

Supplementary Materials

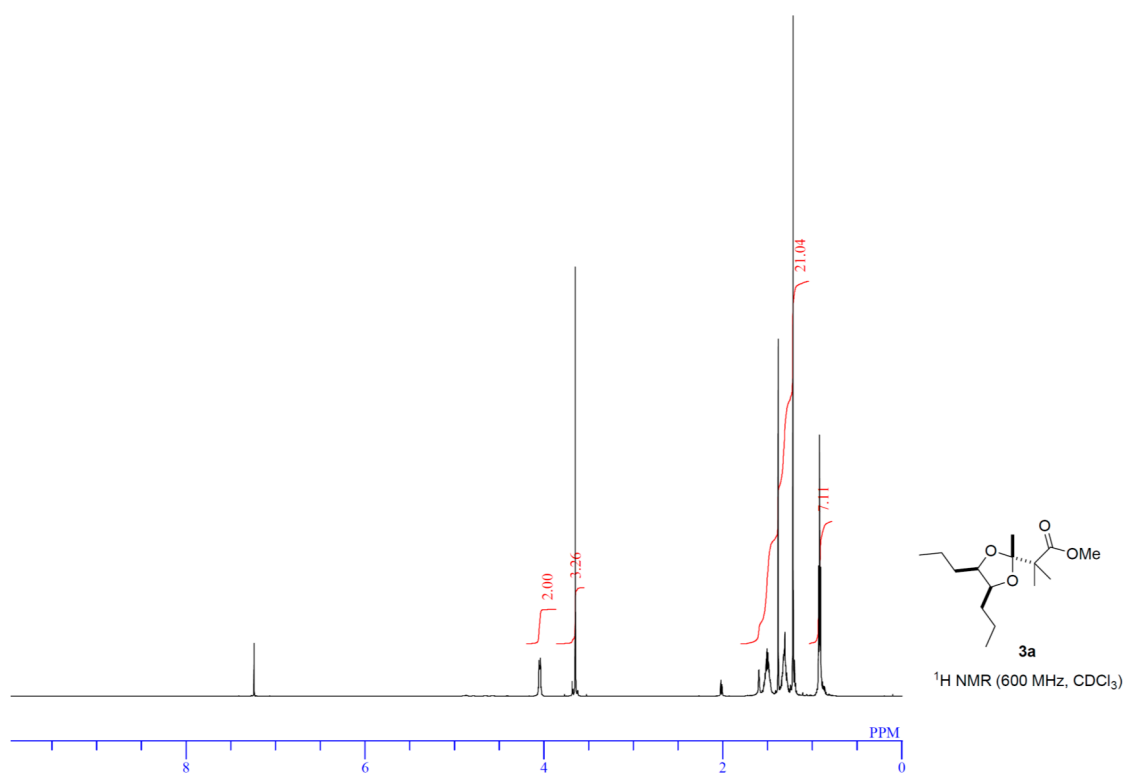


Figure S1. Proton NMR of 3a.

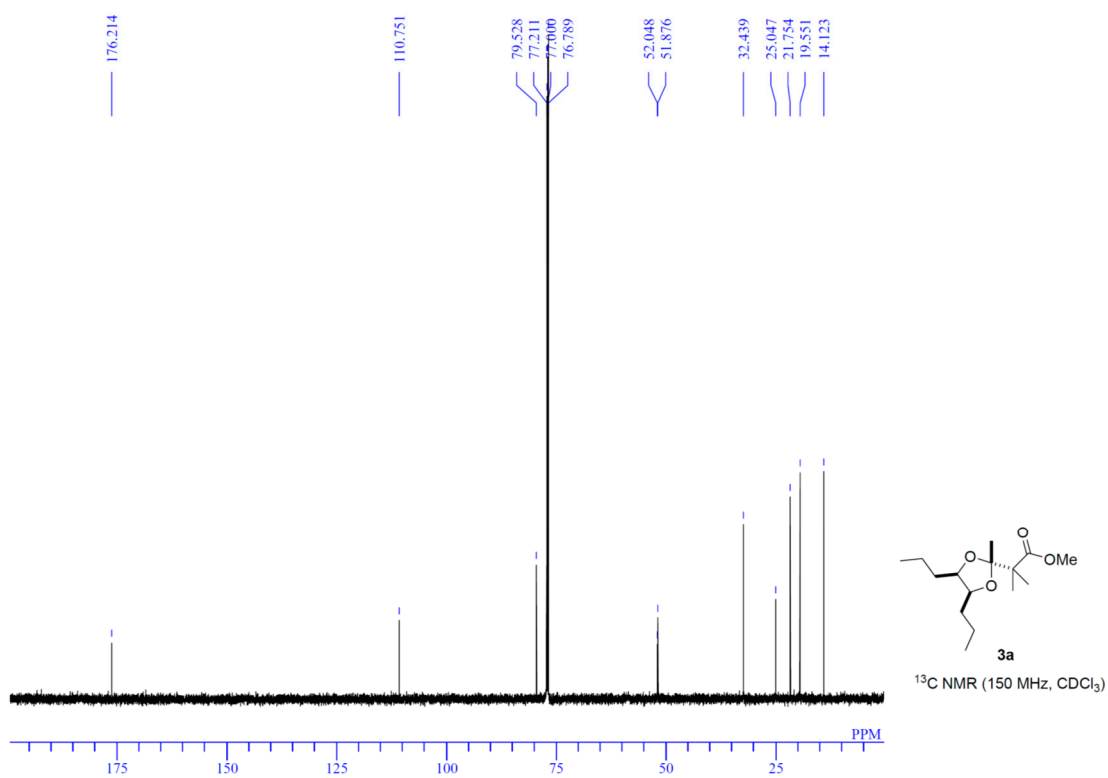


Figure S2. Carbon-13 NMR of 3a.

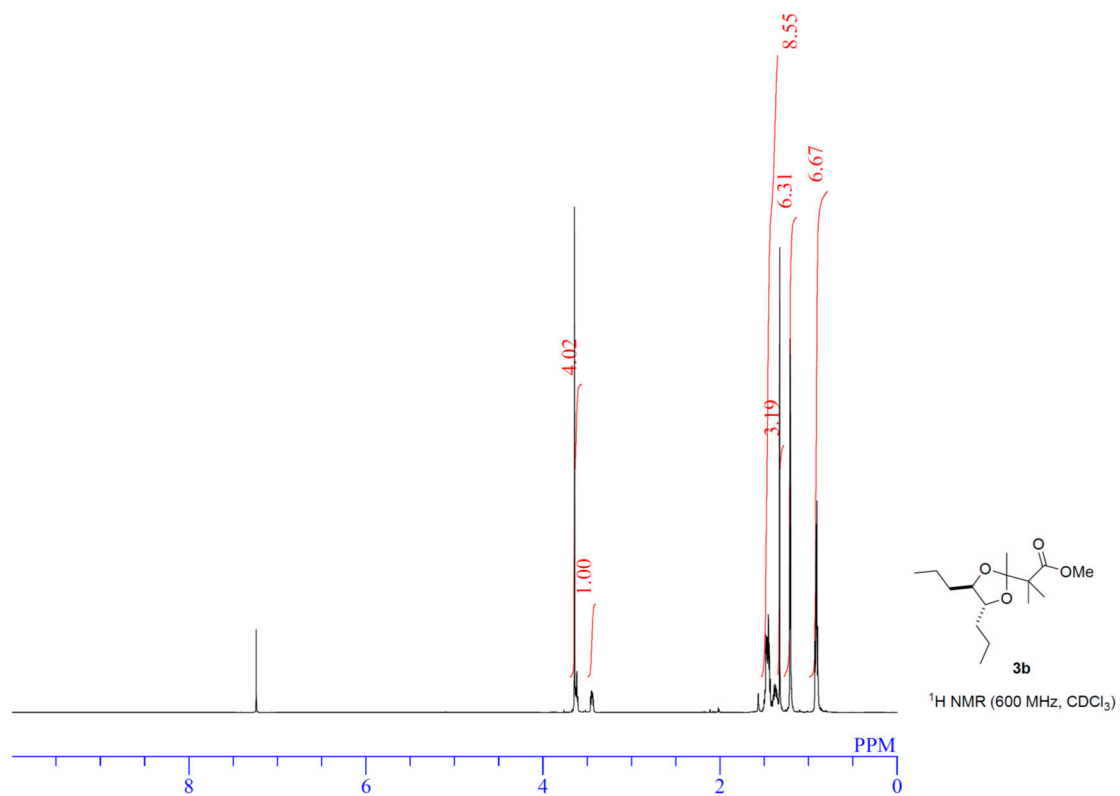


Figure S3. Proton NMR of 3b.

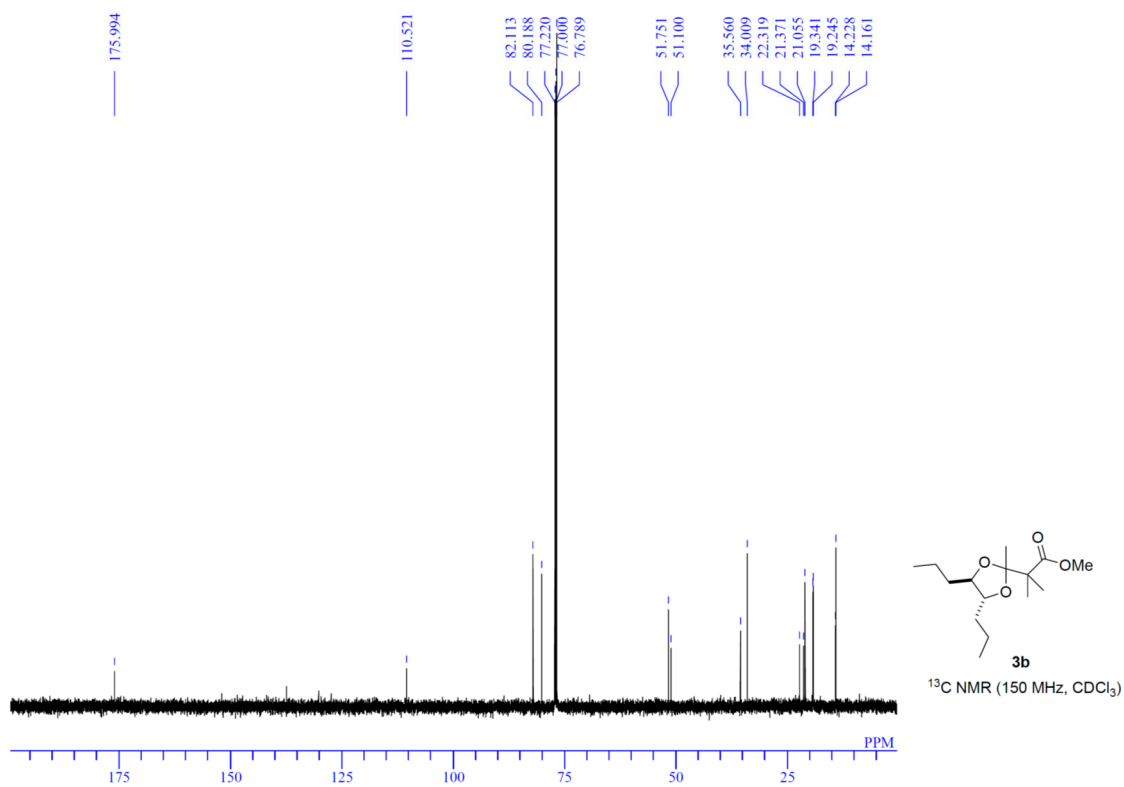
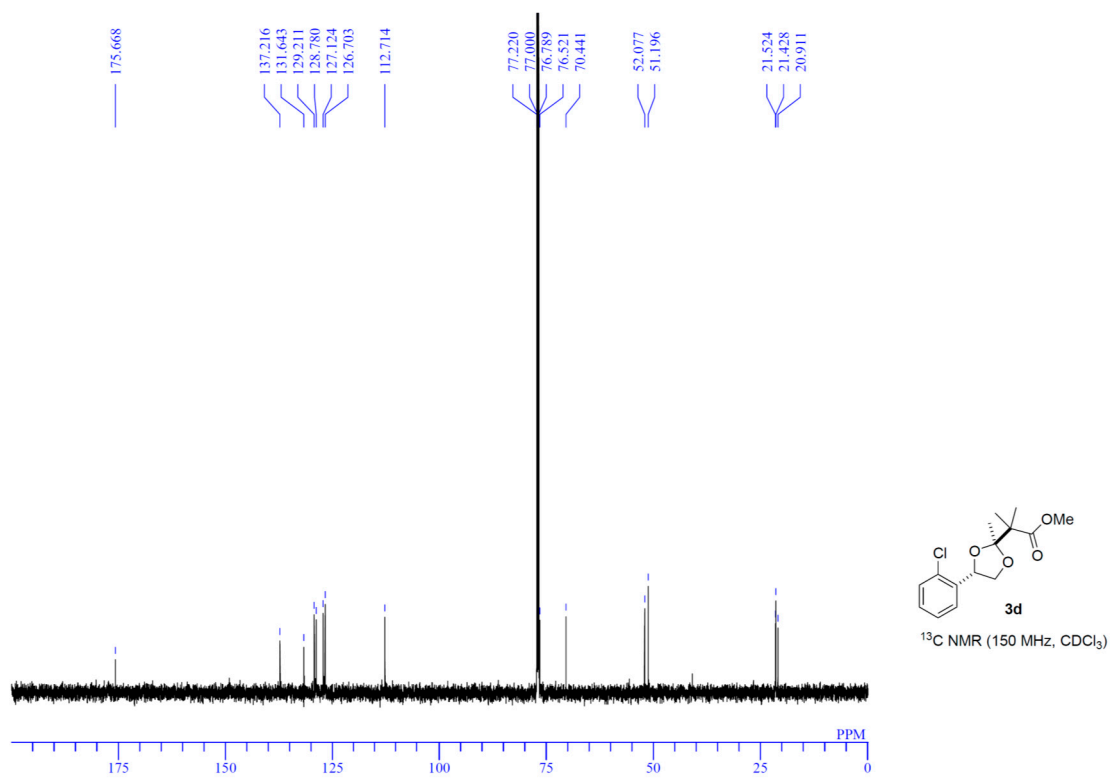
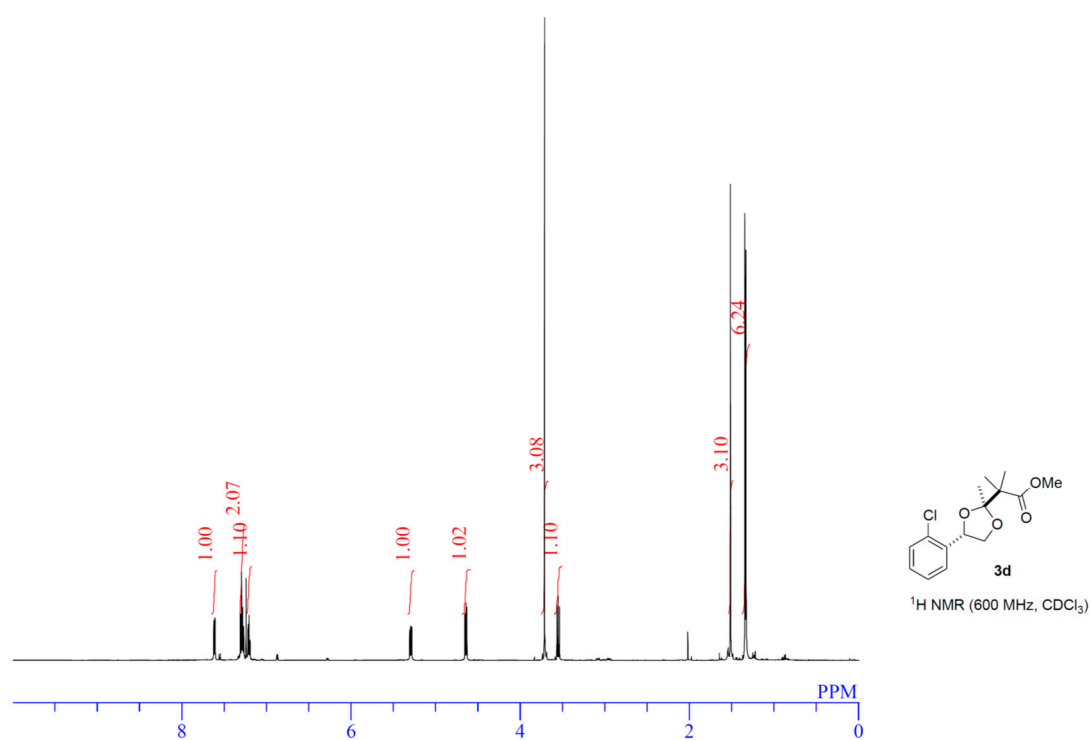


Figure S4. Carbon-13 NMR of 3b.



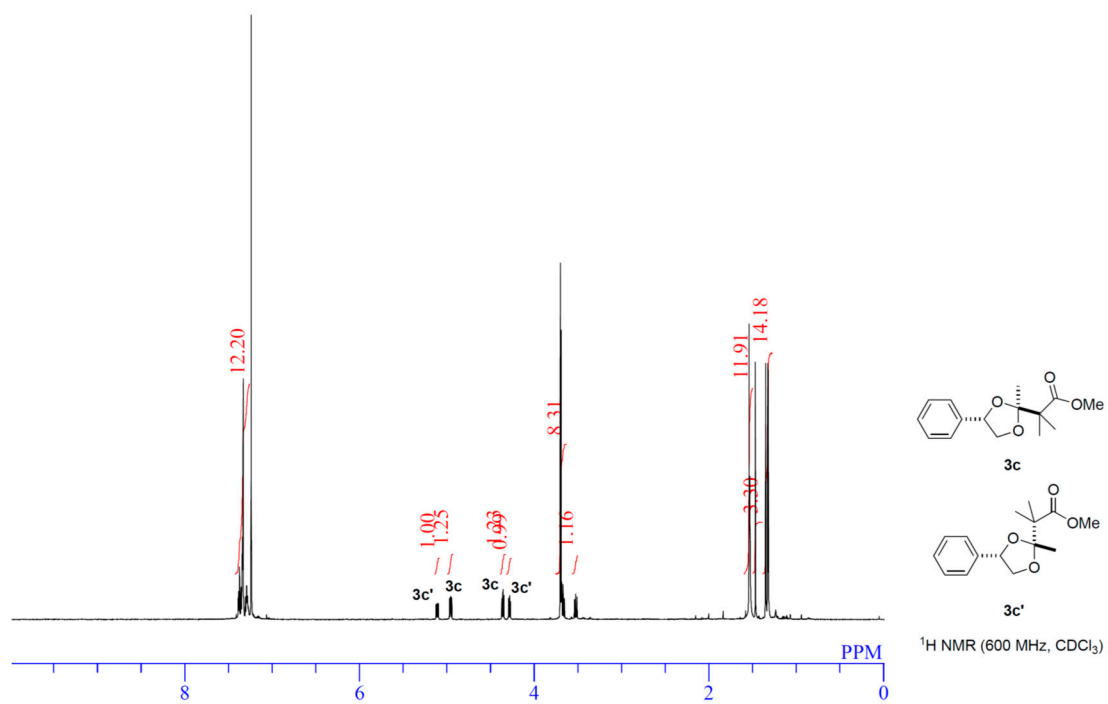


Figure S9. Proton NMR of 3c and 3c'.

