Supplementary Information

SUGAR BASED γ-AMINO ALCOHOL ORGANOCATALYST FOR ASYMMETRIC MICHAEL ADDITION OF β-KETO ESTERS WITH NITROOLEFINS

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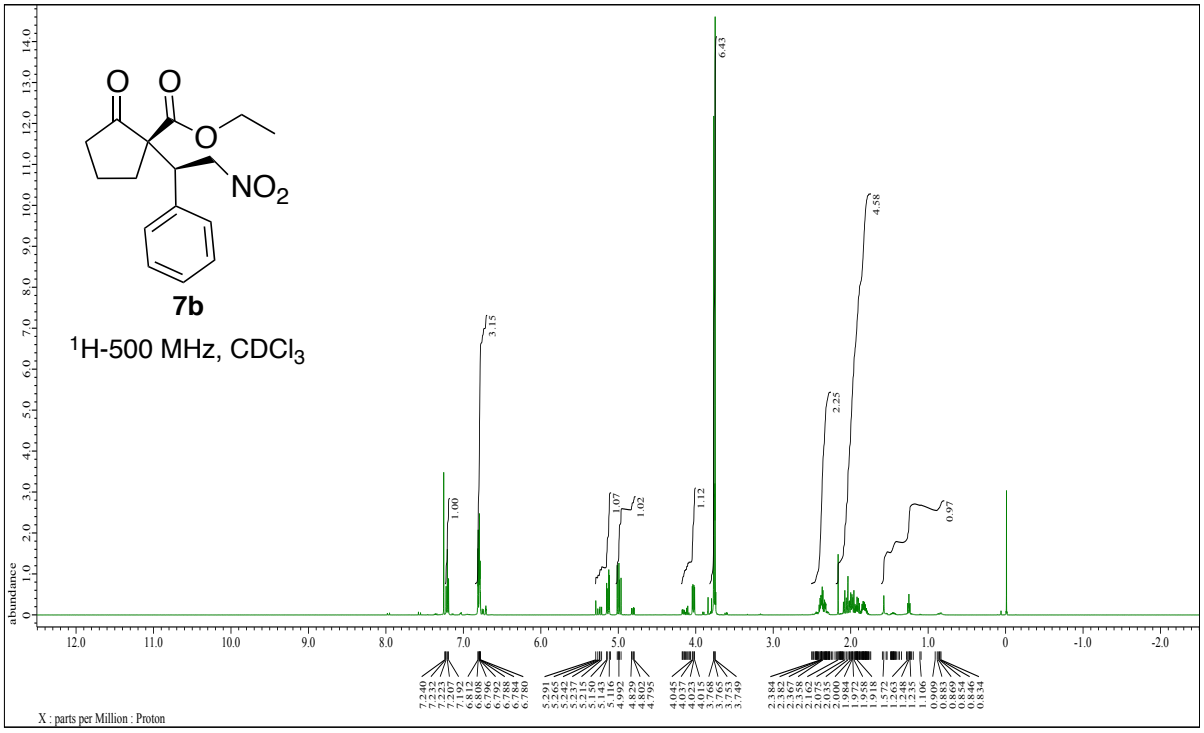
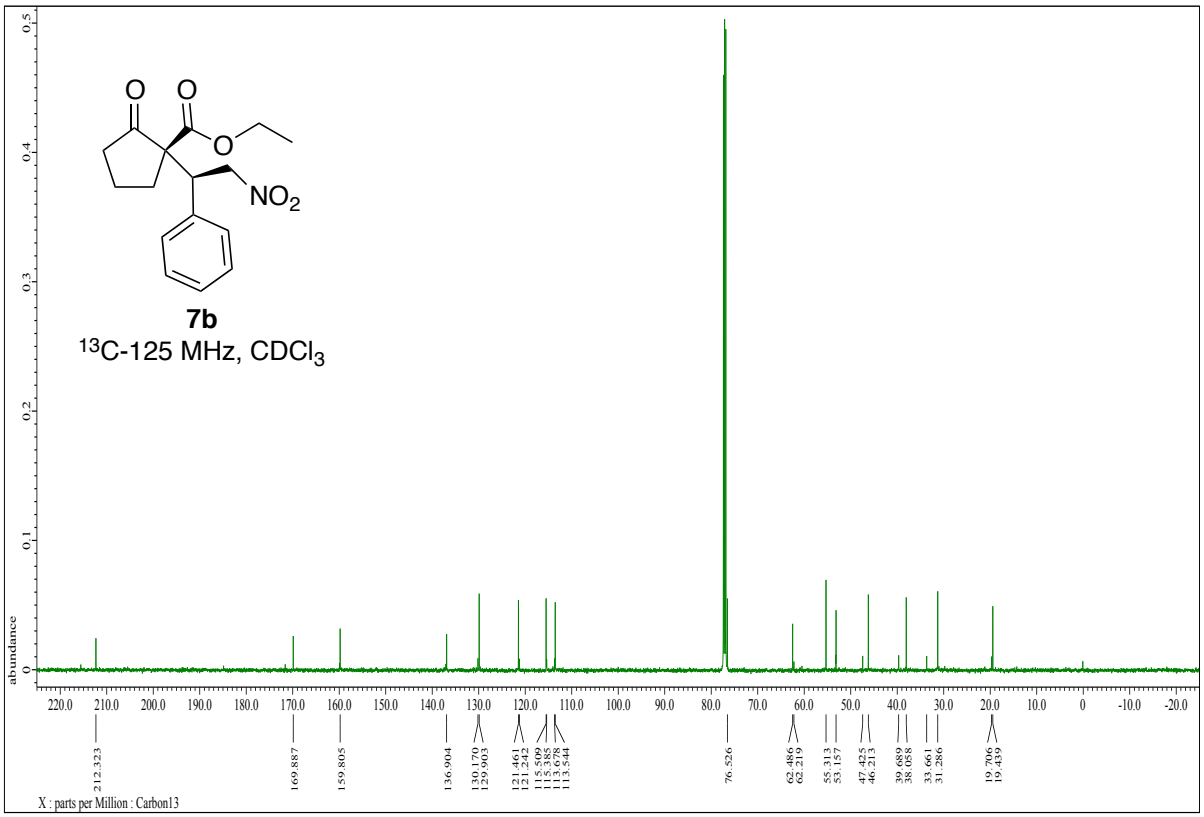
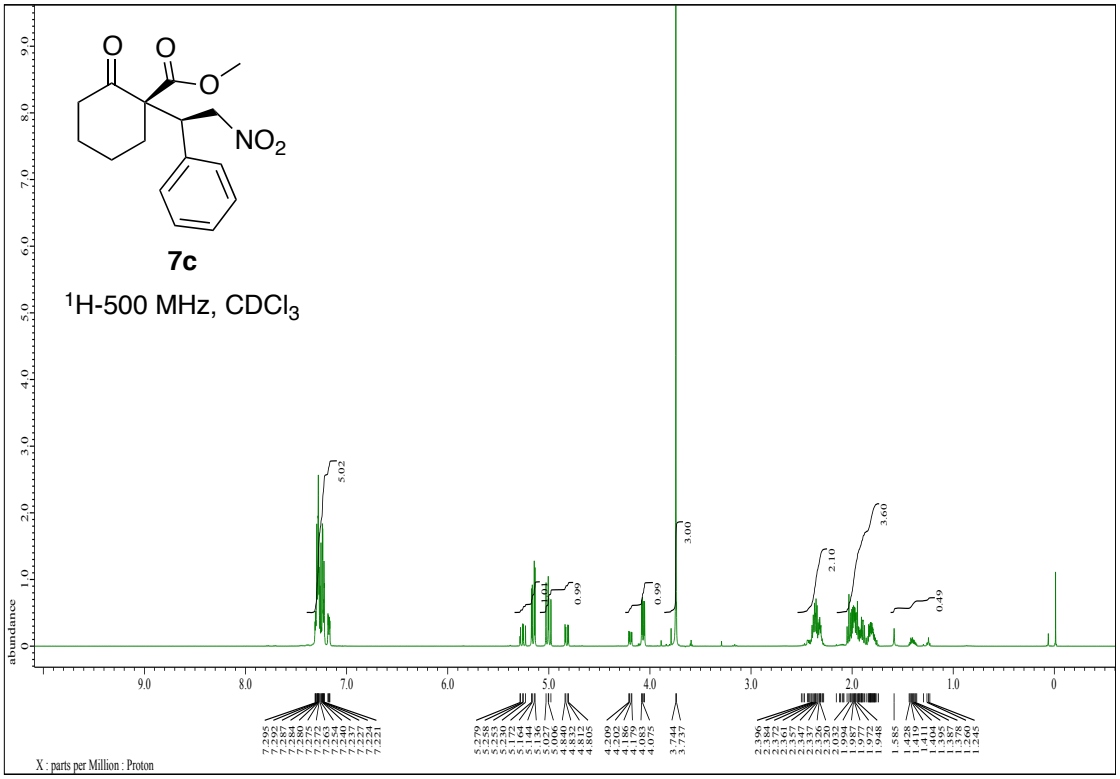
^{1}H NMR Ethyl-1-(2-nitro-1-phenylethyl)-2-oxocyclopentanecarboxylate **7b**



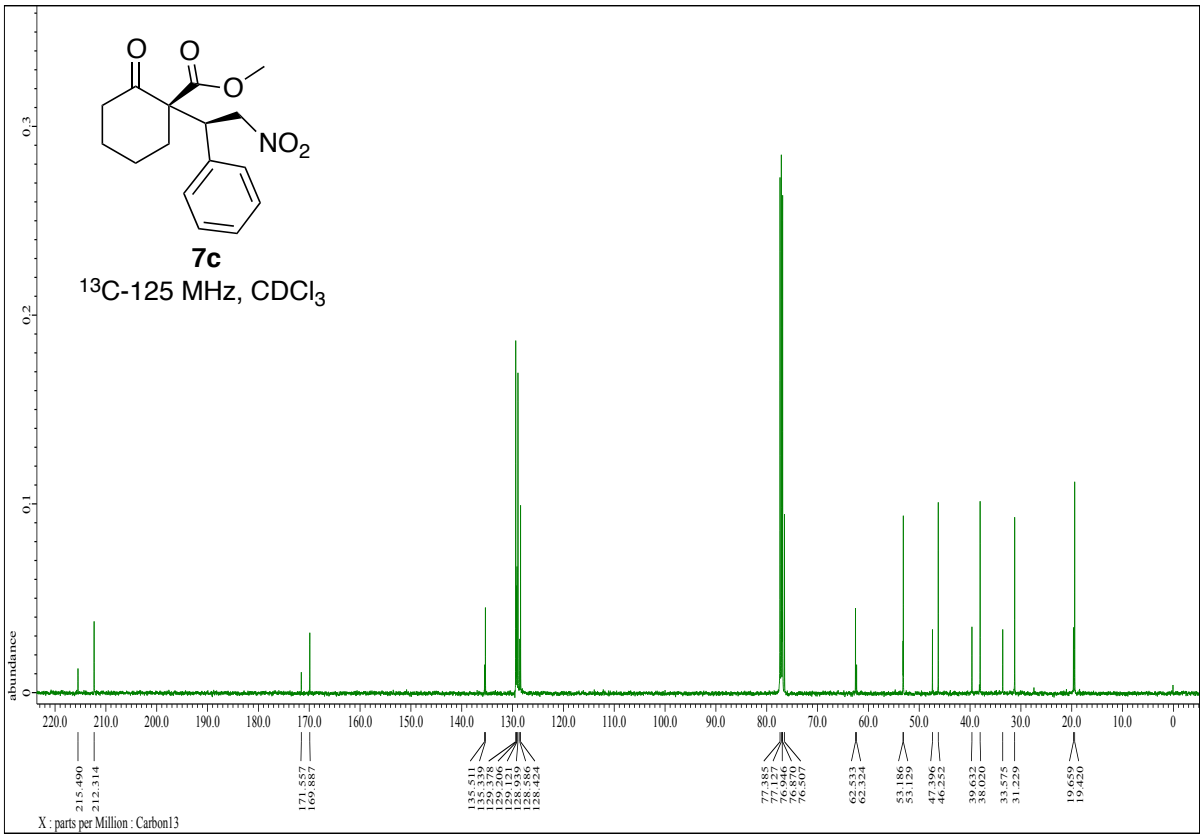
^{13}C NMR Ethyl-1-(2-nitro-1-phenylethyl)-2-oxocyclopentanecarboxylate **7b**



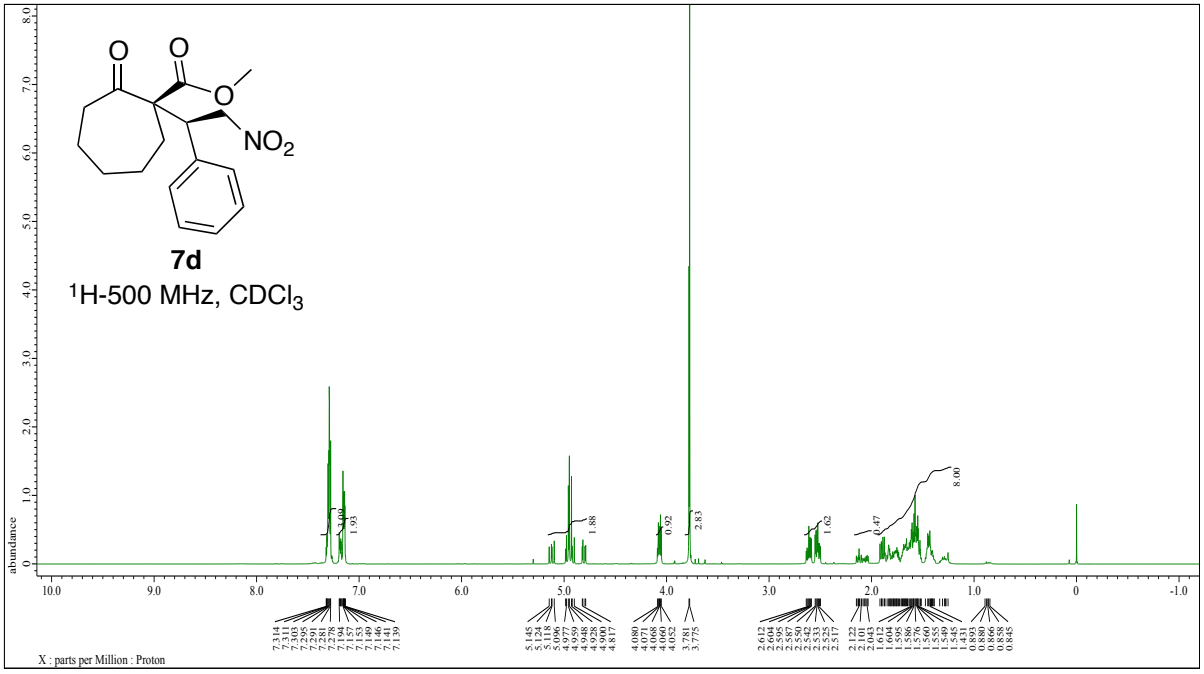
^{1}H NMR Methyl-1-(2-nitro-1-phenylethyl)-2-oxocyclohexanecarboxylate **7c**



