

Supplementary Material

Addition of Heteroatom Nucleophiles to Ketene Dimers

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Nessan J. Kerrigan^b

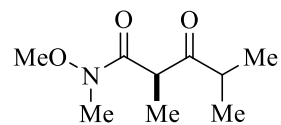
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^b School of Chemical Sciences, Dublin City University, Glasnevin, Dublin 9, Ireland

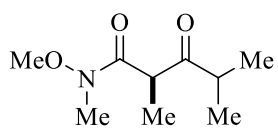
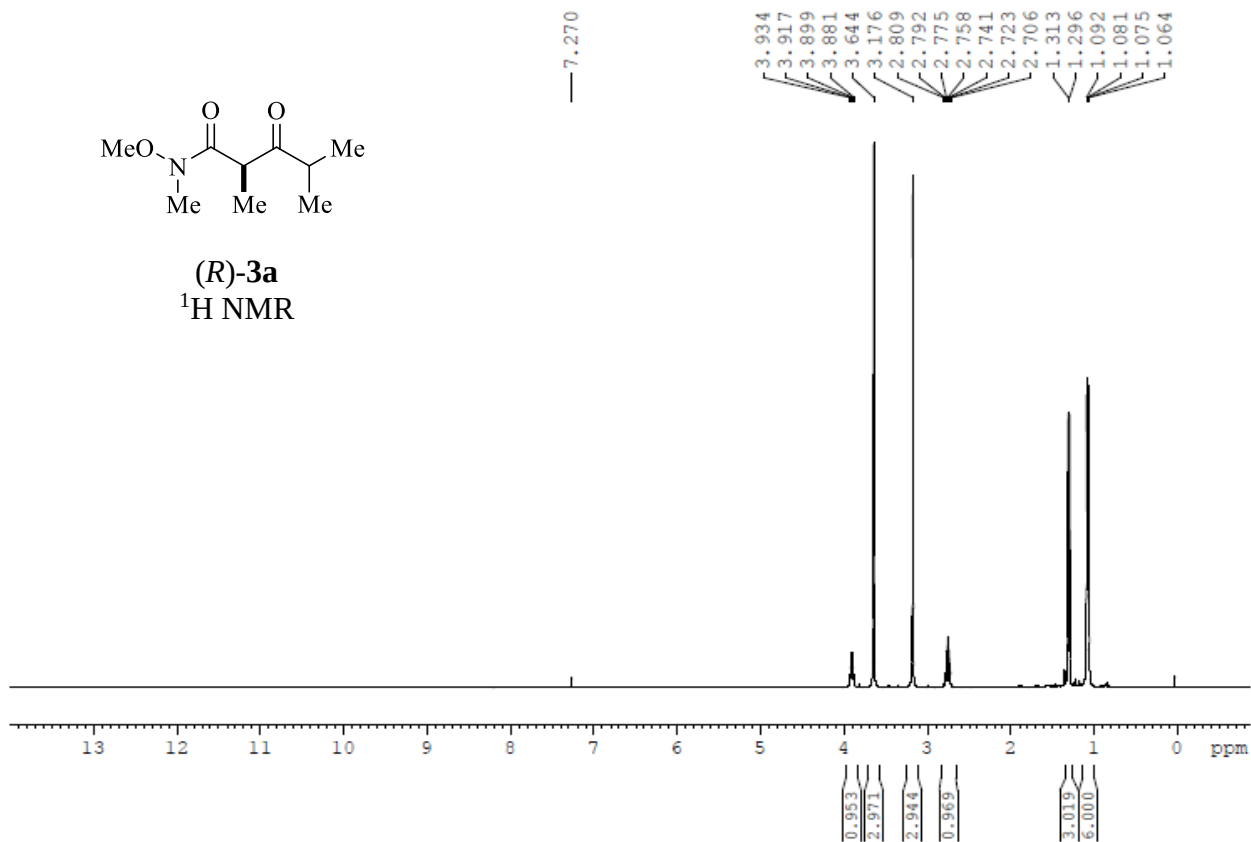
Email: nessan.kerrigan@dcu.ie

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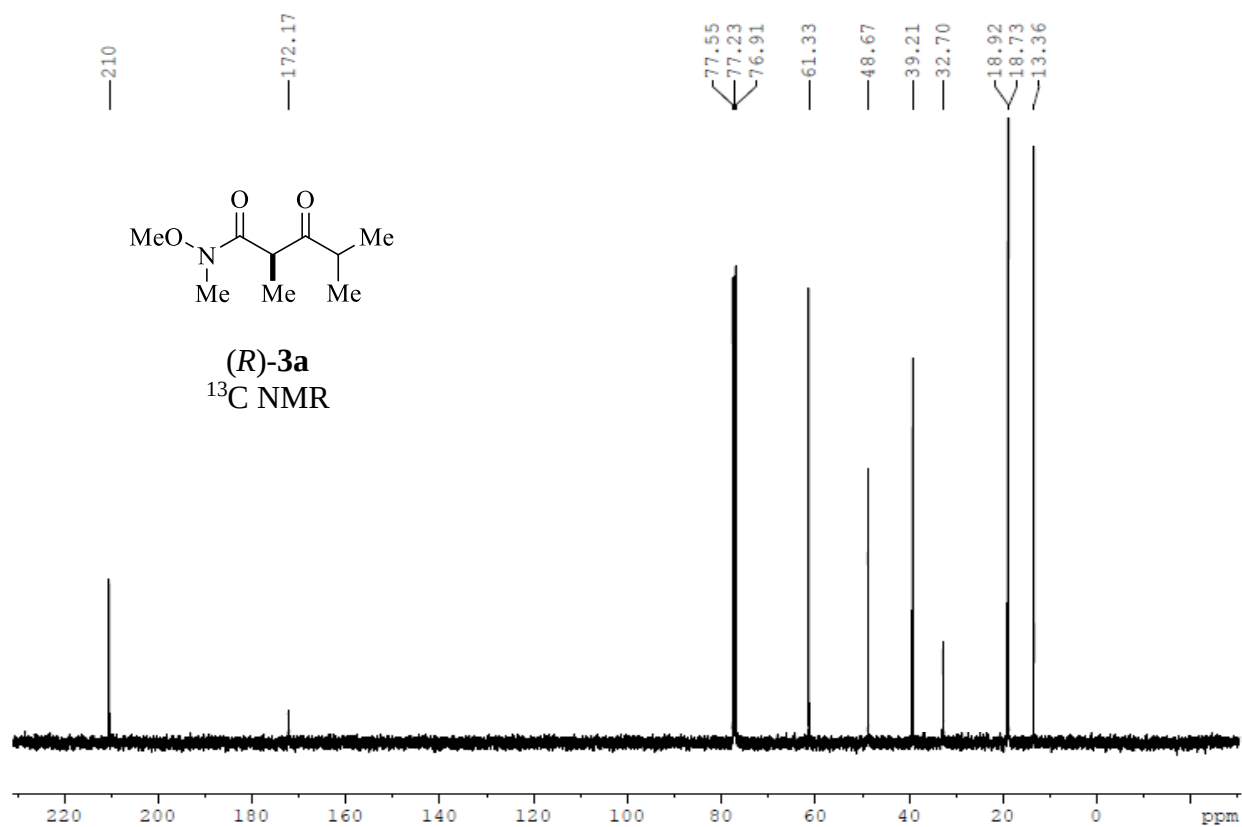
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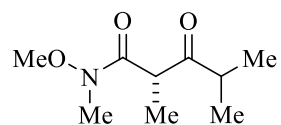


