

SUPPORTING INFORMATION

Facile Synthesis of Dimeric Titanium (IV) Complex with Terminal Ti=O Moiety and Its Application as a Catalyst for Cycloaddition Reaction of CO₂ to Epoxides

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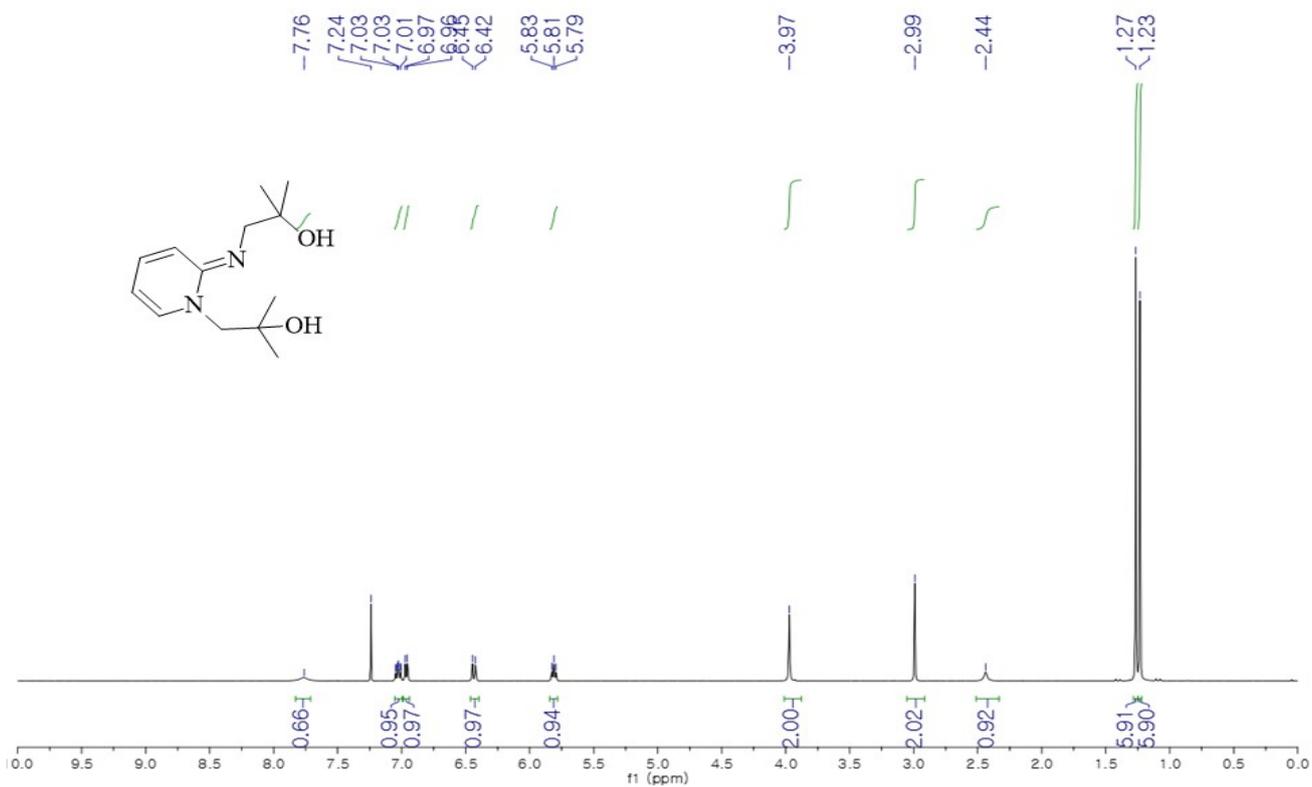


Figure S1. ^1H NMR spectrum of $\text{HOCMe}_2\text{CH}_2\text{NC}_5\text{H}_4\text{NCH}_2\text{CMe}_2\text{OH}$ (LH_2) in CDCl_3

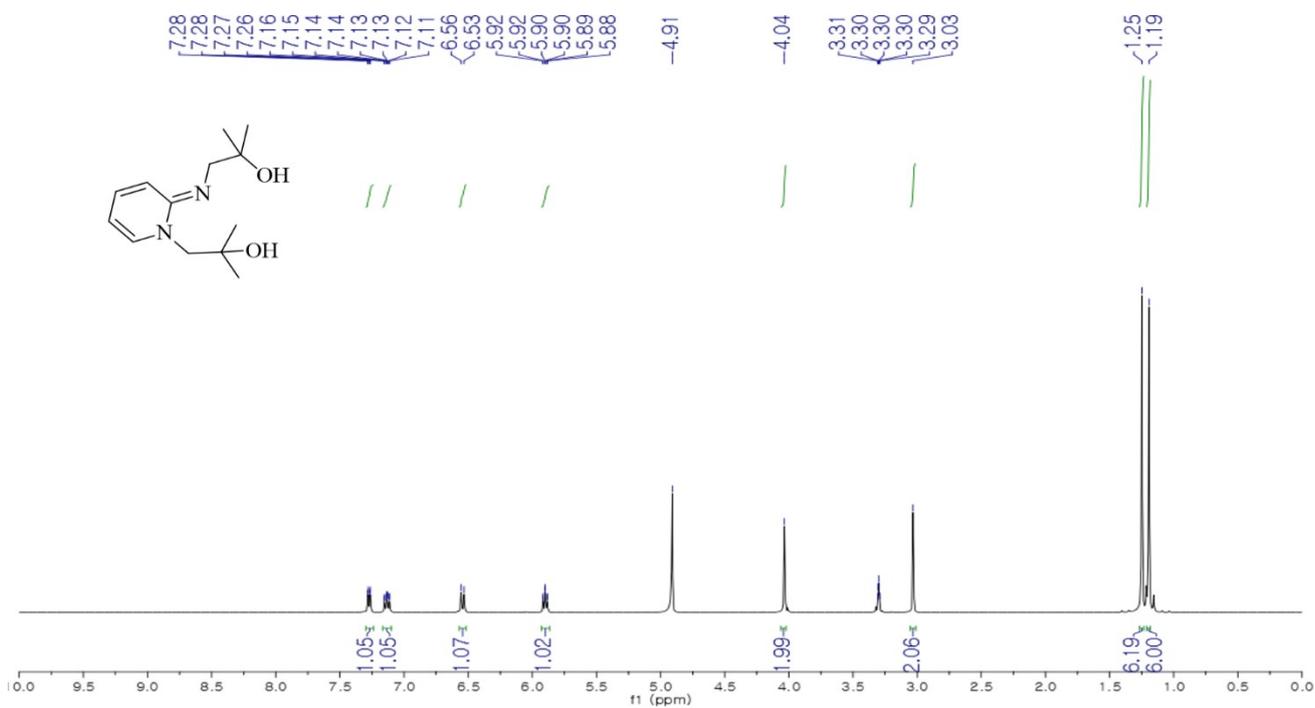


Figure S2. ^1H NMR spectrum of $\text{HOCMe}_2\text{CH}_2\text{NC}_5\text{H}_4\text{NCH}_2\text{CMe}_2\text{OH}$ (LH_2) in CD_3OD