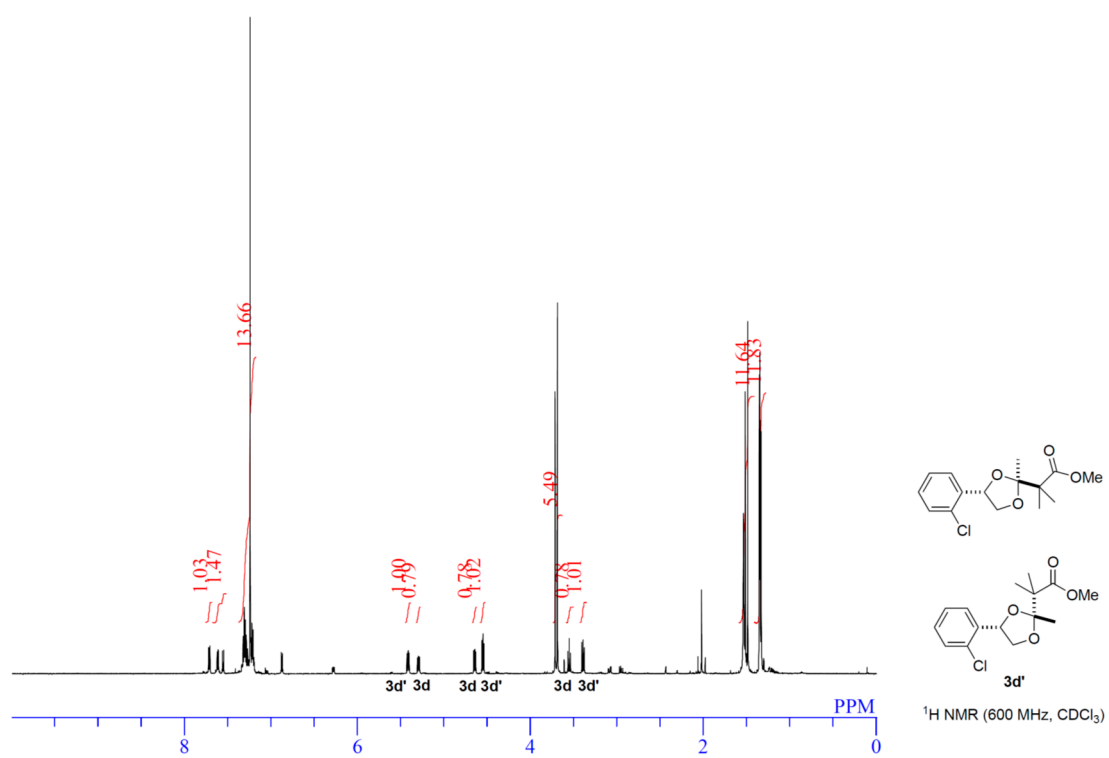
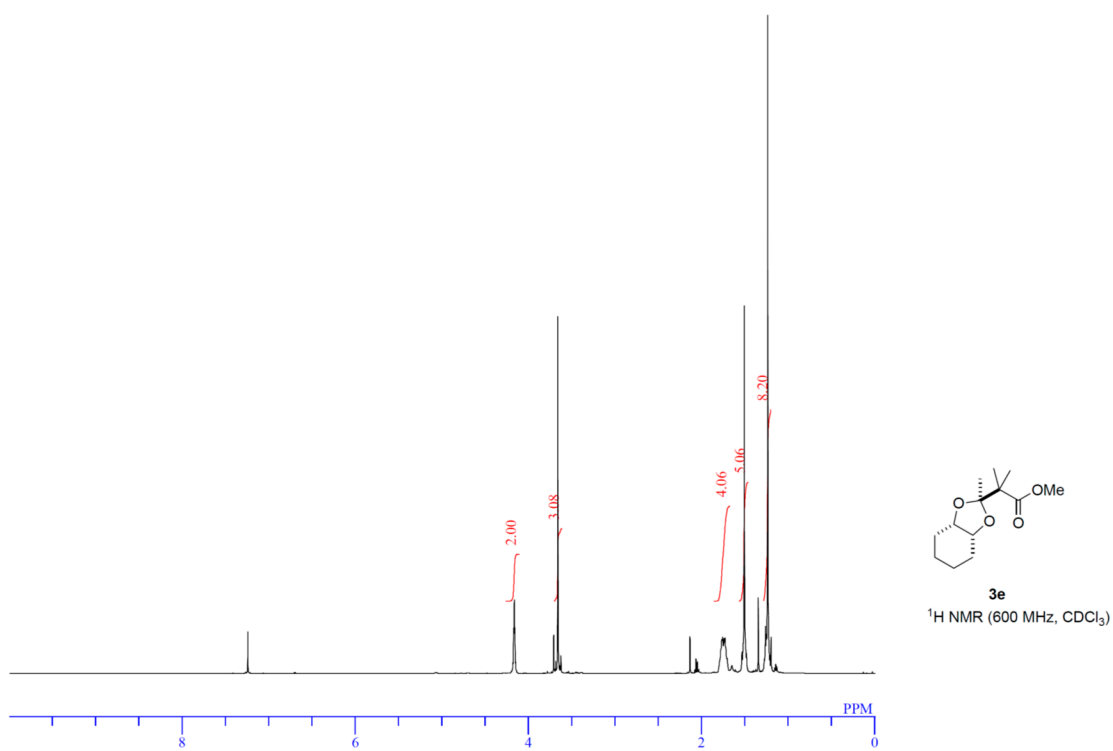
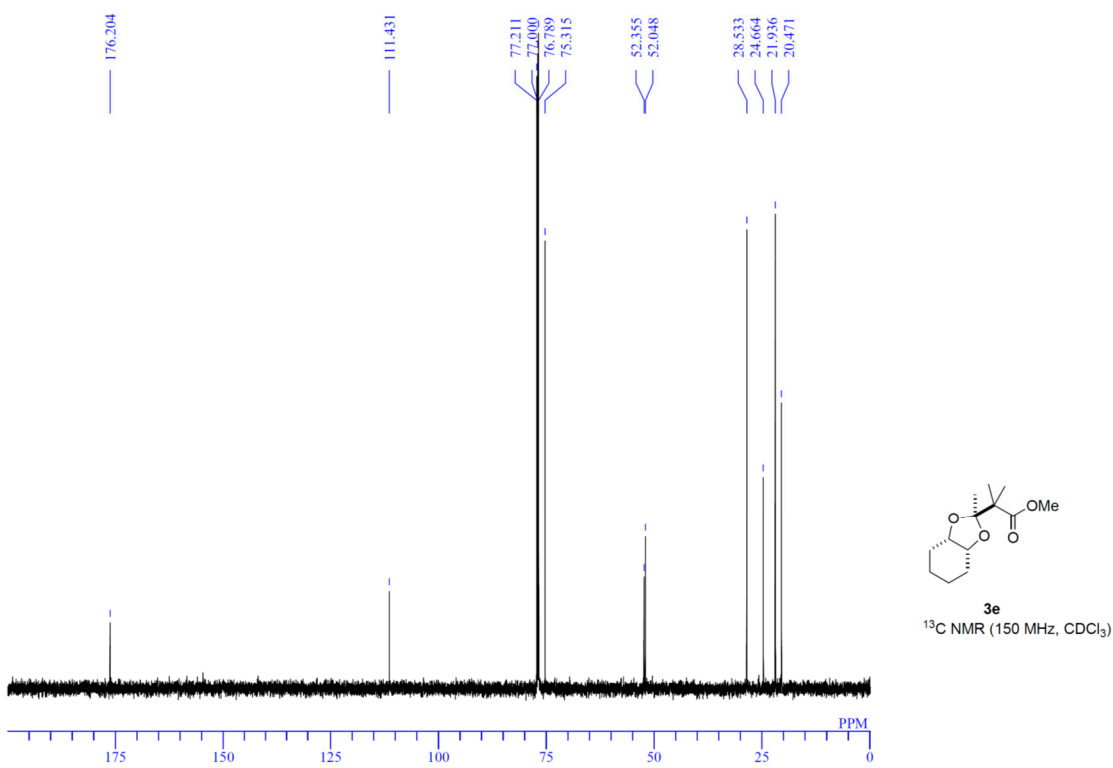
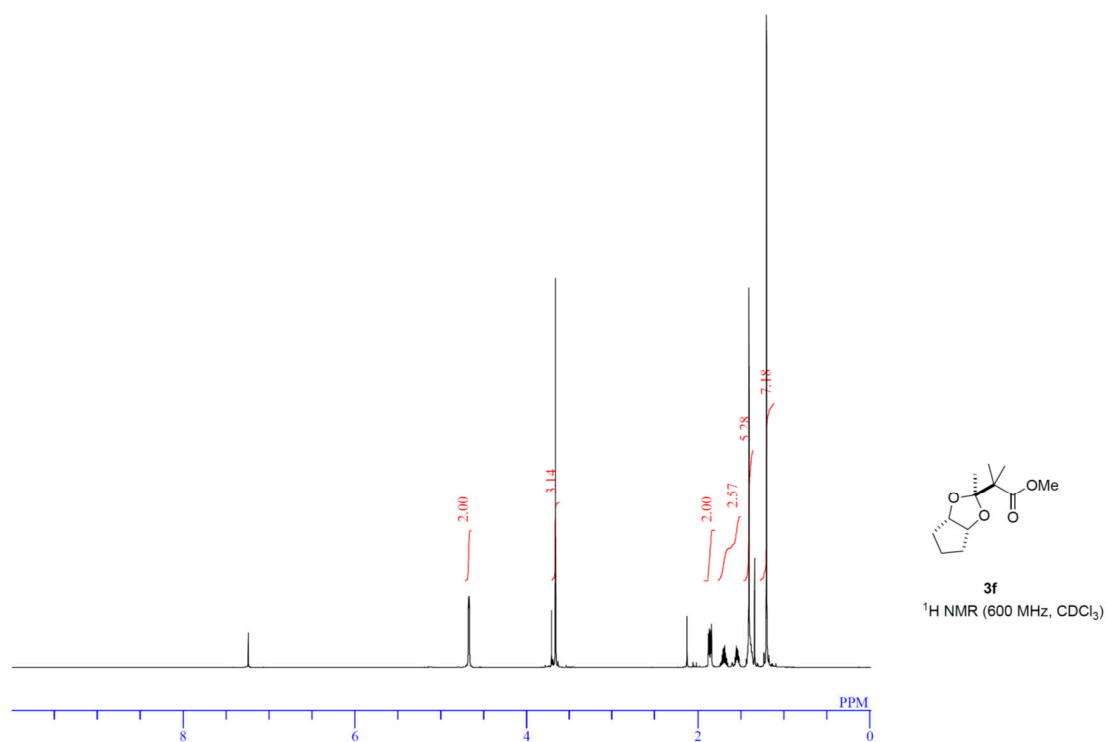
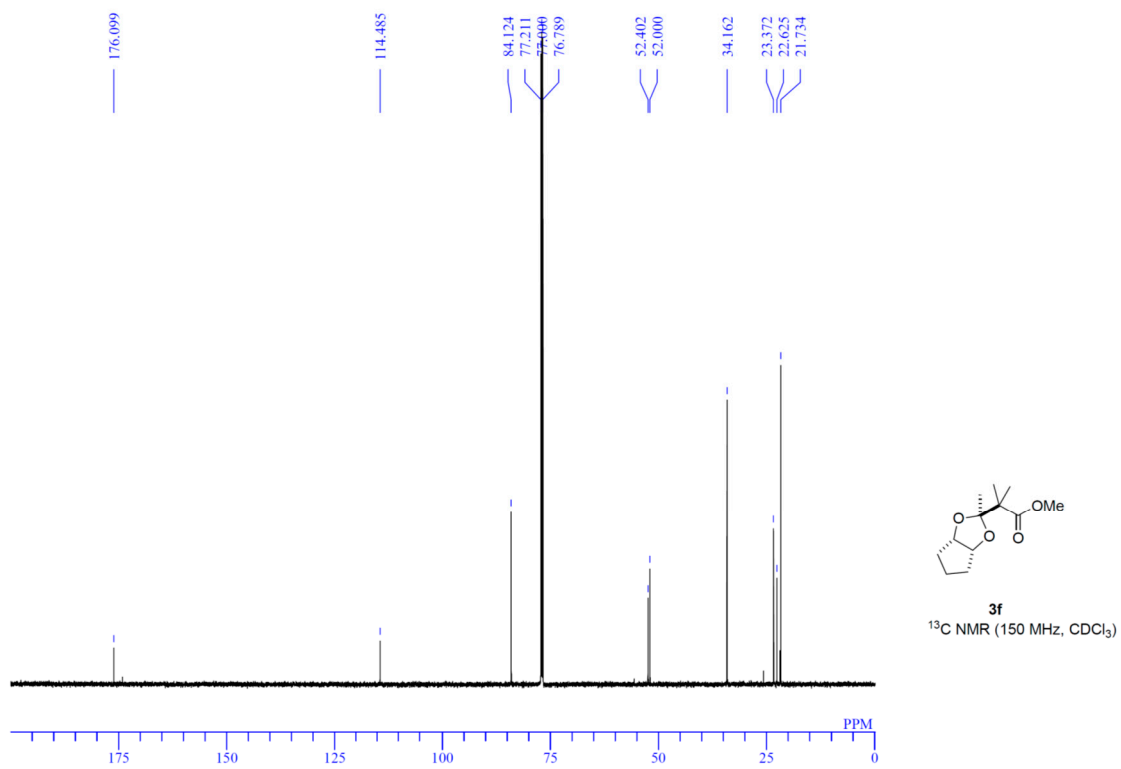
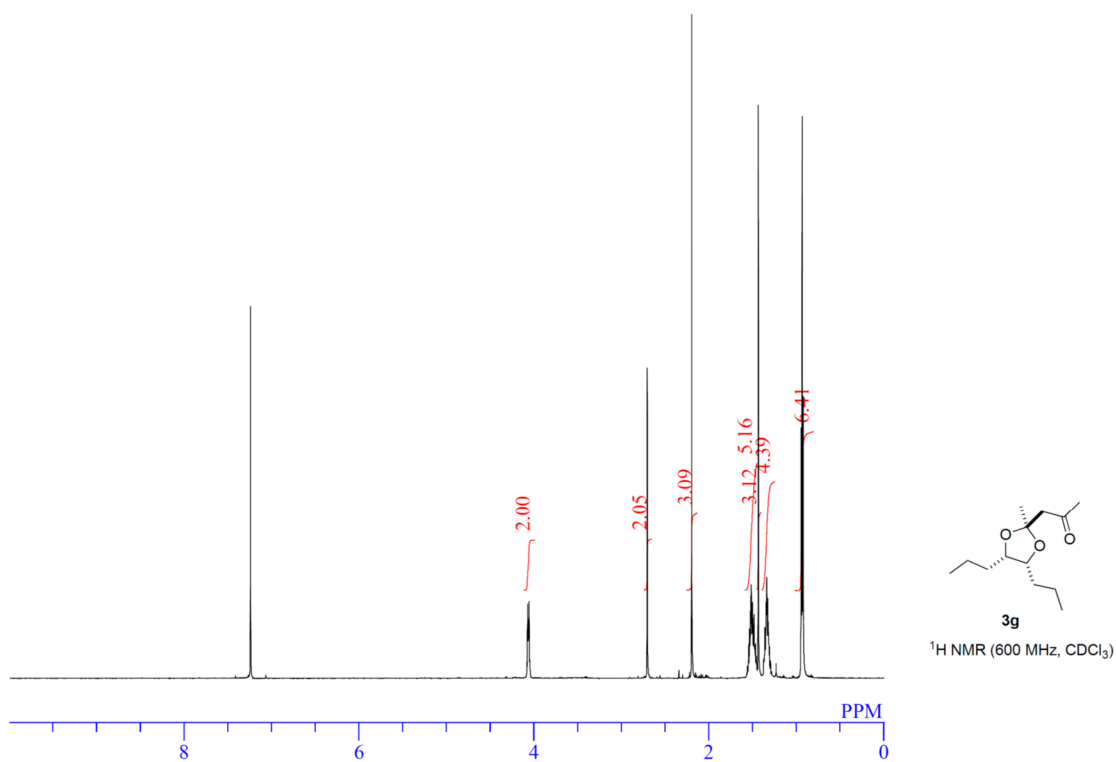
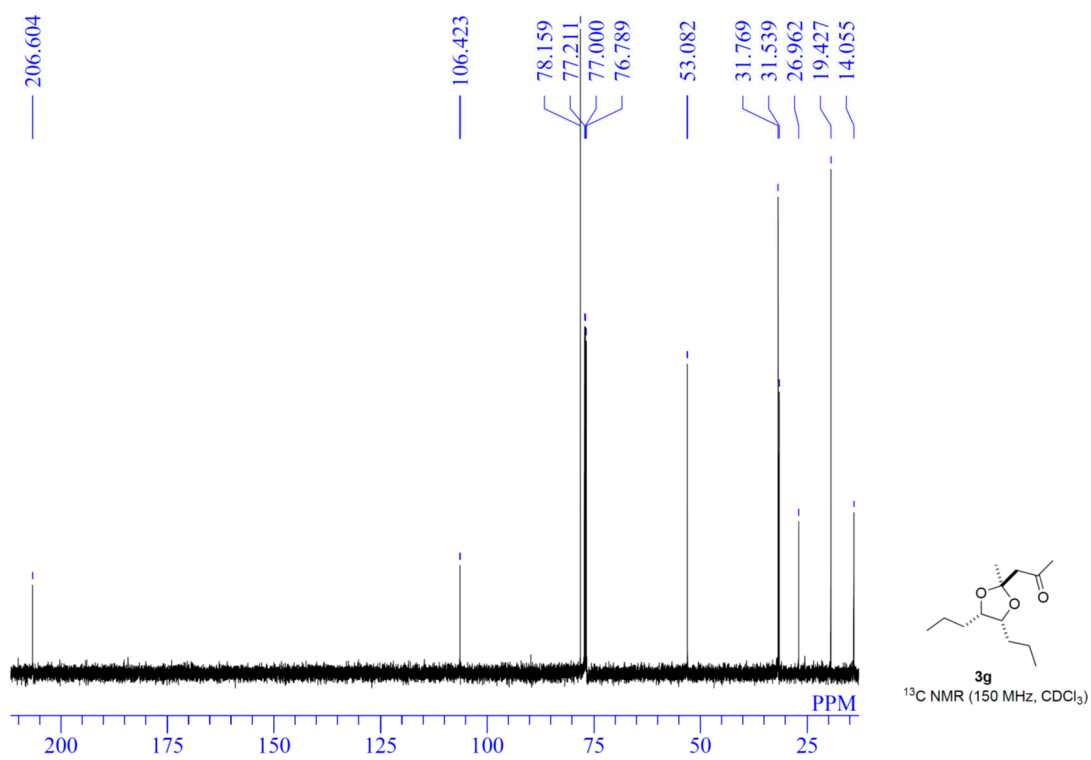
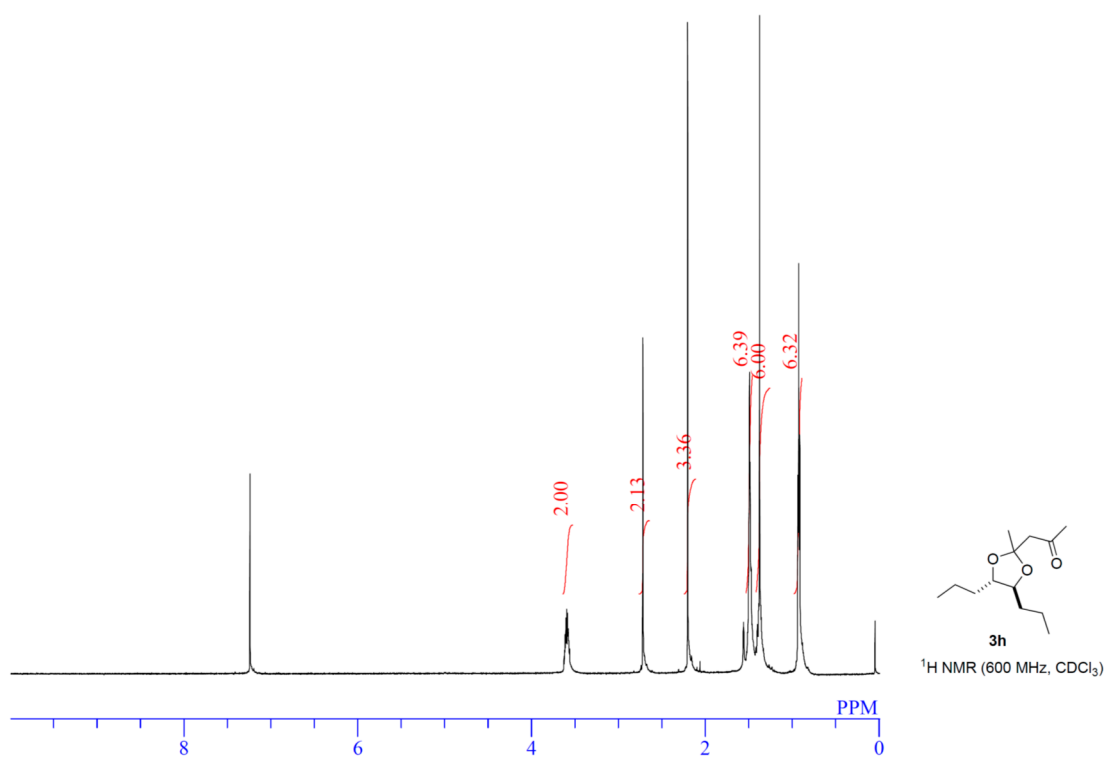
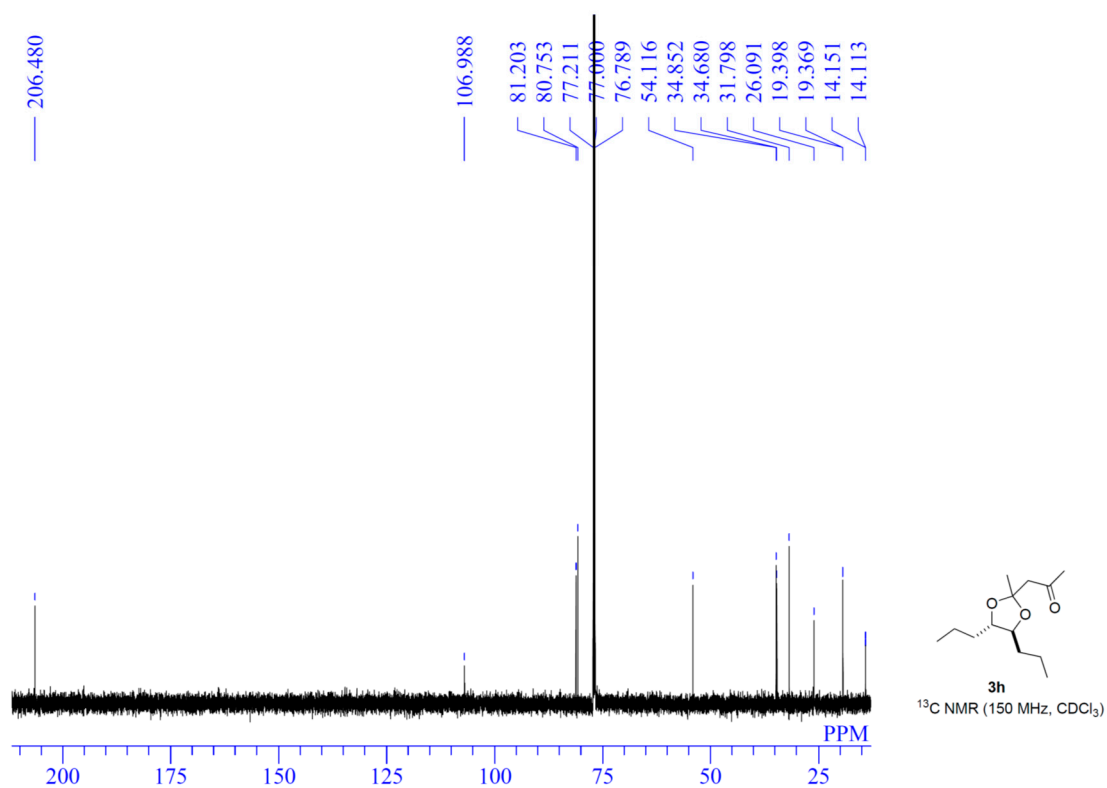