(R)-3a
¹H NMR

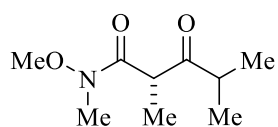
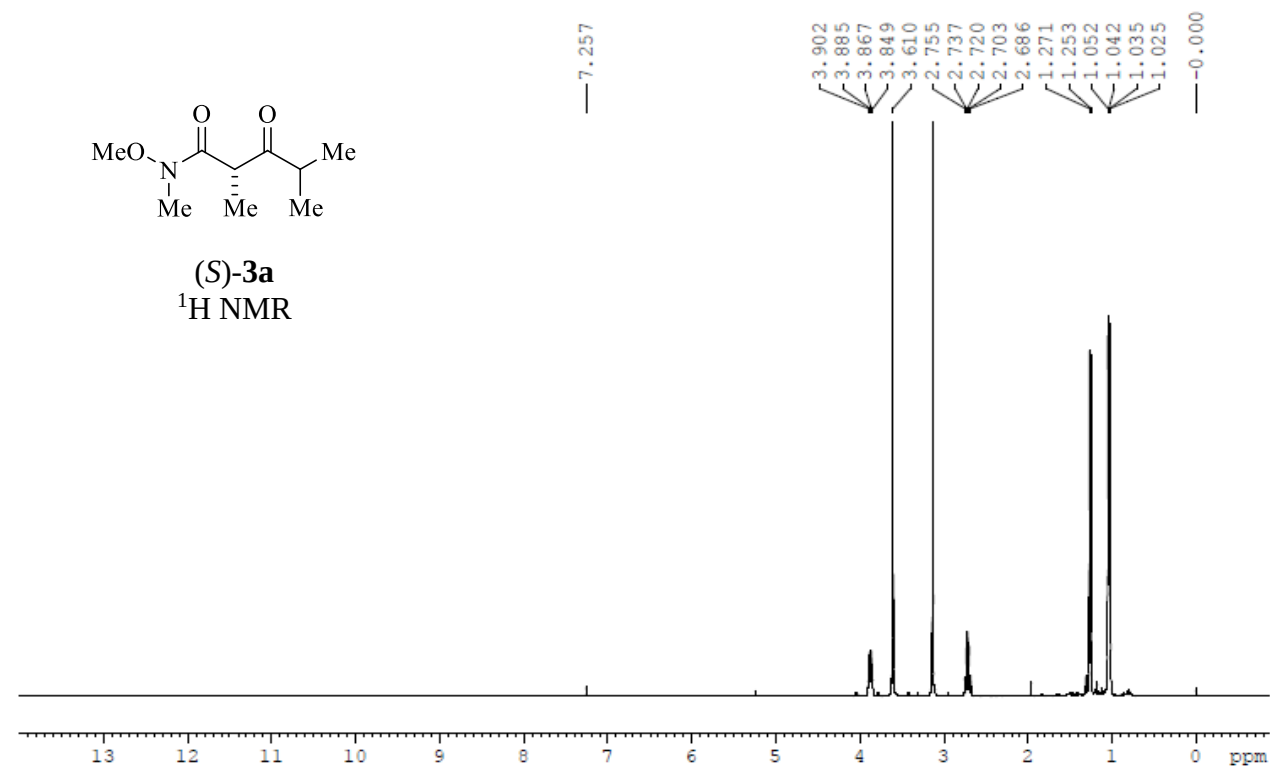