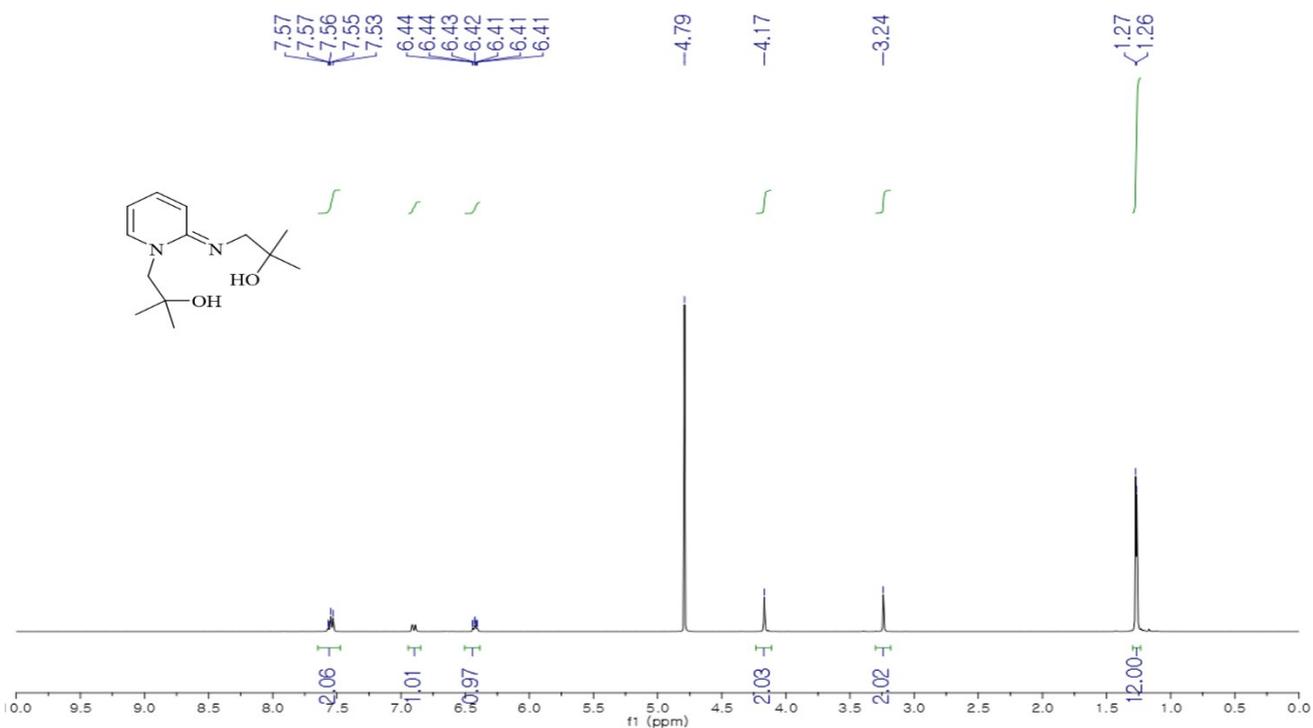


Figure S3. ^1H NMR spectrum of $\text{HOCMe}_2\text{CH}_2\text{NC}_5\text{H}_4\text{NCH}_2\text{CMe}_2\text{OH}$ (LH_2) in D_2O