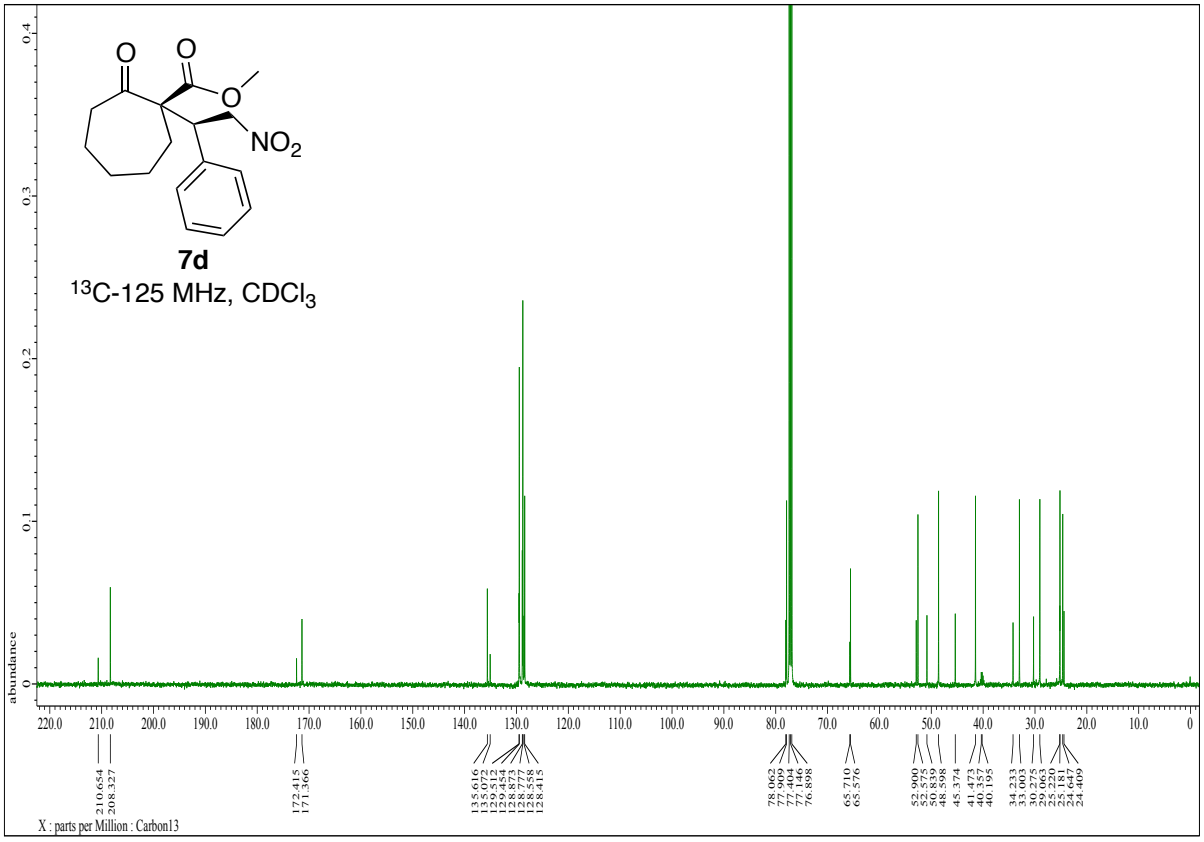
^{13}C NMR Methyl-1-(2-nitro-1-phenylethyl)-2-oxocyclohexanecarboxylate **7c**



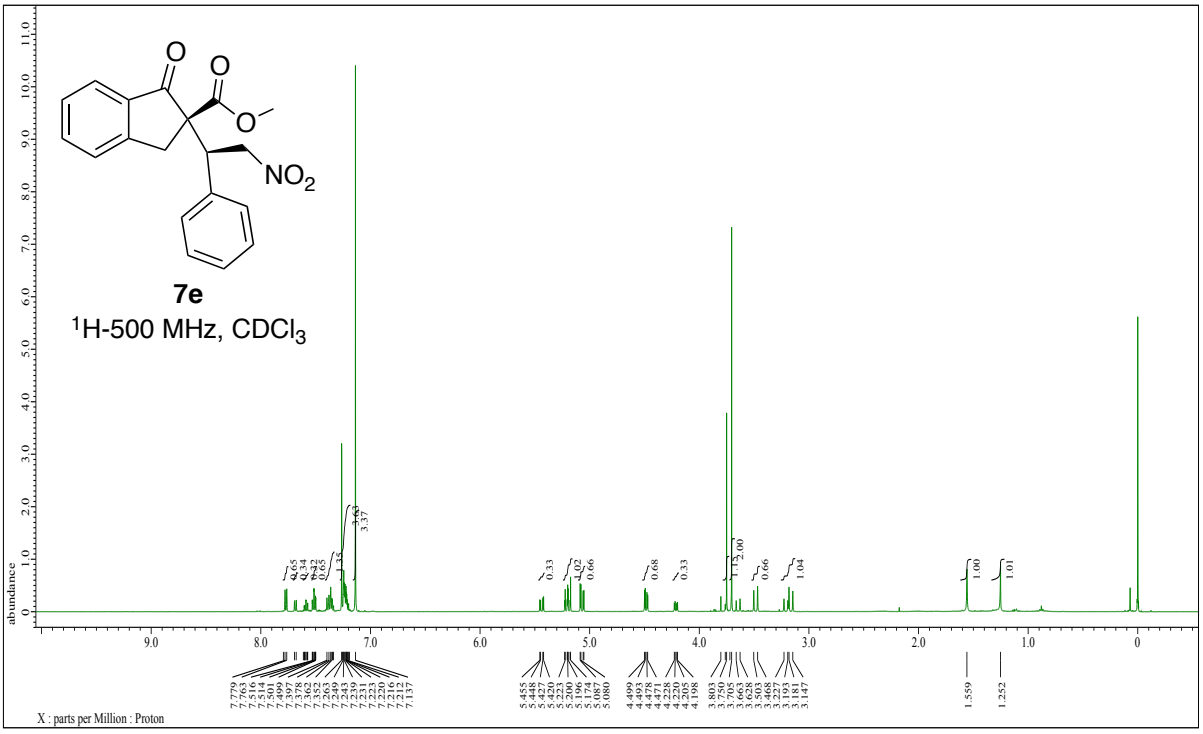
^{1}H NMR Methyl-1-(2-nitro-1-phenylethyl)-2-oxocycloheptanecarboxylate **7d**



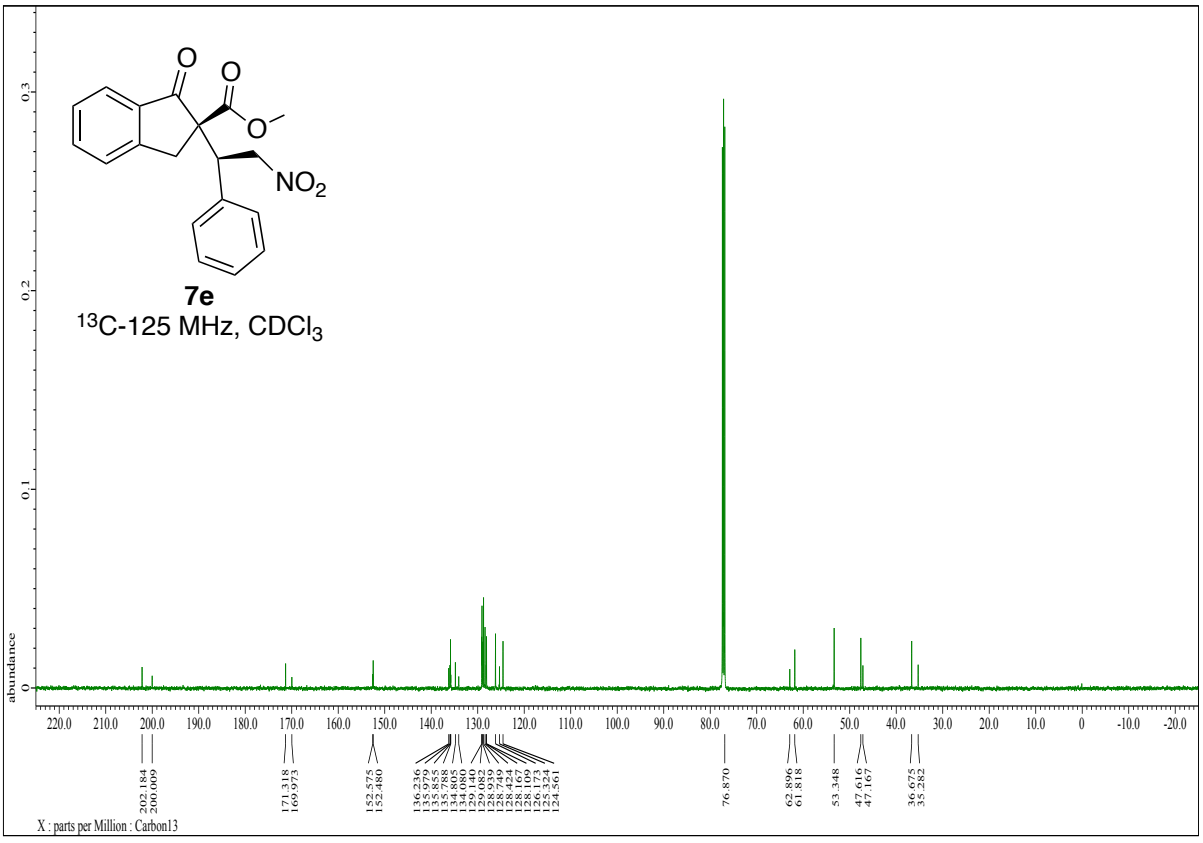
^{13}C NMR Methyl-1-(2-nitro-1-phenylethyl)-2-oxocycloheptanecarboxylate **7d**



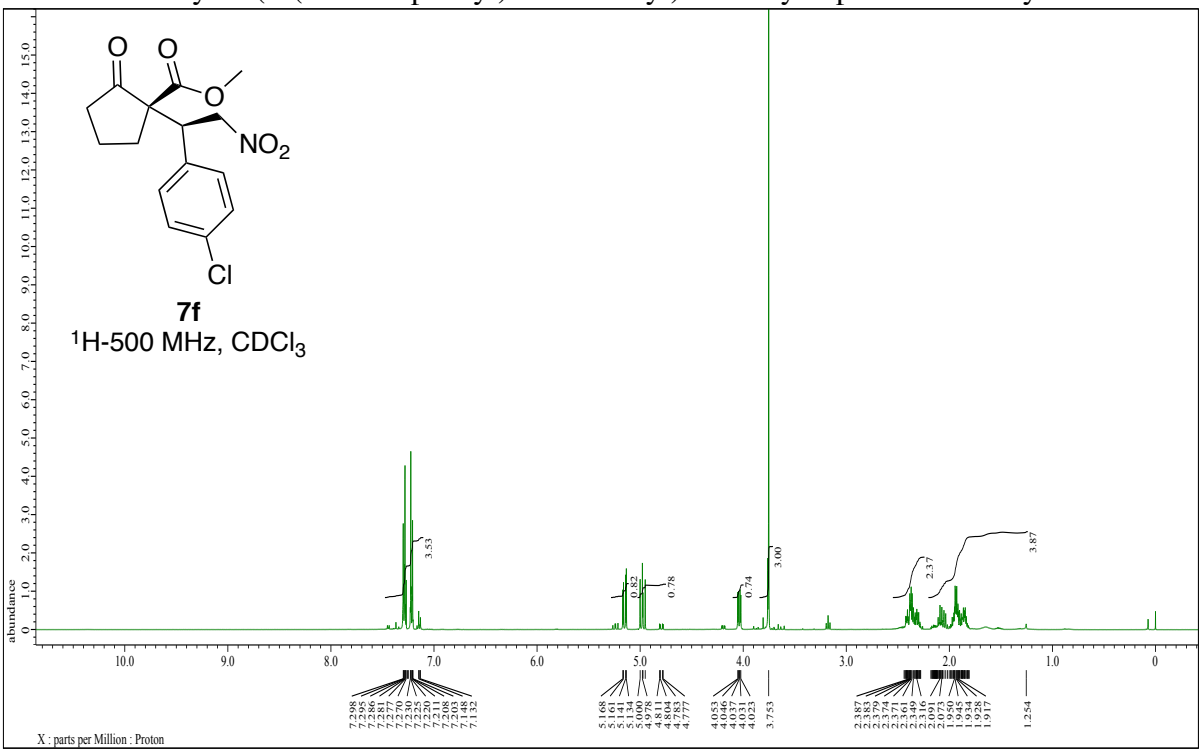
^{1}H NMR Methyl-2,3-dihydro-2-(2-nitro-1-phenylethyl)-1-oxo-1H-indene-2-carboxylate **7e**



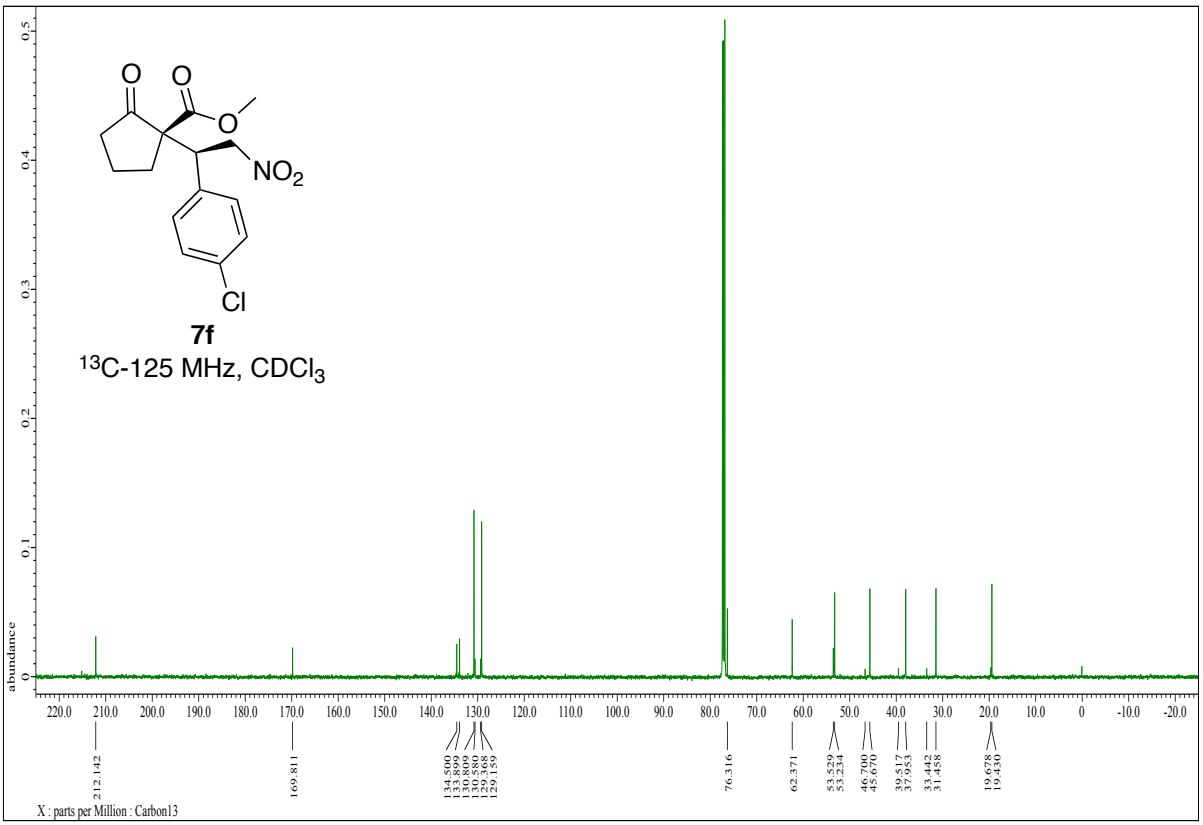
^{13}C NMR Methyl-2,3-dihydro-2-(2-nitro-1-phenylethyl)-1-oxo-1H-indene-2-carboxylate **7e**