(R)-3a
¹³C NMR

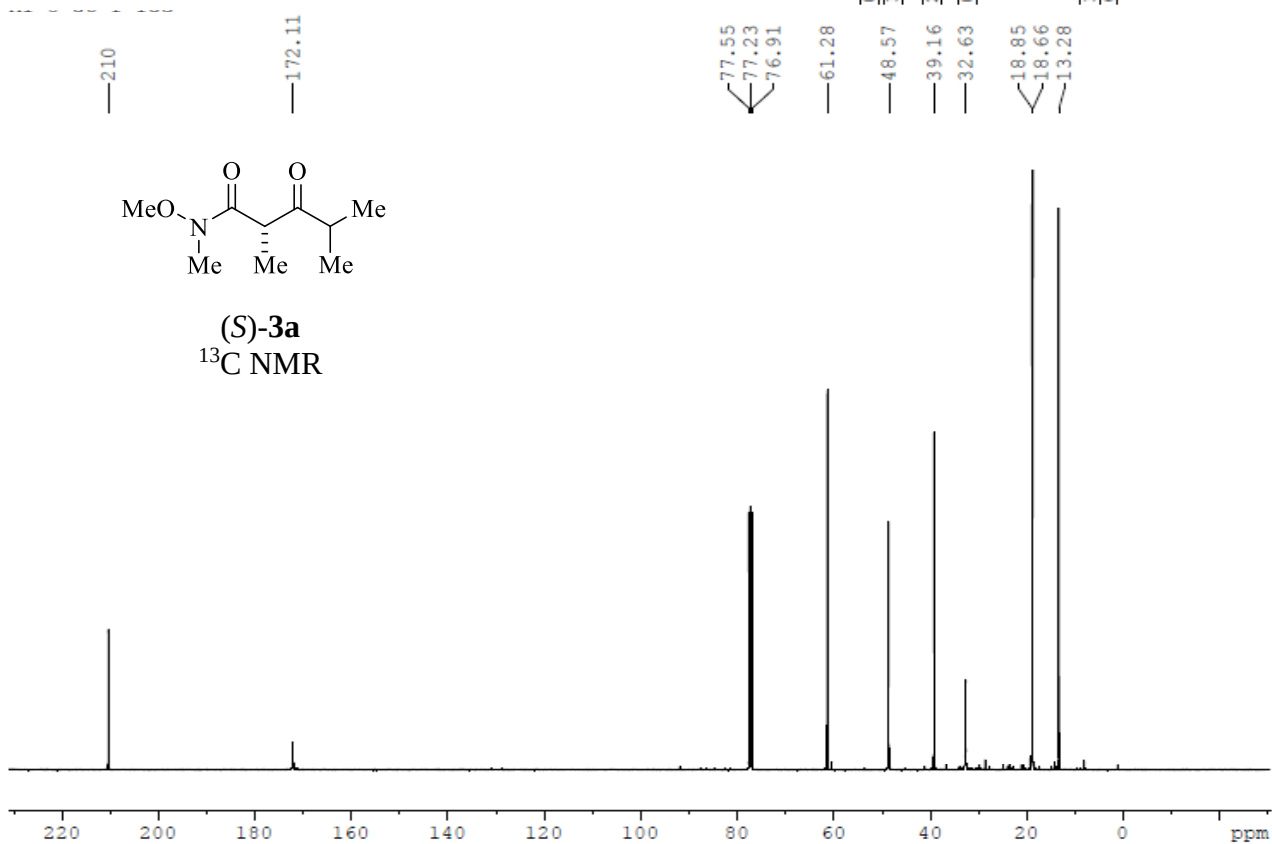


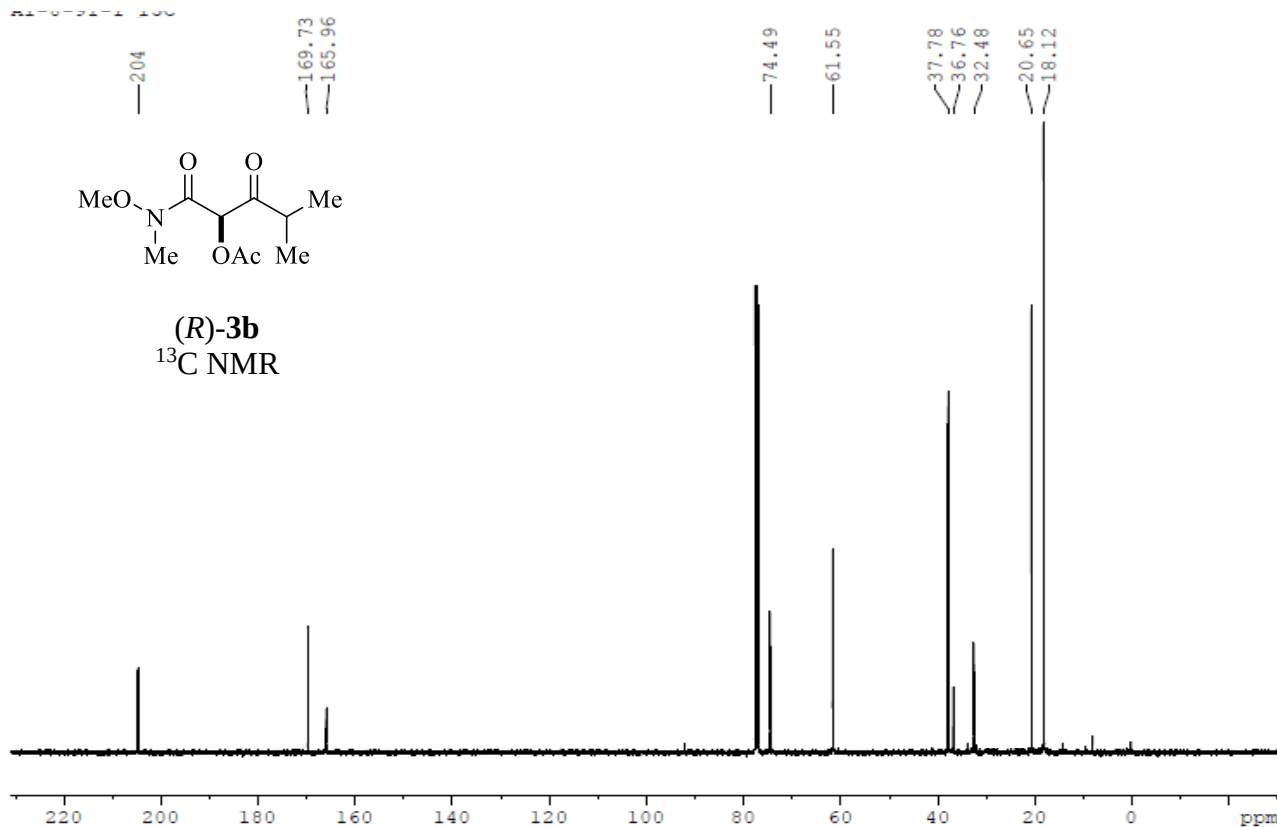
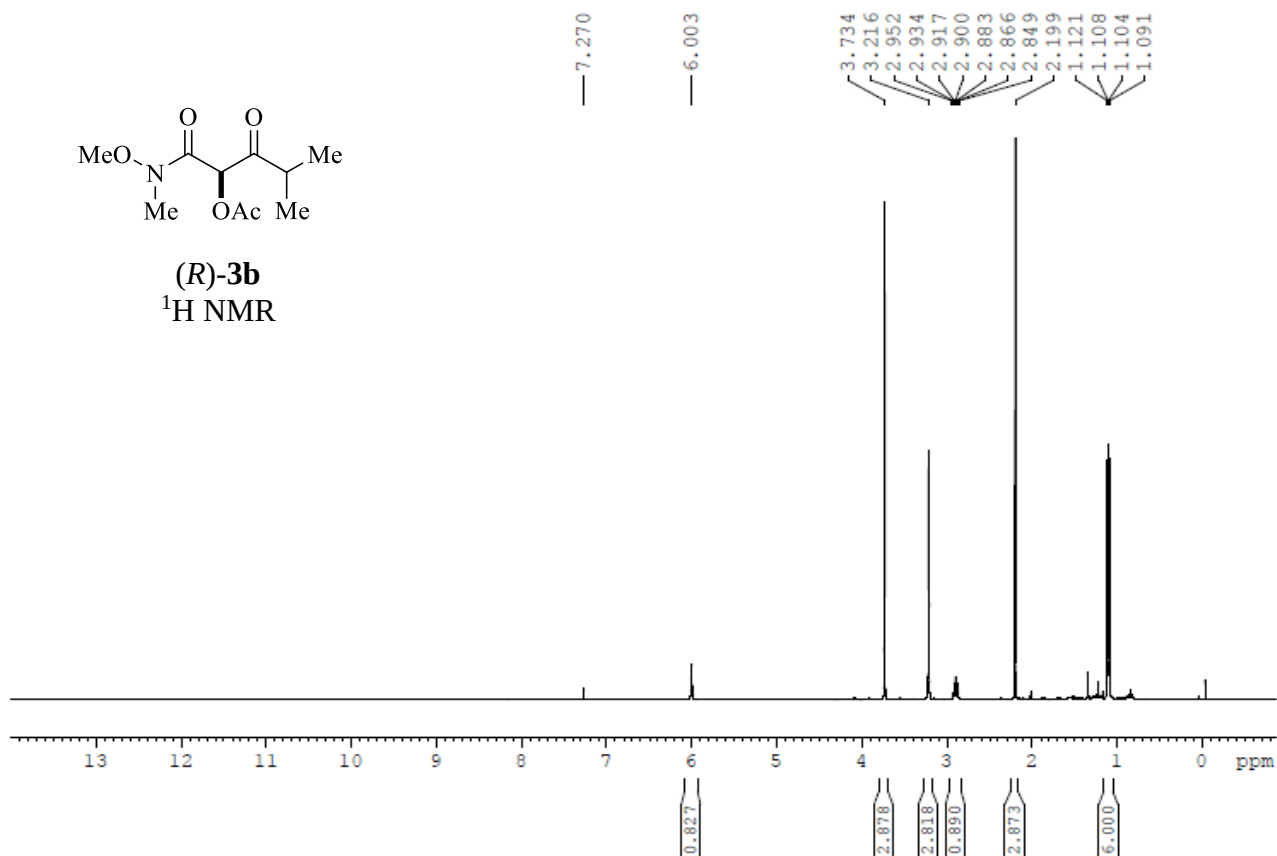


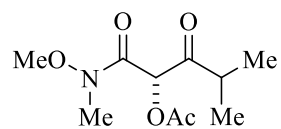
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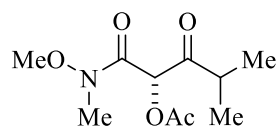
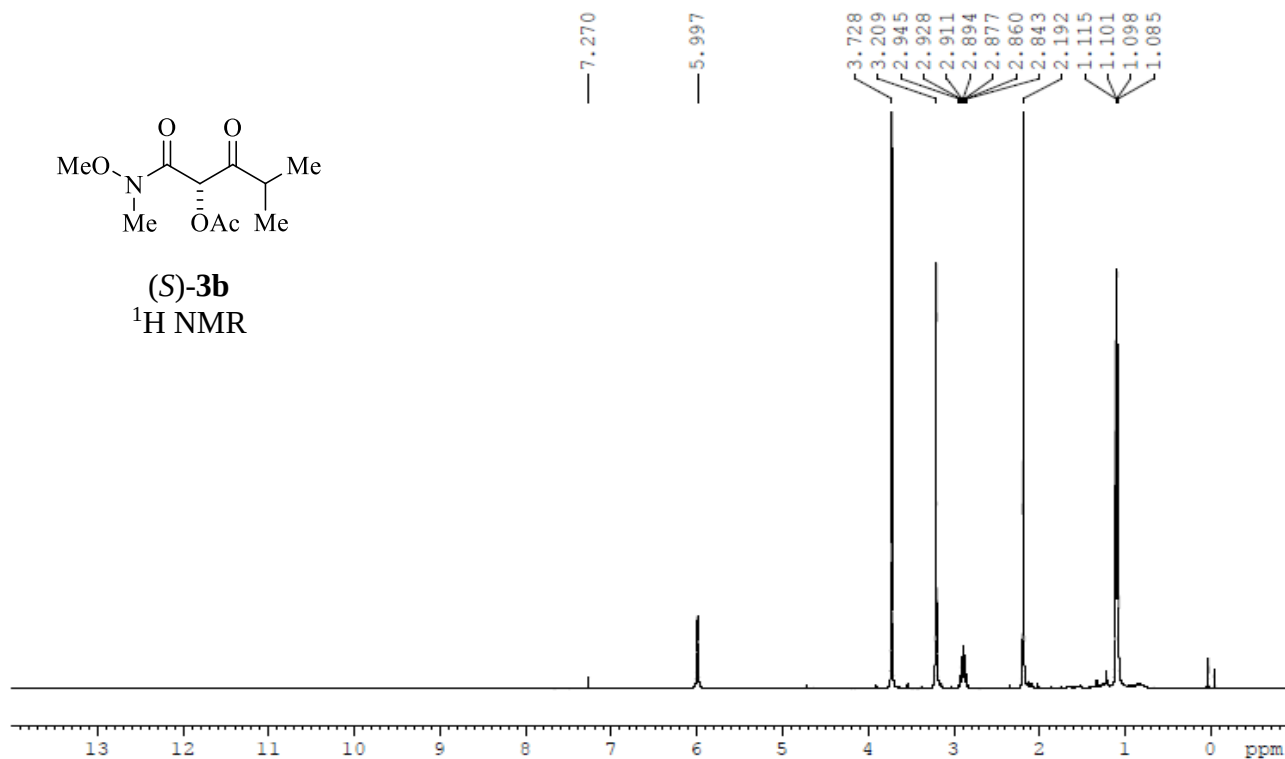
(S)-3a
¹³C NMR