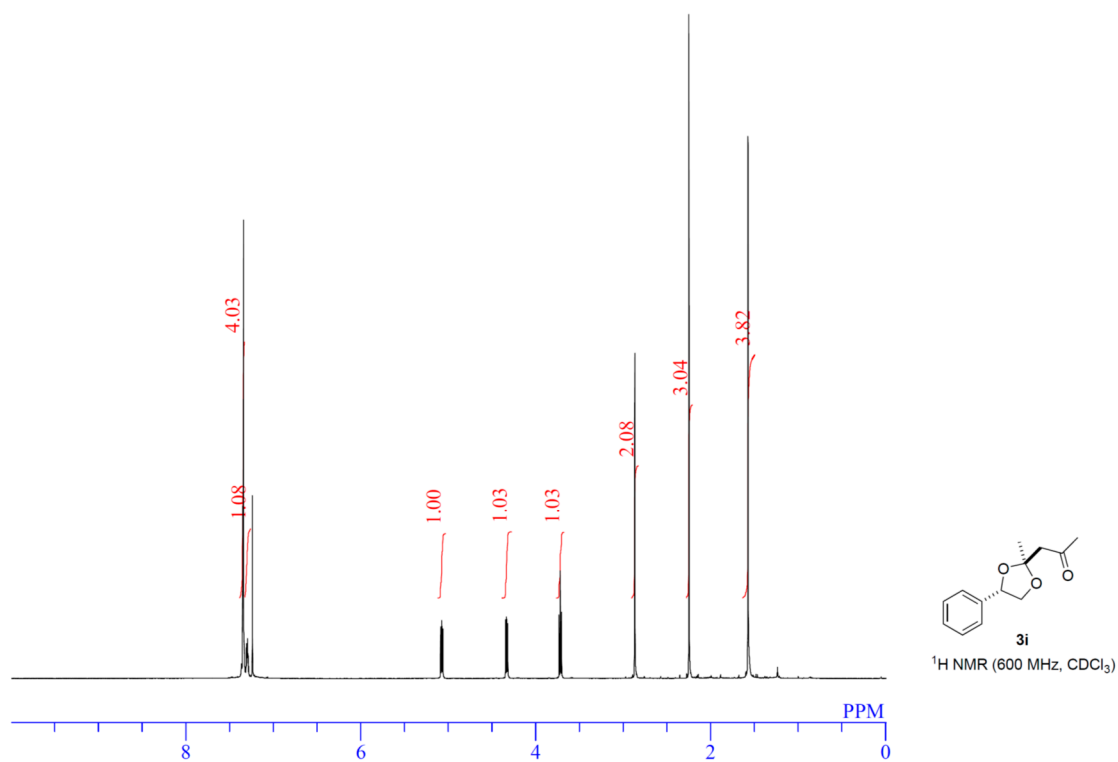
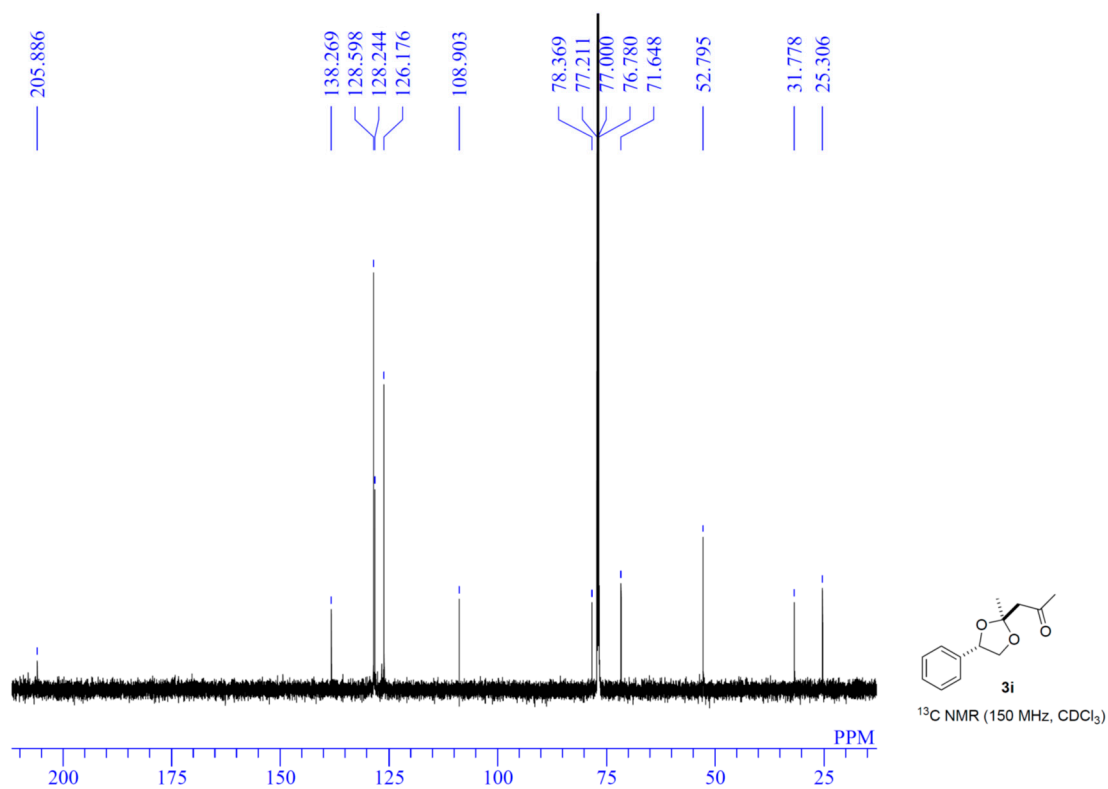
Figure S10. Proton NMR of 3d and 3d'.

Figure S11. Proton NMR of **3e**.Figure S12. Carbon-13 NMR of **3e**.

Figure S13. Proton NMR of **3f**.Figure S14. Carbon-13 NMR of **3f**.

Figure S15. Proton NMR of **3g**.Figure S16. Carbon-13 NMR of **3g**.

Figure S17. Proton NMR of **3h**.Figure S18. Carbon-13 NMR of **3h**.

Figure S19. Proton NMR of **3i**.Figure S20. Carbon-13 NMR of **3i**.

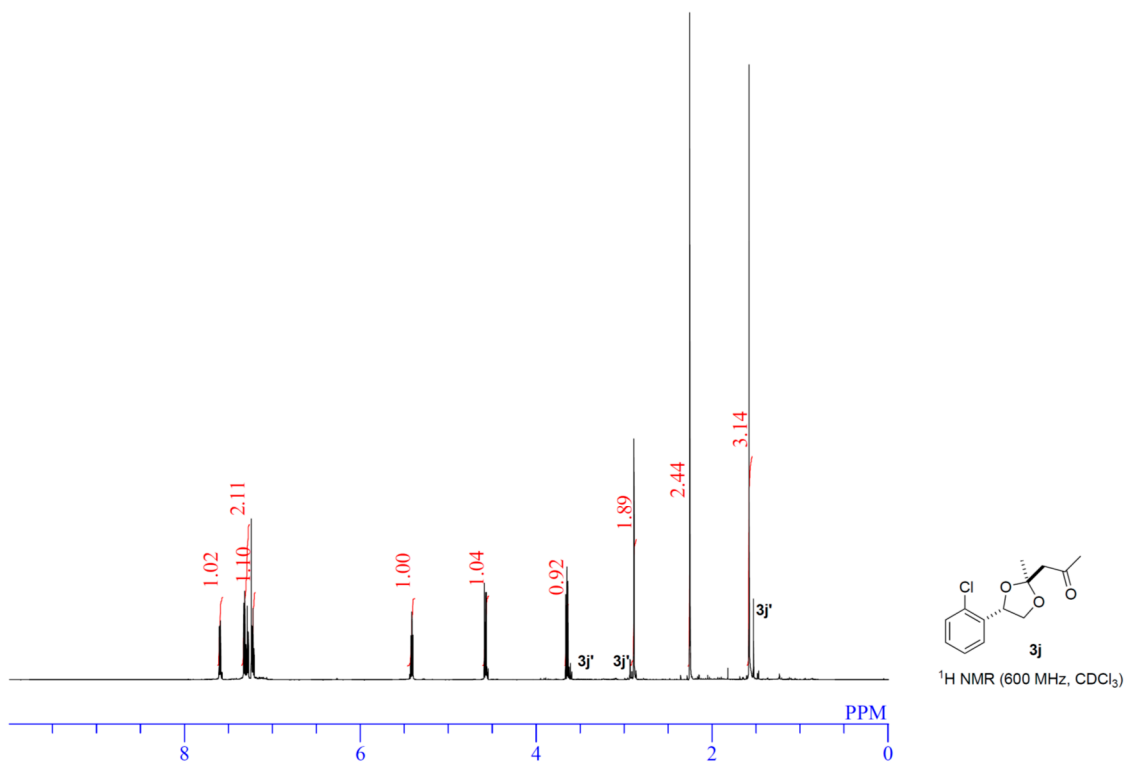


Figure S21. Proton NMR of 3j.

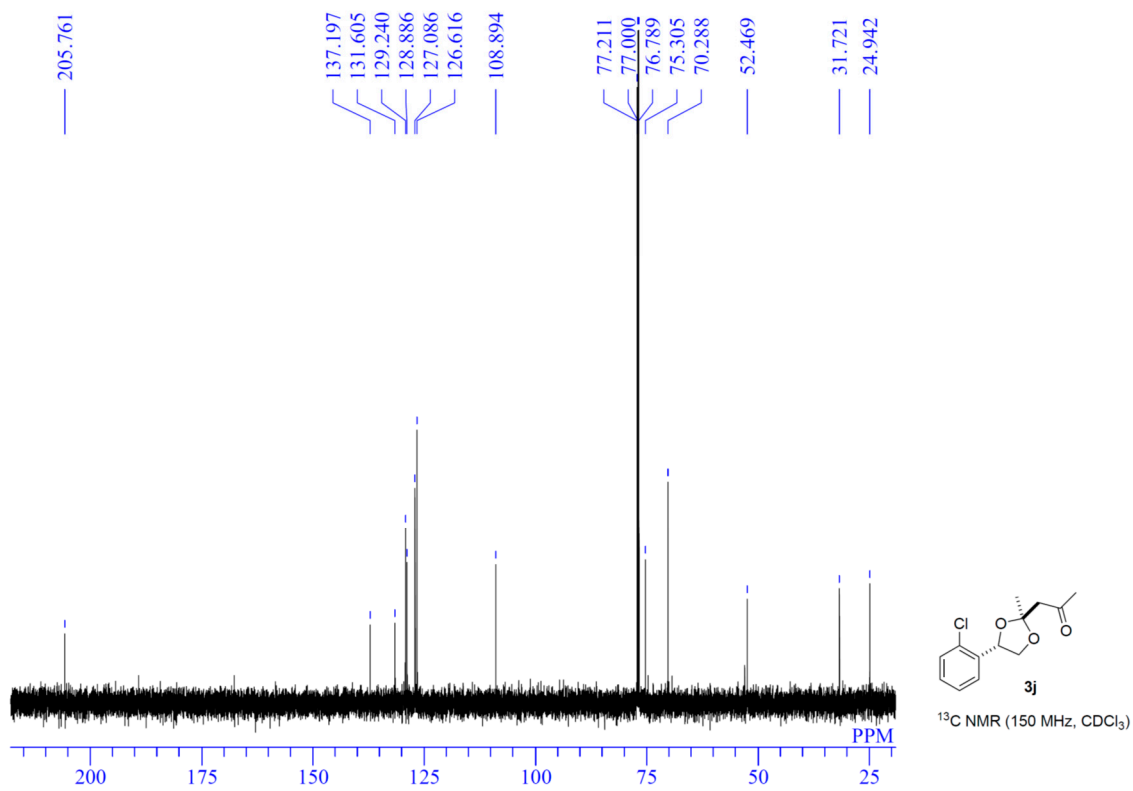
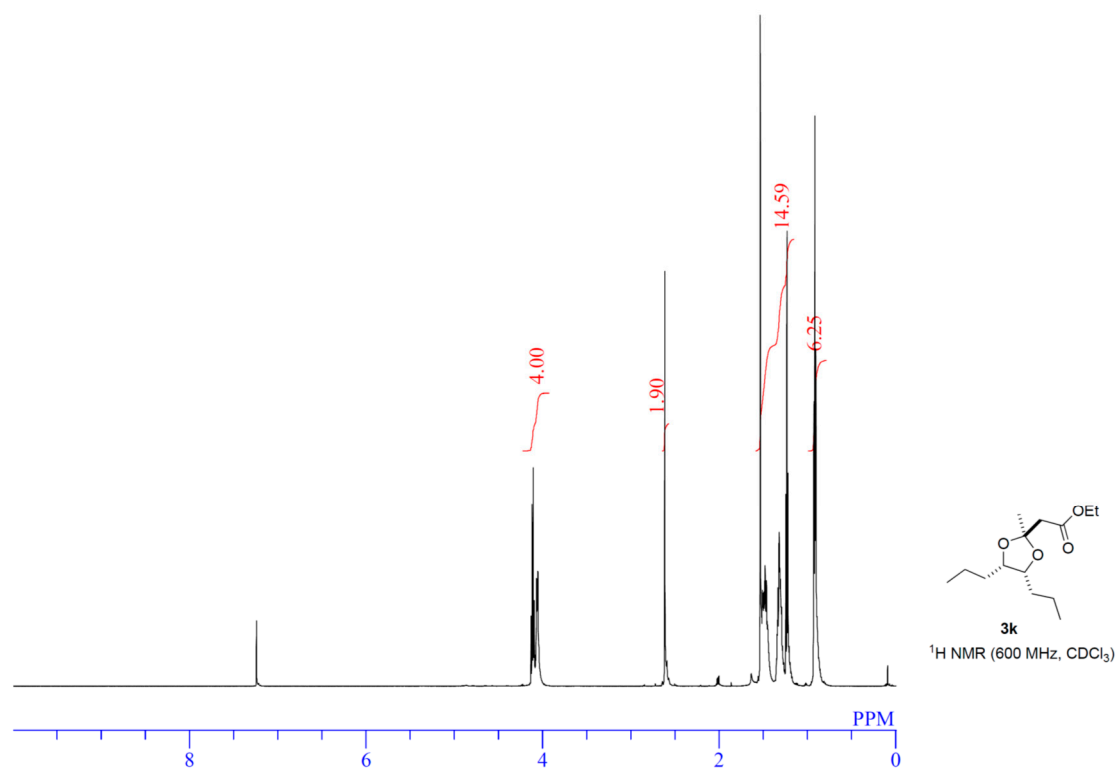
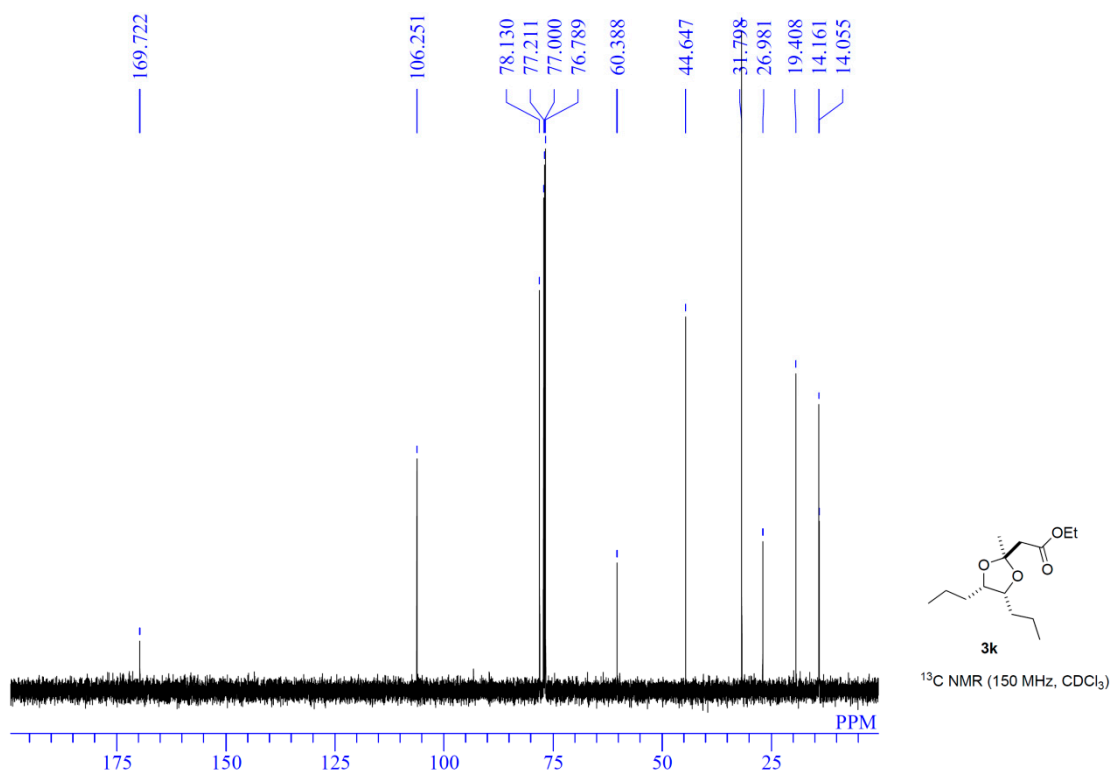
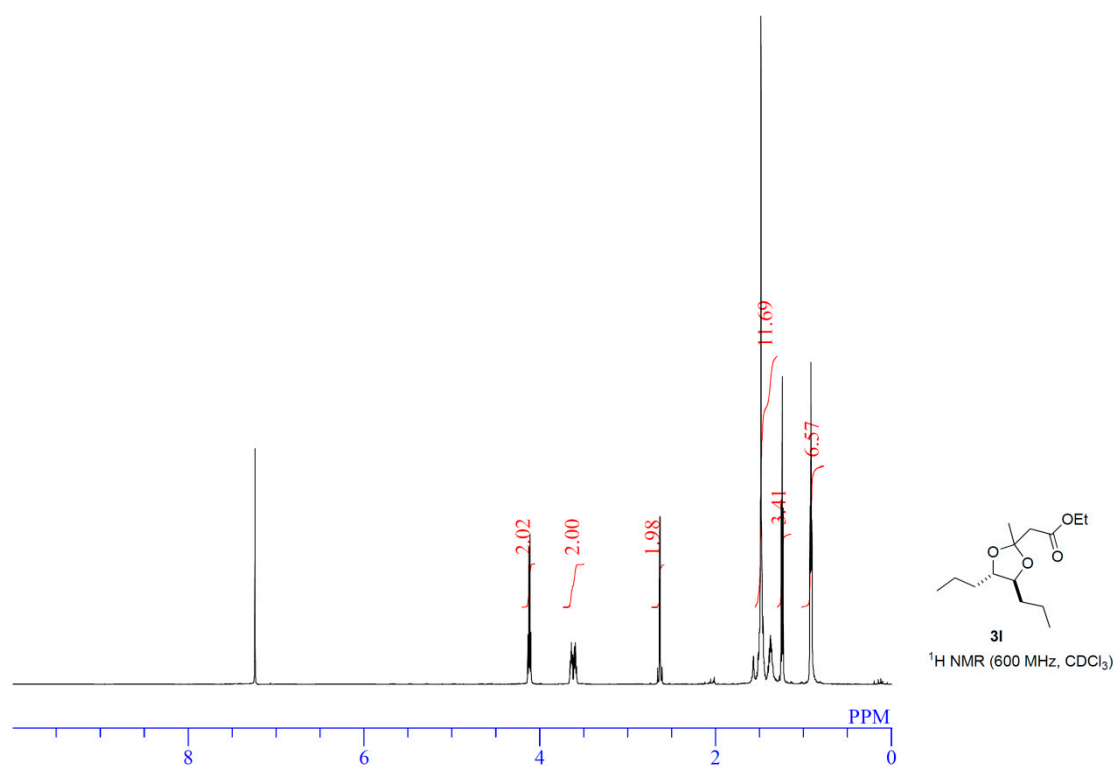
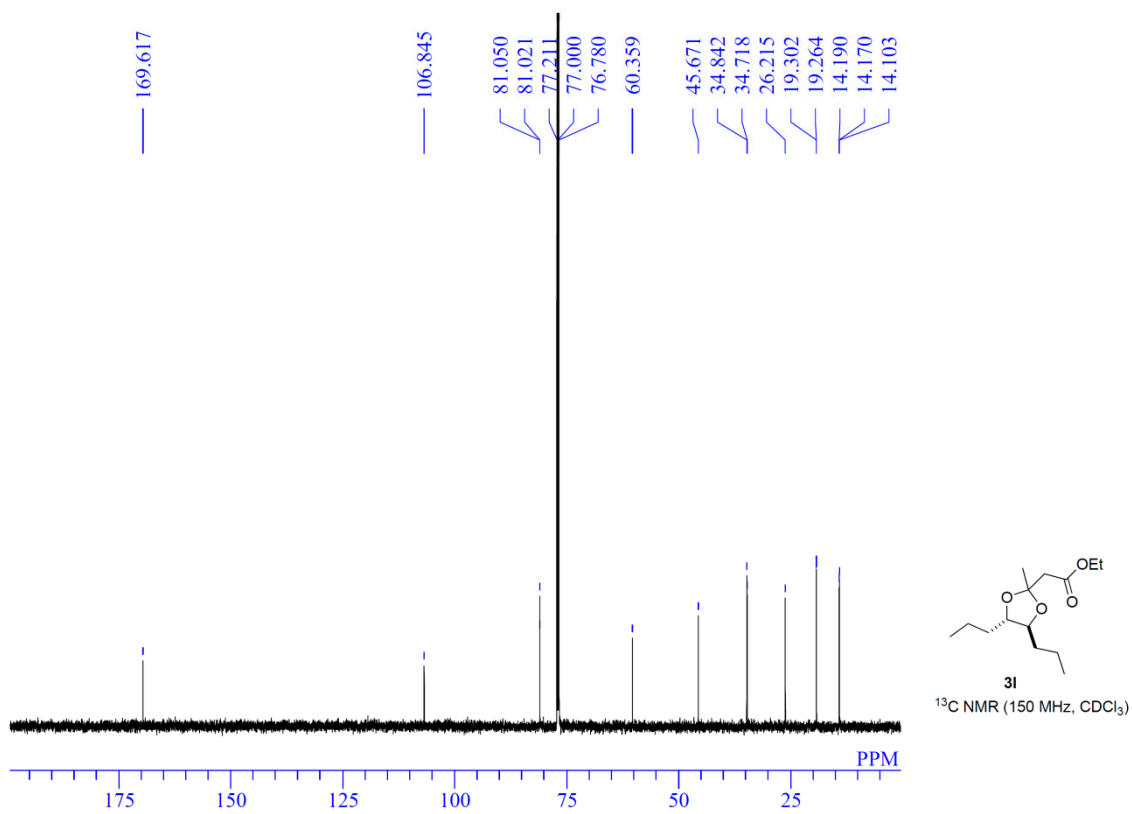
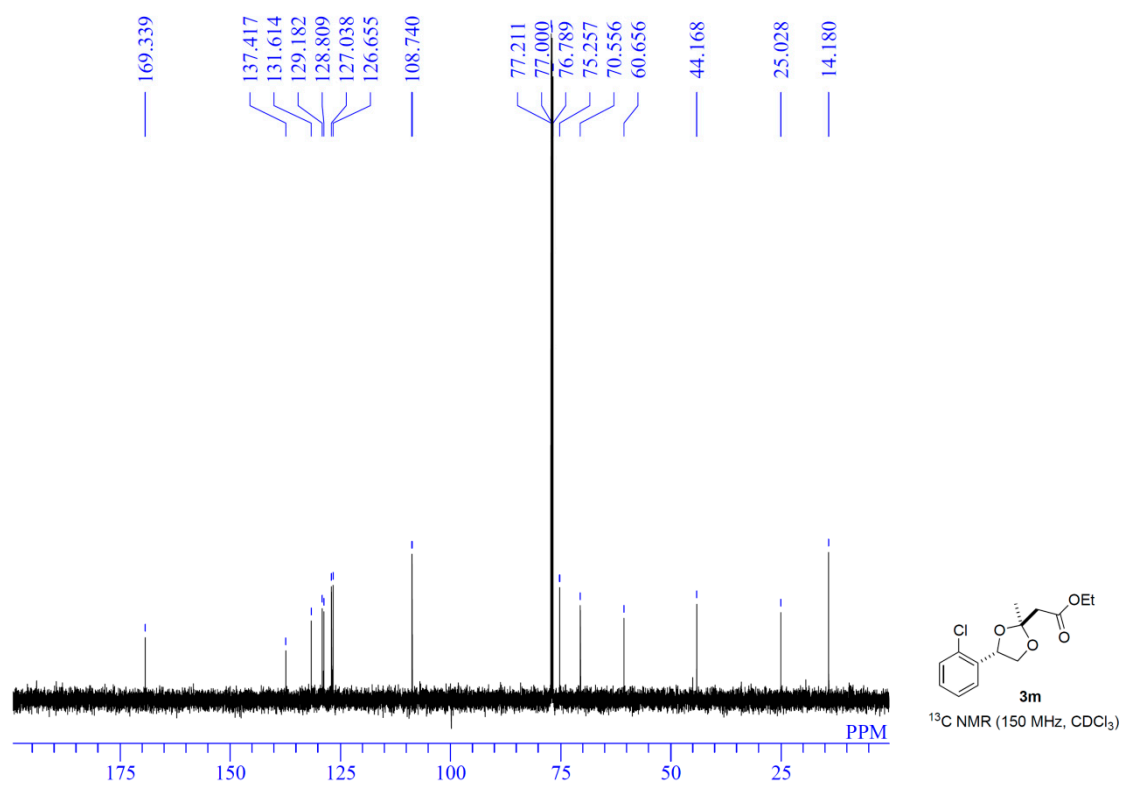
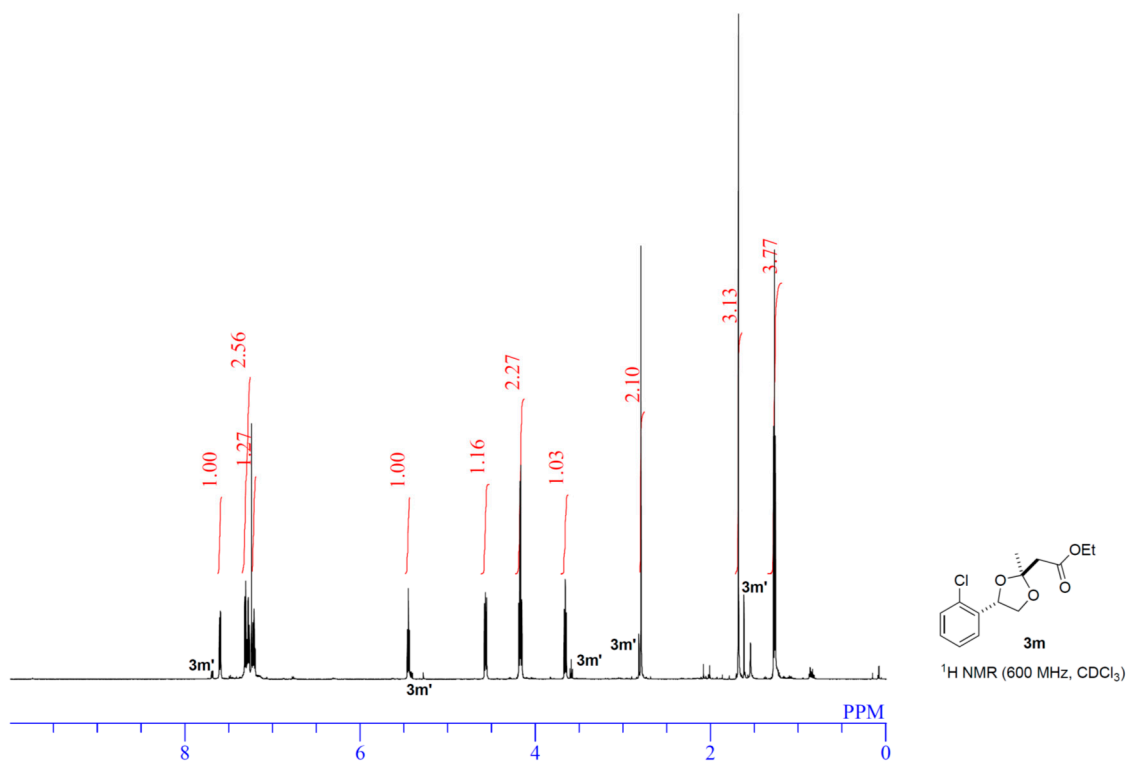
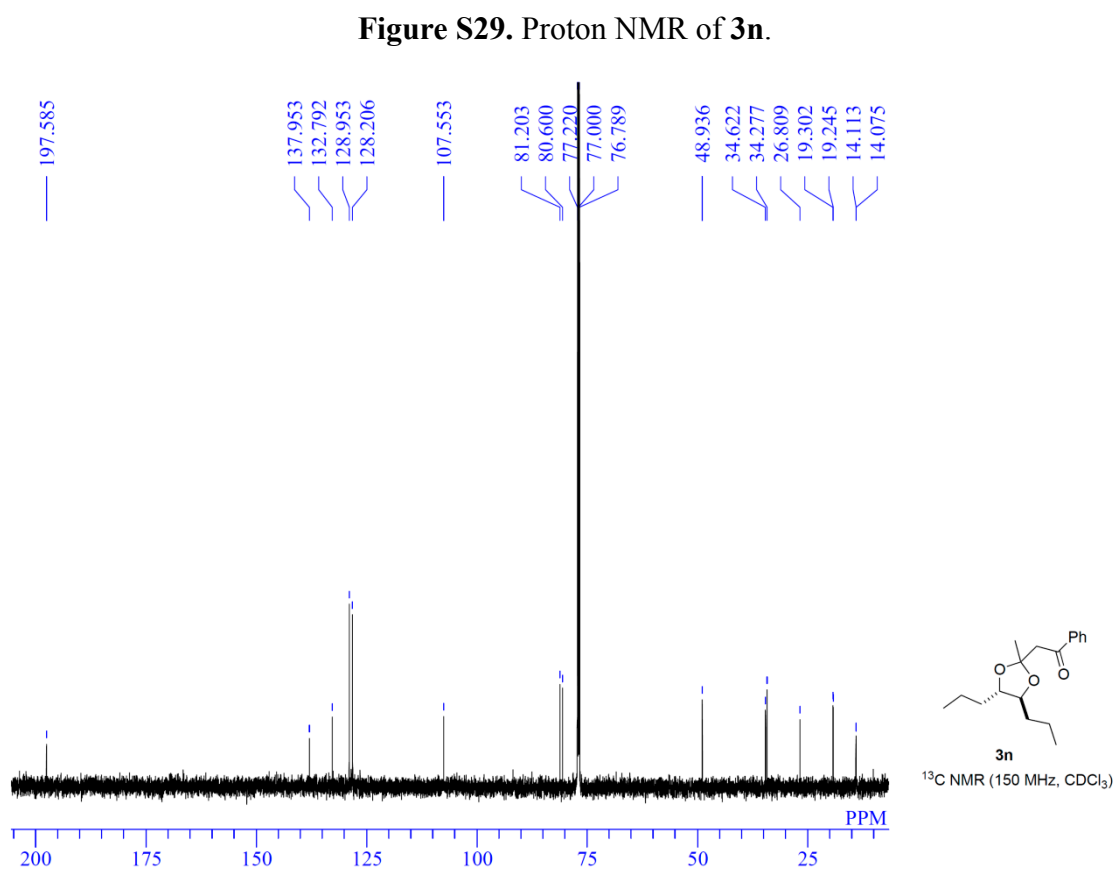
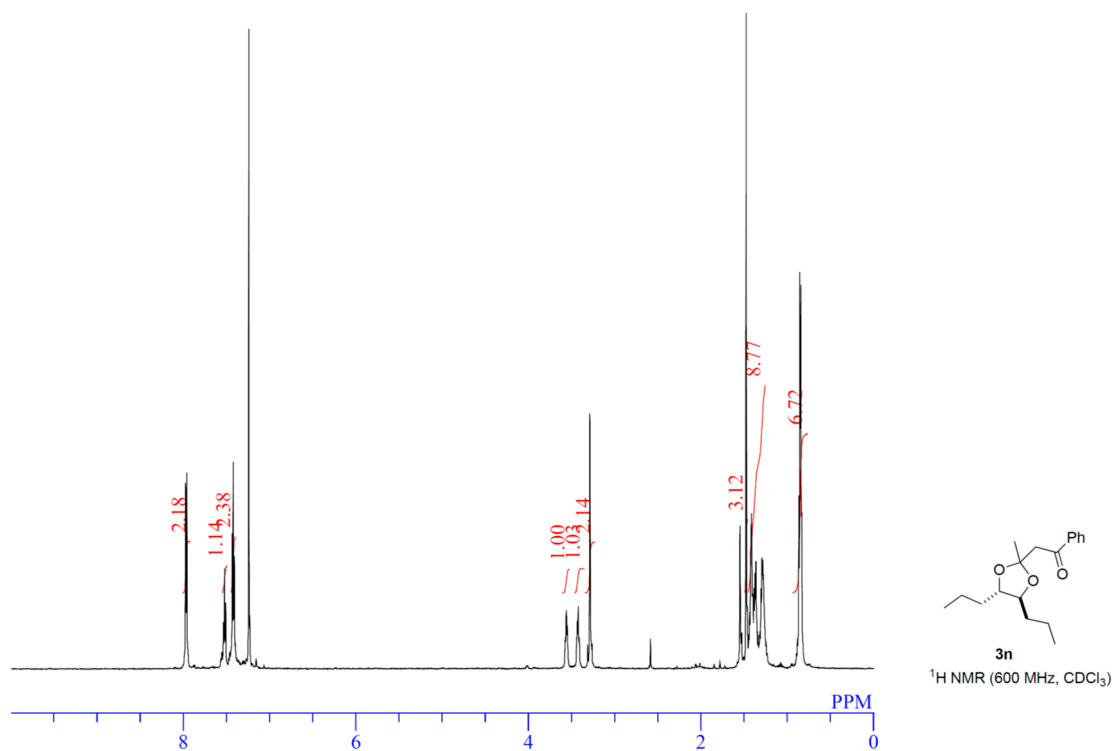