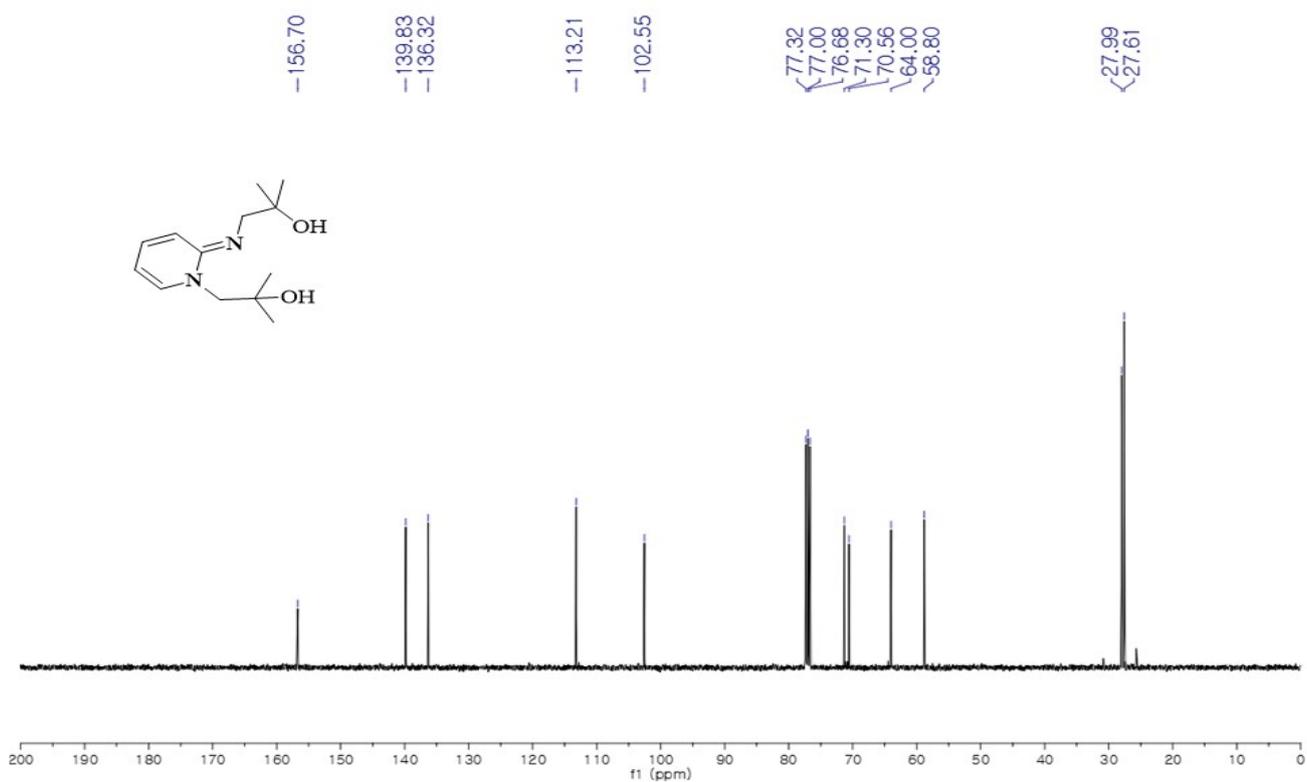


Figure S4. ^{13}C NMR spectrum of $\text{HOCMe}_2\text{CH}_2\text{NC}_5\text{H}_4\text{NCH}_2\text{CMe}_2\text{OH}$ (LH_2) in CDCl_3