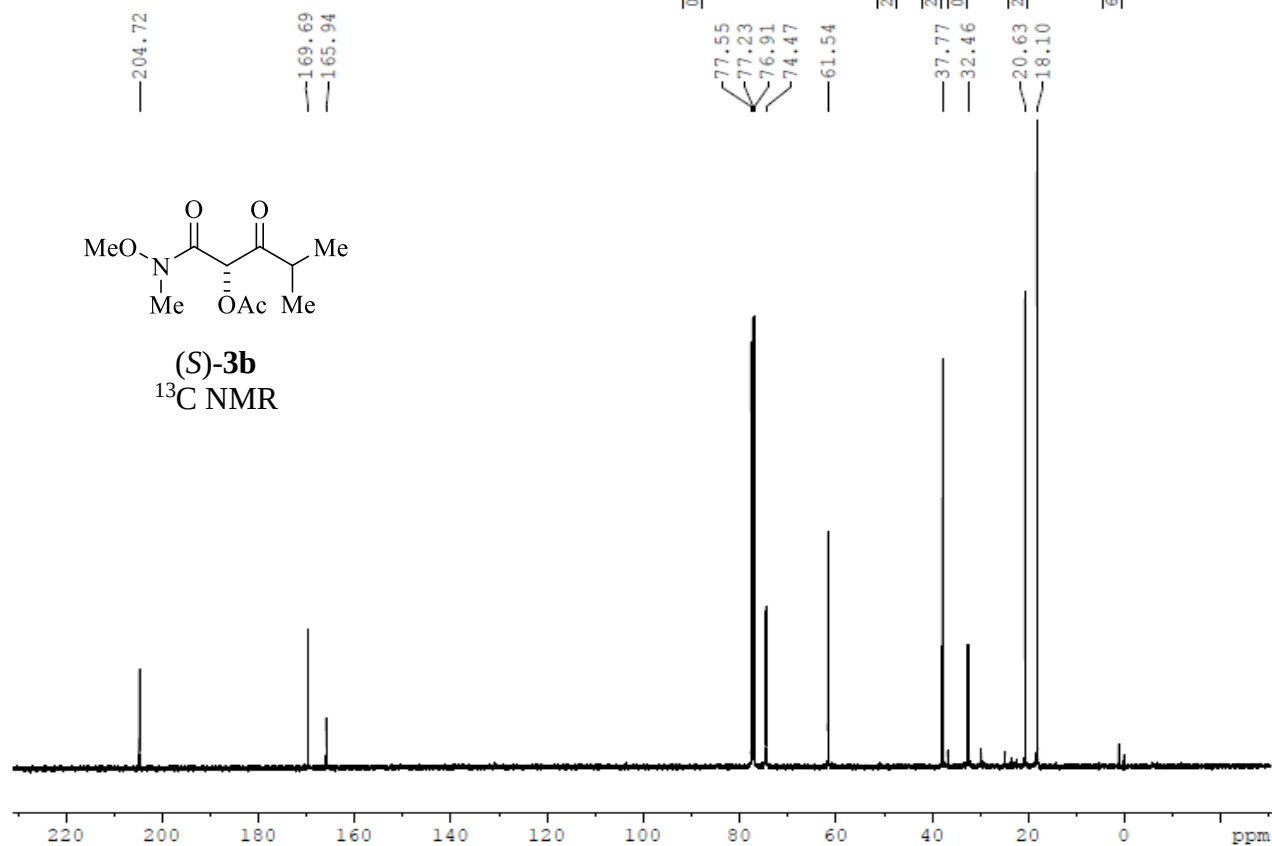




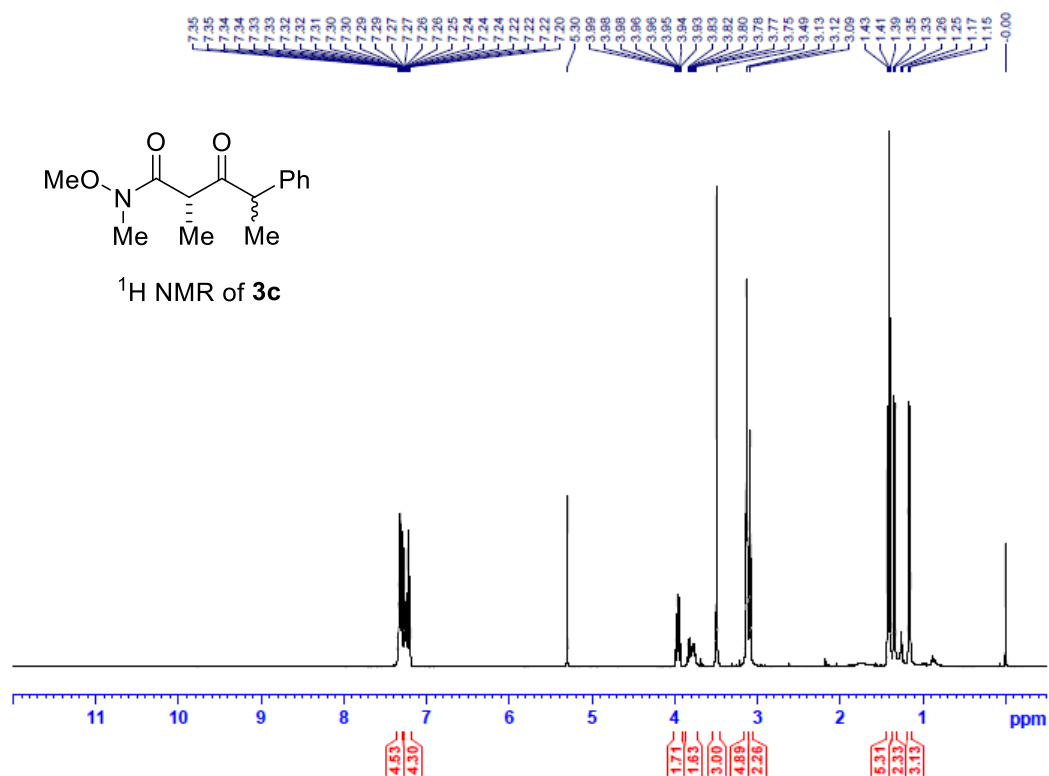
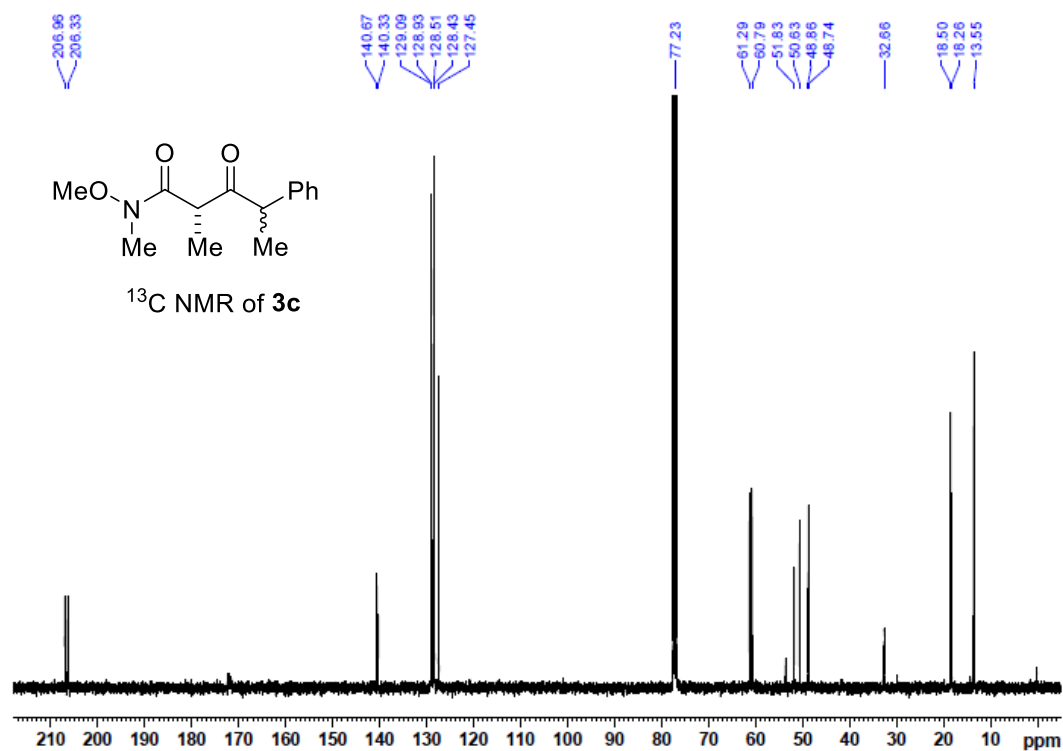