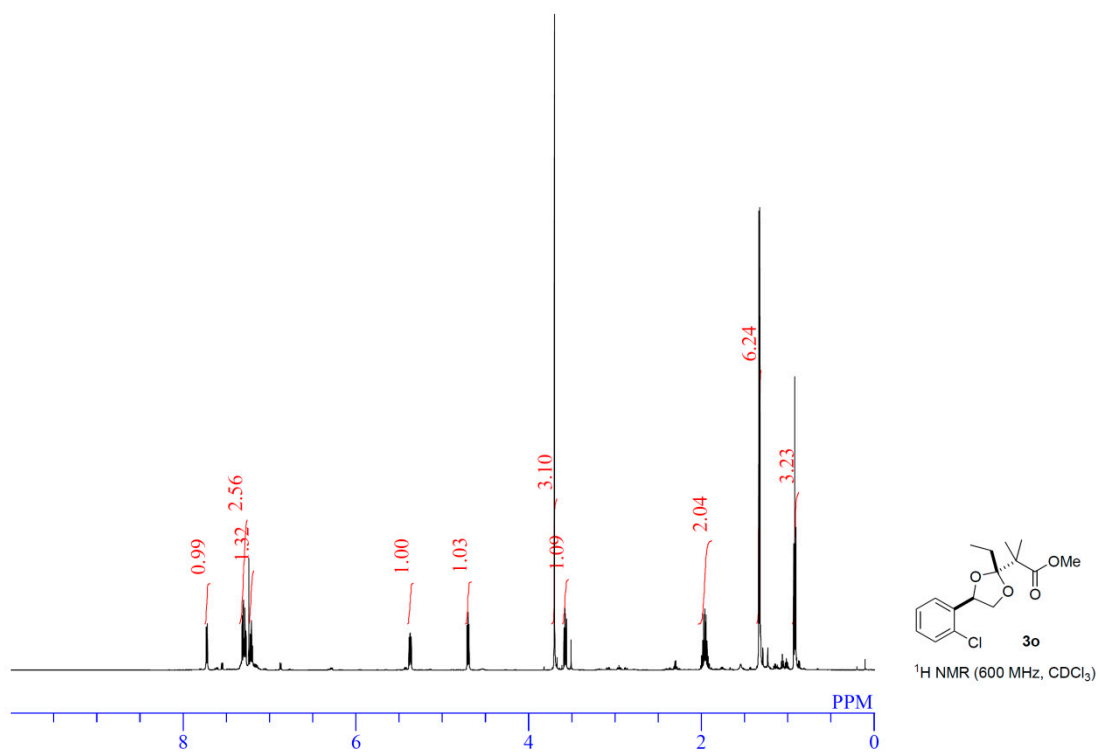
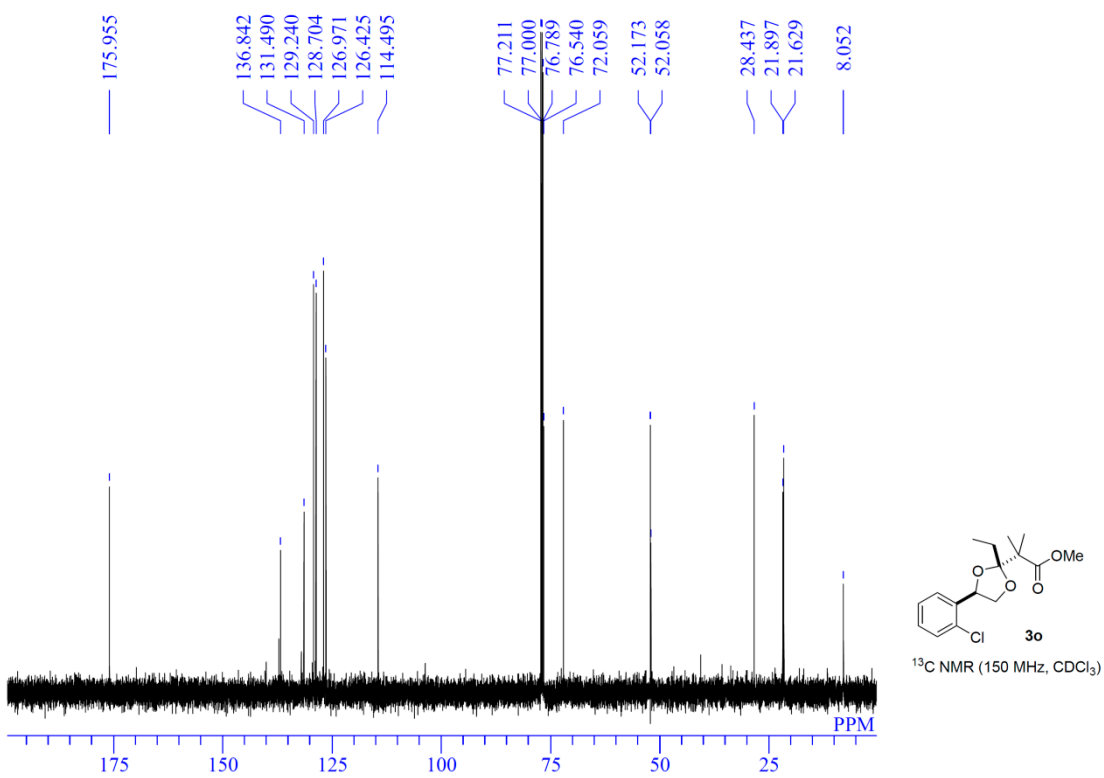
Figure S22. Carbon-13 NMR of 3j.

Figure S23. Proton NMR of **3k**.Figure S24. Carbon-13 NMR of **3k**.

Figure S25. Proton NMR of **31**.Figure S26. Carbon-13 NMR of **31**.





Figure S31. Proton NMR of **3o**.Figure S32. Carbon-13 NMR of **3o**.

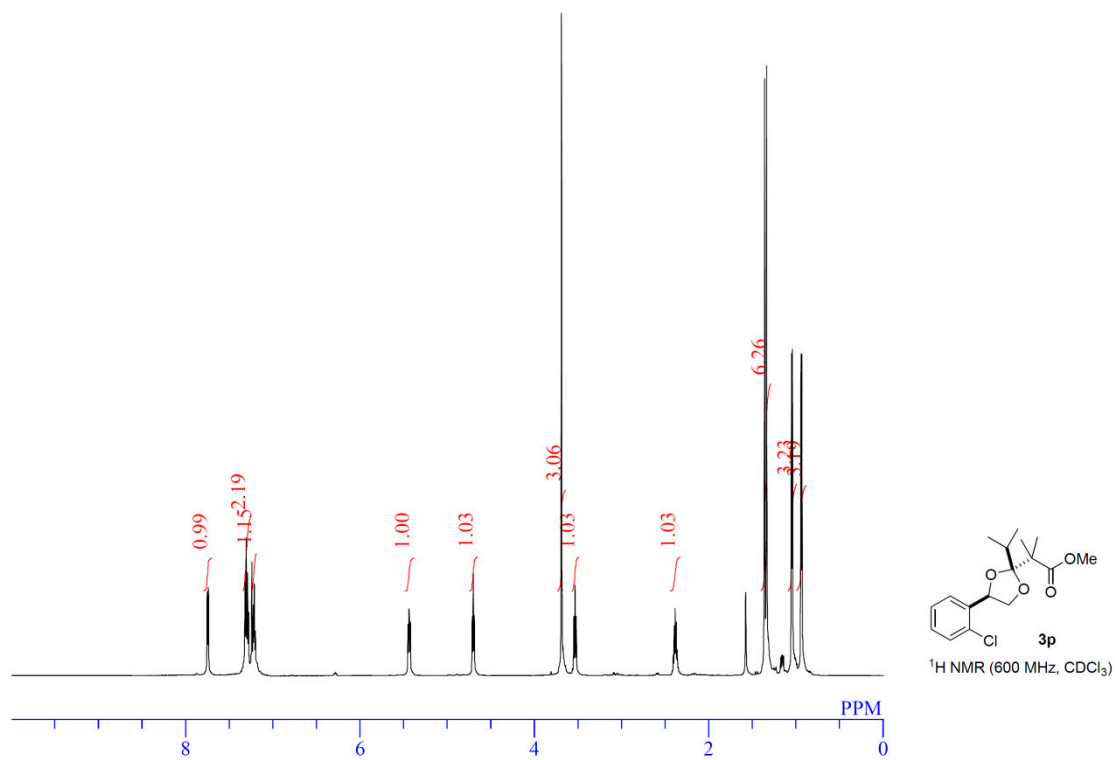


Figure S33. Proton NMR of 3p.