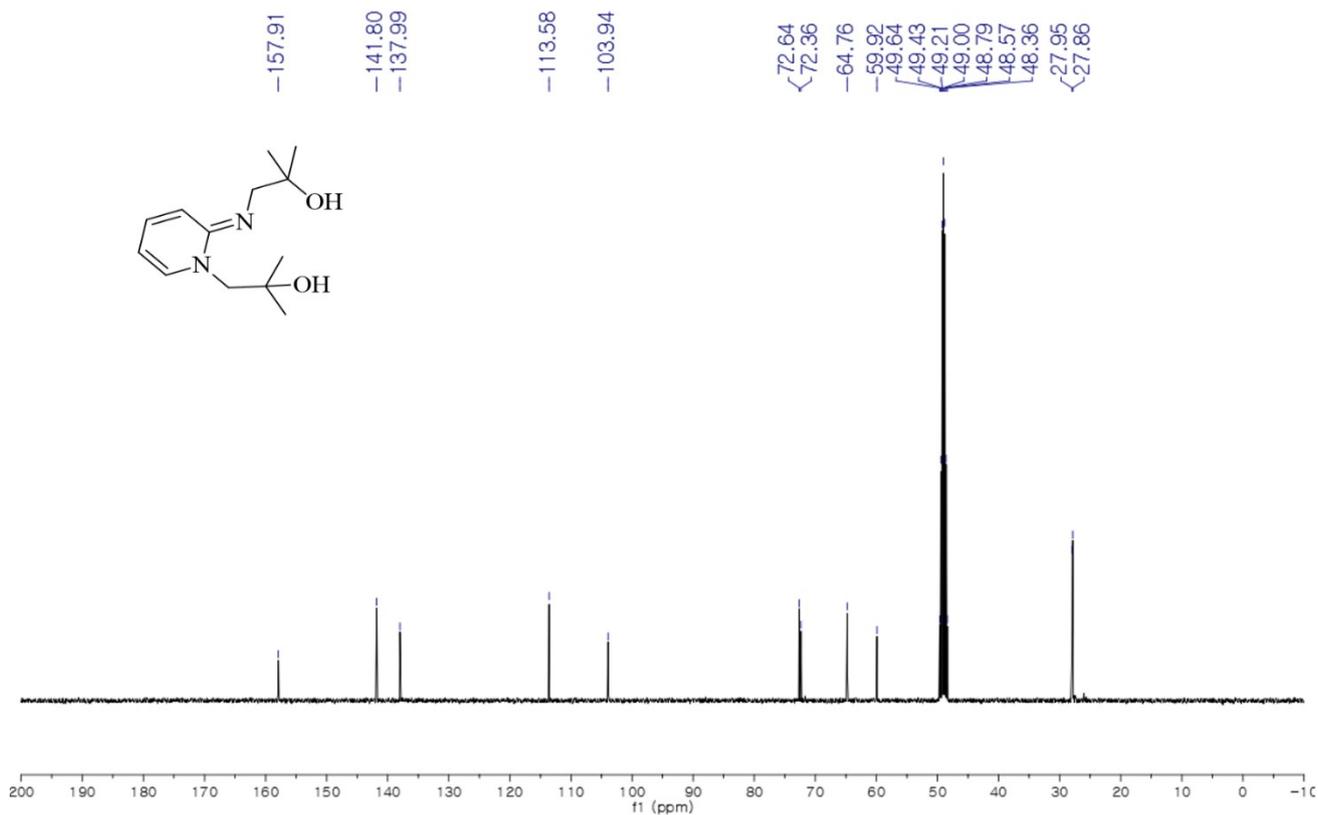


Figure S5. ¹³C NMR spectrum of HOCE₂CH₂NC₅H₄NCH₂CME₂OH (LH₂) in CD₃OD

C₁₃H₂₂N₂O₂, M+nH ,239.18

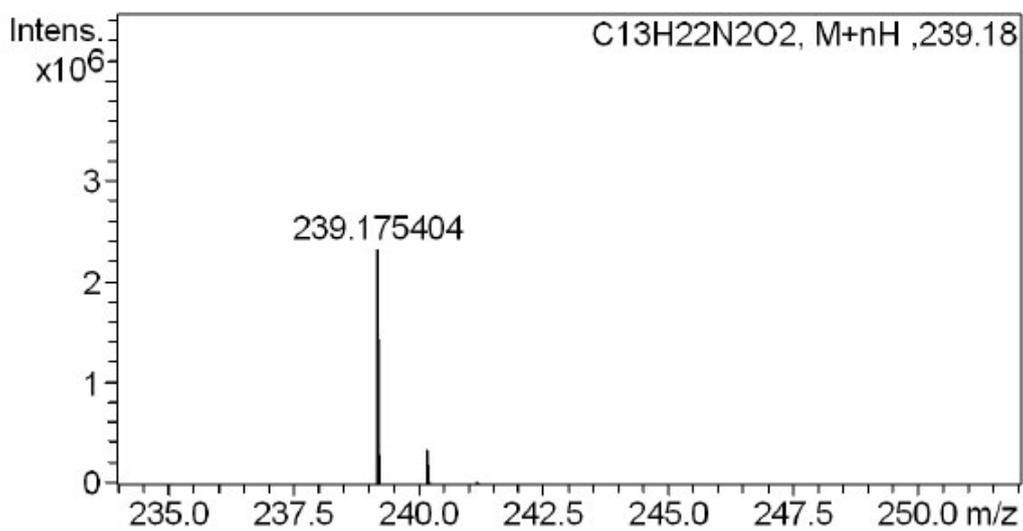


Figure S6. HRMS Spectrum of HOCE₂CH₂NC₅H₄NCH₂CME₂OH (LH₂)
(HRMS m/z calcd for C₁₃H₂₂N₂O₂ 239.1760, found 239.1754.)