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¹H NMR



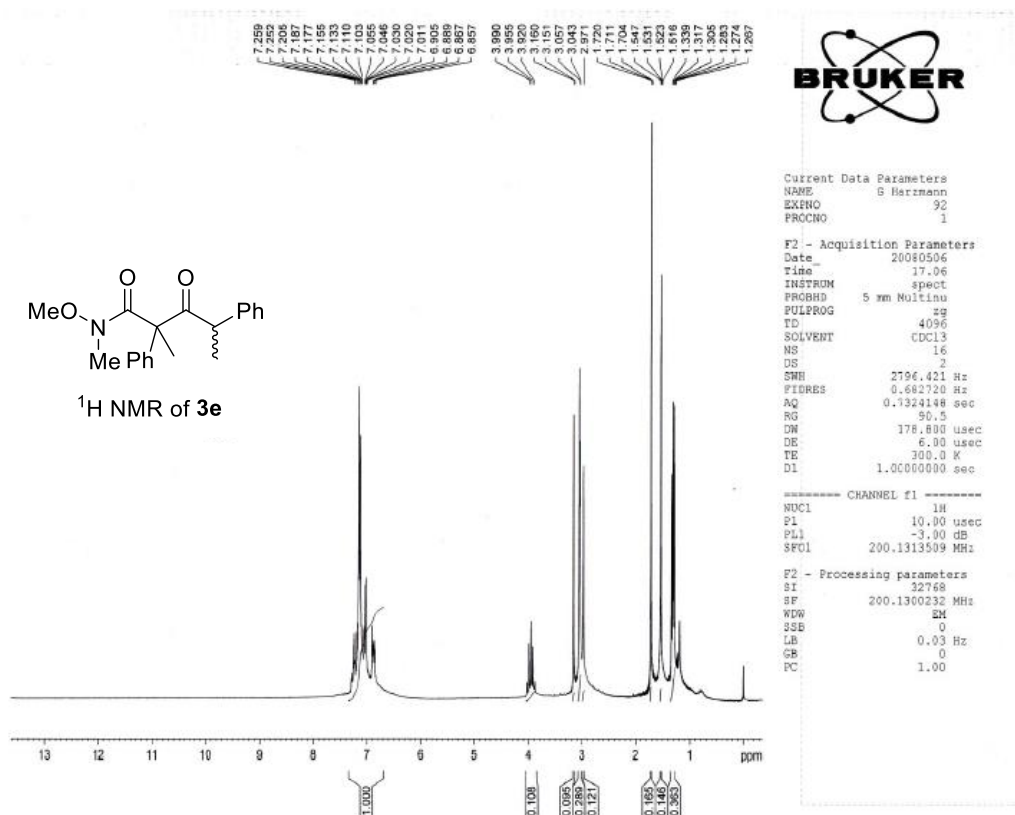
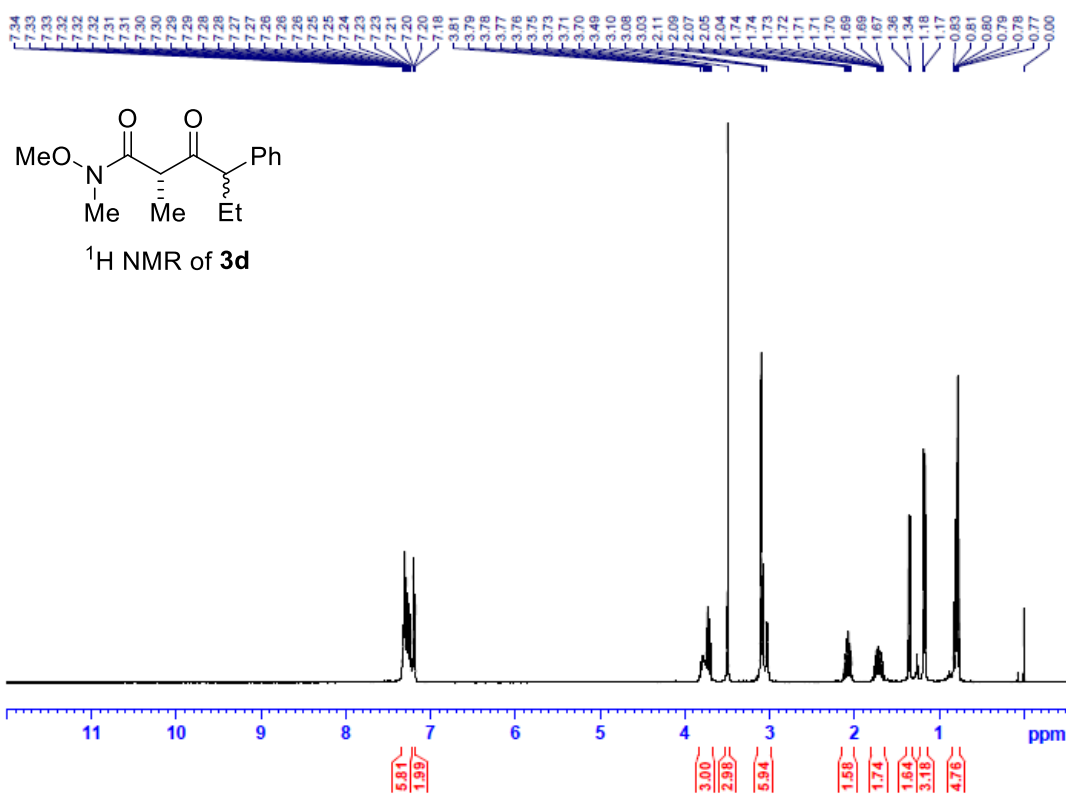
(S)-3b
¹³C NMR



