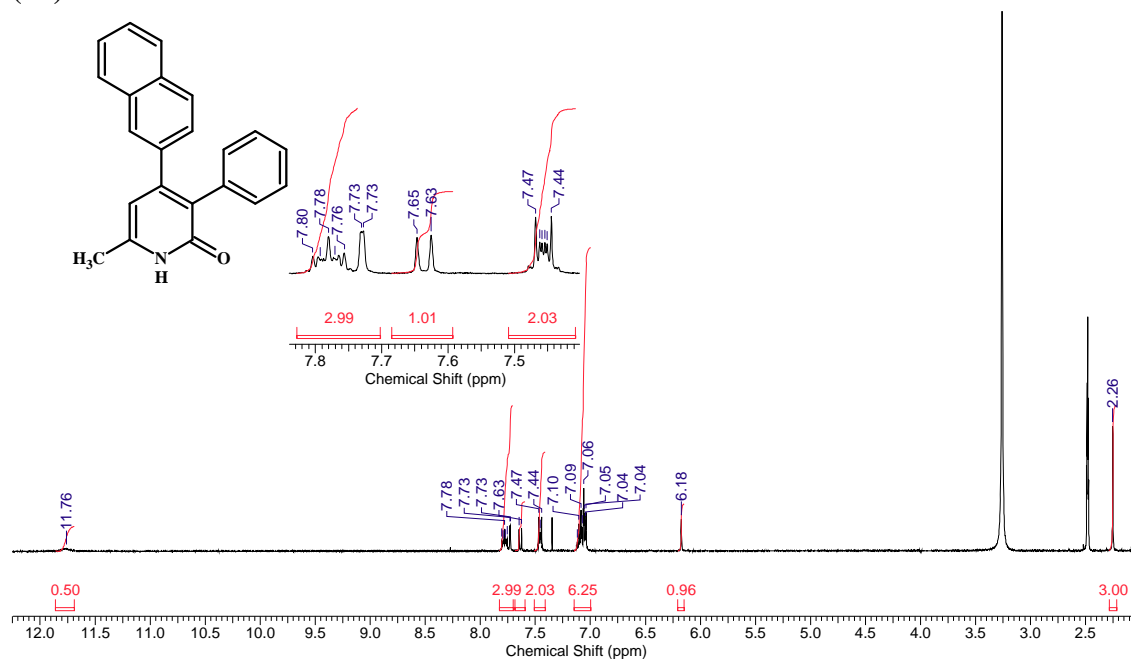
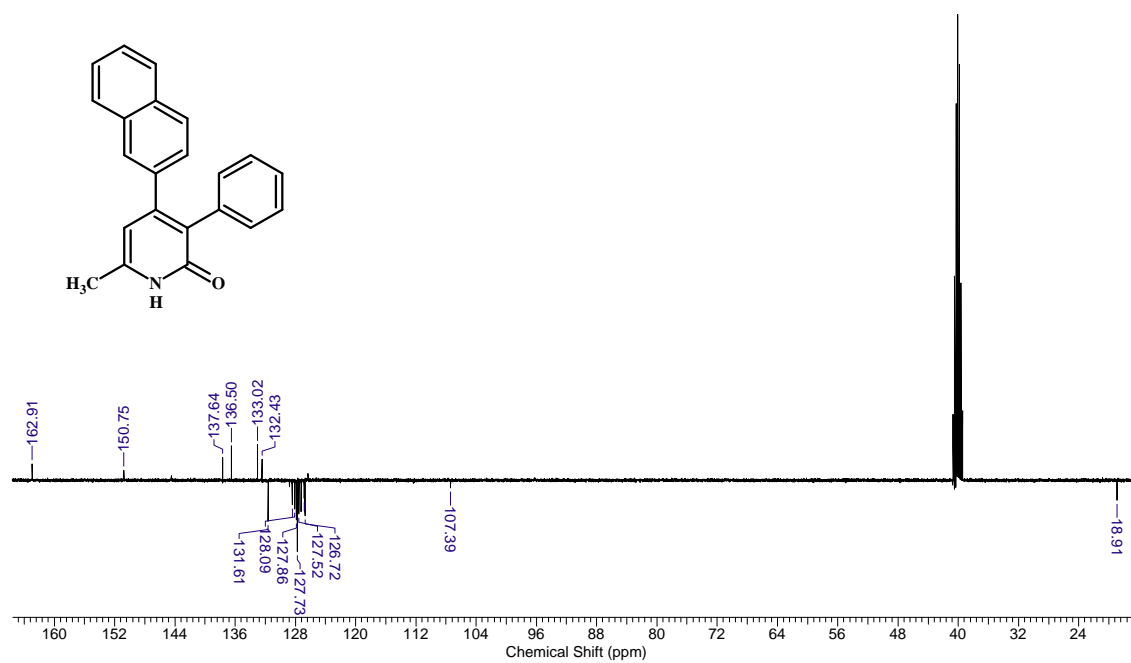
¹H NMR (400 MHz, CDCl₃) of 4-methyl-3-phenyl-5,6,7,8-tetrahydro-1H-quinolin-2-one (8c)**¹³C NMR (100 MHz, CDCl₃) of 4-methyl-3-phenyl-5,6,7,8-tetrahydro-1H-quinolin-2-one (8c)**

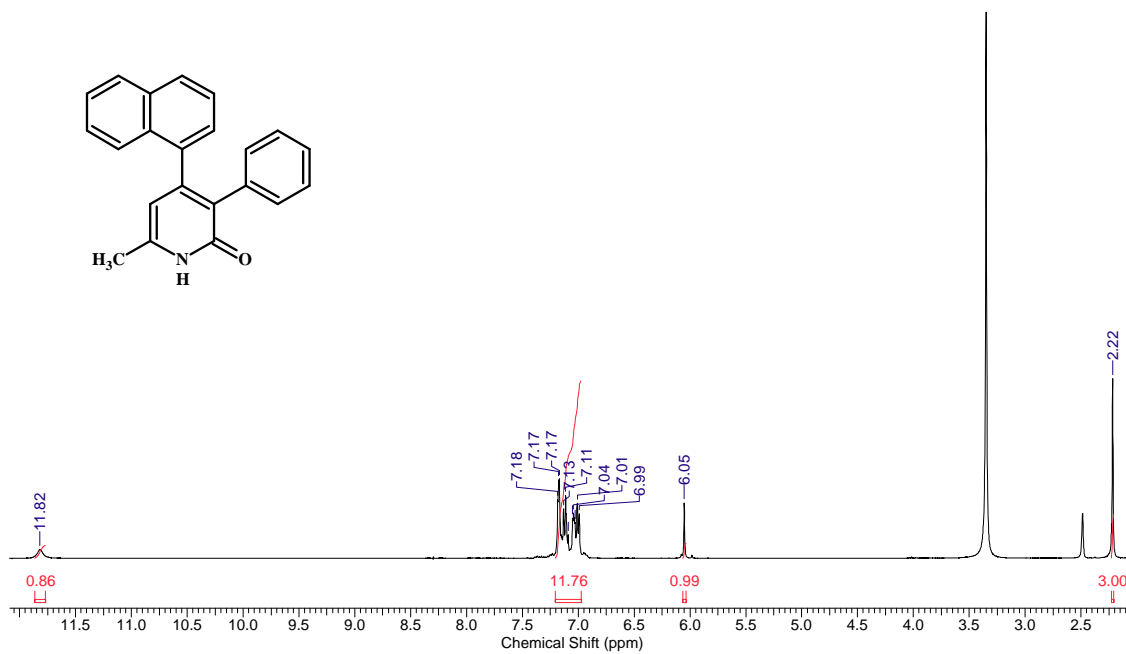
^1H NMR (400 MHz, CDCl_3) of 1-methyl-4-phenyl-2,5,6,7-tetrahydro-[2]pyrindin-3-one (8d) **^{13}C NMR (100 MHz, CDCl_3) of 1-methyl-4-phenyl-2,5,6,7-tetrahydro-[2]pyrindin-3-one (8d)**

¹H NMR (400 MHz, CDCl₃) of 6-methyl-3,4-diphenyl-1H-pyridin-2-one (8e)**¹³C NMR (100 MHz, CDCl₃) 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)**