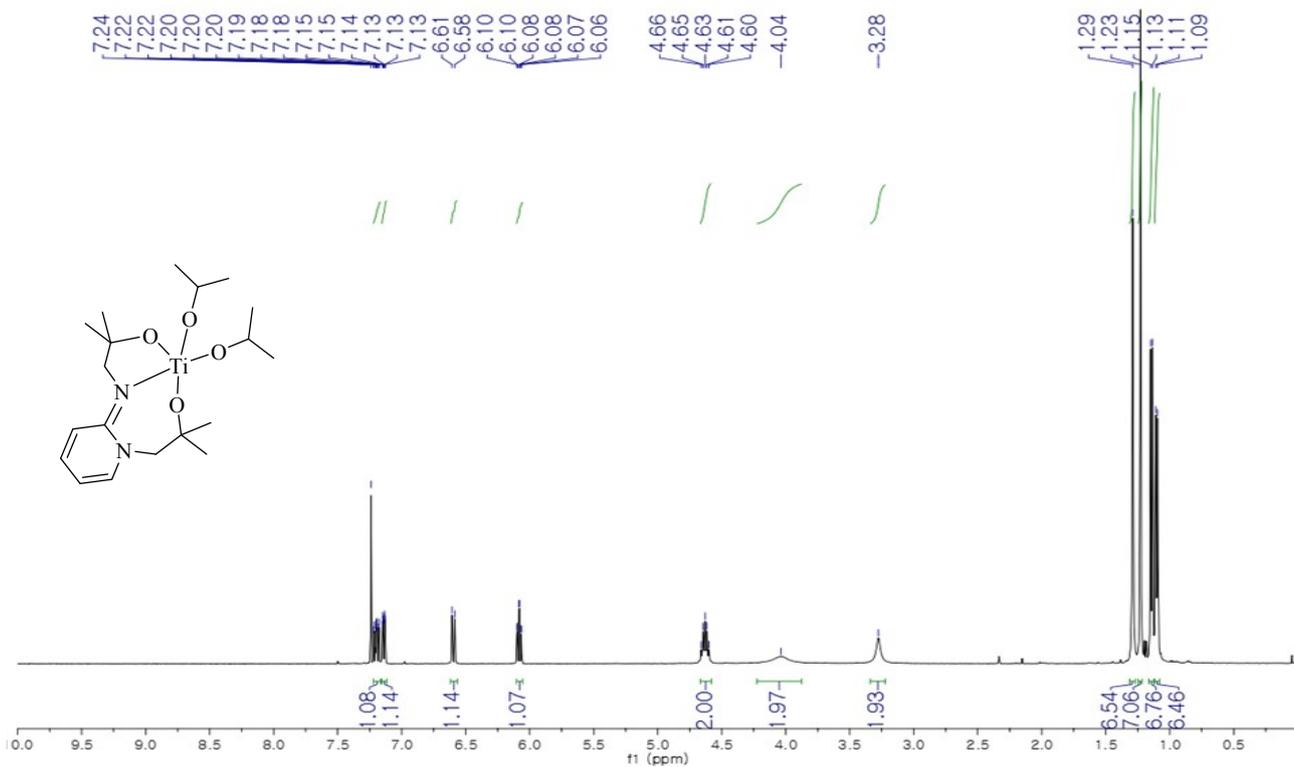


Figure S7. ^1H NMR spectrum of $\text{LTi}(\text{O-}i\text{Pr})_2$ (1) in CDCl_3

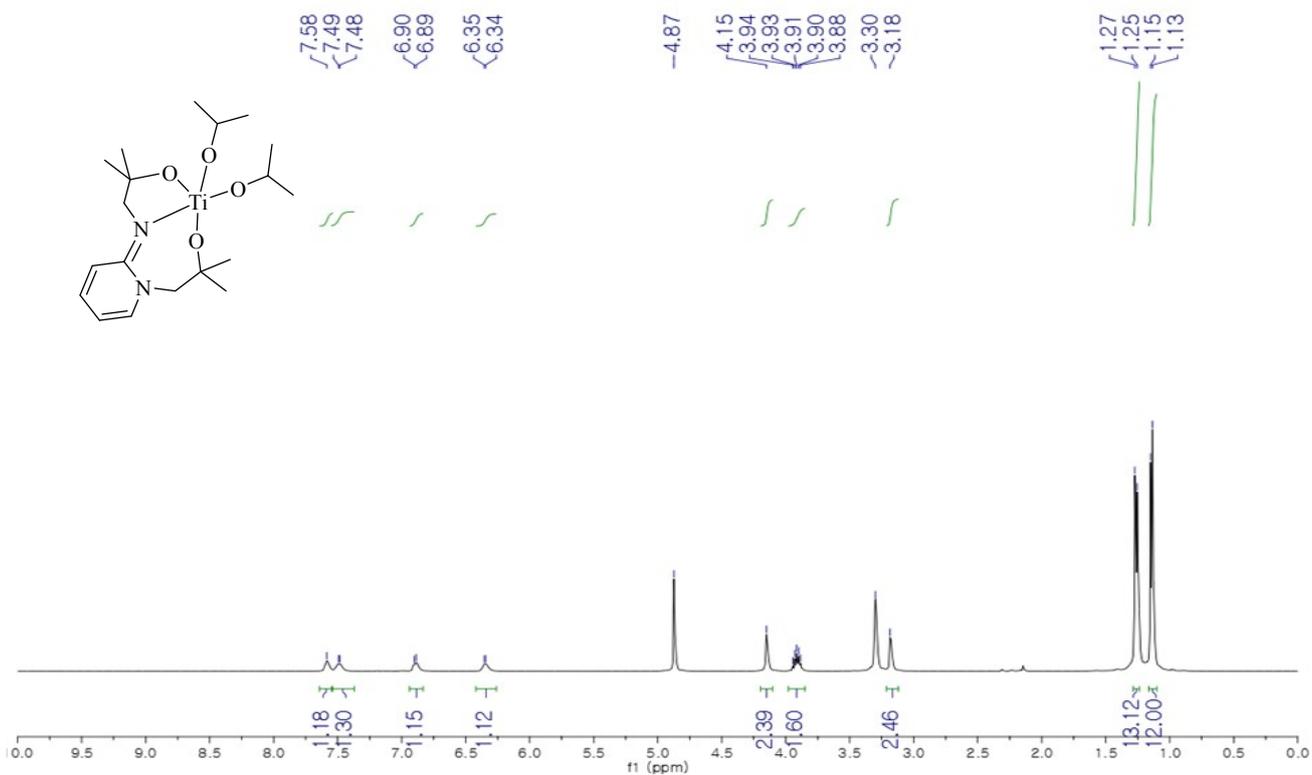


Figure S8. ^1H NMR spectrum of $\text{LTi}(\text{O-}i\text{Pr})_2$ (1) in CD_3OD

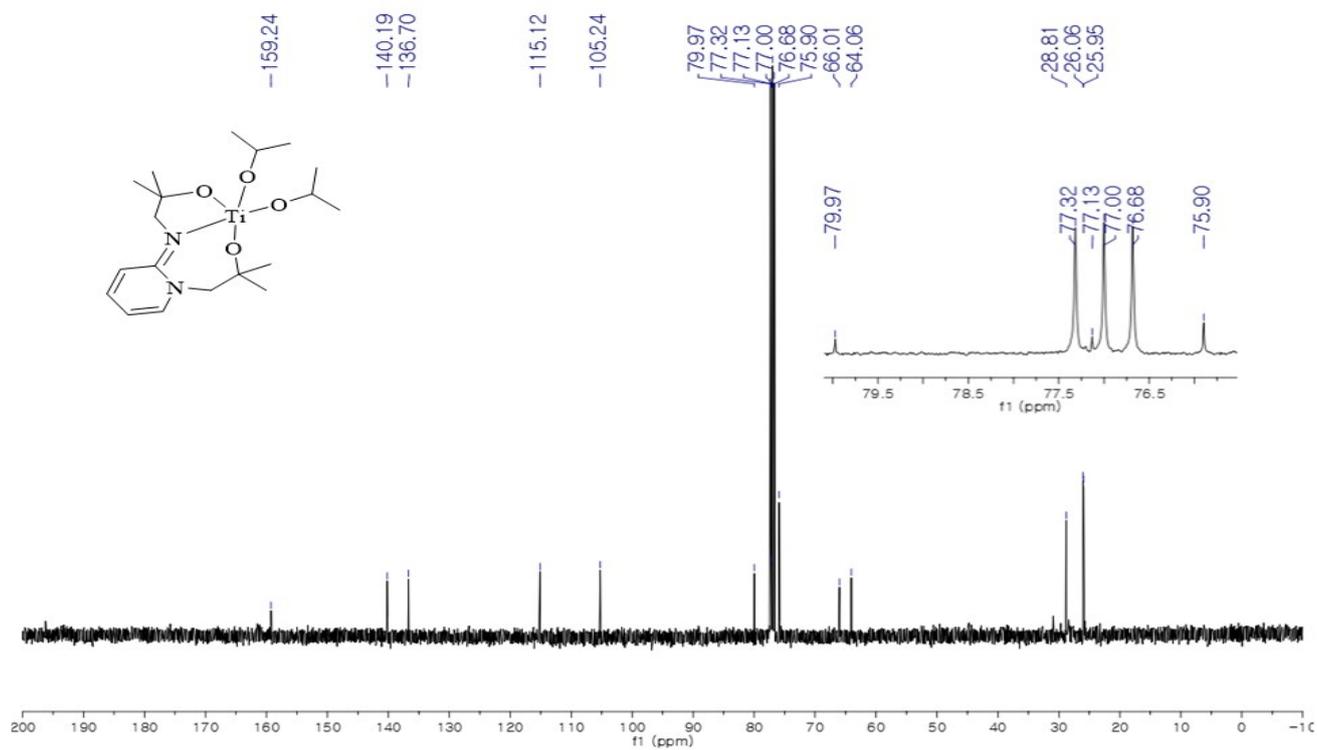


Figure S9. ^{13}C NMR spectrum of $\text{LTi}(\text{O-}i\text{Pr})_2$ (**1**) in CDCl_3