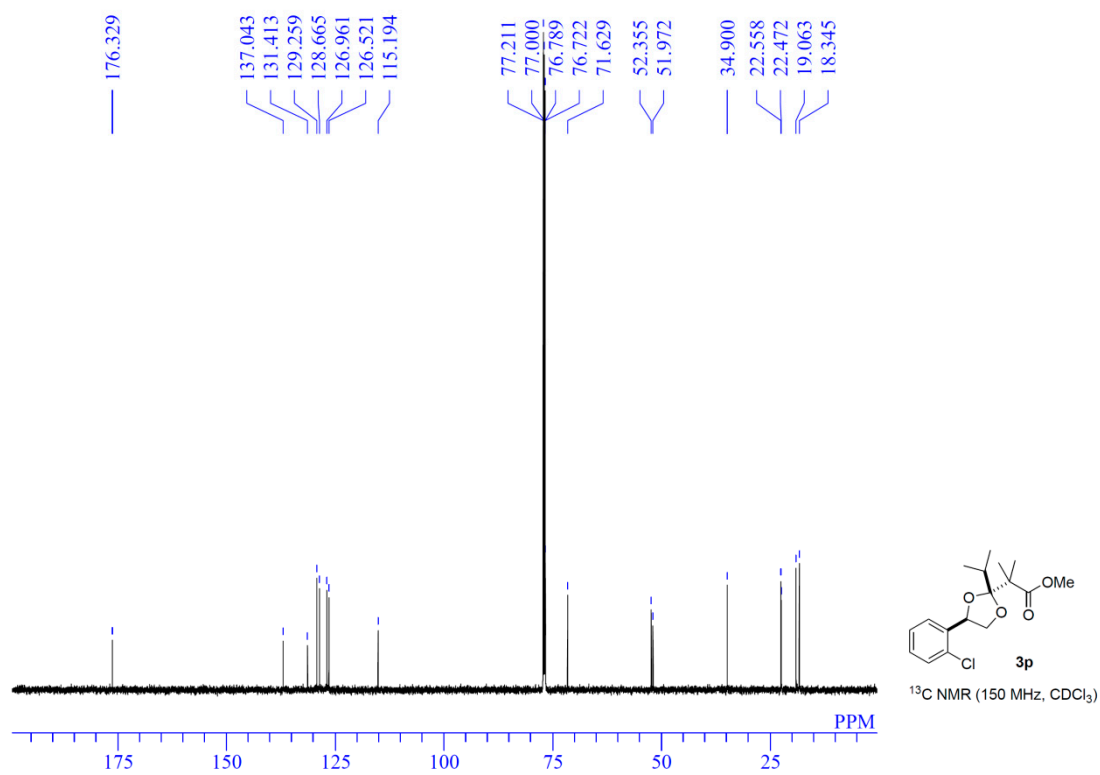
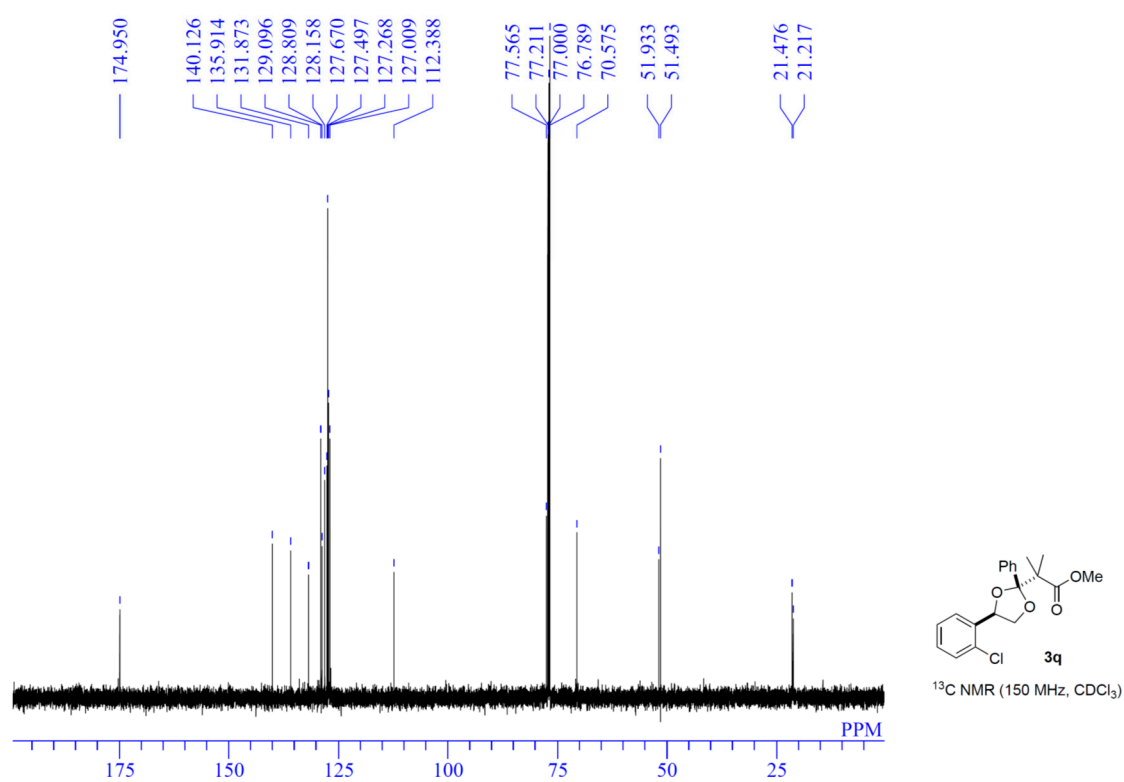
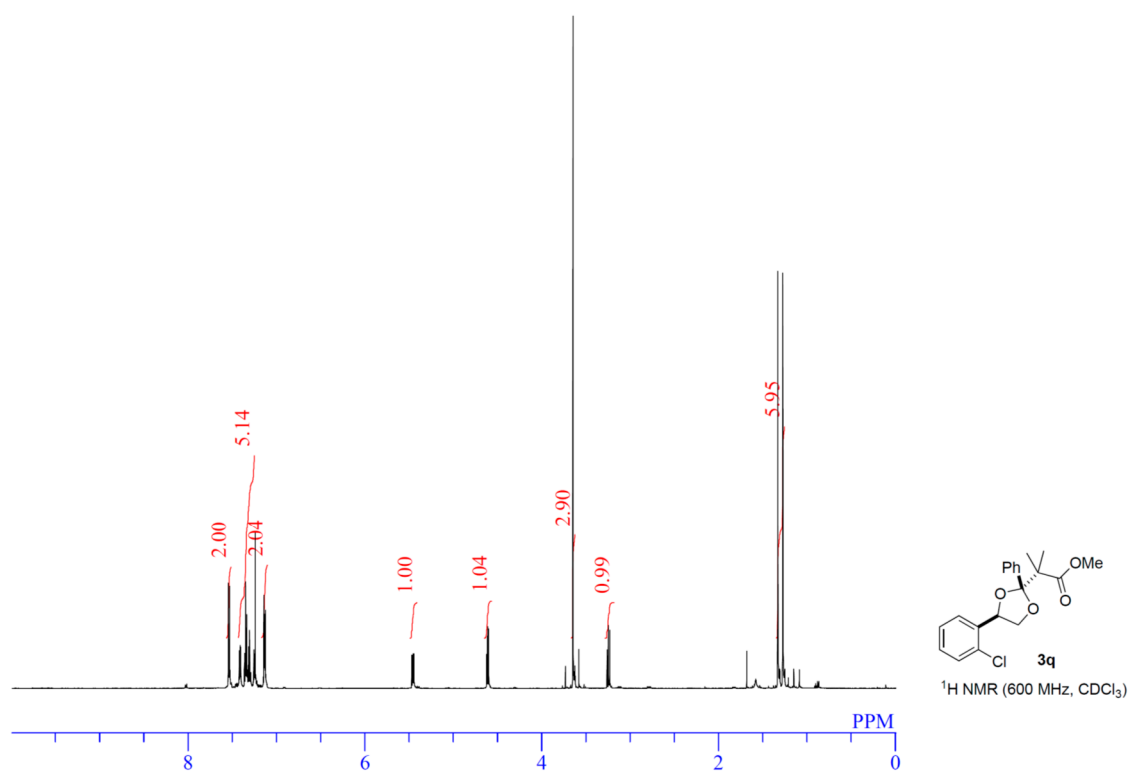
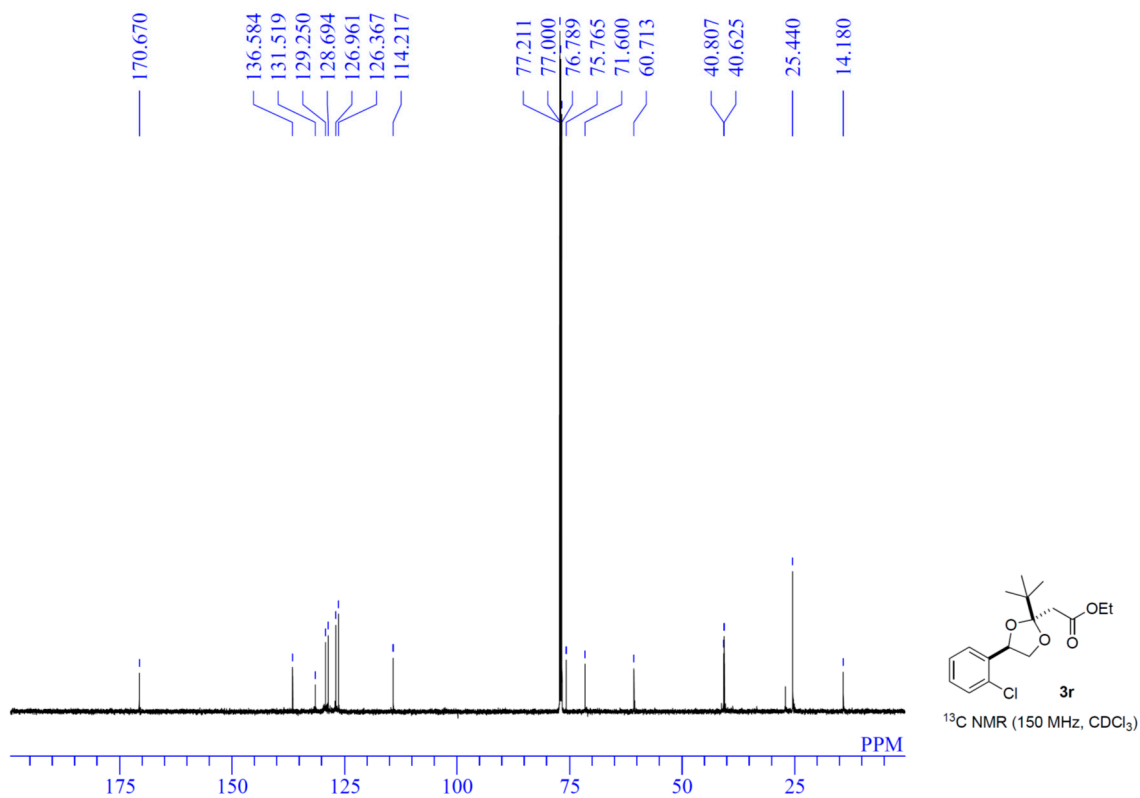
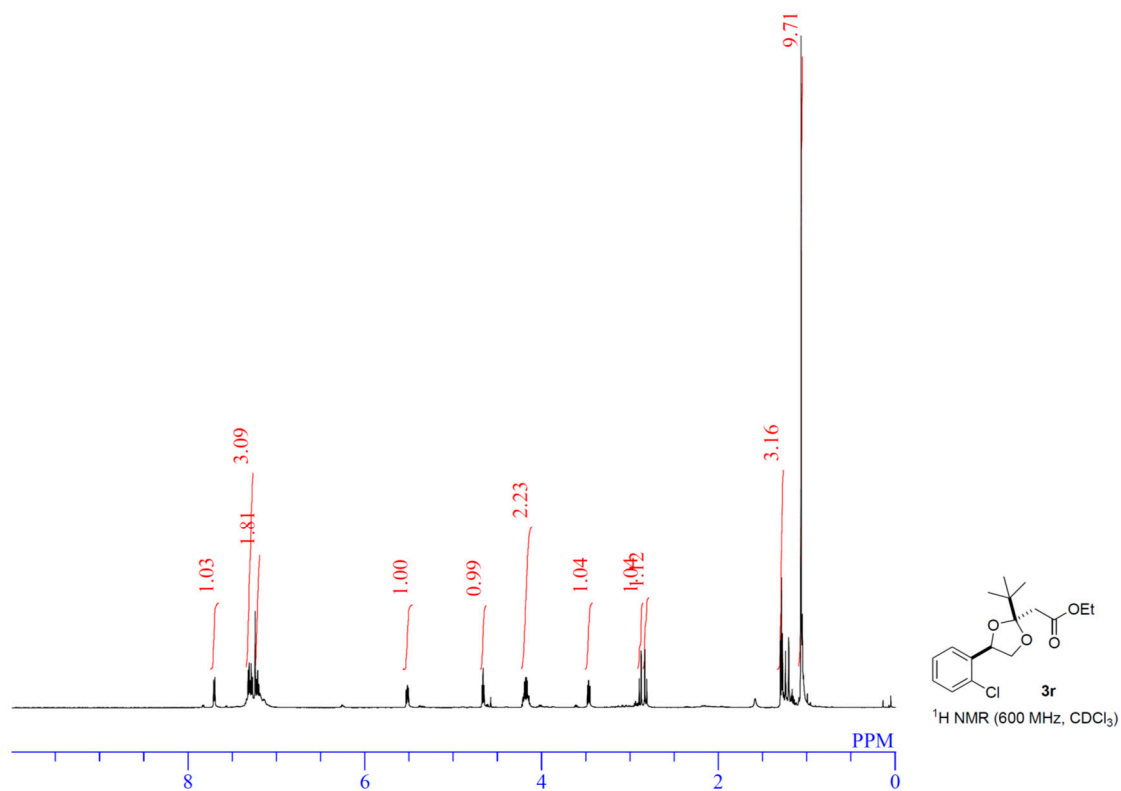


Figure S34. Carbon-13 NMR of 3p.





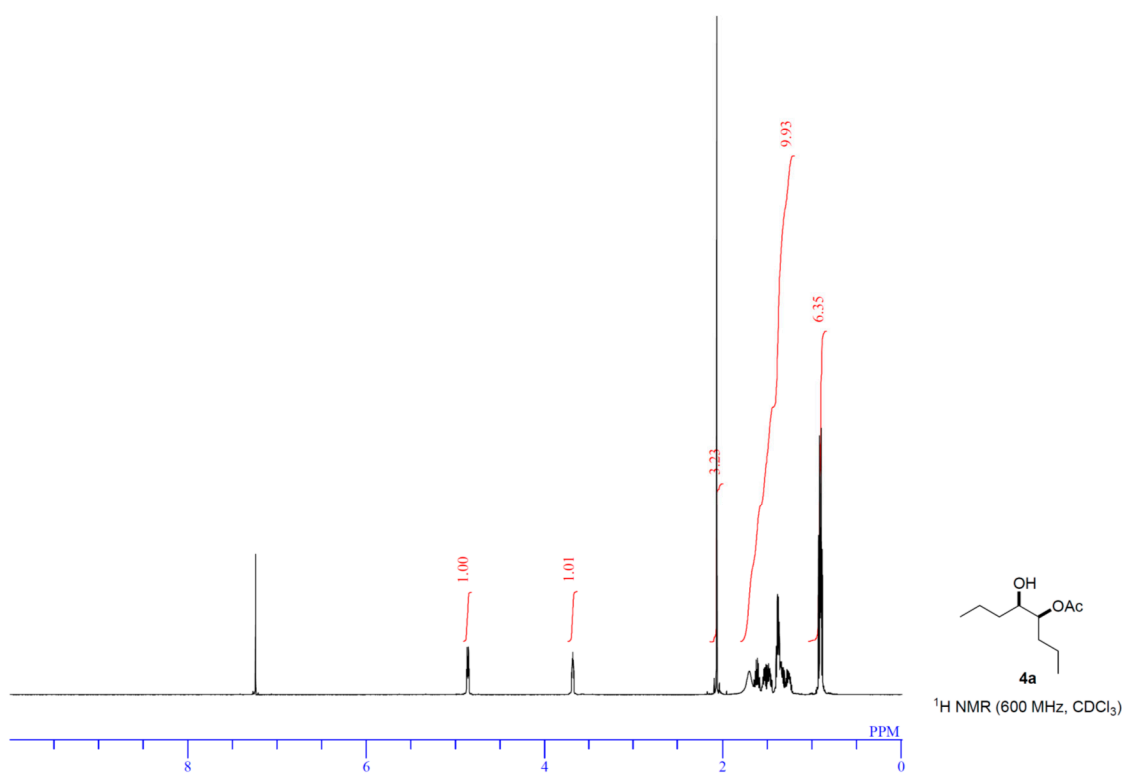


Figure S39. Proton NMR of 4a.