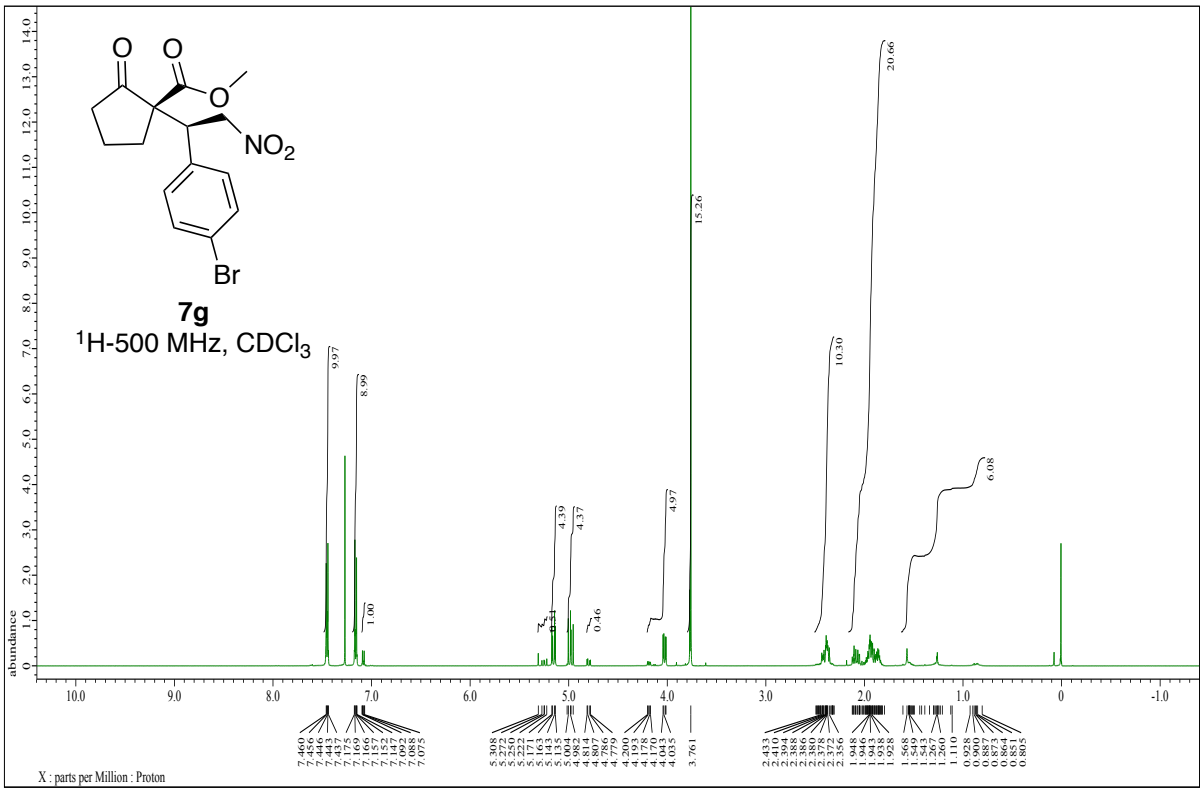
^{1}H NMR Methyl-1-(1-(4-chlorophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7f**



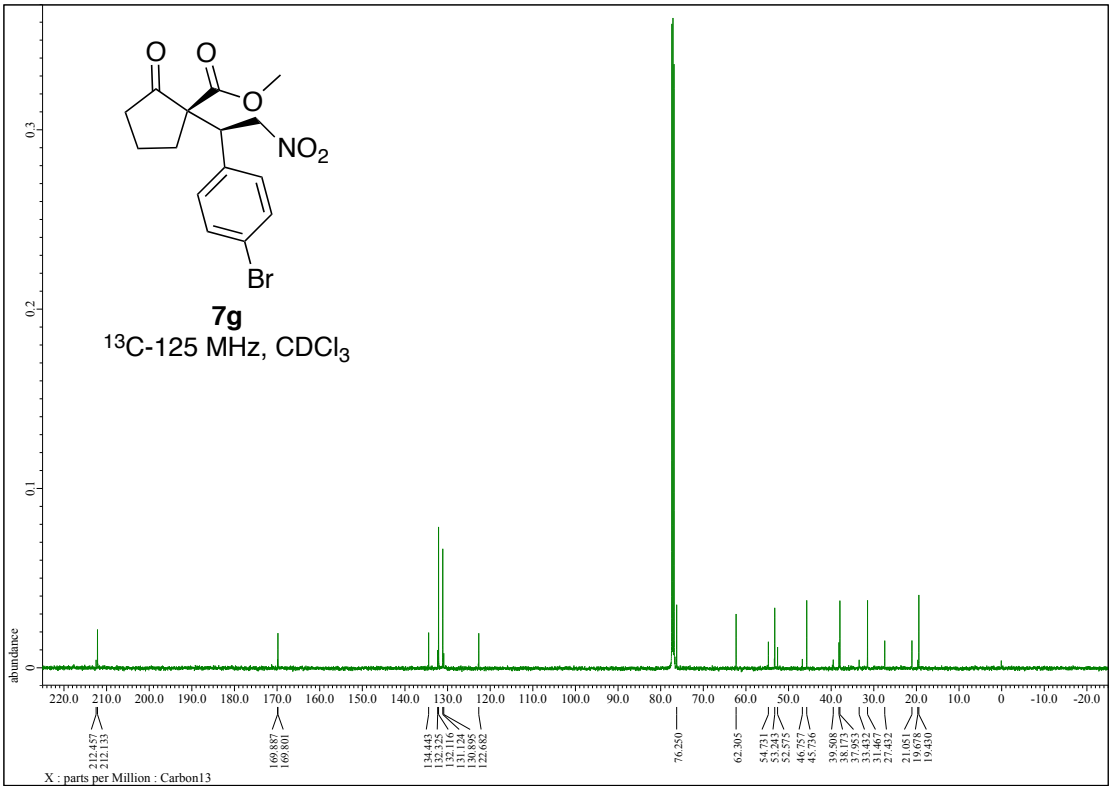
^{13}C NMR Methyl-1-(1-(4-chlorophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7f**



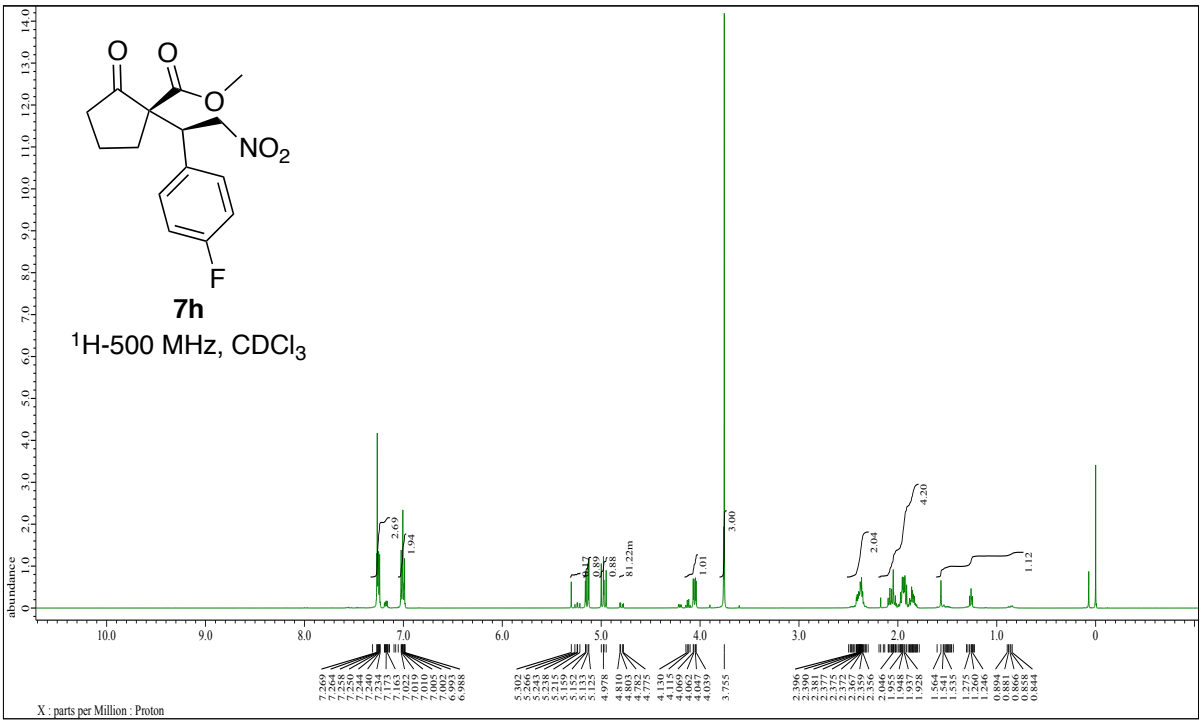
^{1}H NMR Methyl-1-(1-(4-bromophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7g**



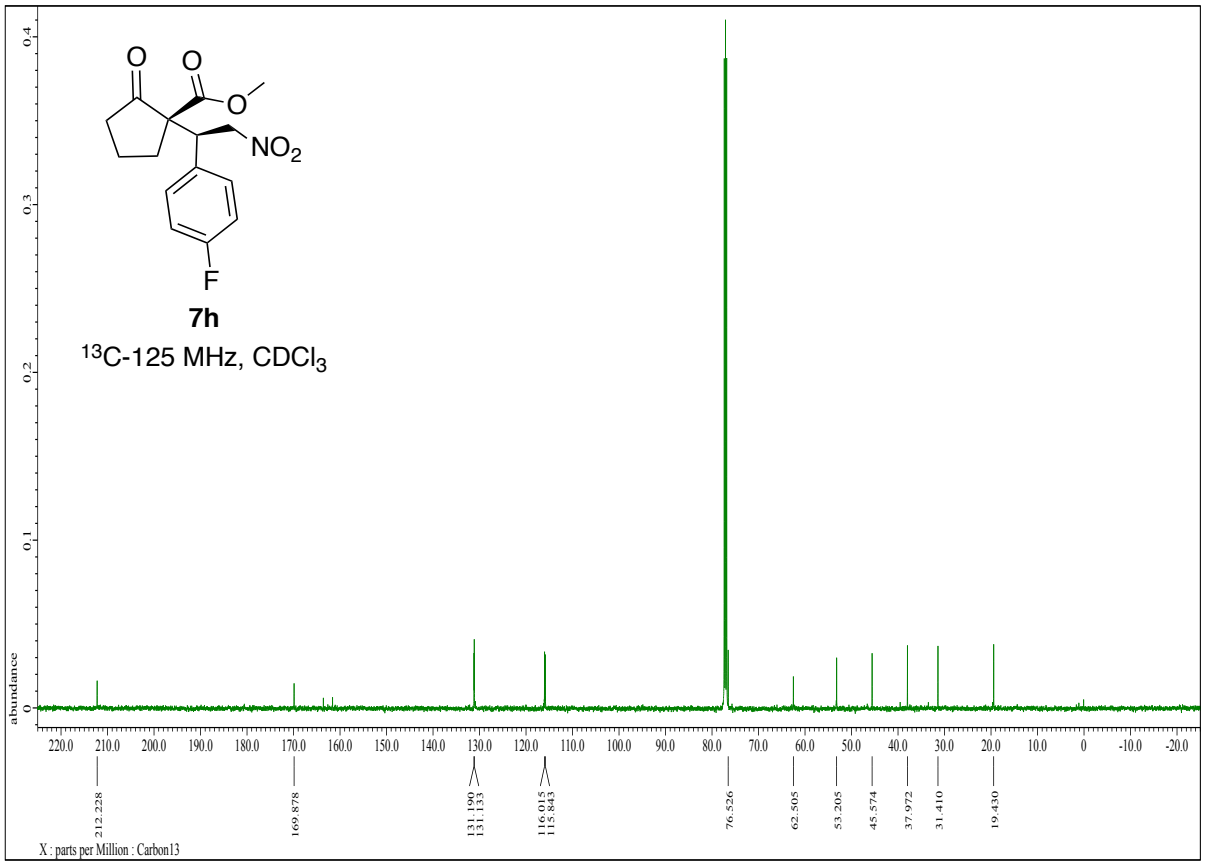
^{13}C NMR Methyl-1-(1-(4-bromophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7g**