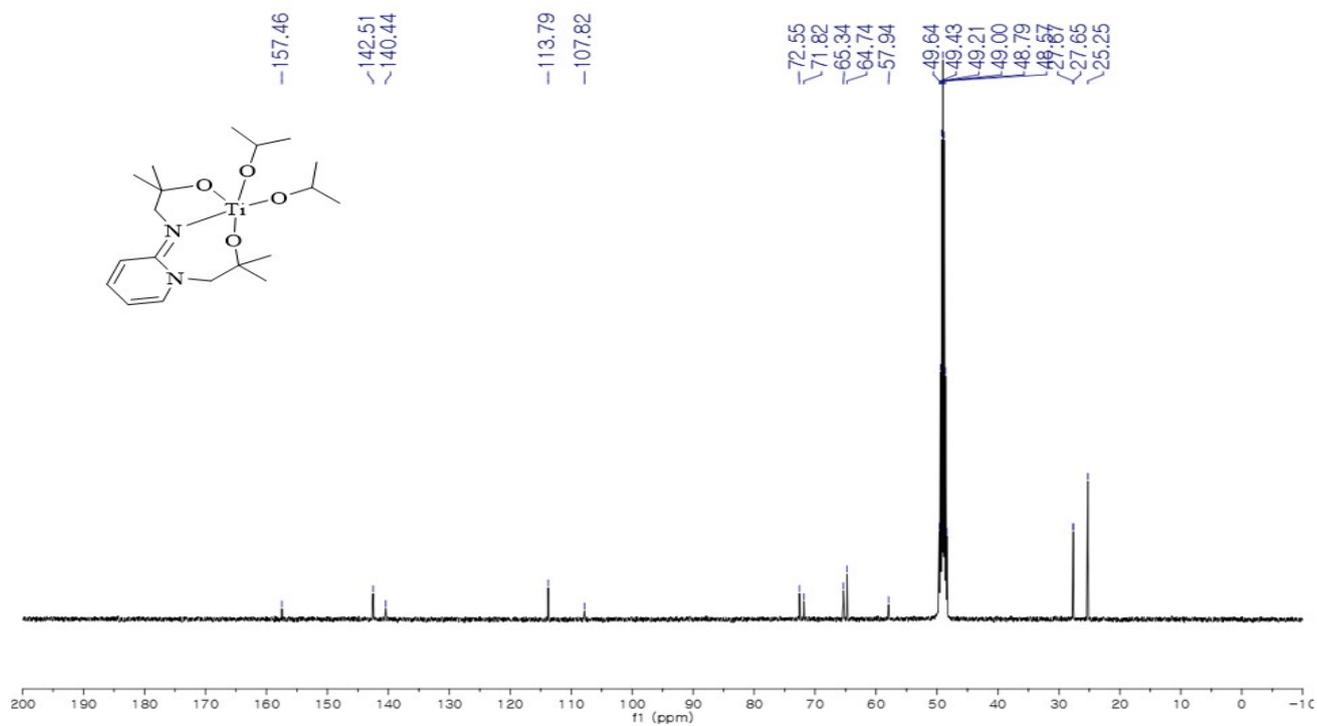


Figure S10. ^{13}C NMR spectrum of $\text{LTi}(\text{O-}i\text{Pr})_2$ (**1**) in CD_3OD