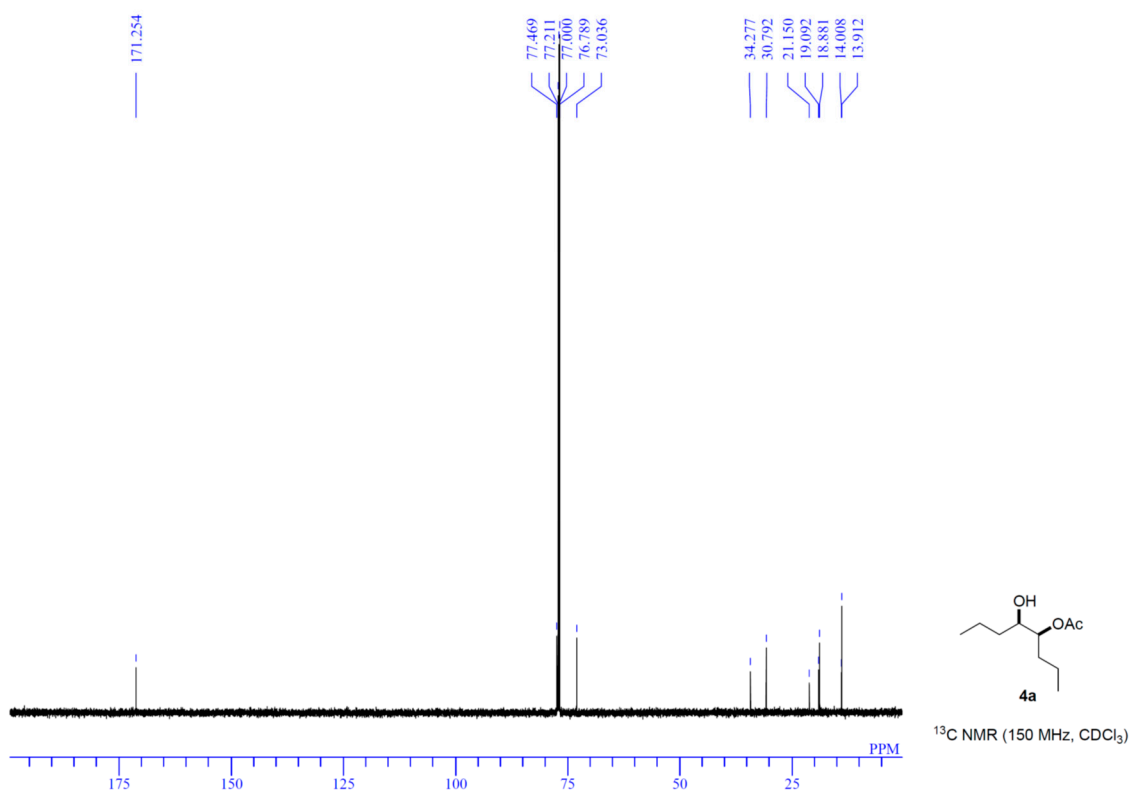
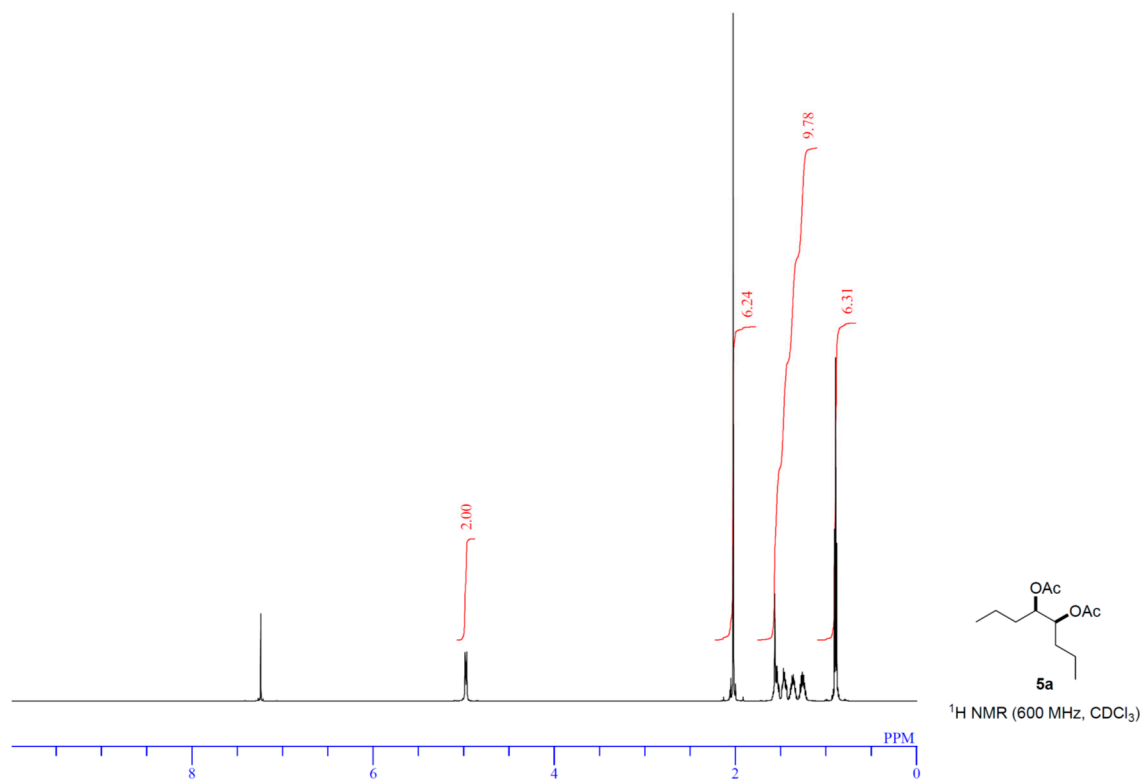
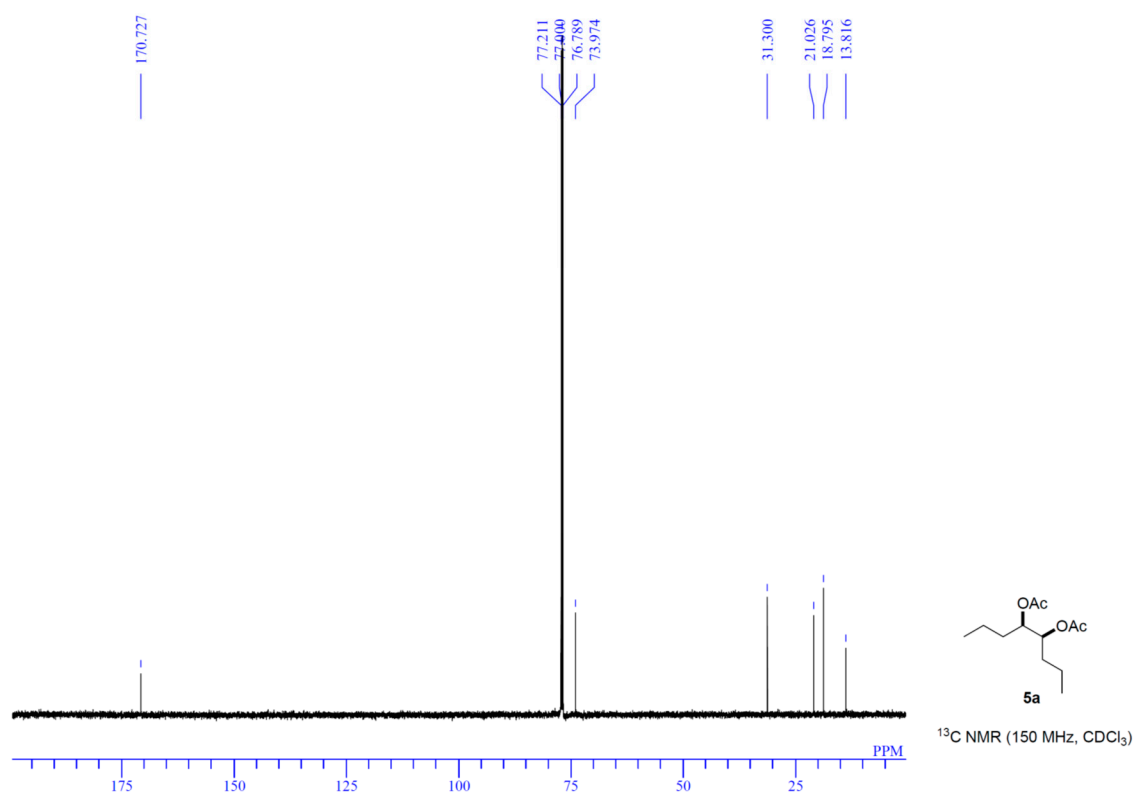
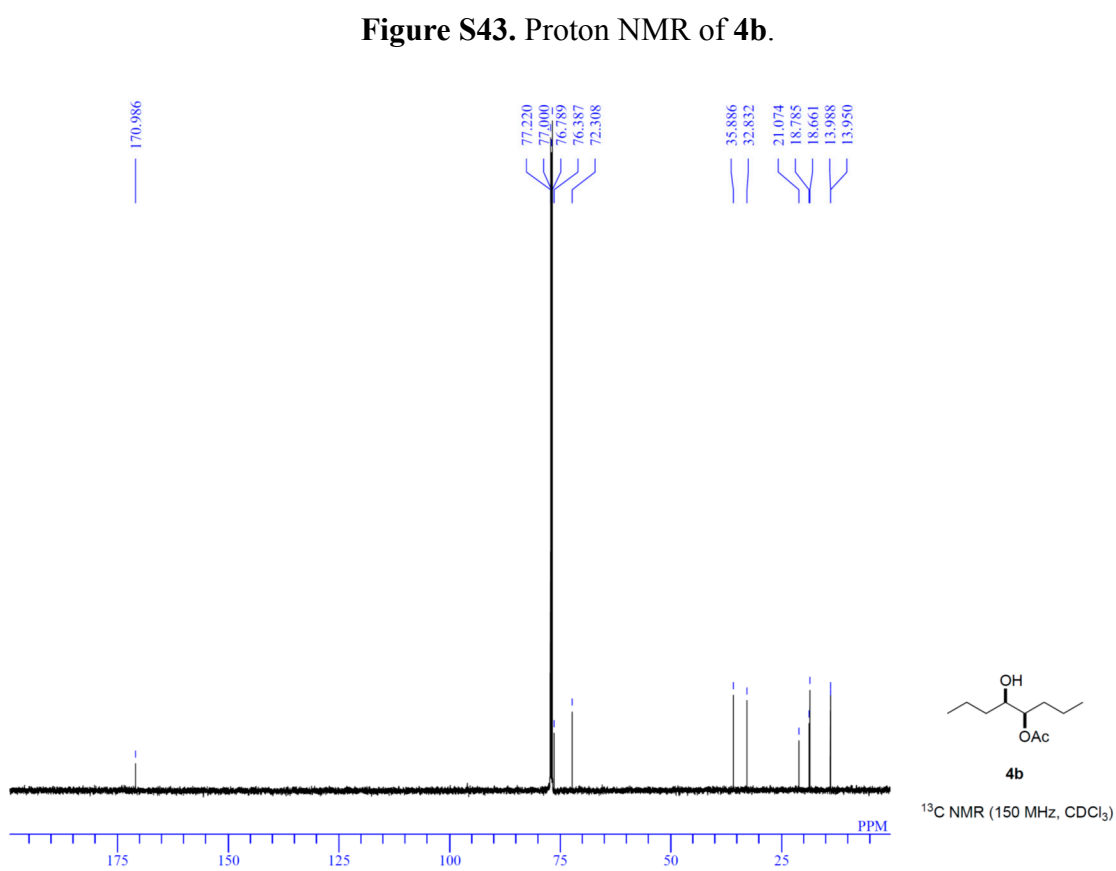
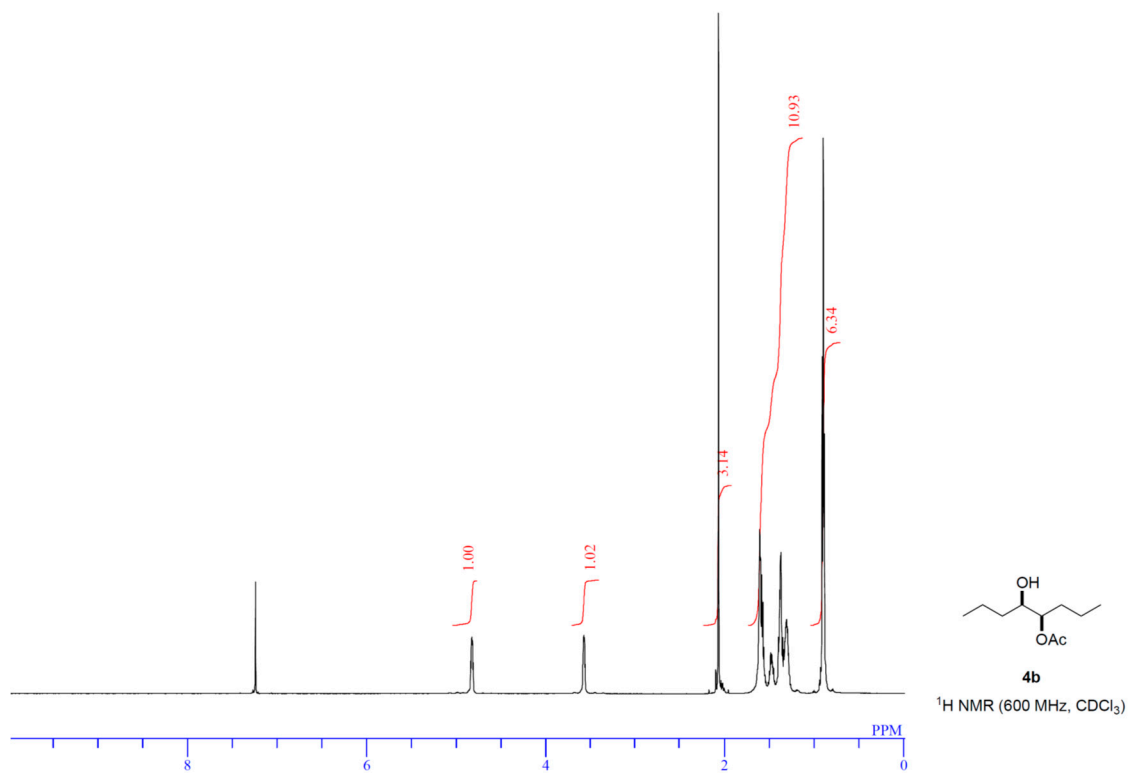
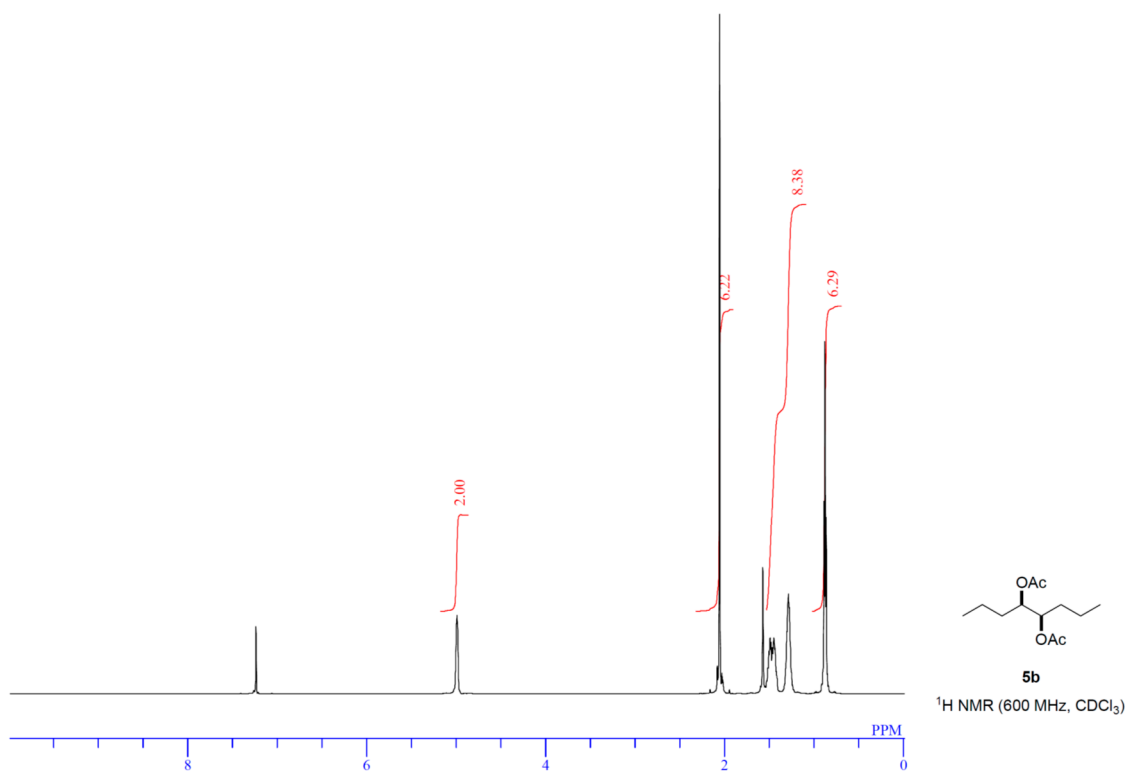
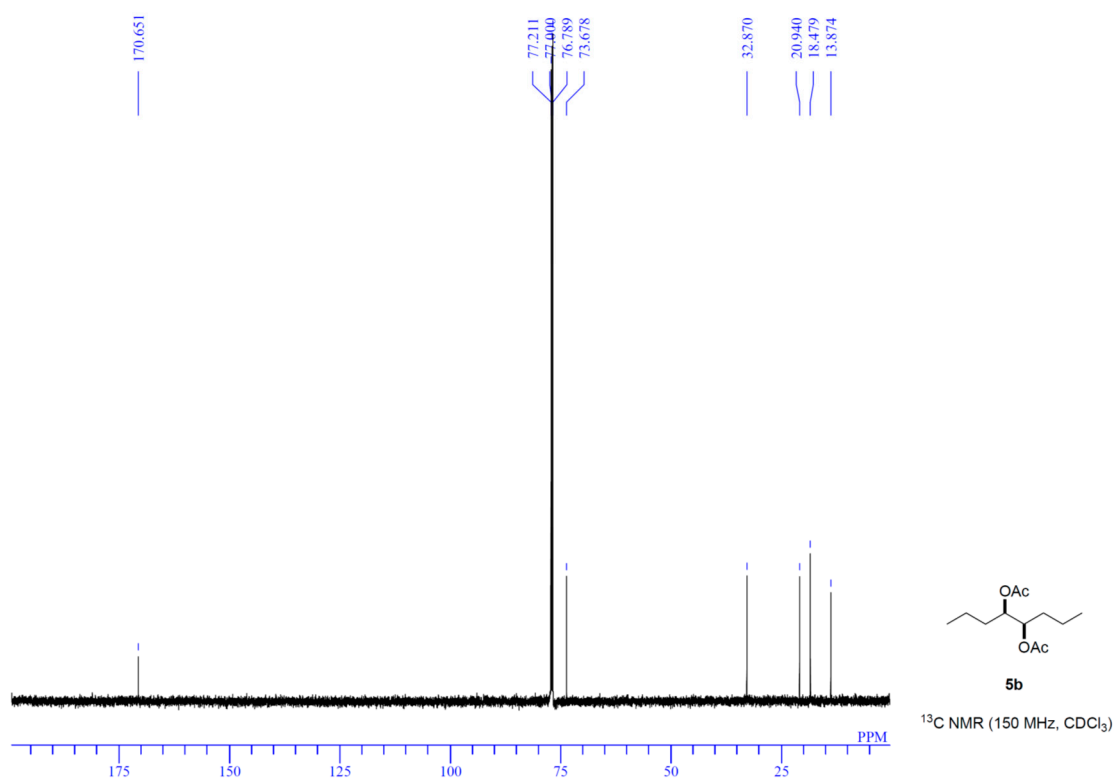
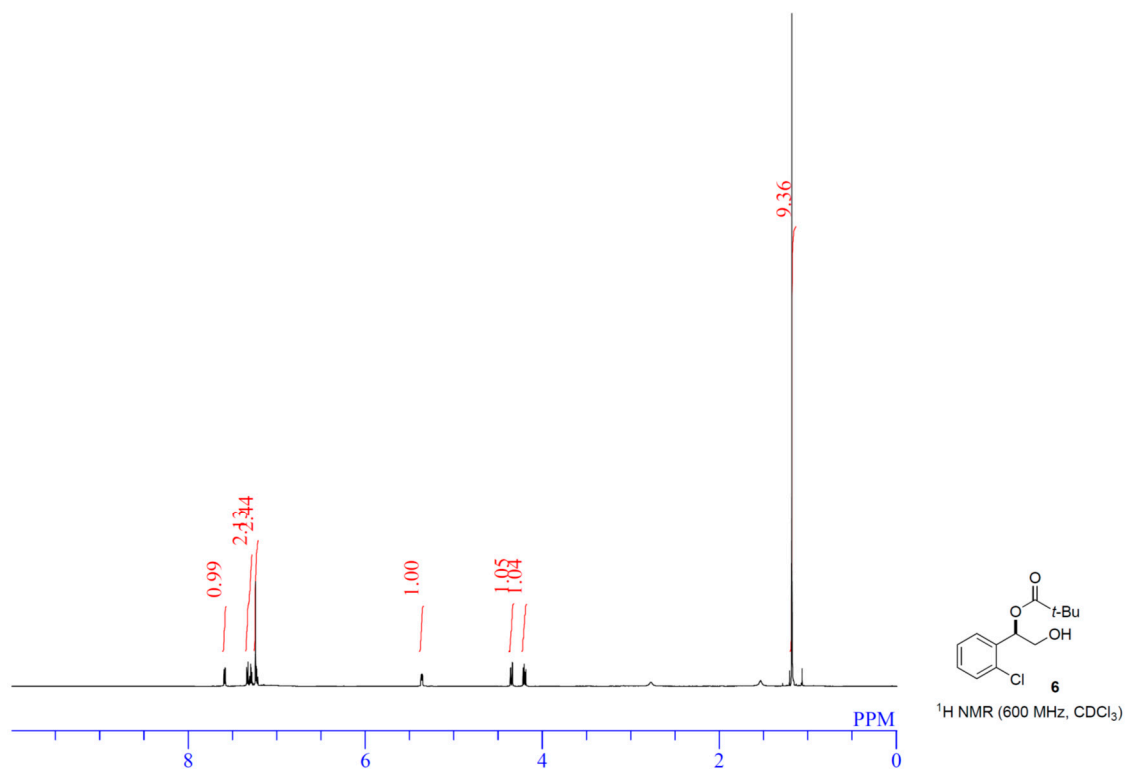
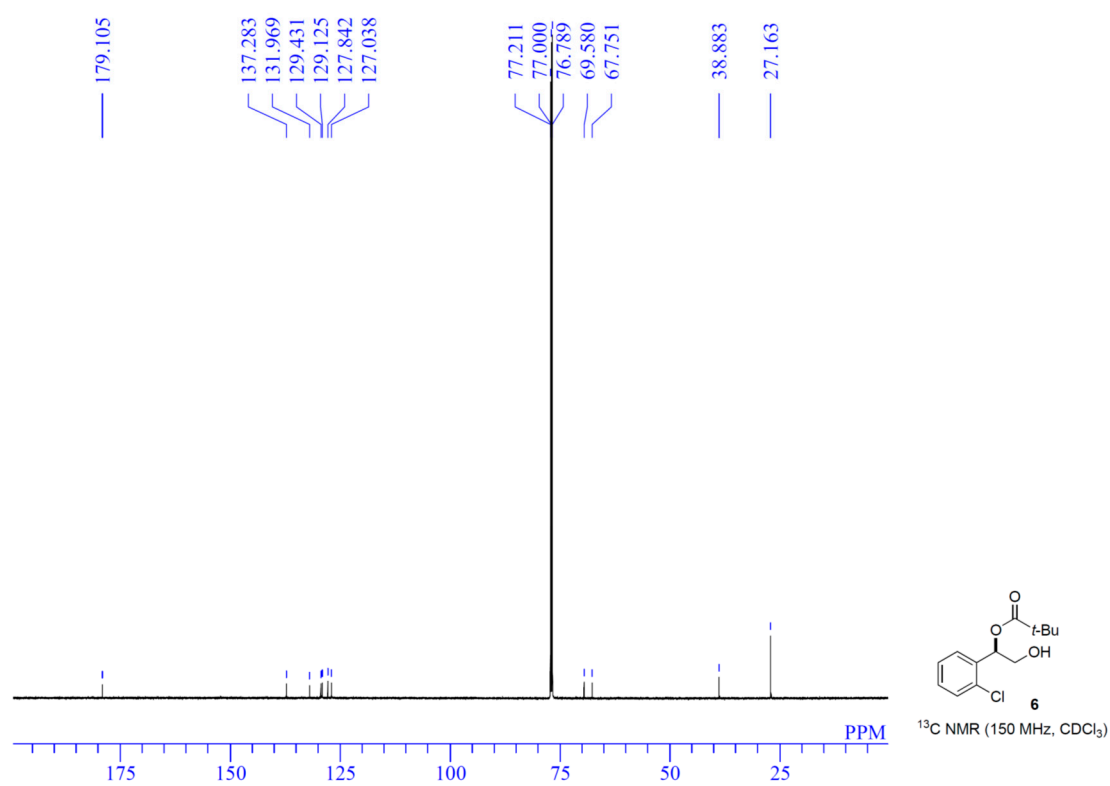


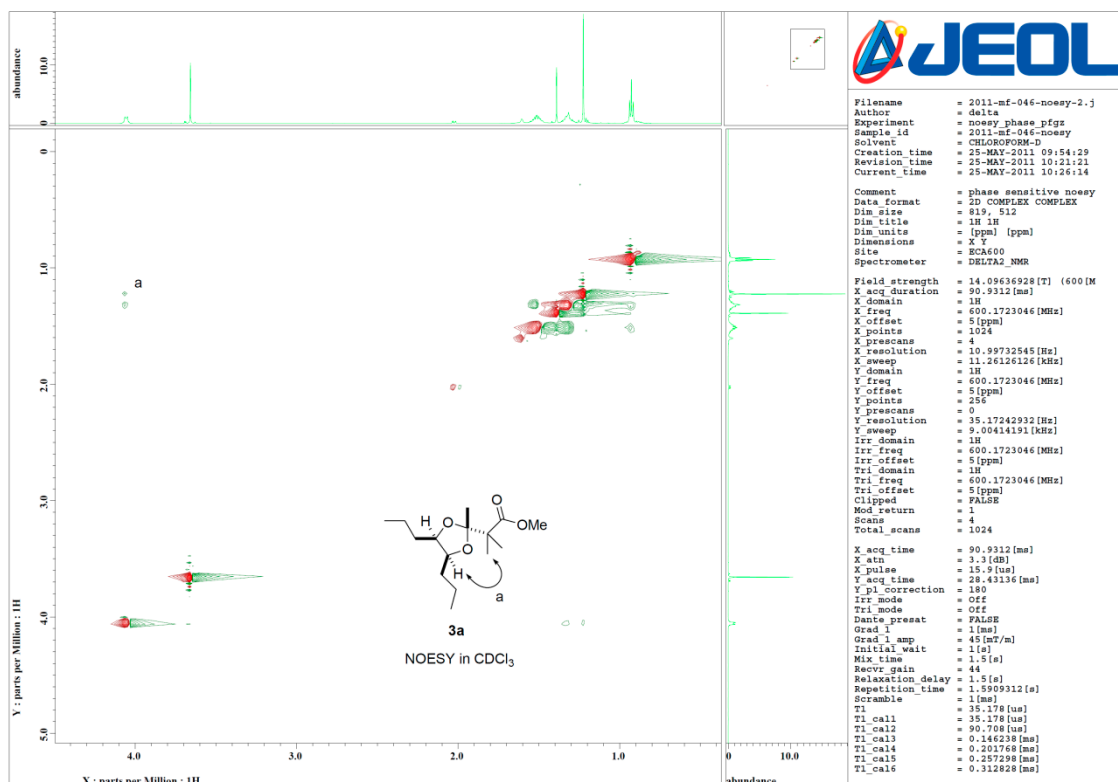
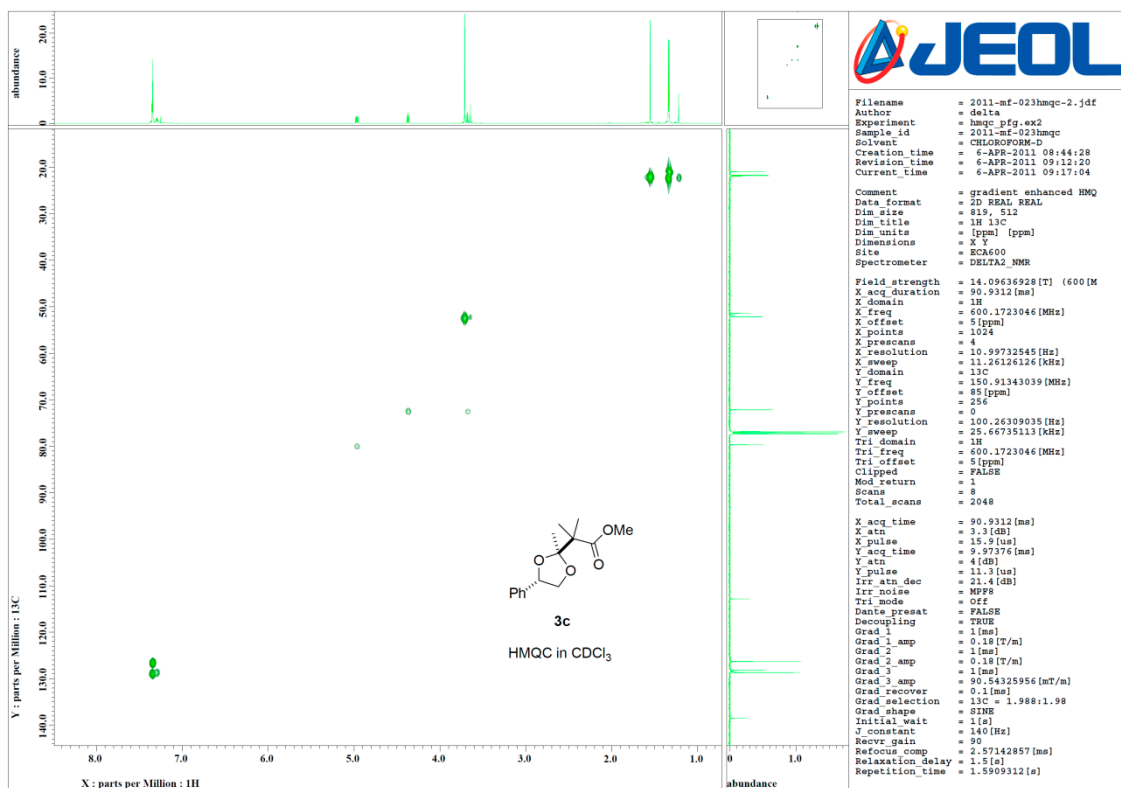
Figure S40. Carbon-13 NMR of 4a.

Figure S41. Proton NMR of **5a**.Figure S42. Carbon-13 NMR of **5a**.



Figure S45. Proton NMR of **5b**.Figure S46. Carbon-13 NMR of **5b**.

Figure S47. Proton NMR of **6**.Figure S48. Carbon-13 NMR of **6**.

Figure S49. NOESY spectrum of **3a**.Figure S50. HMQC spectrum of **3c**.

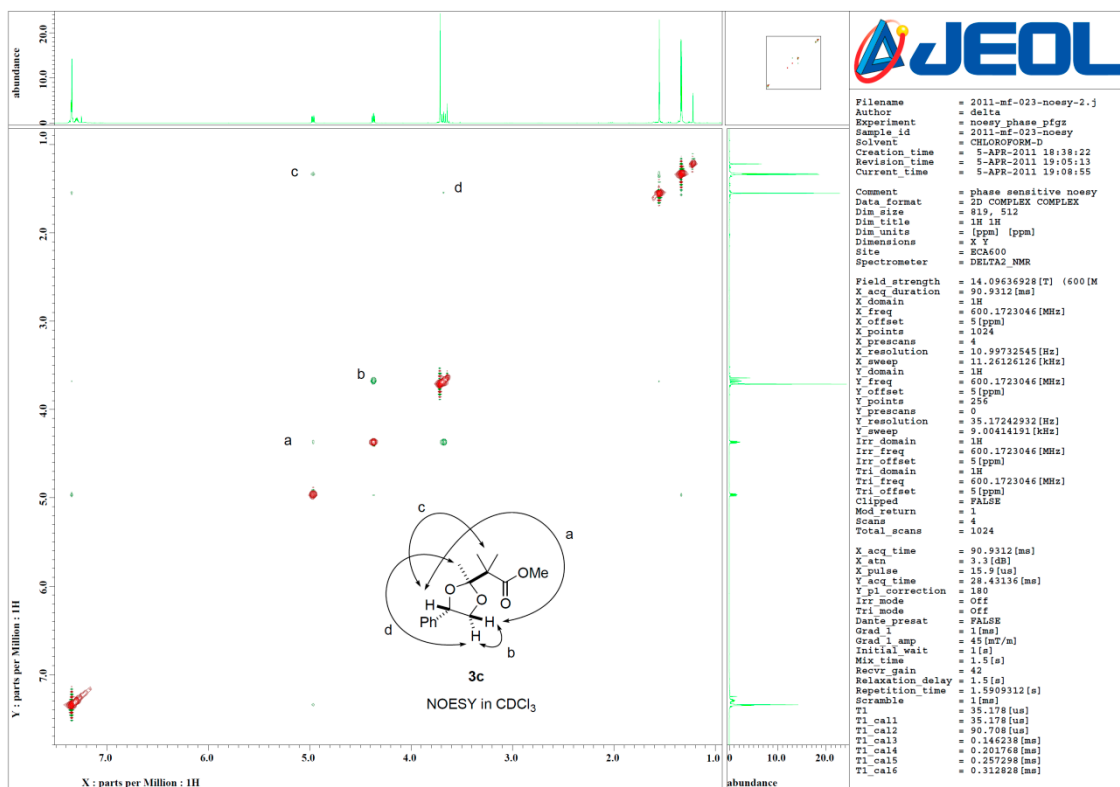


Figure S51. NOESY spectrum of 3c.