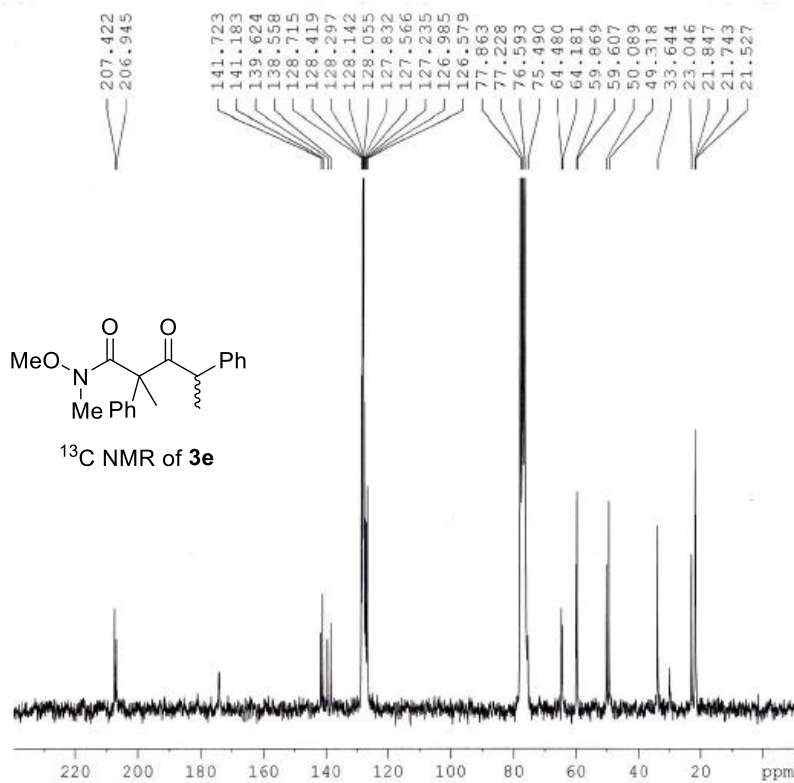
DN-2-64-1

DN-2-64-1 carbon
Cl3CPD

DN-2-54-1



GH1-99-1 (Carbon)



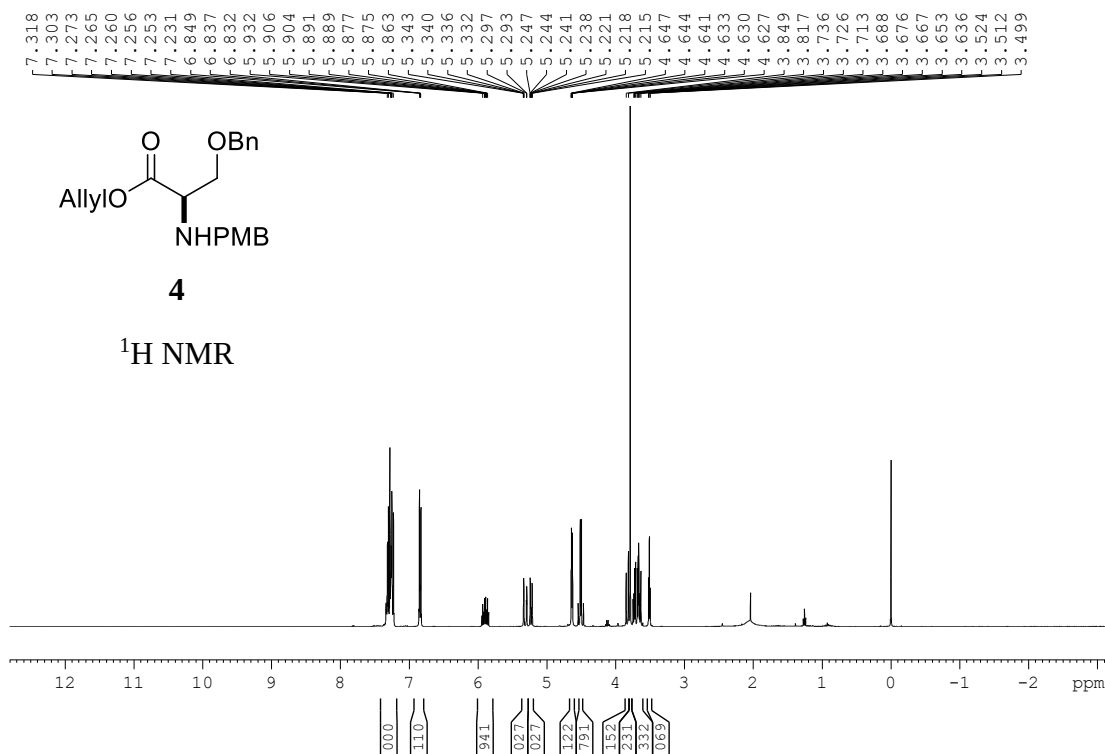
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 EXPNO 93
 PROCNO 1