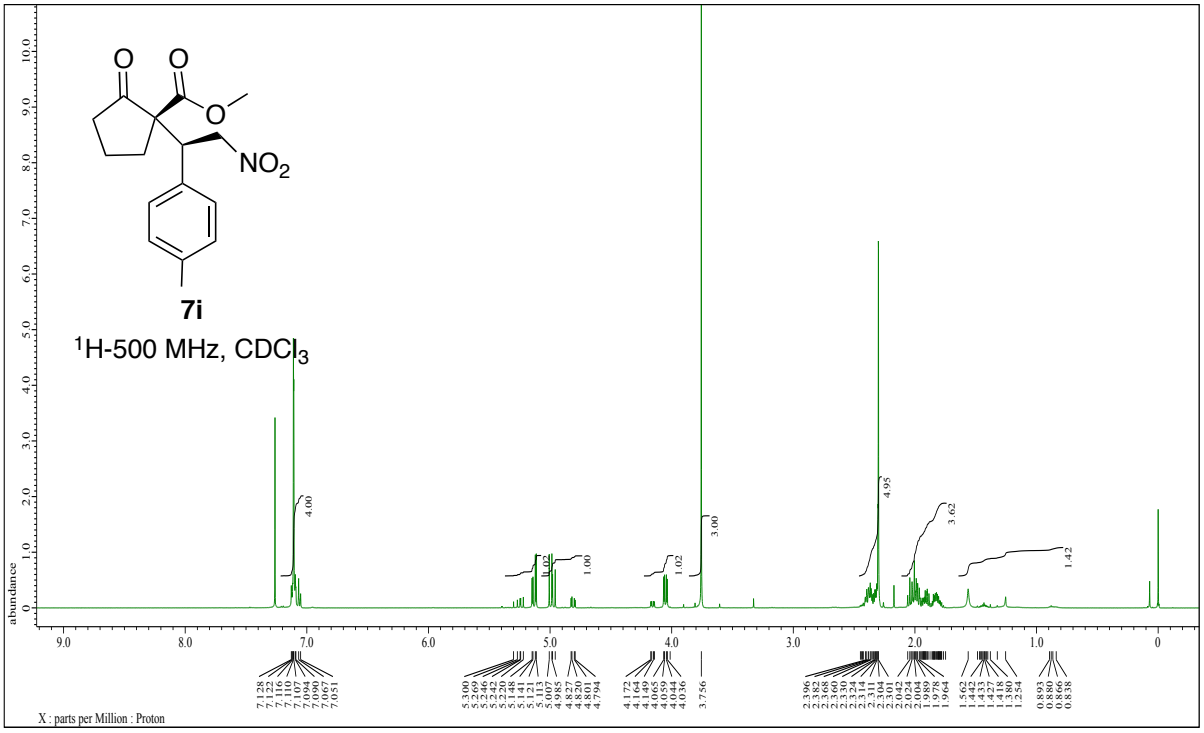
^{1}H NMR Methyl-1-(1-(4-fluorophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7h**



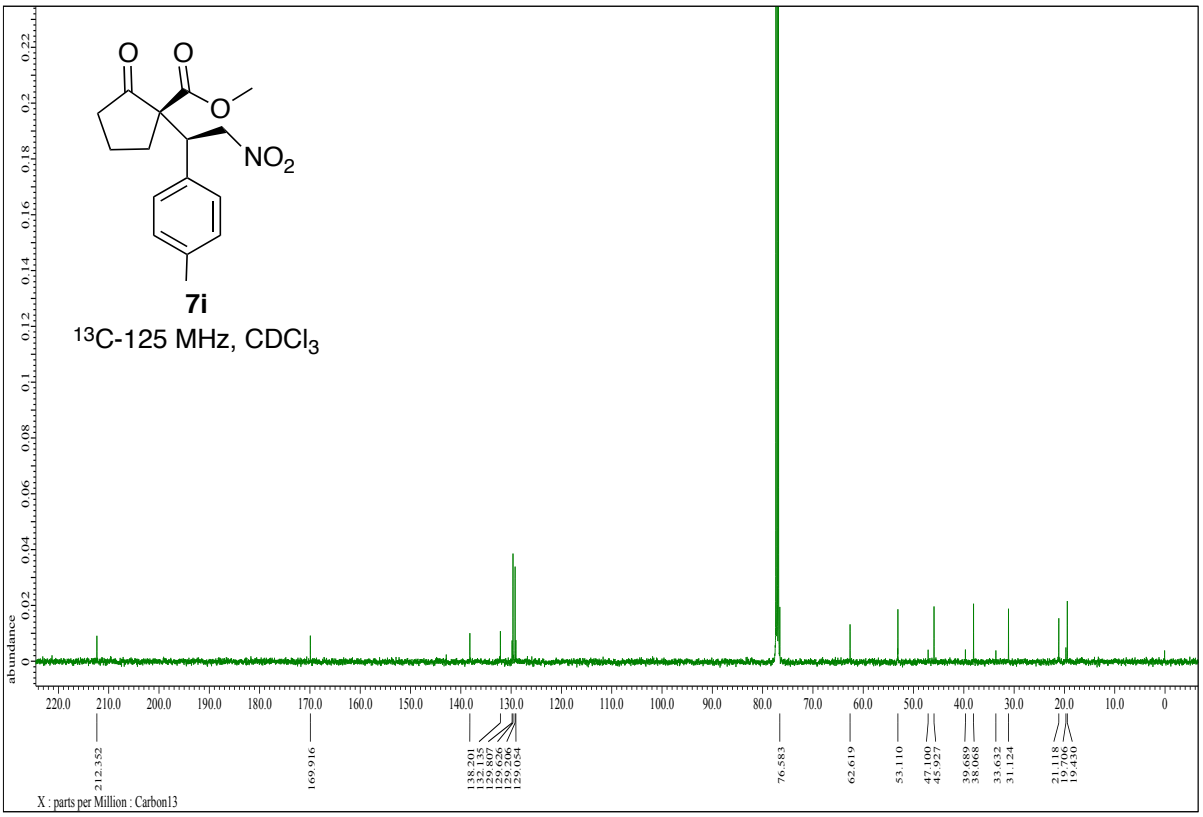
^{13}C NMR Methyl-1-(1-(4-fluorophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7h**



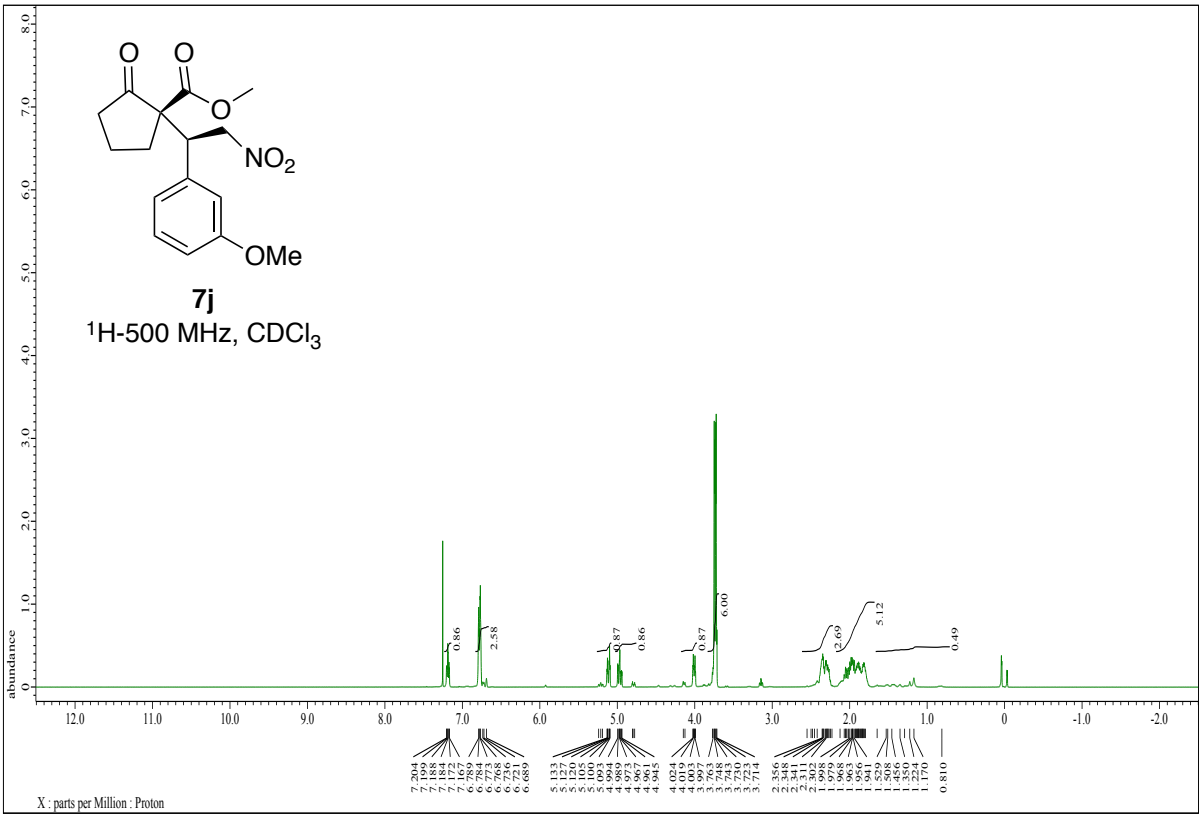
^{1}H NMR Methyl-1-(1-(4-methylphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7i**



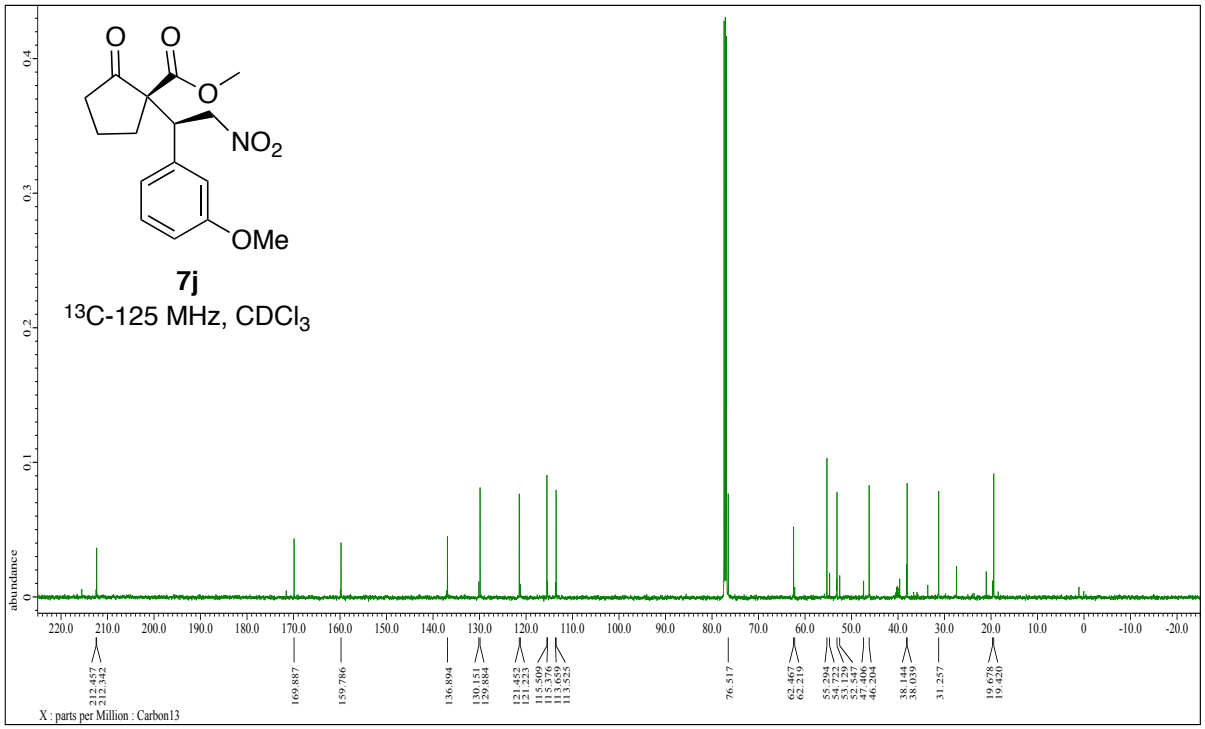
^{13}C NMR Methyl-1-(1-(4-methylphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7i**



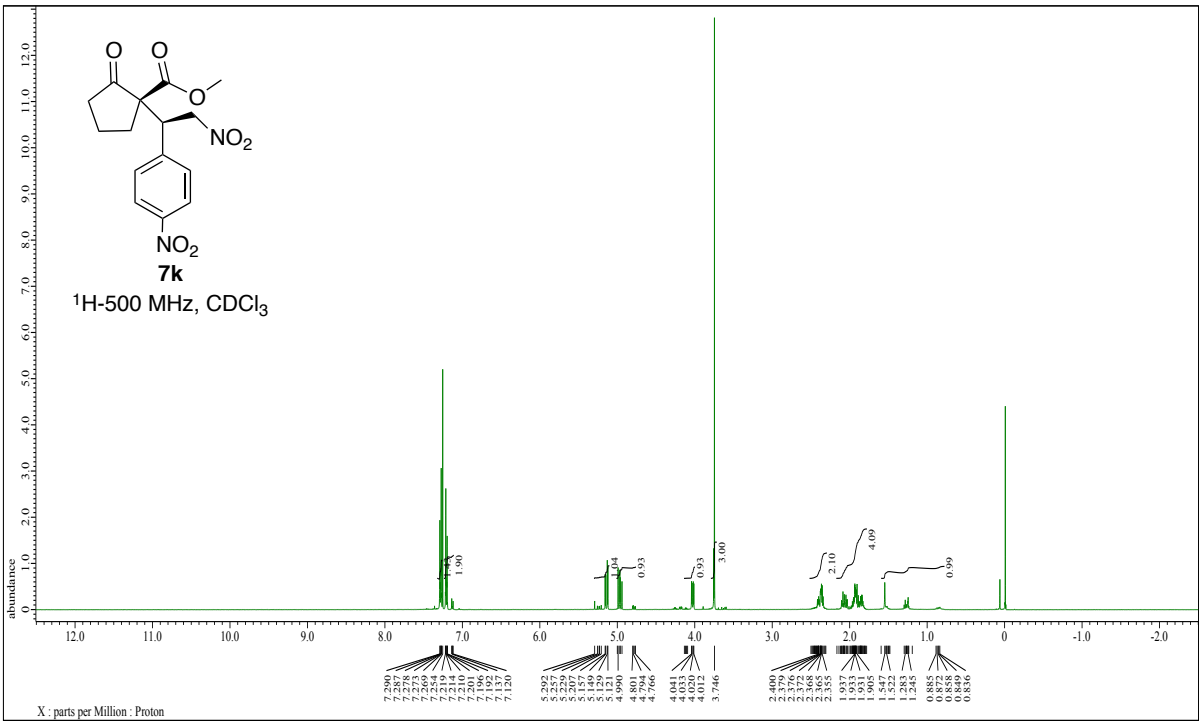
[1]**H NMR** Methyl-1-(1-(3-methoxyphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7j**