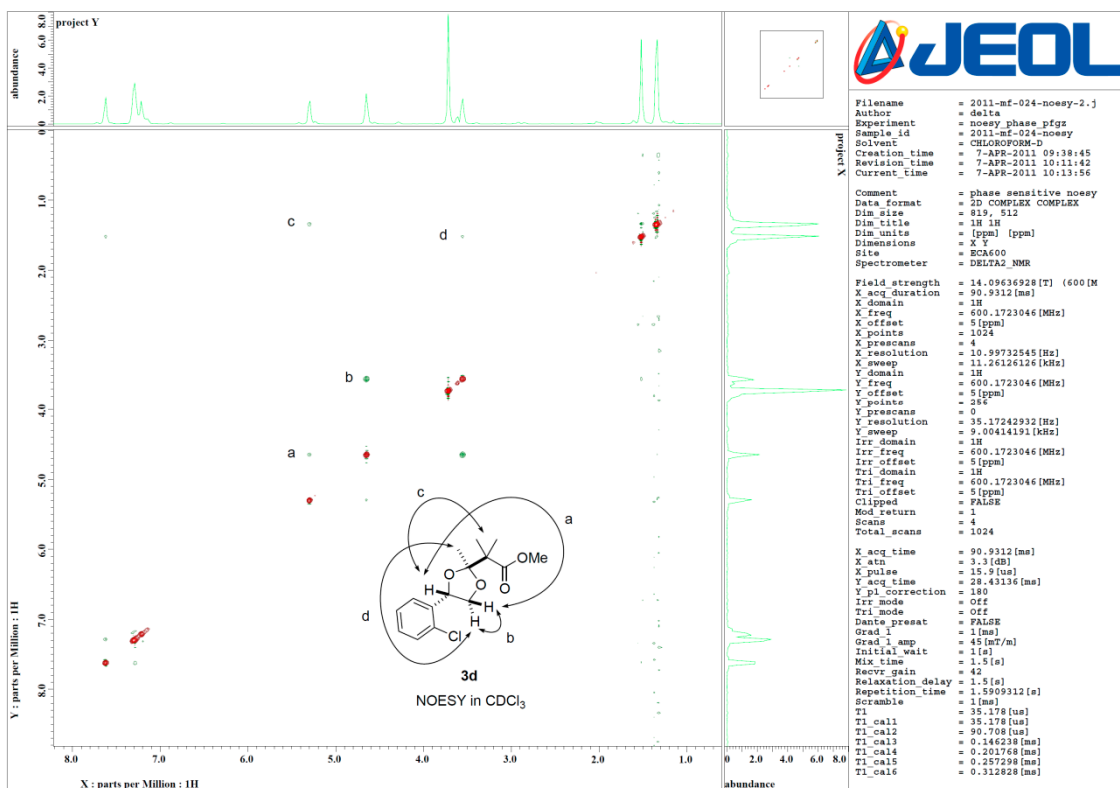


Figure S52. NOESY spectrum of 3d.

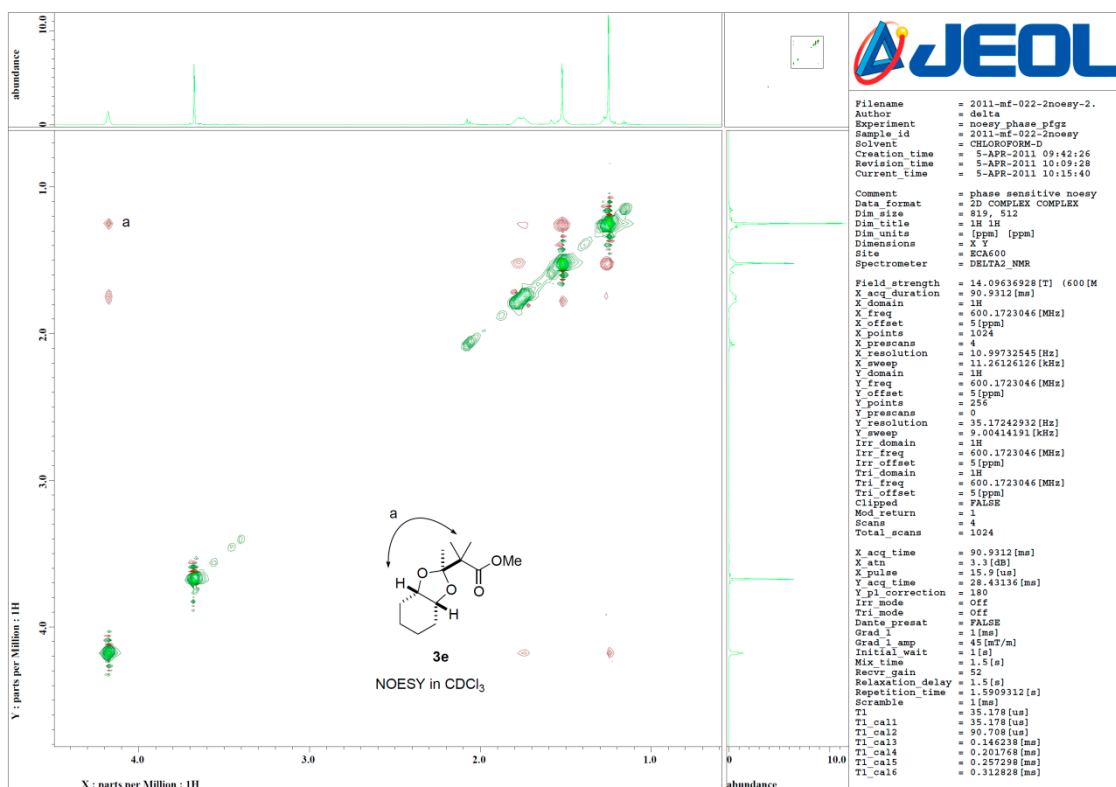


Figure S53. NOESY spectrum of 3e.

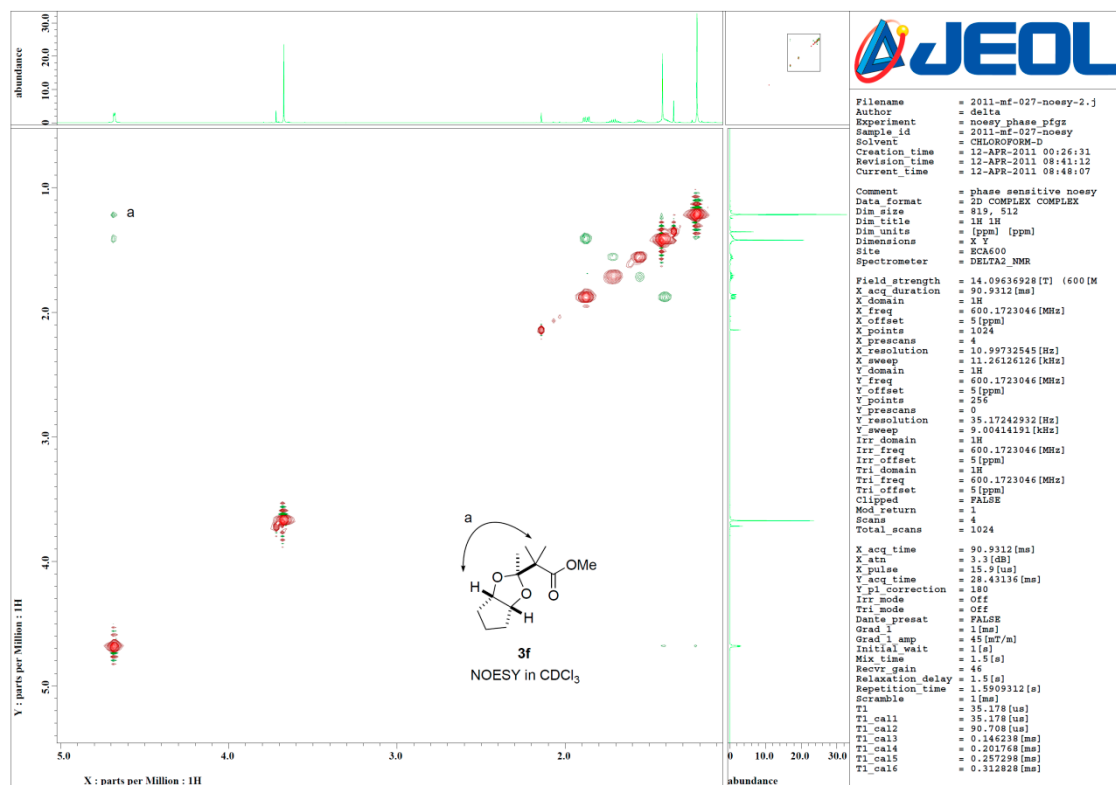
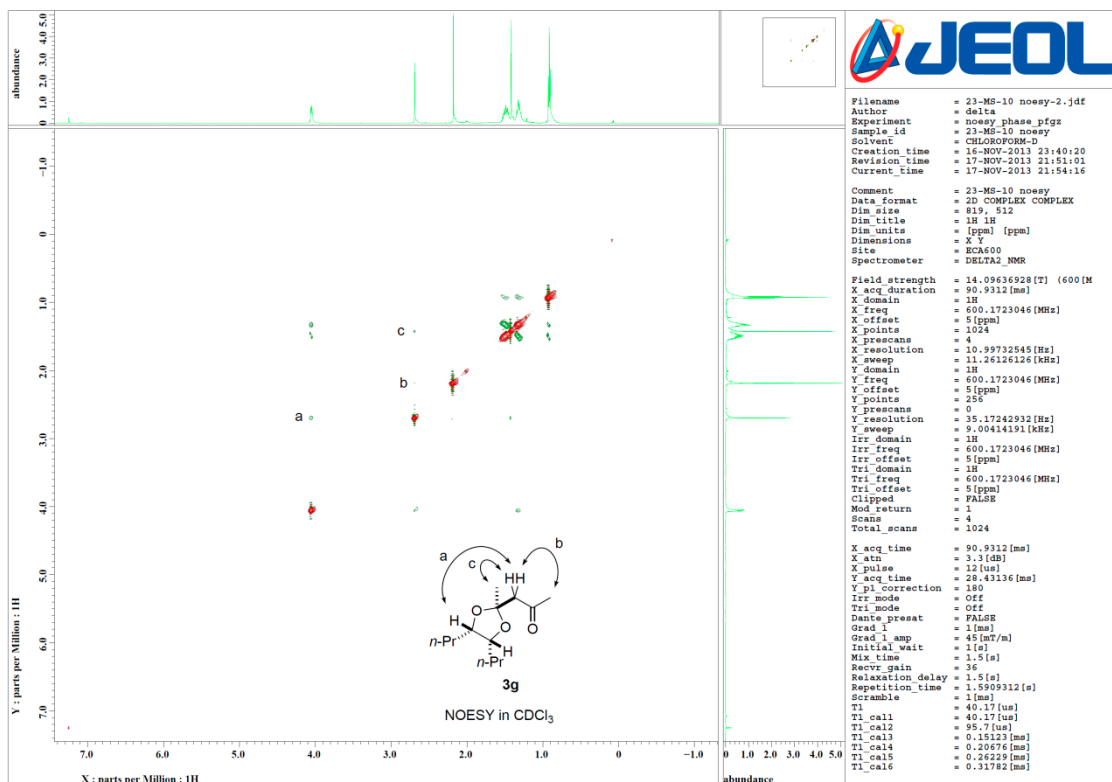
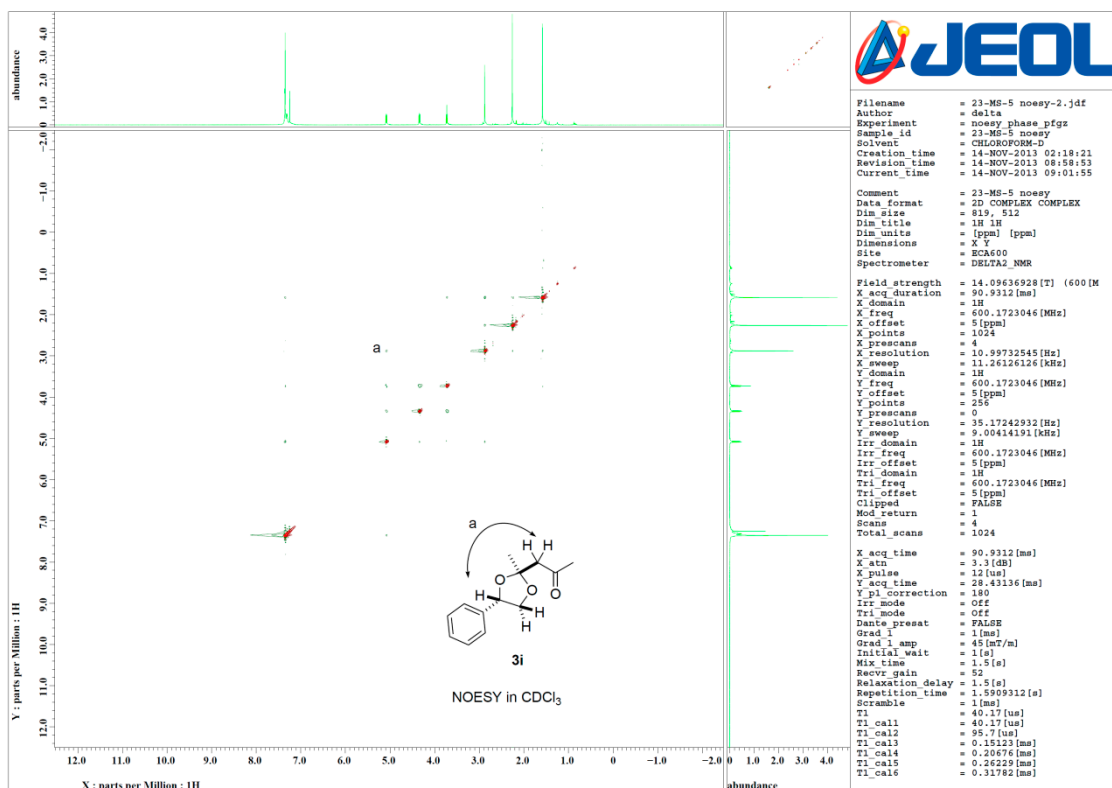


Figure S54. NOESY spectrum of 3f.

Figure S55. NOESY spectrum of **3g**.Figure S56. NOESY spectrum of **3i**.

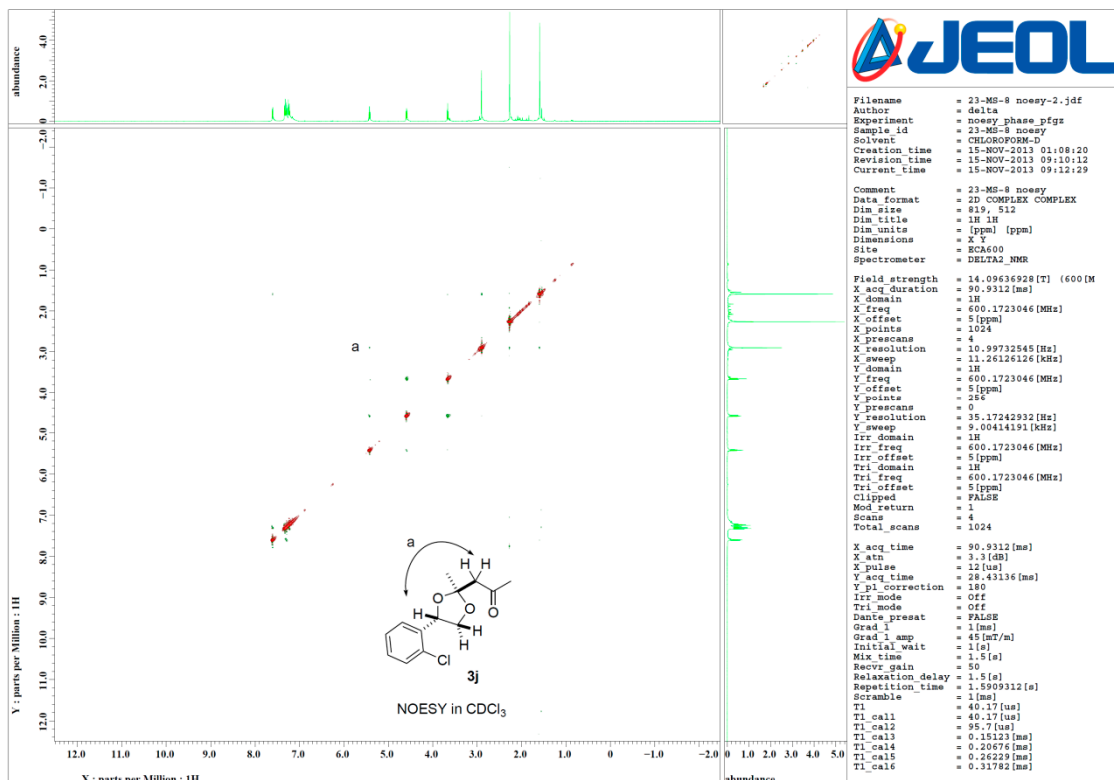


Figure S57. NOESY spectrum of 3j.