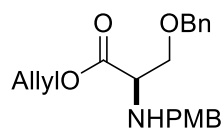
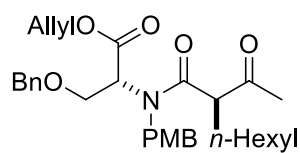
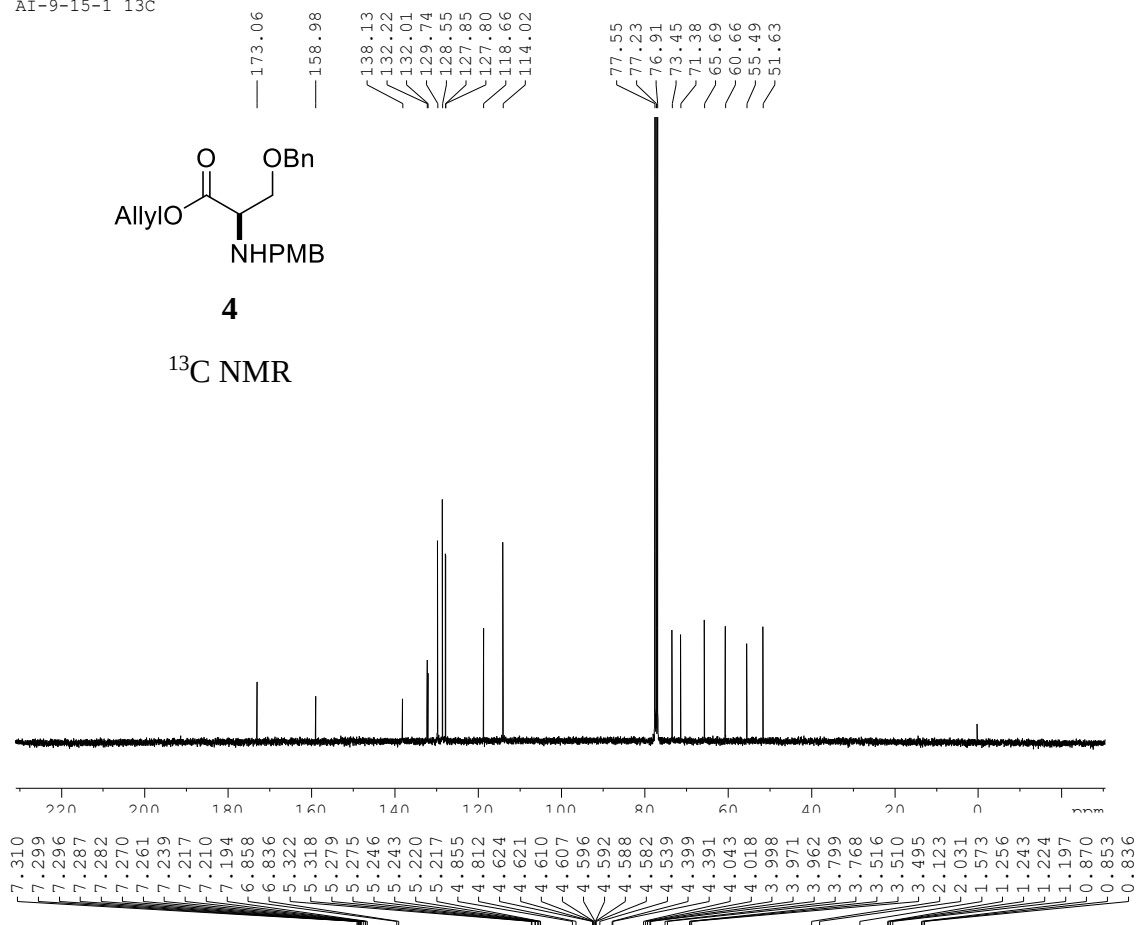
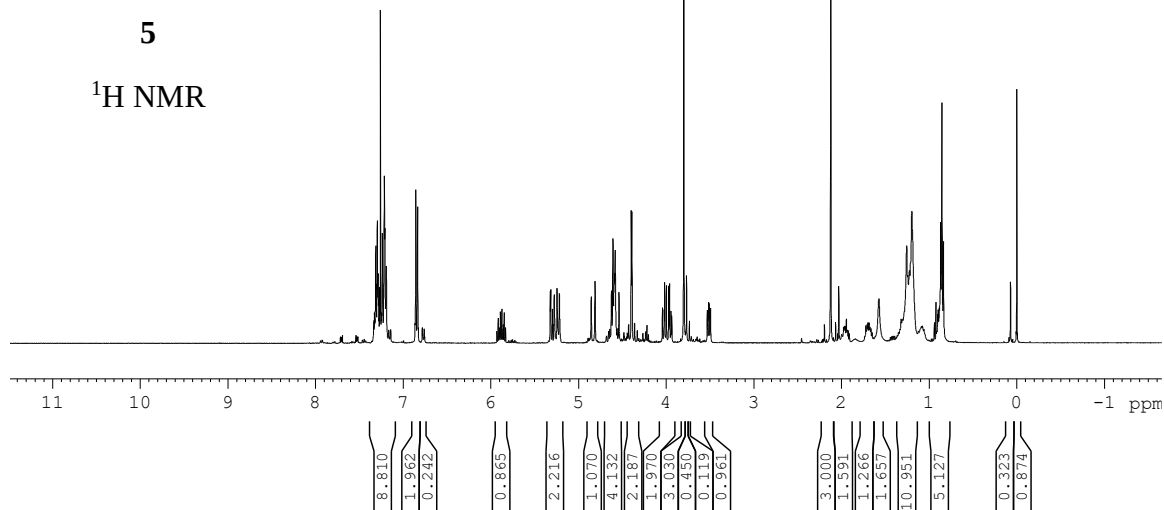
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 FIDRES 0.333355 Hz
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 DE 6.00 usec
 TE 300.0 K
 D1 4.00000000 sec
 d11 0.03000000 sec

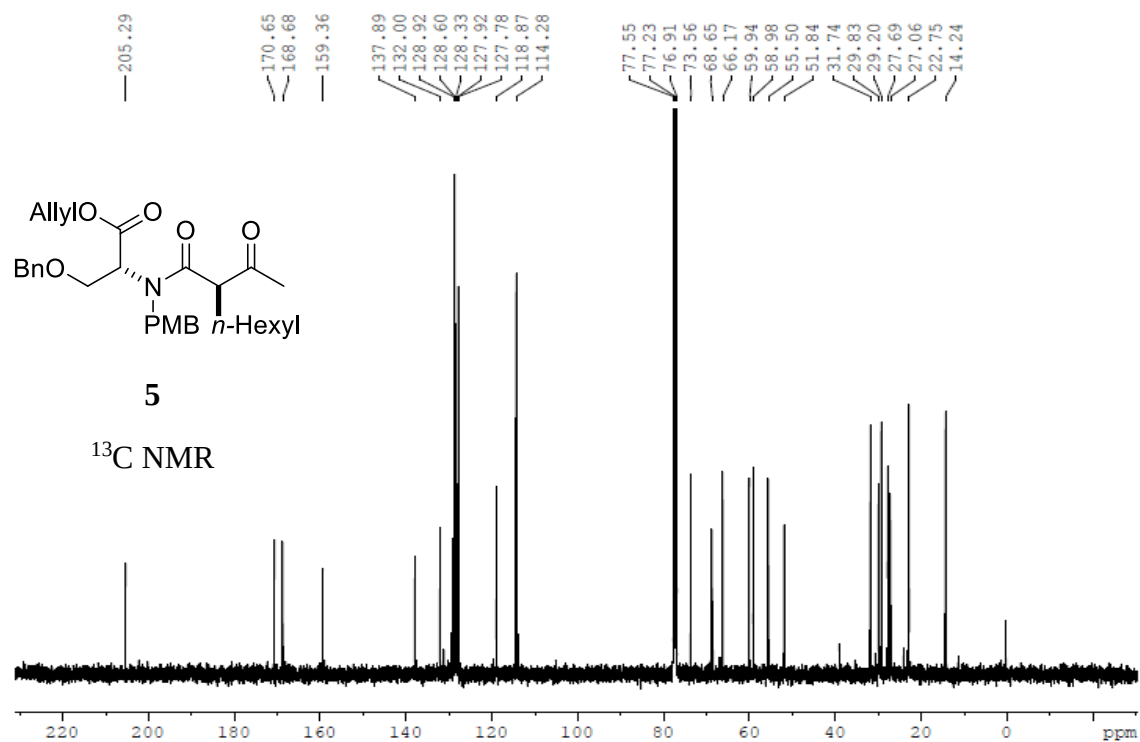
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 P1 6.00 usec
 PL1 1.00 dB
 SFO1 50.3285046 MHz

===== CHANNEL f2 =====
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 NUC2 1H
 PCPE2 100.00 usec
 PL2 -4.00 dB
 PL12 16.72 dB
 SFO2 200.1300000 MHz