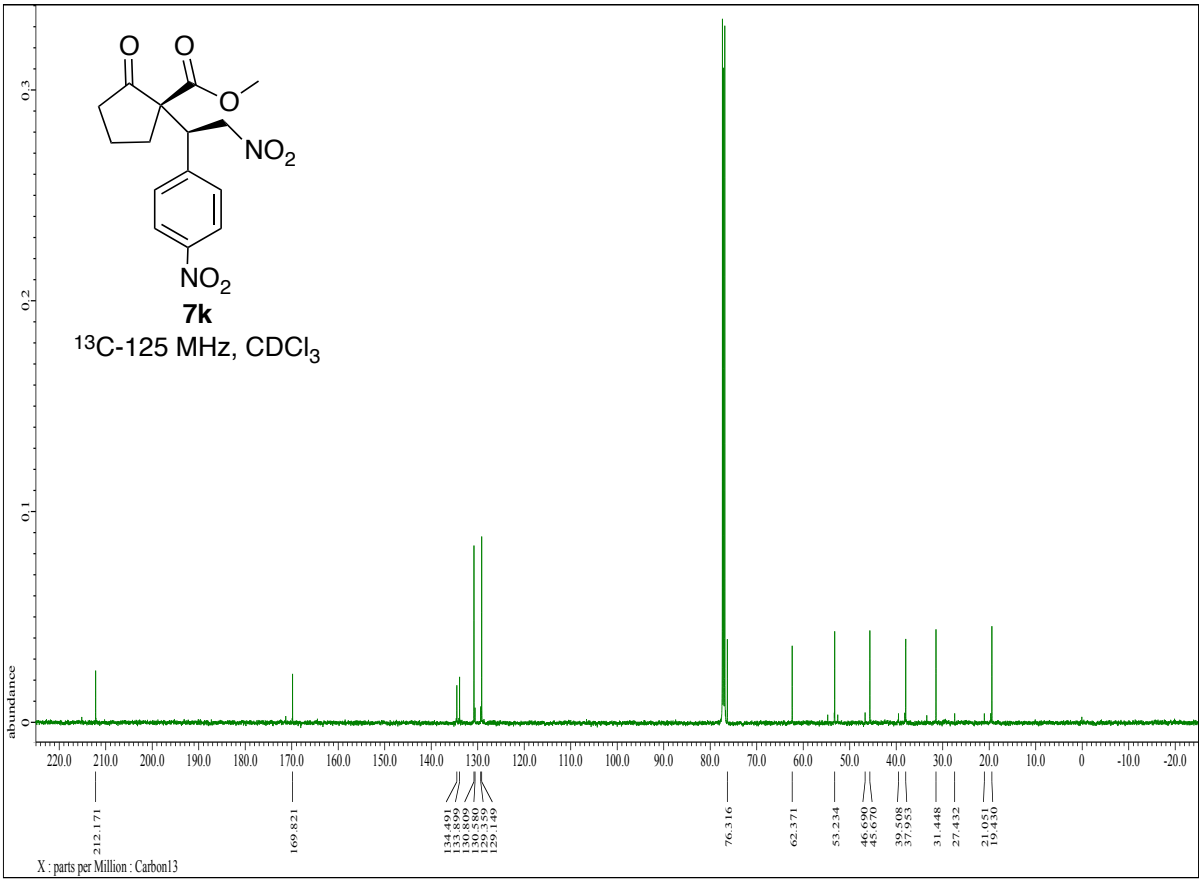
[13]**C NMR** Methyl-1-(1-(3-methoxyphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7j**



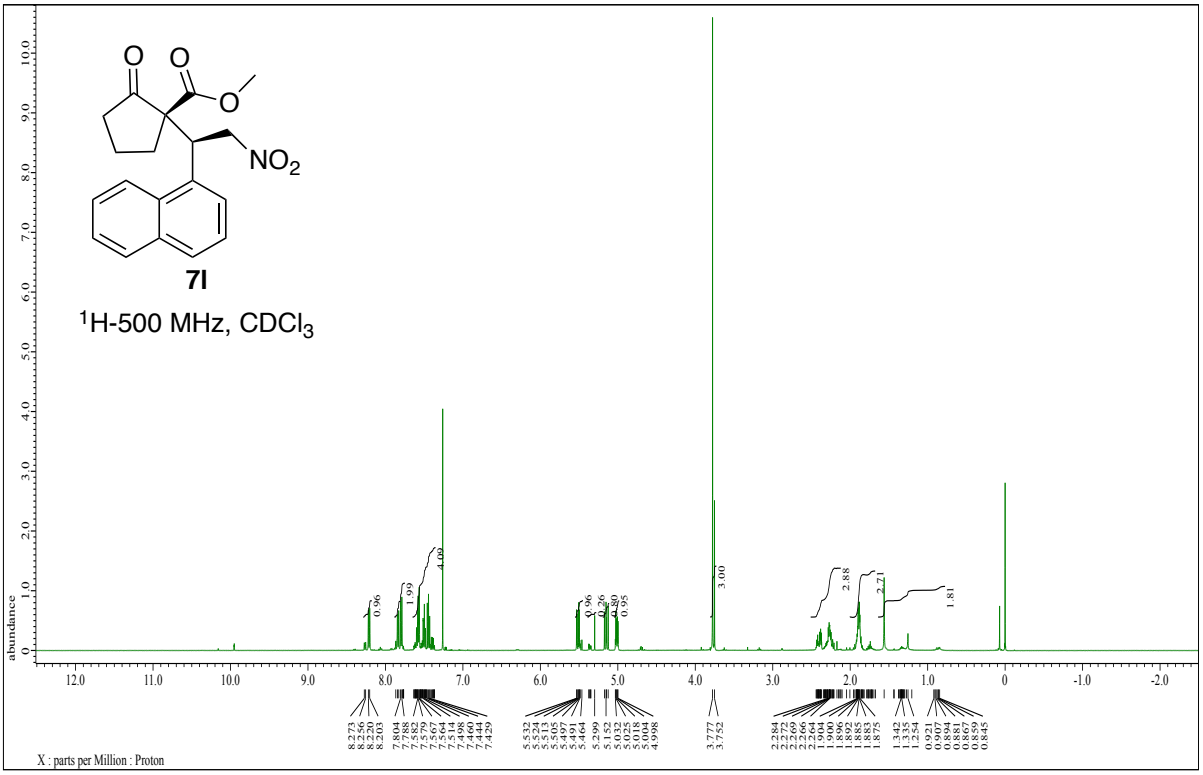
^{1}H NMR Methyl-1-(1-(4-nitrophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7k**



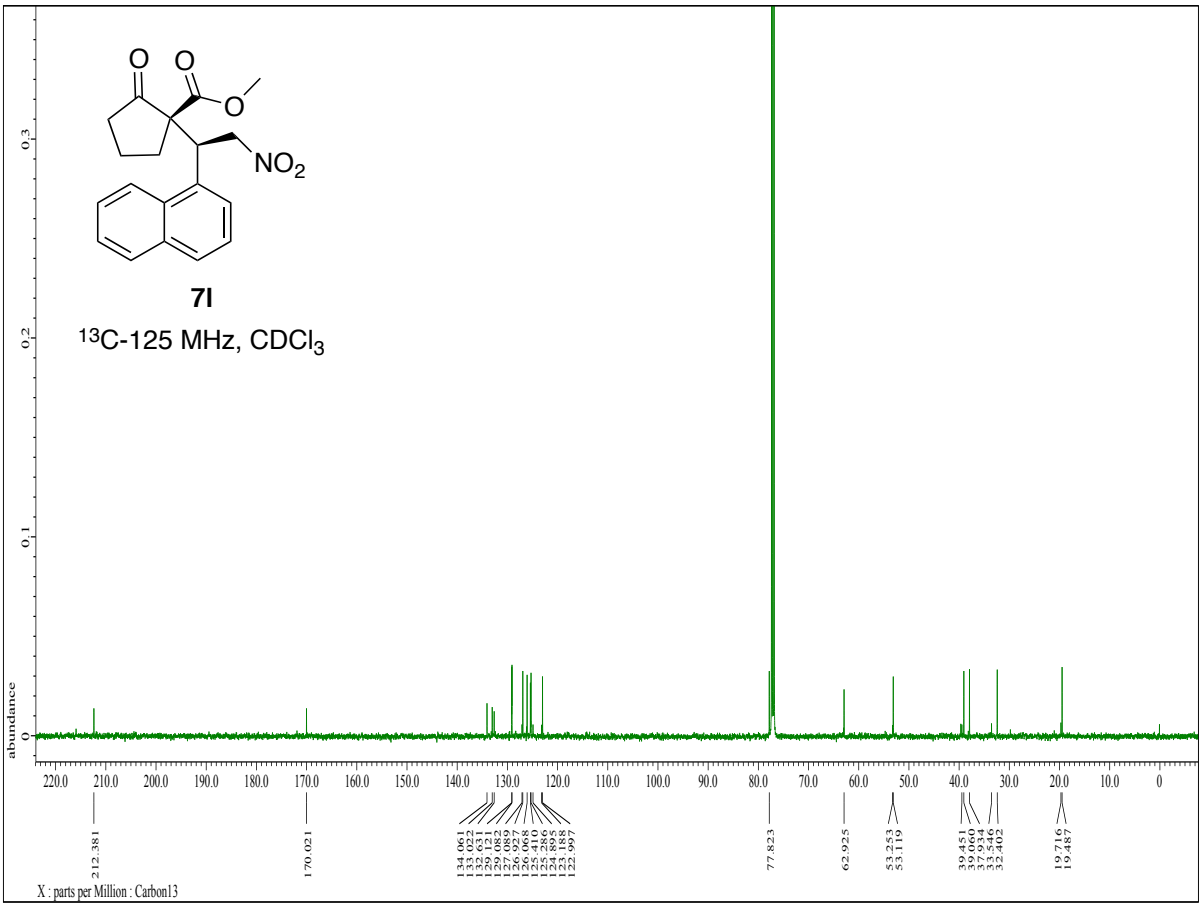
^{13}C NMR Methyl-1-(1-(4-nitrophenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7k**



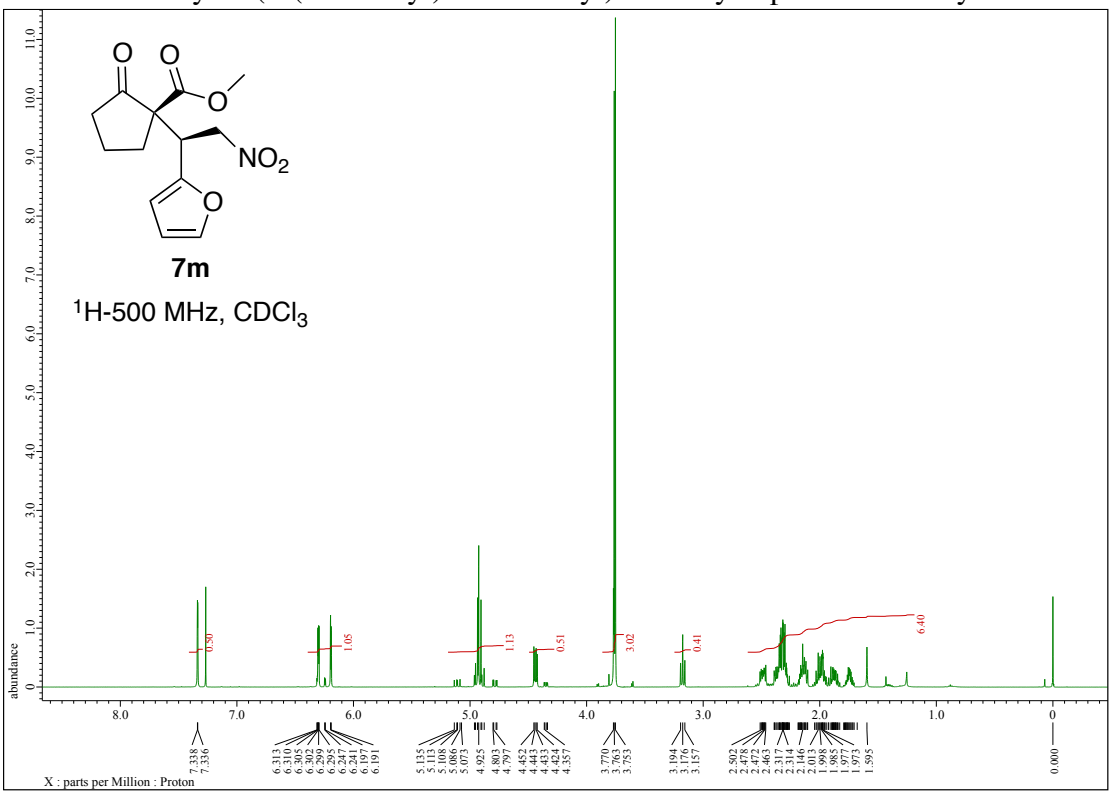
^{1}H NMR Methyl-1-(1-(4-napthylphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7l**



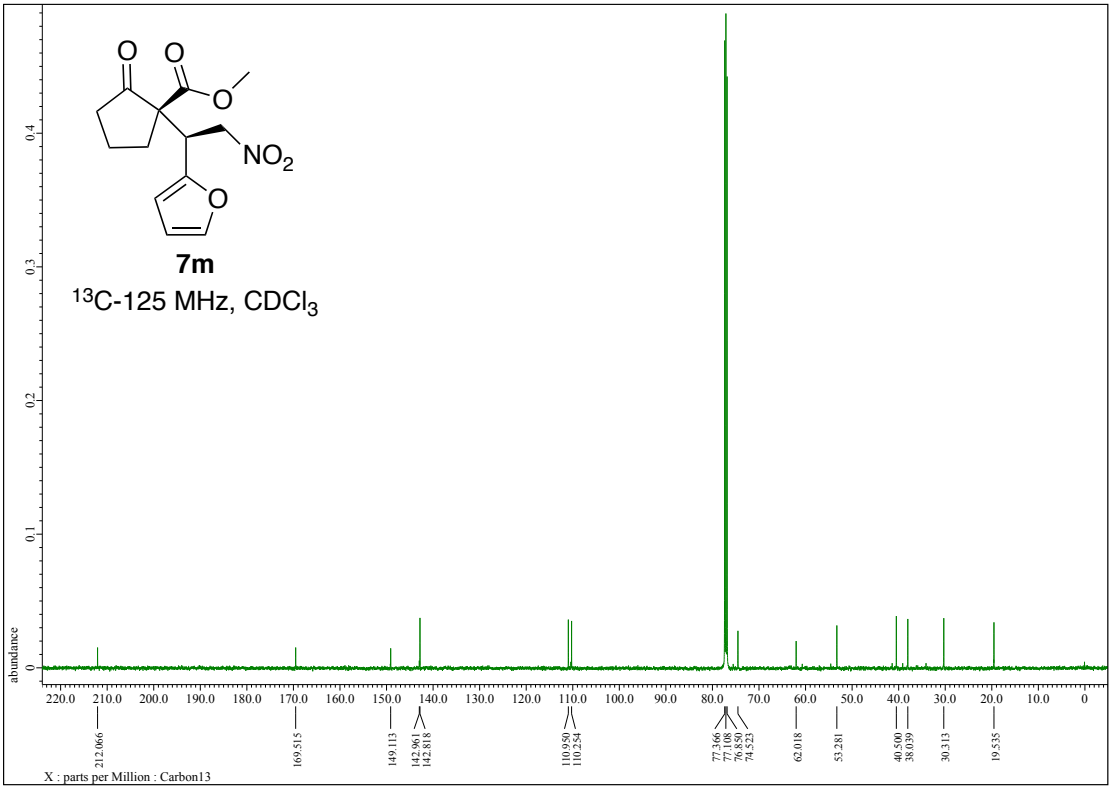
^{13}C NMR Methyl-1-(1-(4-napthylphenyl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7l**