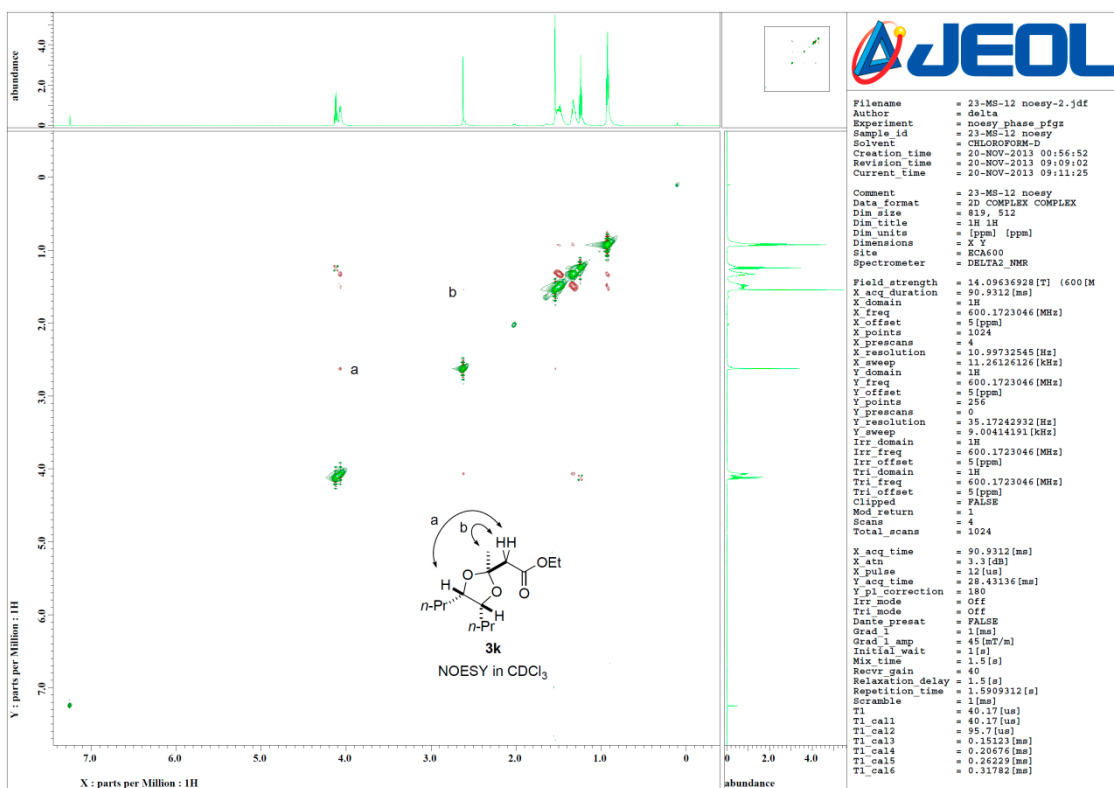
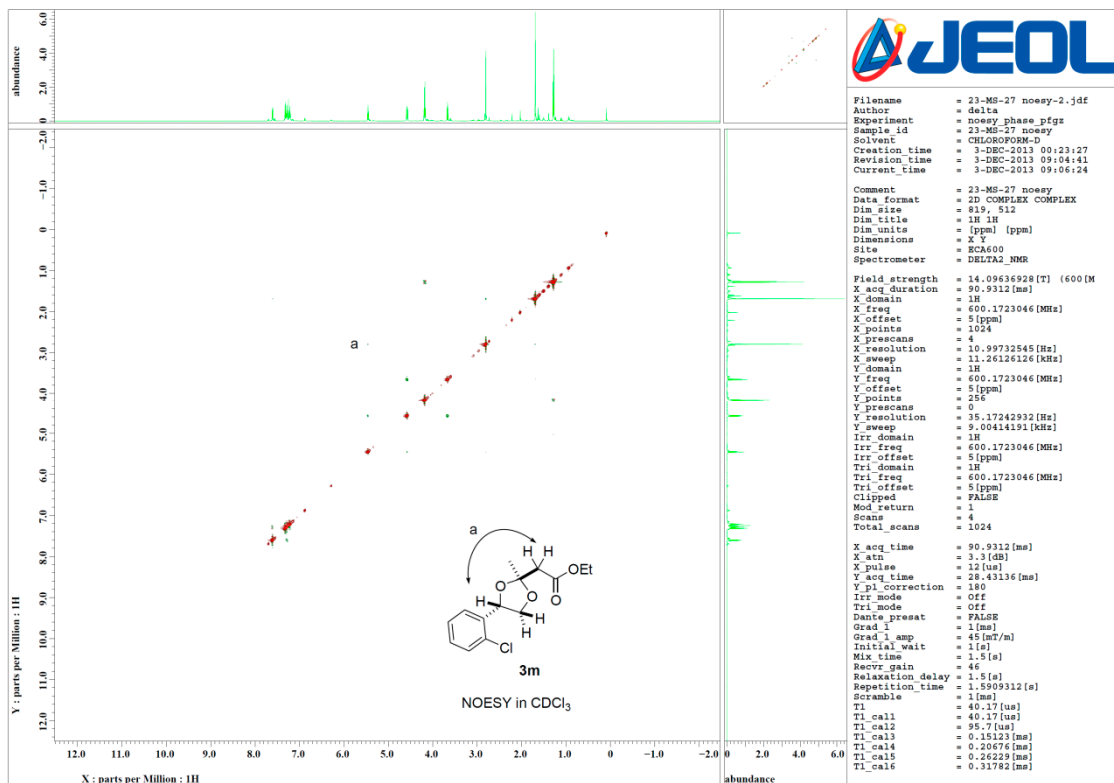
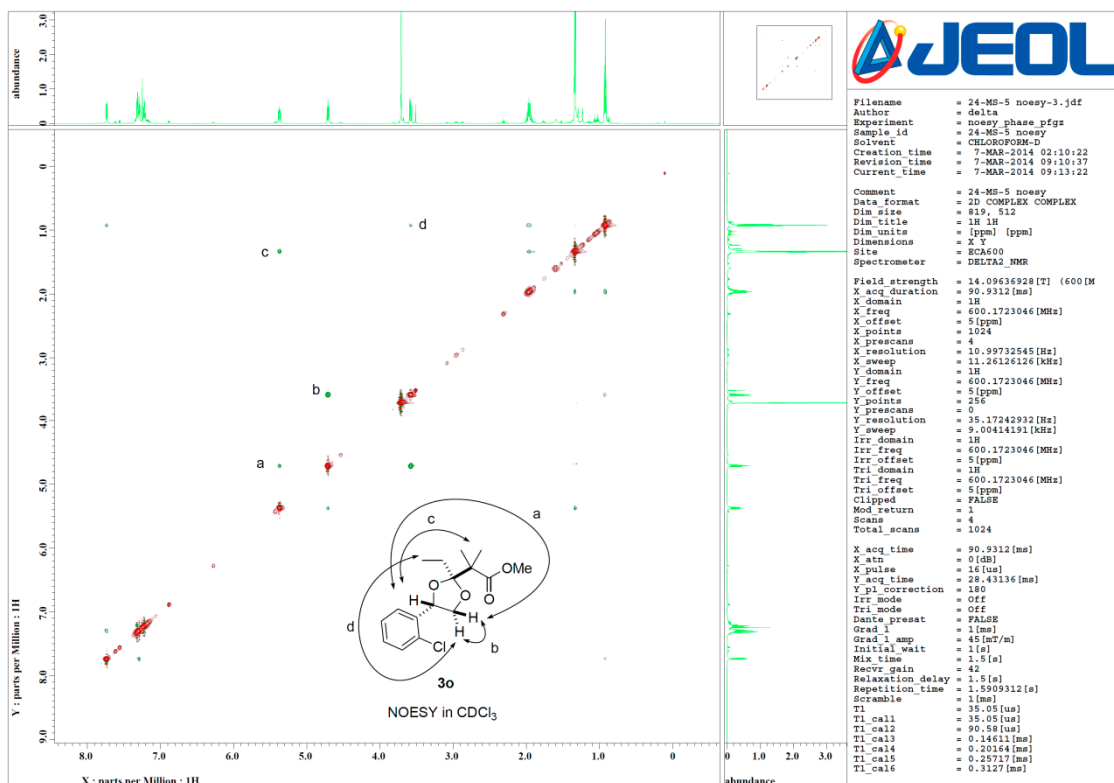
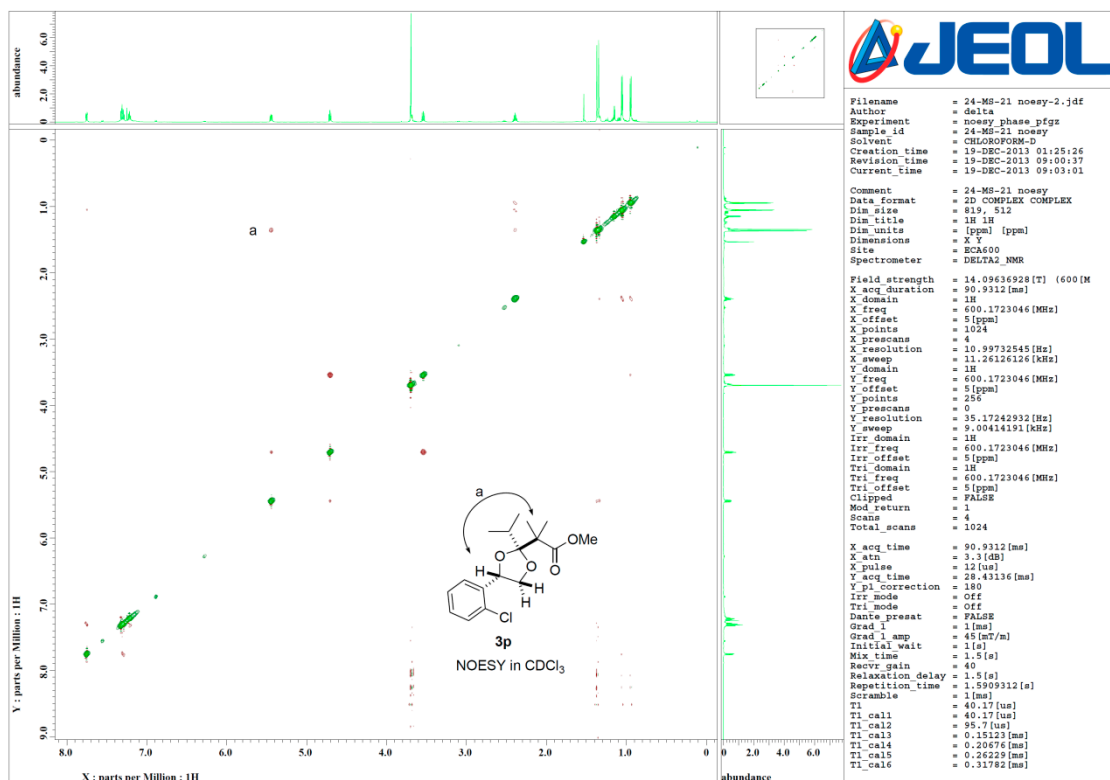
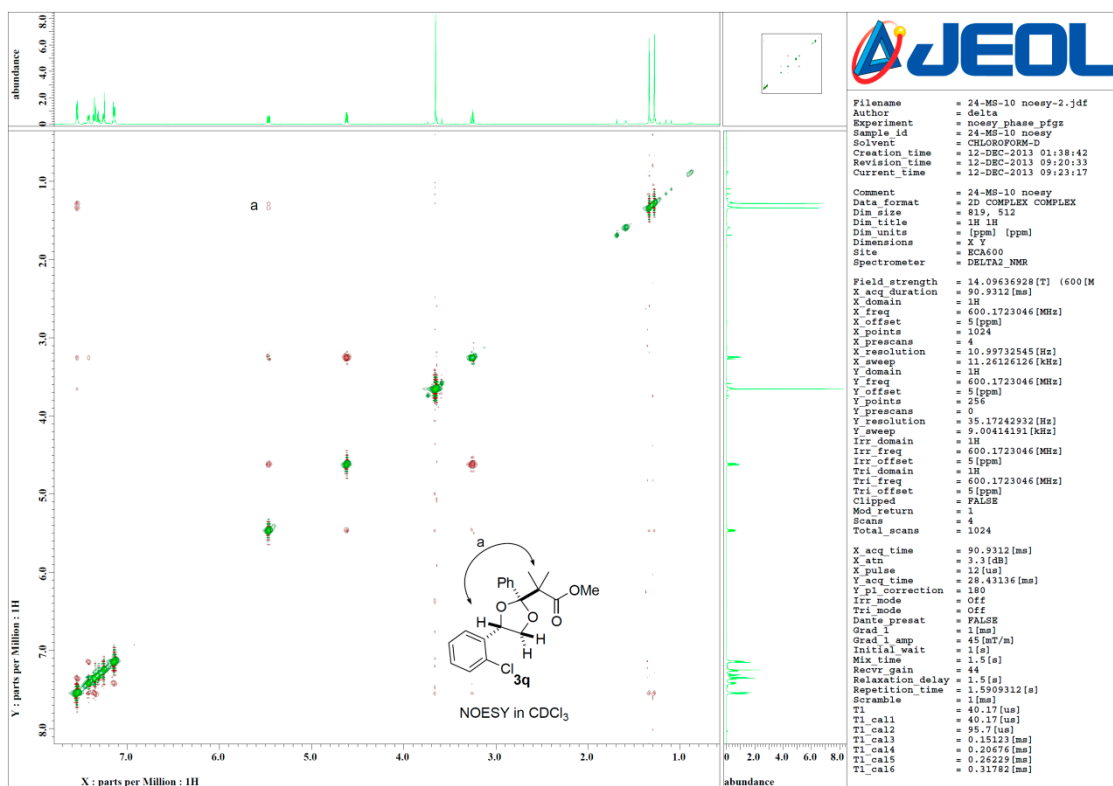


Figure S58. NOESY spectrum of 3k.

Figure S59. NOESY spectrum of **3m**.Figure S60. NOESY spectrum of **3o**.

Figure S61. NOESY spectrum of **3p**.Figure S62. NOESY spectrum of **3q**.

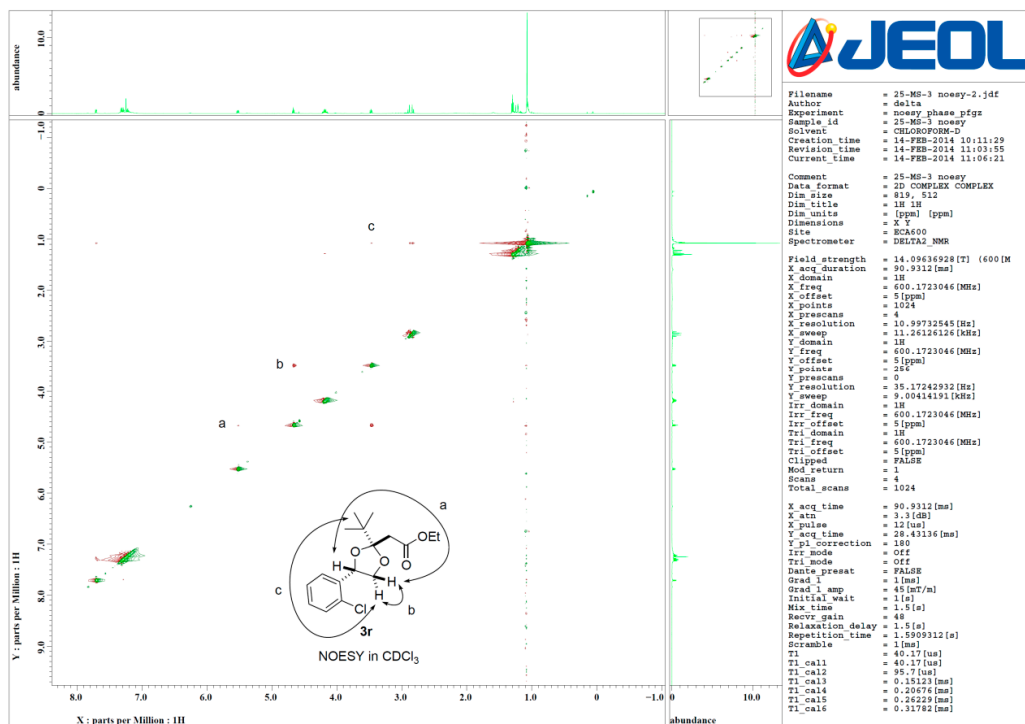
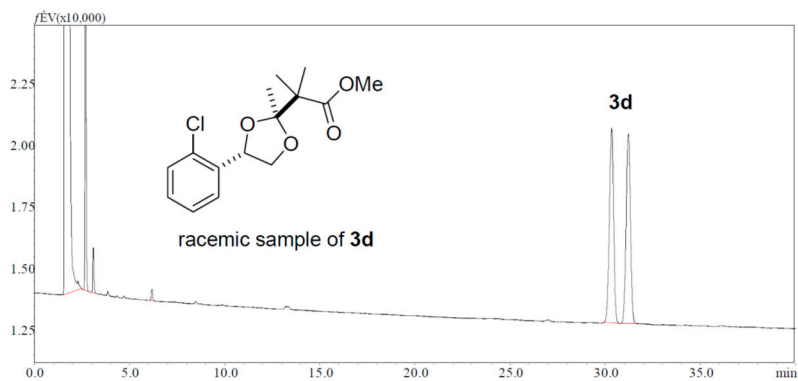
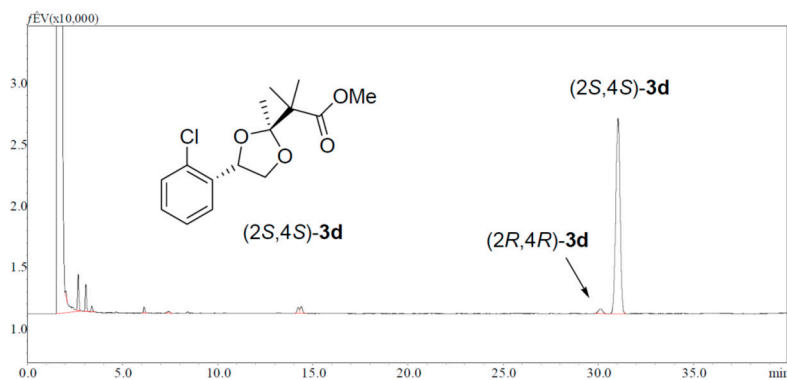


Figure S63. NOESY spectrum of **3r**.

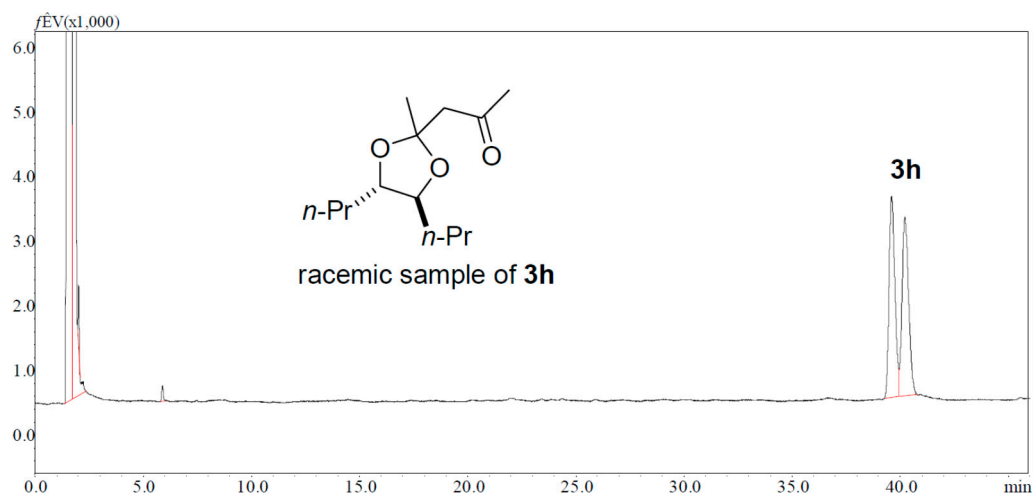


GC trace of racemic sample of **3d** (DEX-CB column at 160 °C).

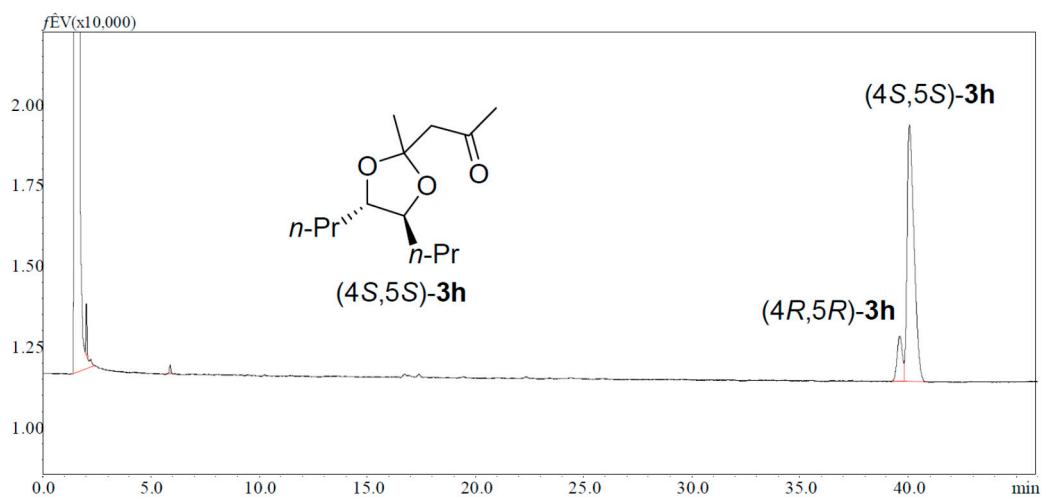


GC trace of optically active **3d** (DEX-CB column at 160 °C).

Figure S64. GC traces of **3d**.

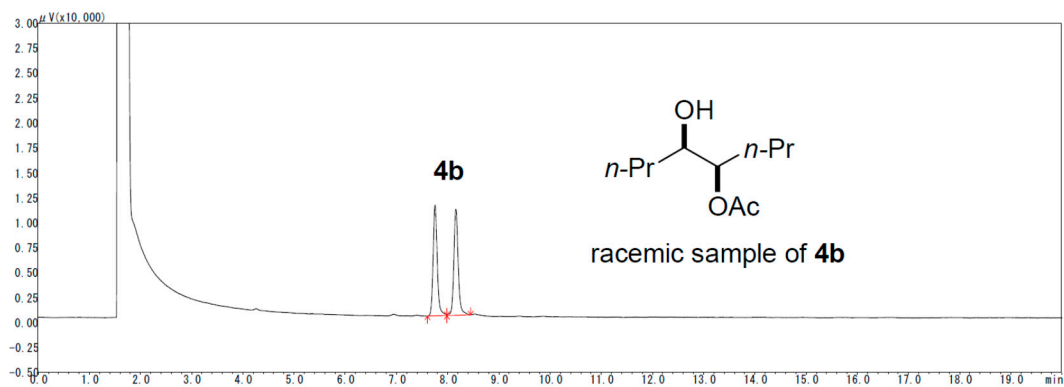


GC trace of racemic sample of **3h** (DEX–CB column 100 °C).

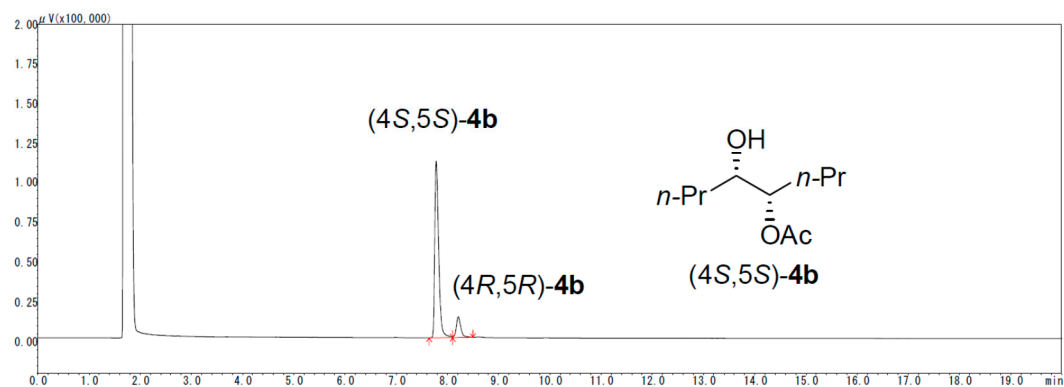


GC trace of optically active **3h** (DEX–CB column at 100 °C).

Figure S65. GC traces of **3h**.

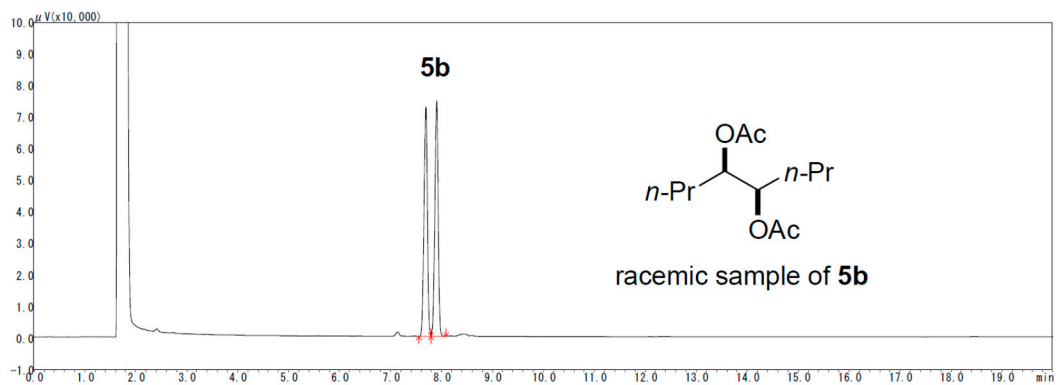


GC trace of racemic sample of **4b** (DEX–CB column at 130 °C).

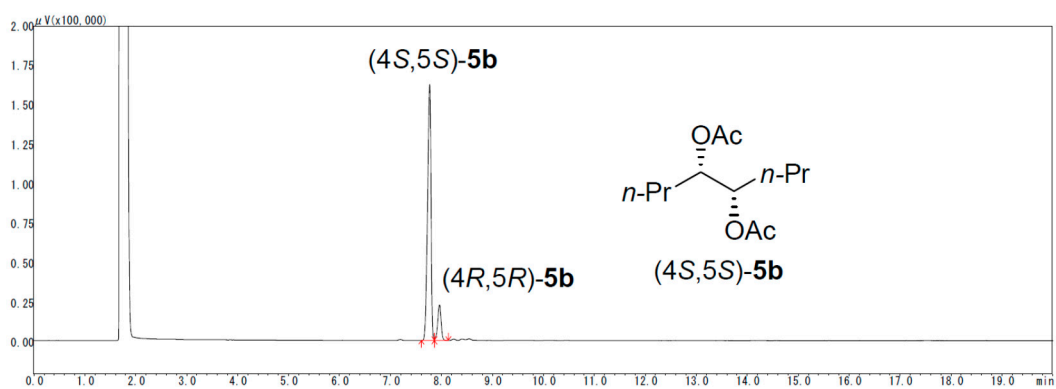


GC trace of optically active **4b** (DEX–CB column at 130 °C).

Figure S66. GC traces of **4b**.



GC trace of racemic sample of **5b** (DEX-CB column at 130 °C).



GC trace of optically active **5b** (DEX-CB column at 130 °C).

Figure S67. GC traces of **5b**.