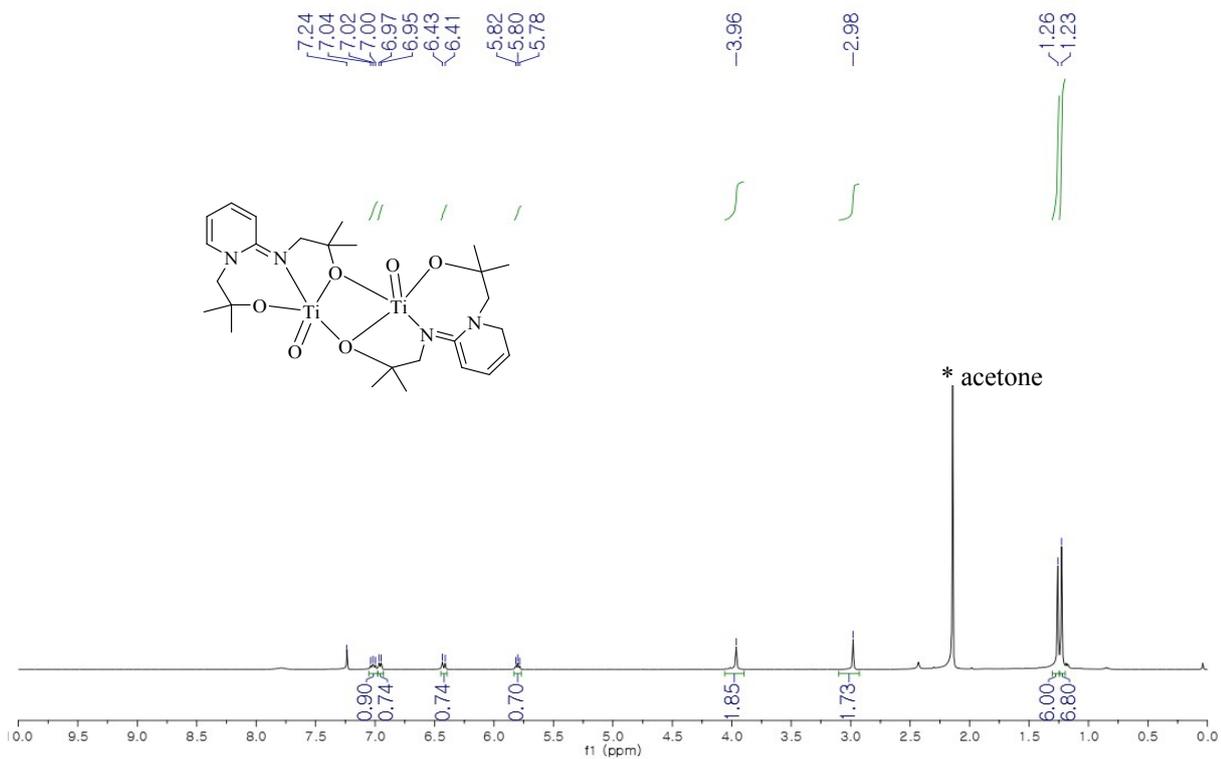


Figure S11. 1H NMR spectrum of $[LTi(=O)]_2$ (**2**) in $CDCl_3$

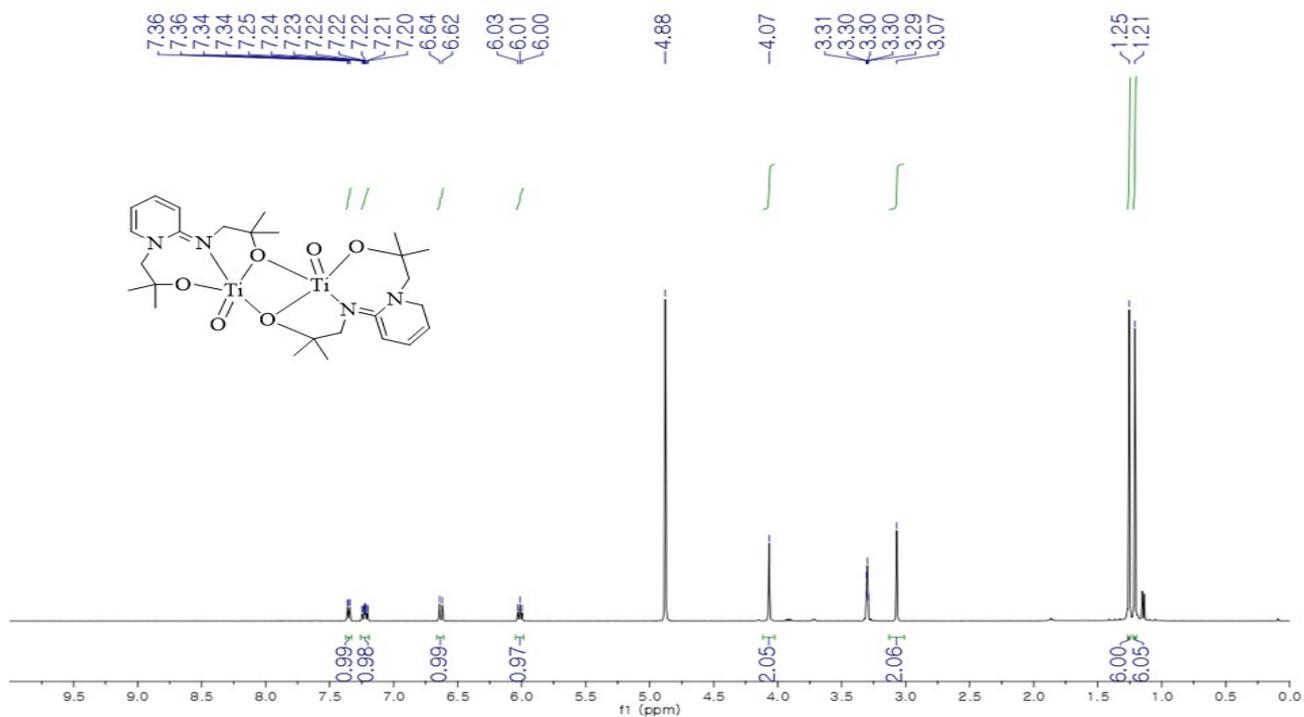


Figure S12. 1H NMR spectrum of $[LTi(=O)]_2$ (**2**) in CD_3OD

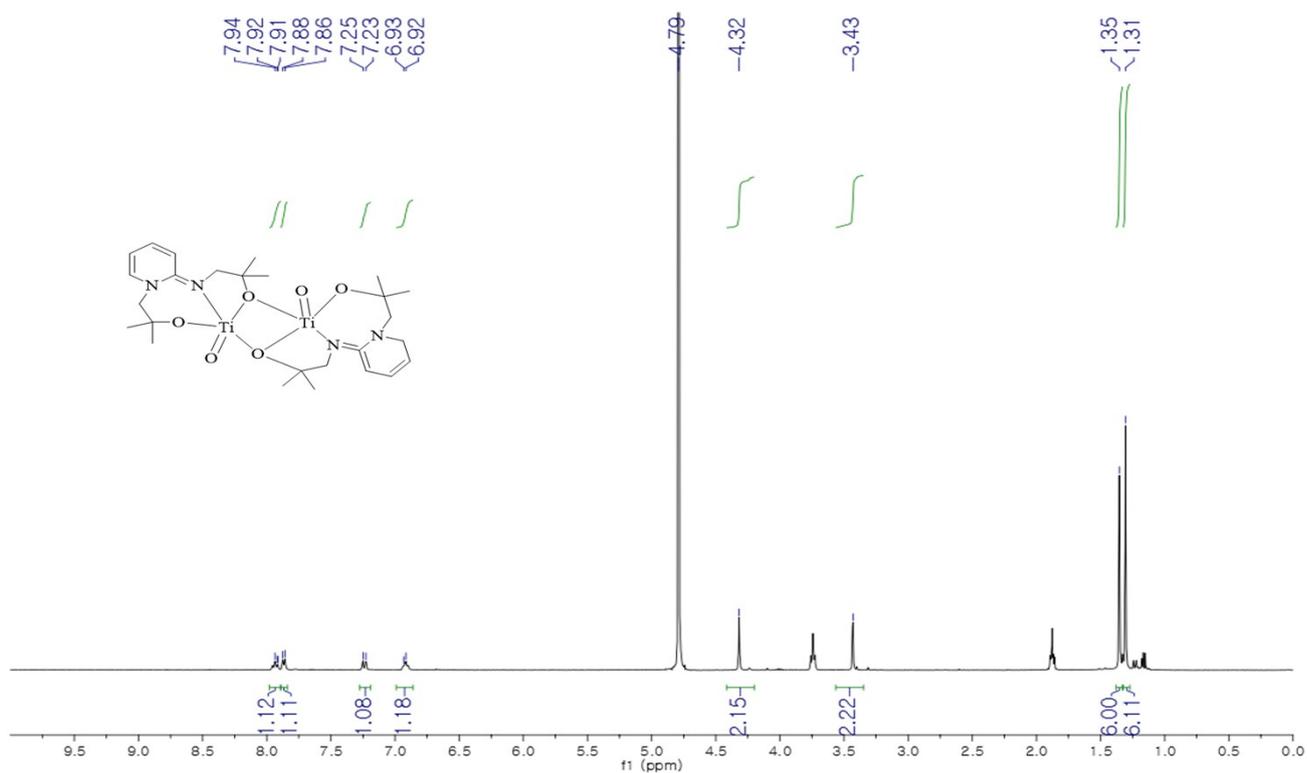


Figure S13. 1H NMR spectrum of $[LTi(=O)]_2$ (2) in D_2O