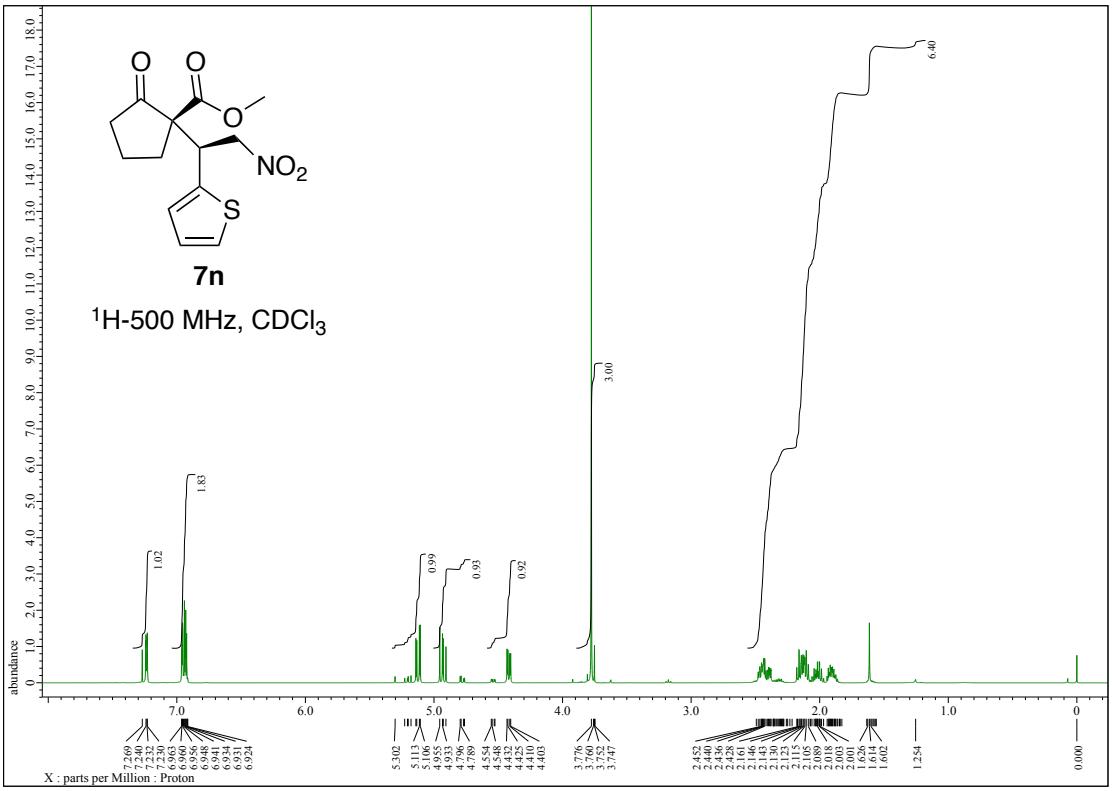
^{1}H NMR Methyl-1-(1-(furan-2-yl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7m**



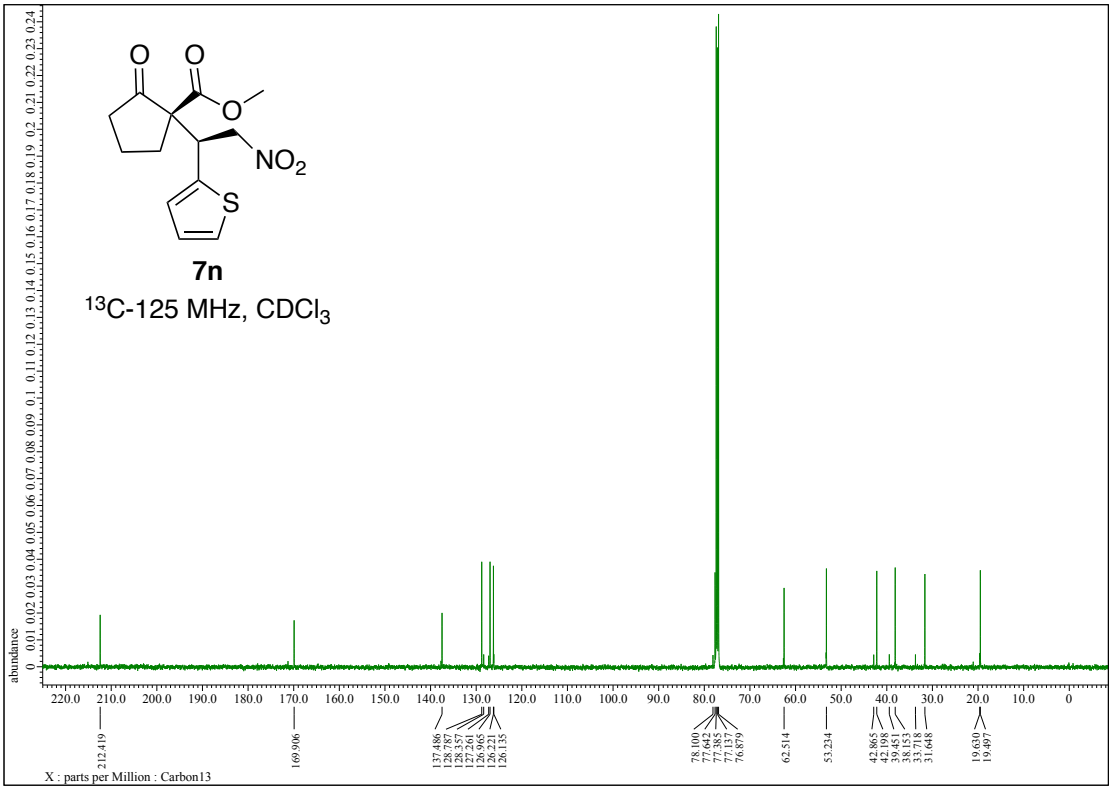
^{13}C NMR Methyl-1-(1-(furan-2-yl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7m**



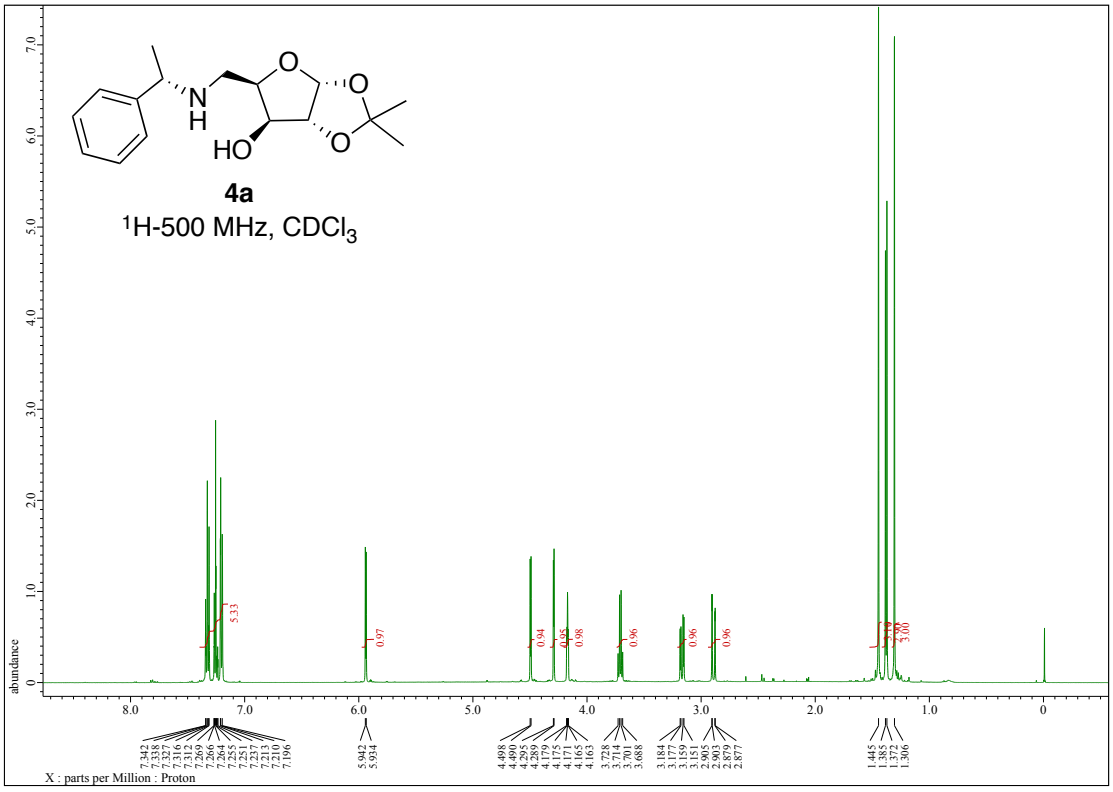
^{1}H NMR Methyl-1-(1-(thiene-2-yl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7n**



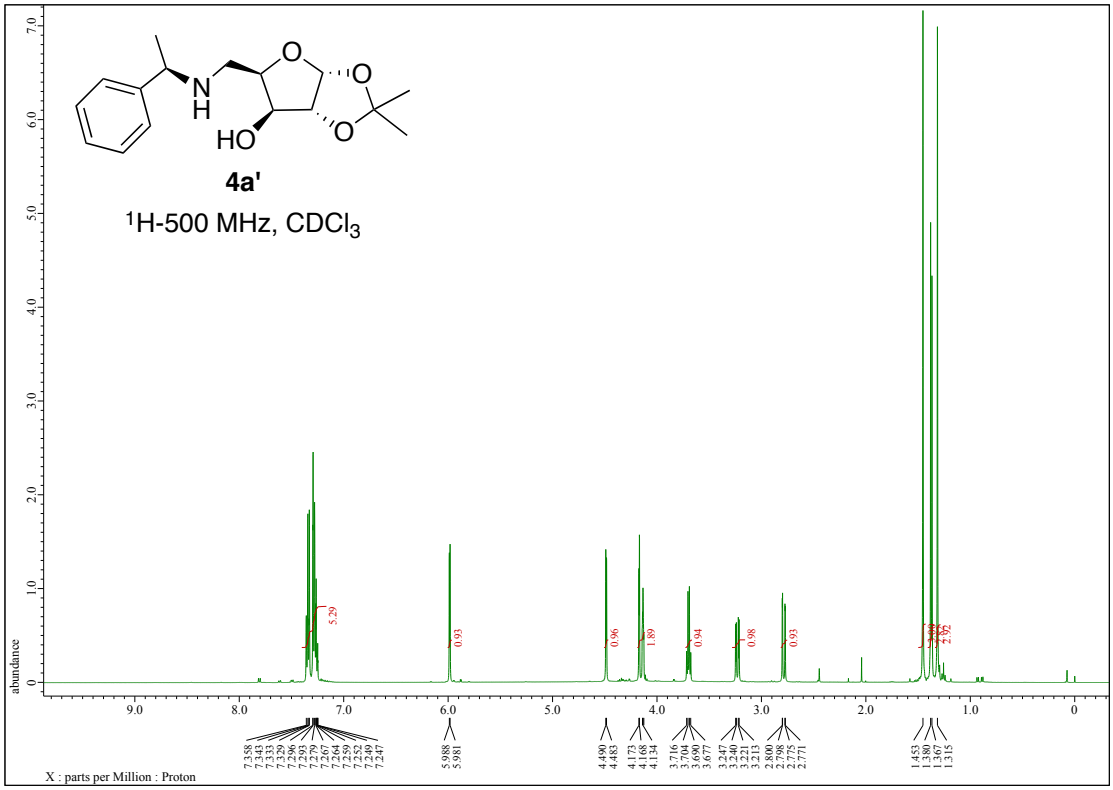
^{13}C NMR Methyl-1-(1-(thiene-2-yl)-2-nitroethyl)-2-oxocyclopentanecarboxylate **7n**