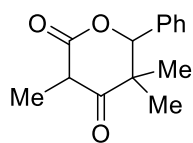
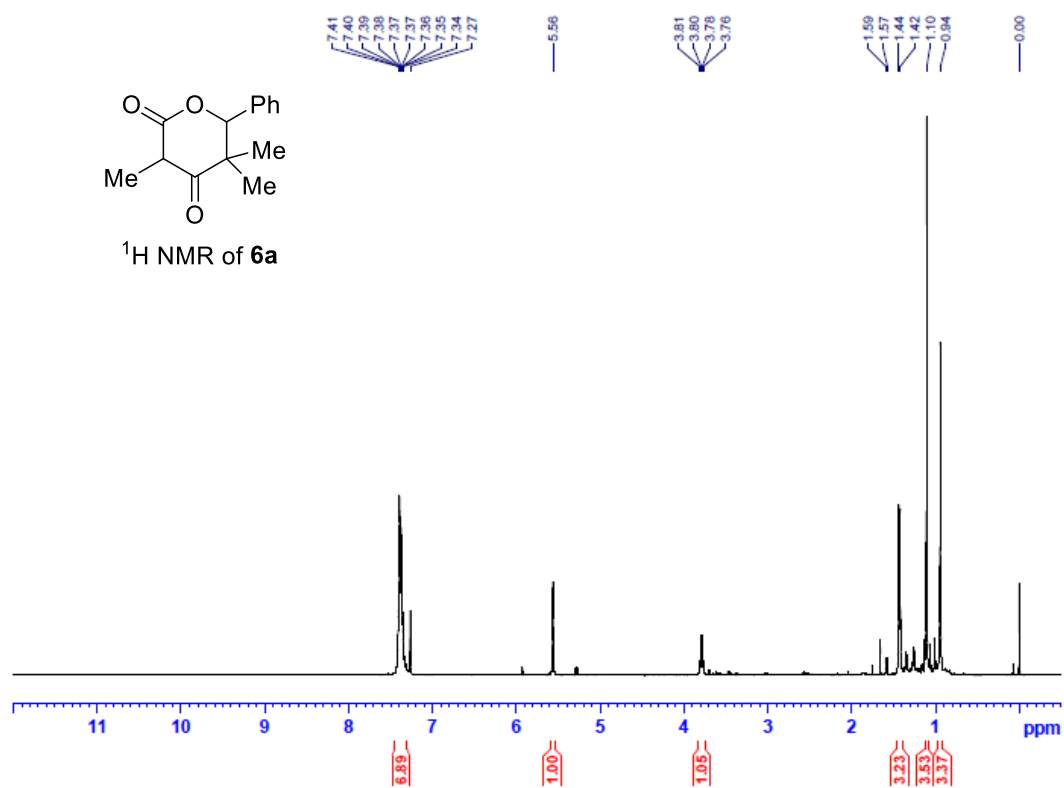
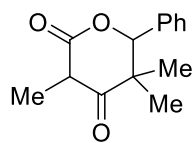
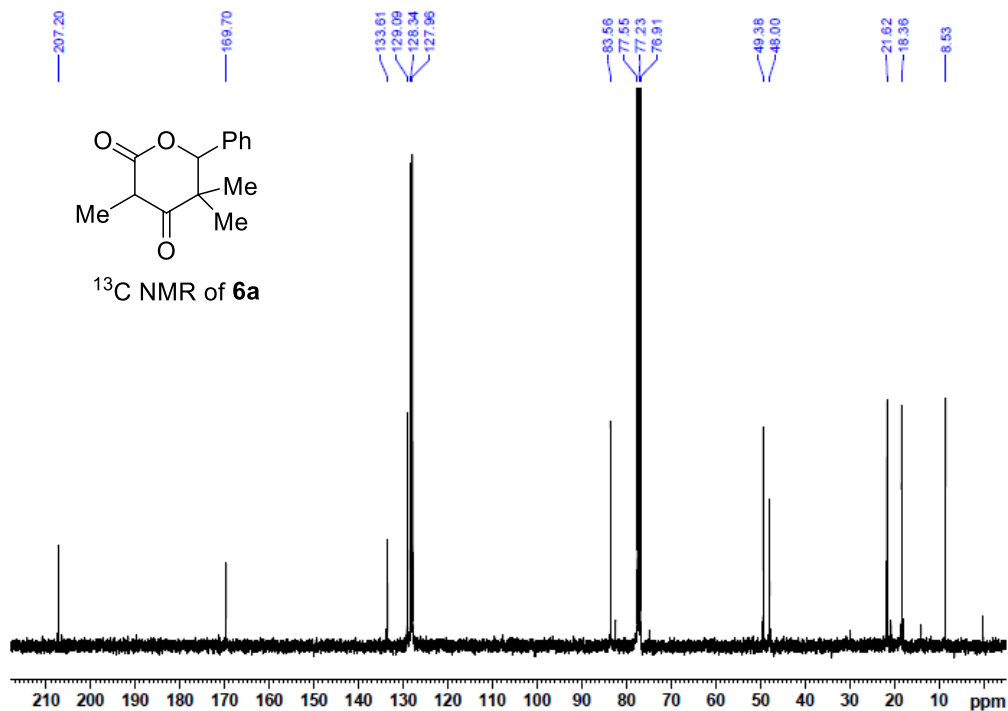
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 LB 3.00 Hz
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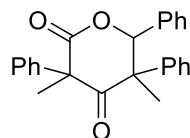
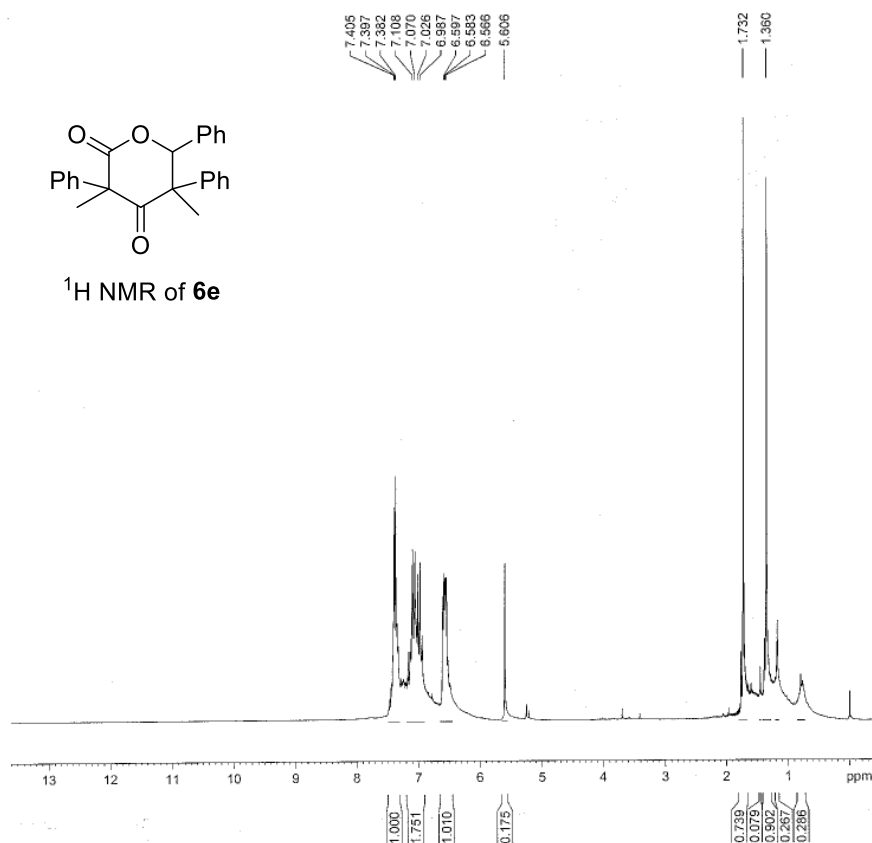
AI-9-15-1 ^{13}C **4** ^{13}C NMR**5** ^1H NMR



DN-2-79-2

 ^1H NMR of **6a**DN-2-79-2
C13CPD ^{13}C NMR of **6a**

GH2-69-1

¹H NMR of 6e

Current Data Parameters
NAME G Harzmann
EXPNO 156
PROCNO 1

F2 - Acquisition Parameters
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Time_ 14.28
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PULPROG zg
TD 4096
SOLVENT CDCl3
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DS 2
SWH 2796.421 Hz
FIDRES 0.682720 Hz
AQ 0.7324148 sec
RG 181
DW 178.800 usec
DE 6.00 usec
TE 300.0 K
D1 3.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 10.00 usec
PL1 -3.00 dB
SFO1 200.1313509 MHz

F2 - Processing parameters
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SSB 0
LB 0.03 Hz
GB 0
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