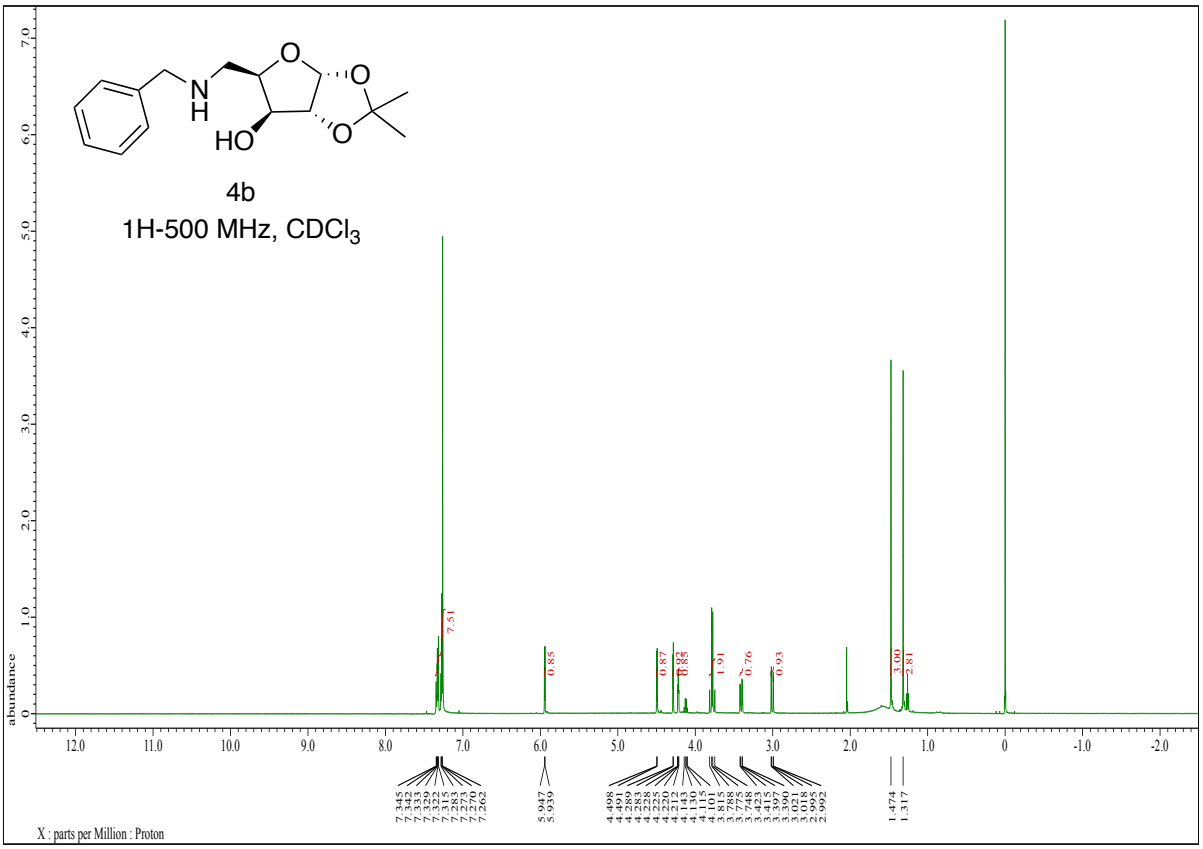
^{1}H NMR of 4a



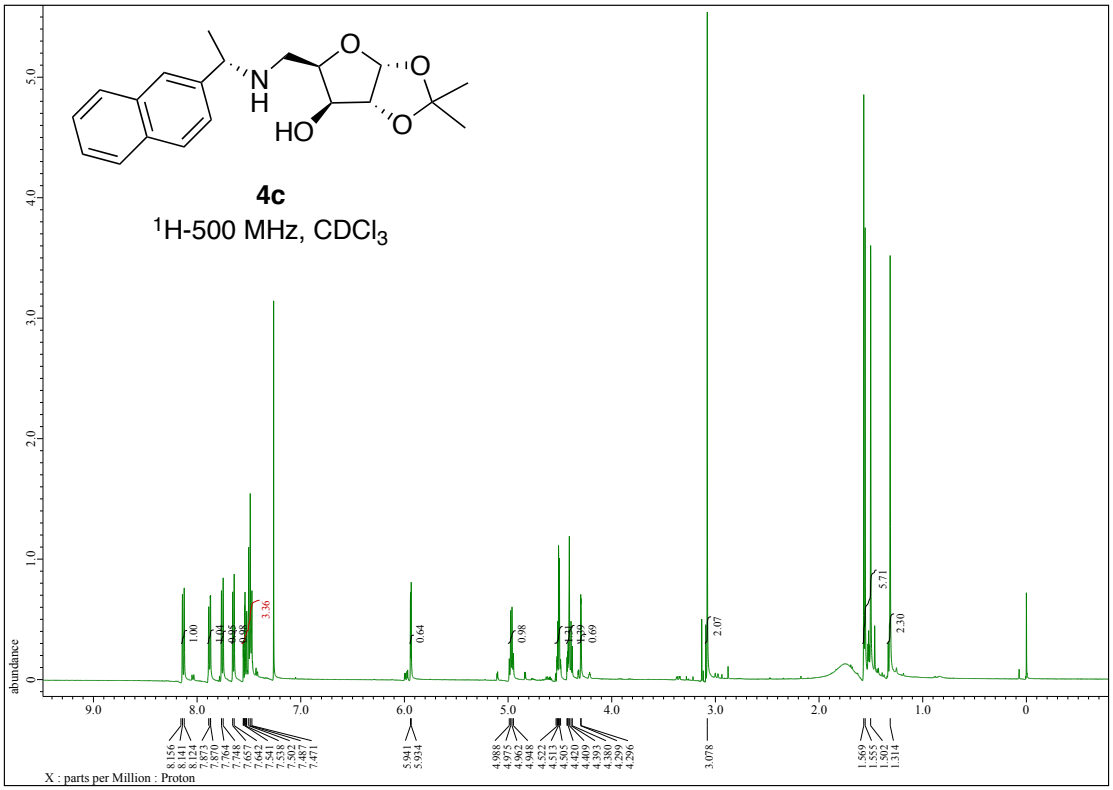
^{1}H NMR of 4a'



^{1}H NMR of 4b



^{1}H NMR of 4c



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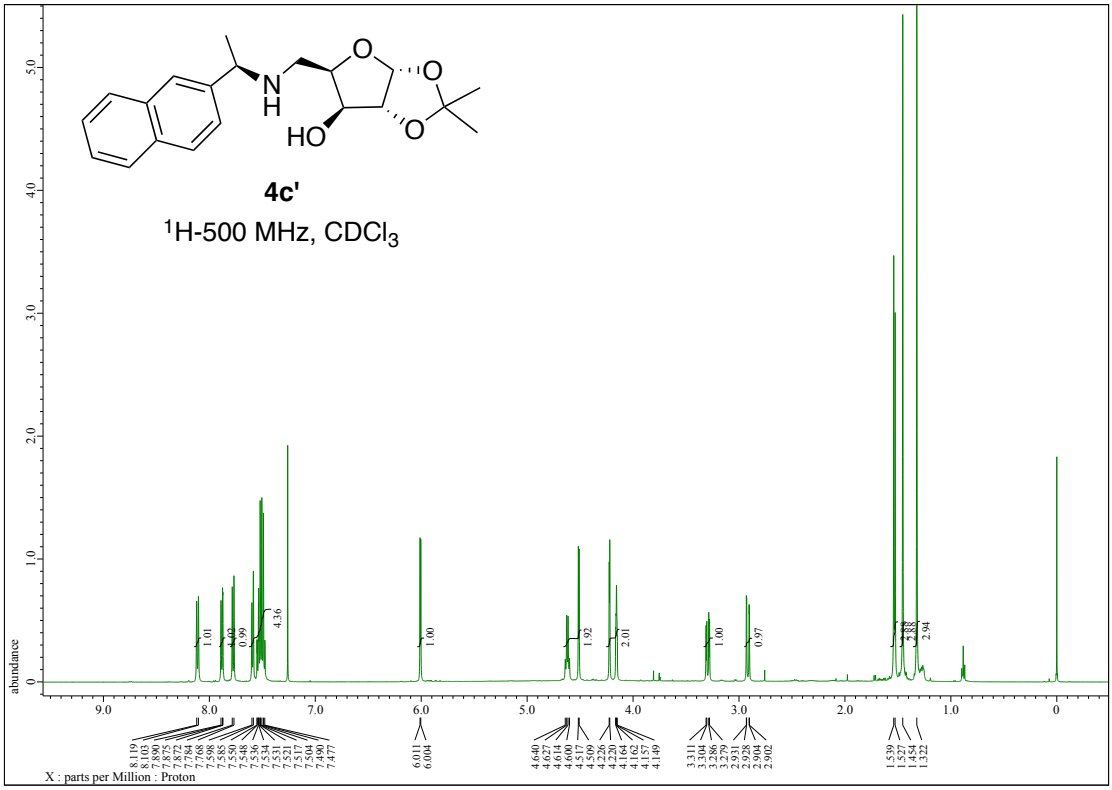

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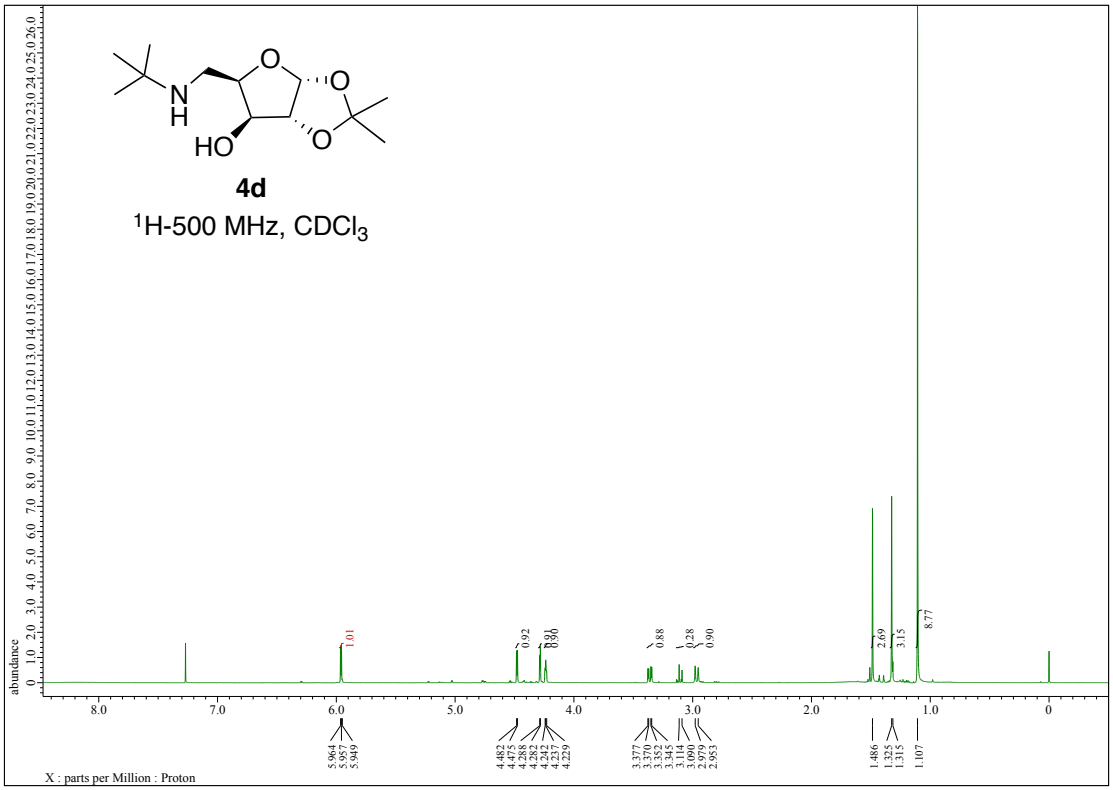

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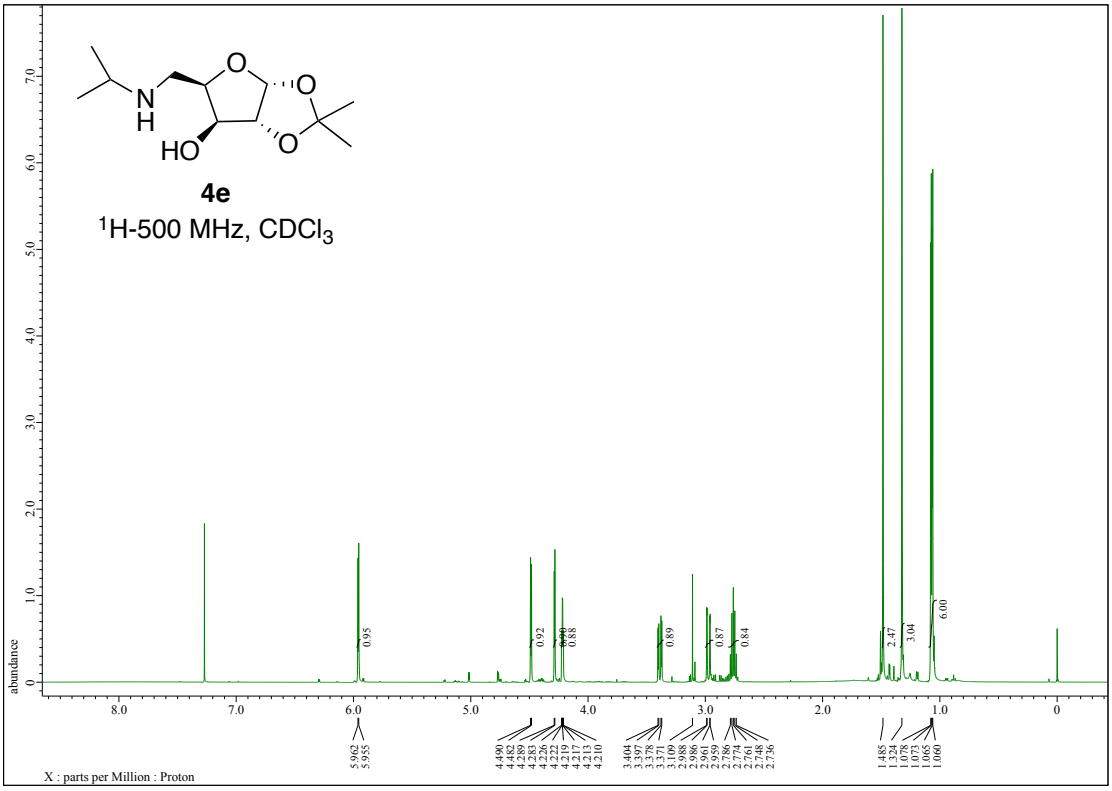
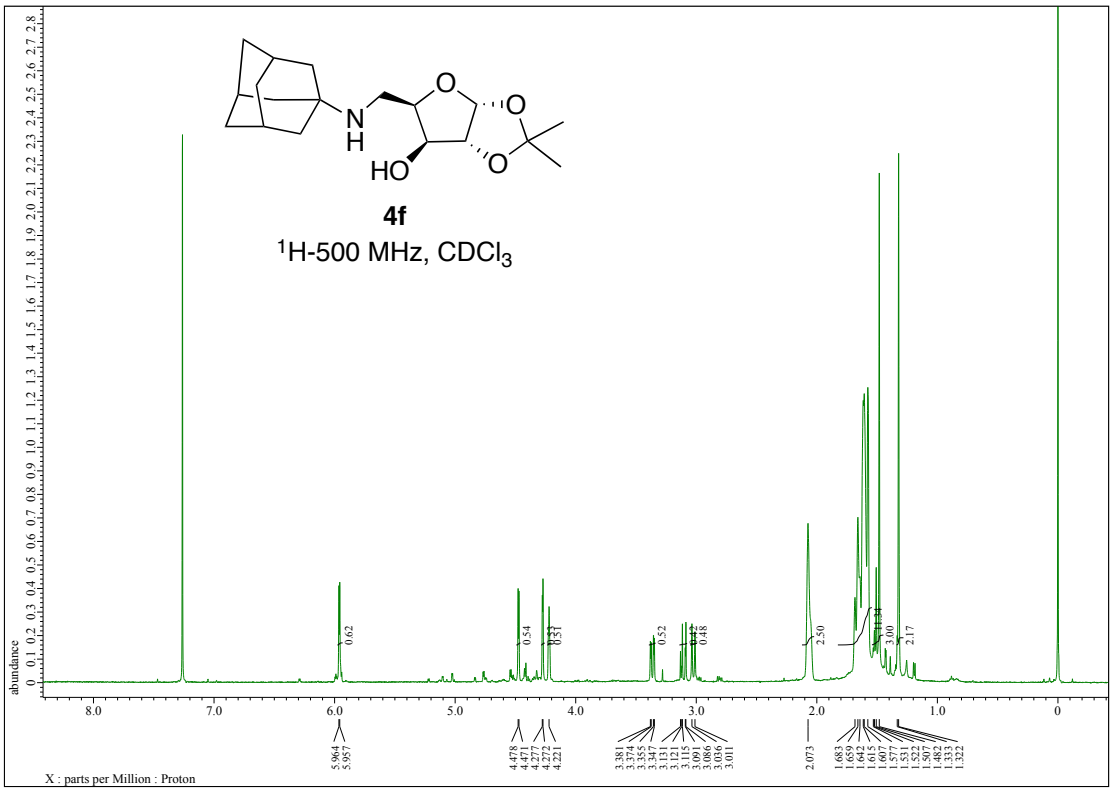


^{1}H NMR of 4f



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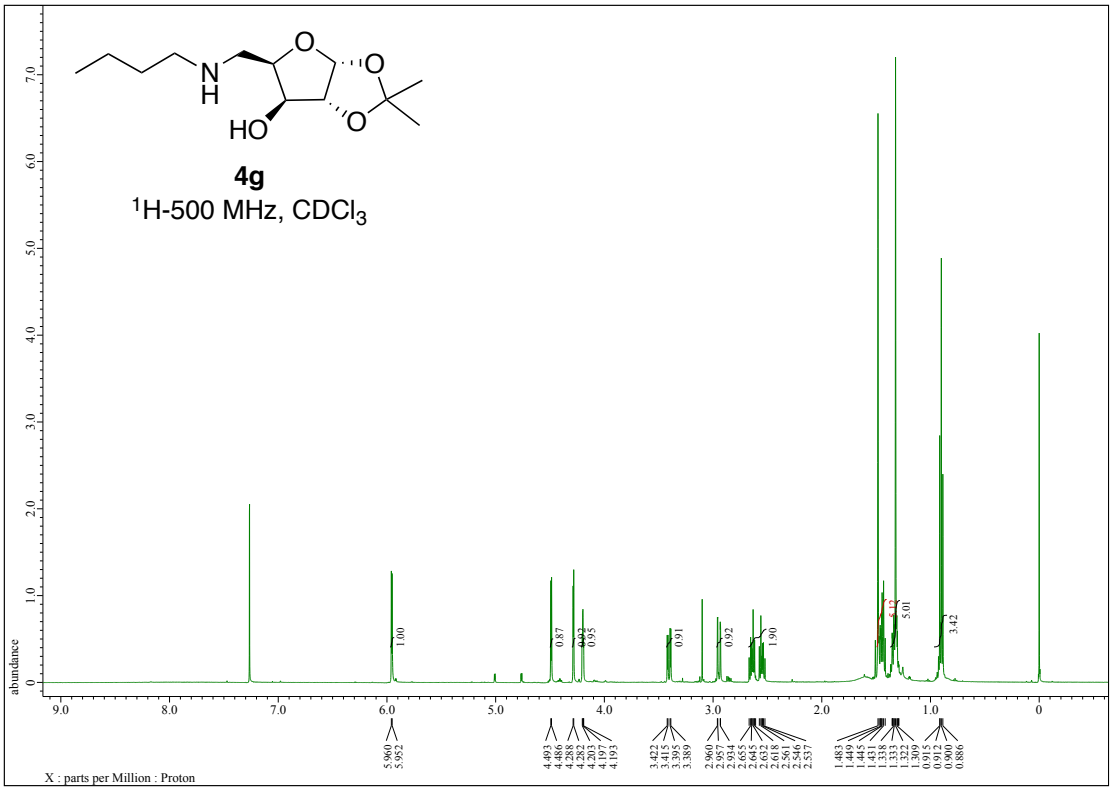

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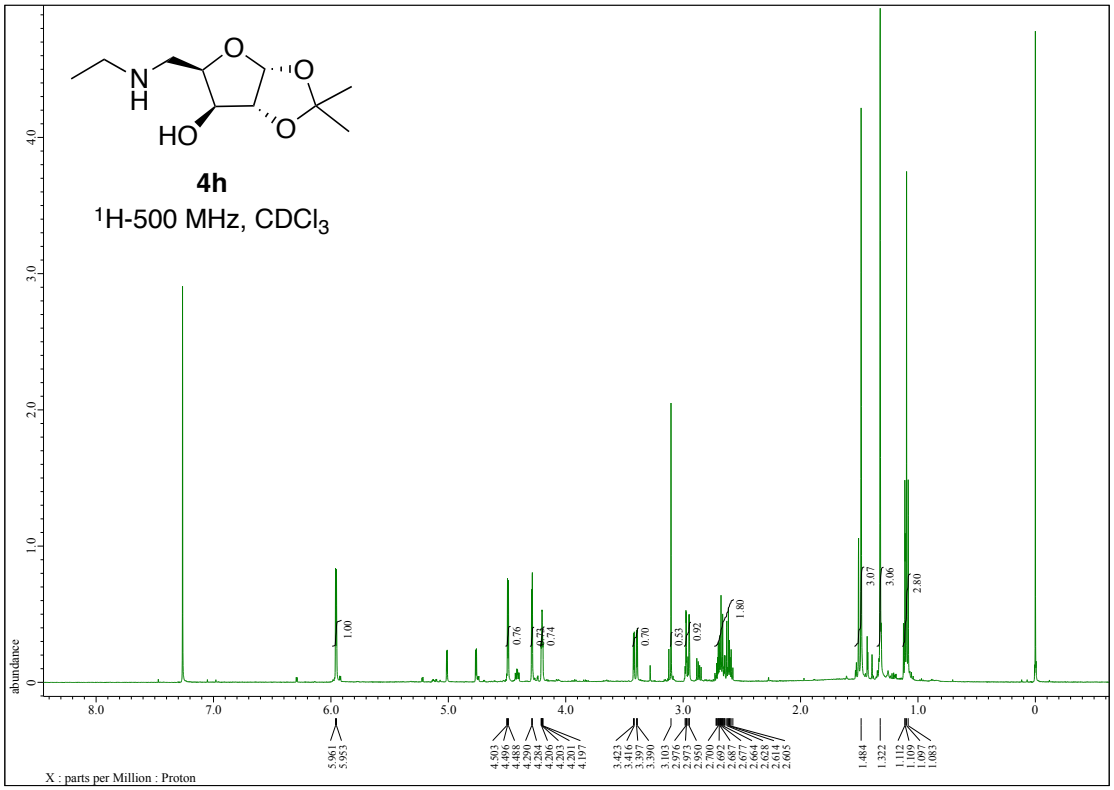
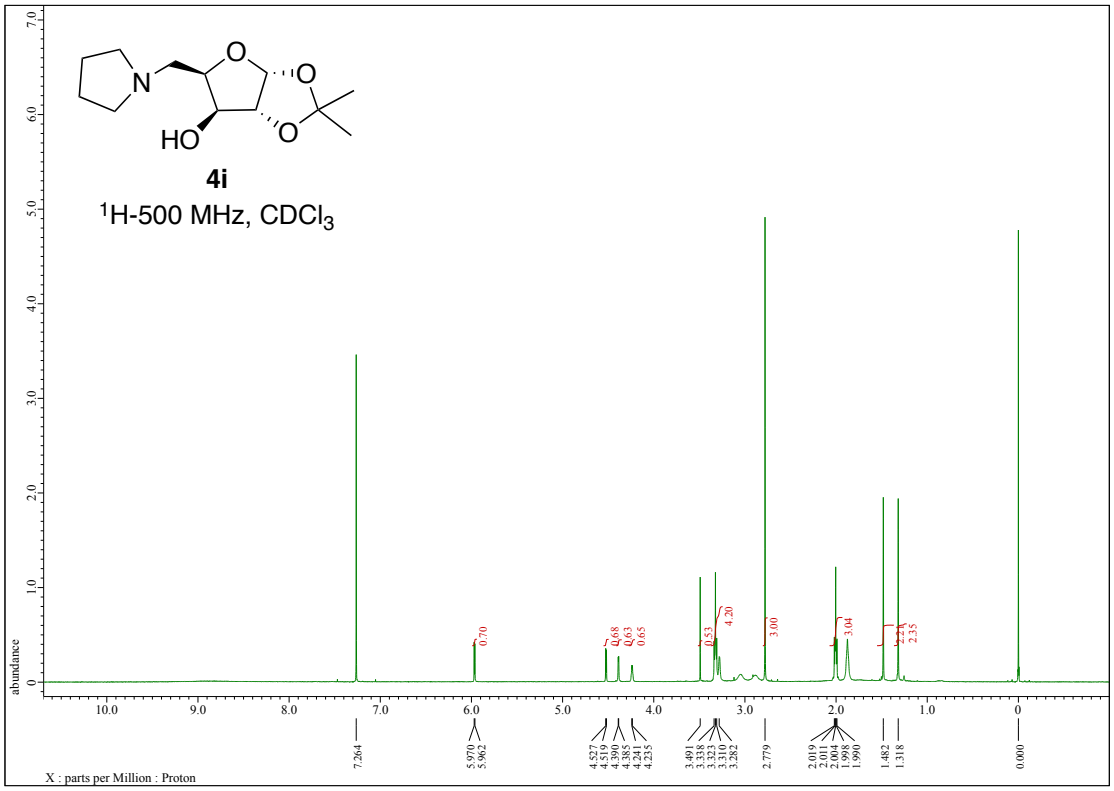


^{1}H NMR of 4i



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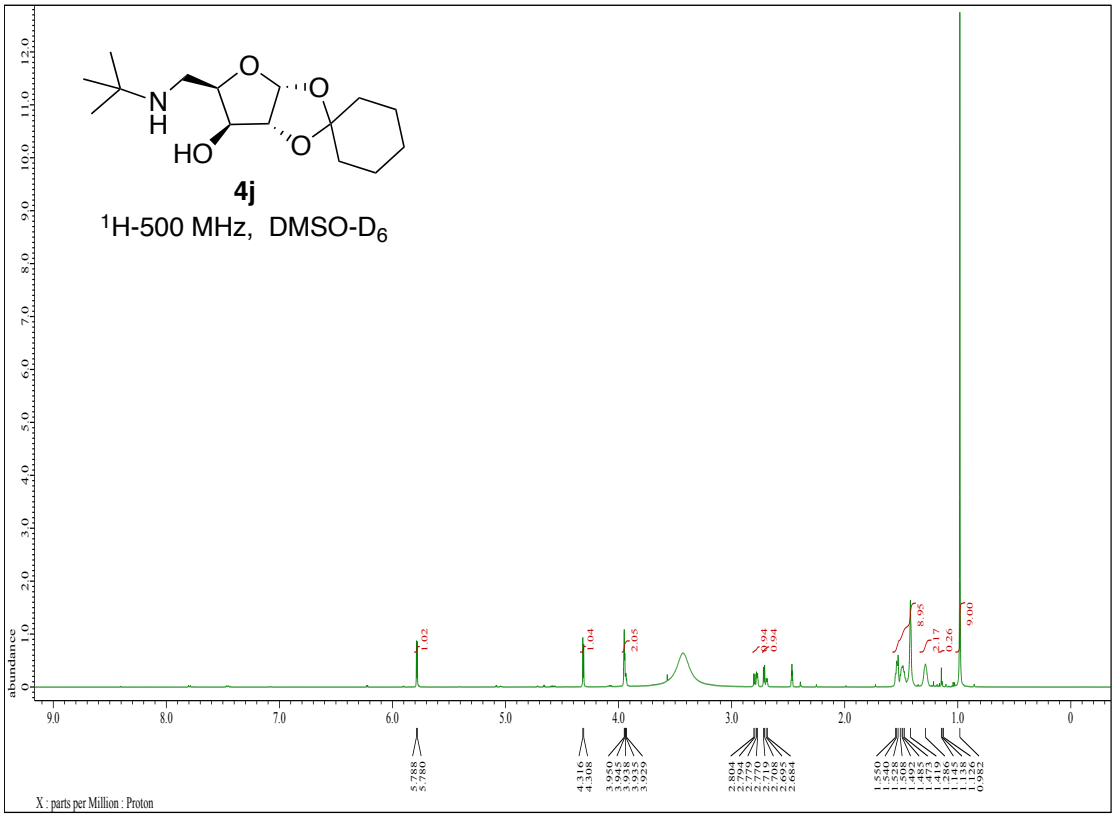
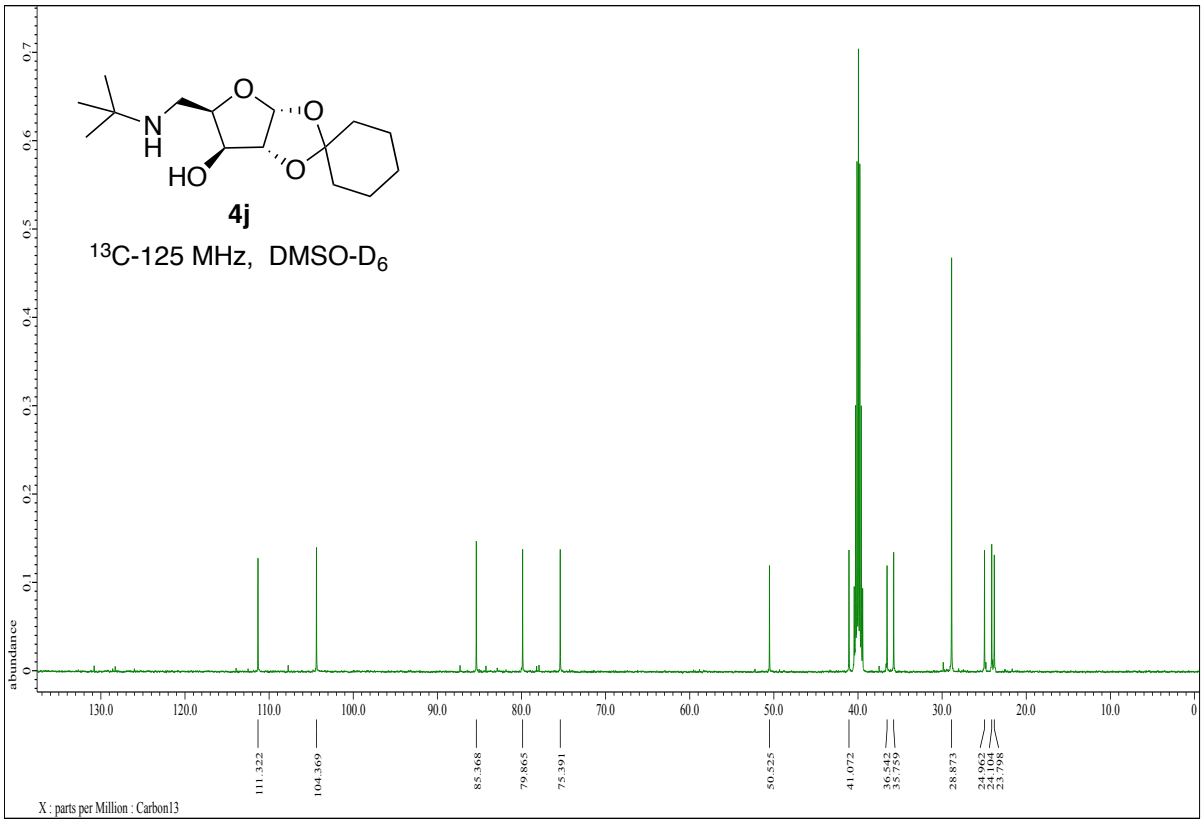


^{13}C NMR of 4j



DEPT of 4j