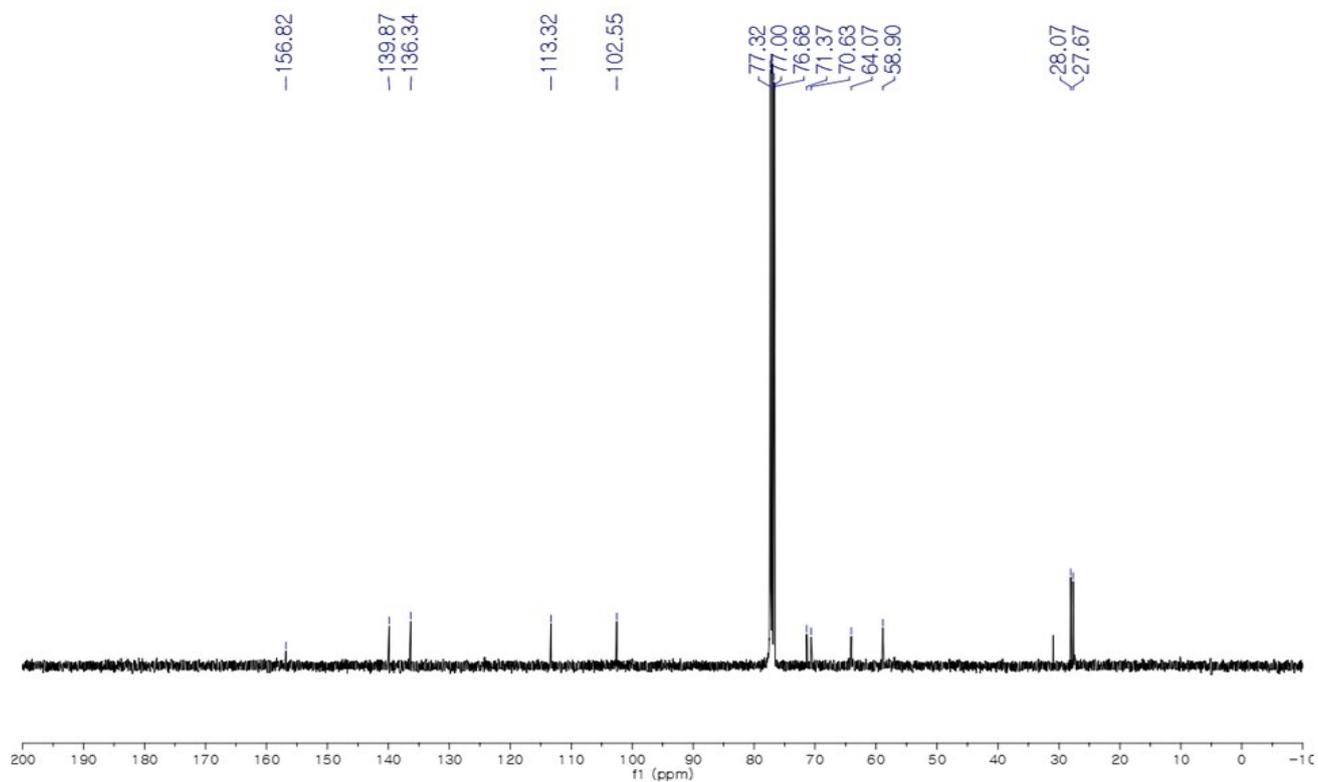


Figure S14. ^{13}C NMR spectrum of $[LTi(=O)]_2$ (2) in $CDCl_3$

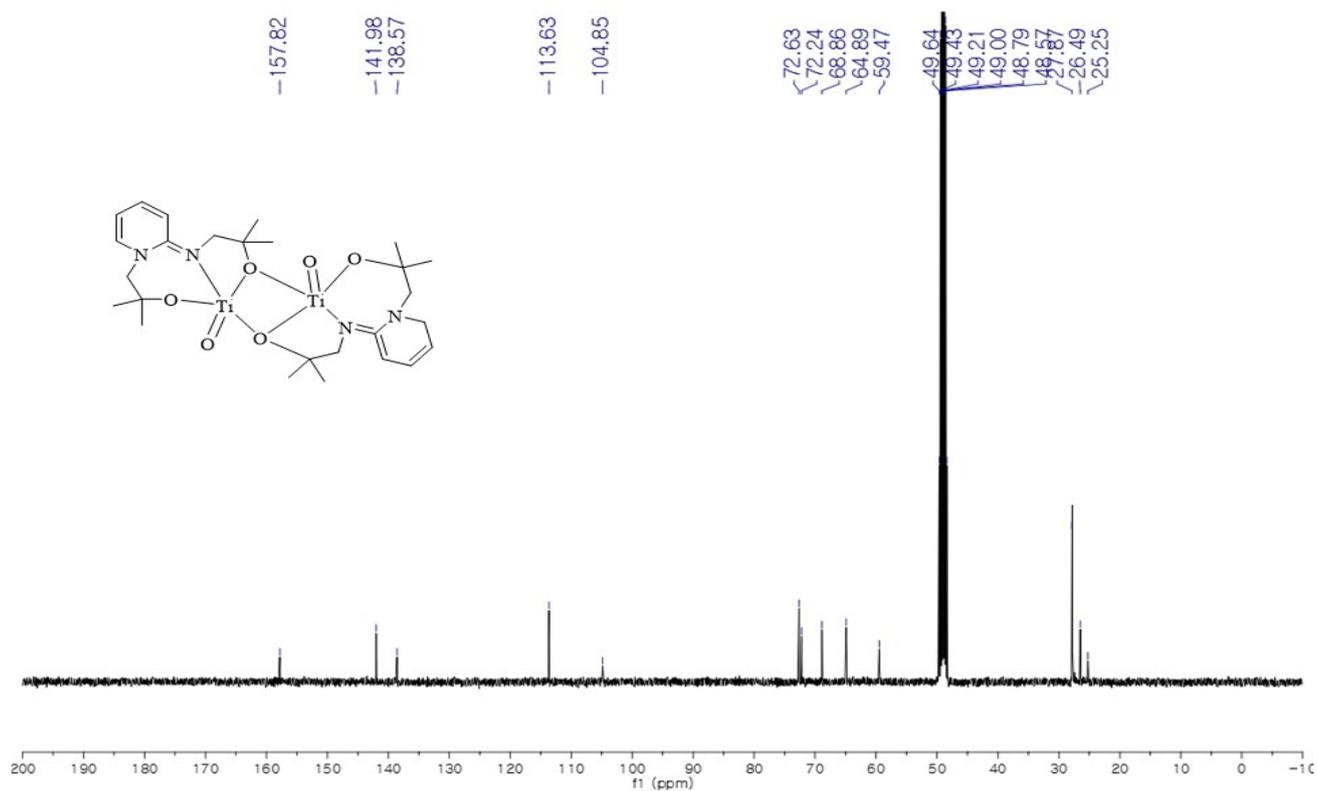


Figure S15. ^{13}C NMR spectrum of $[LTi(=O)]_2$ (2) in CD_3OD



Figure S16. 1H NMR spectrum in $CDCl_3$ for the compound obtained after wet air bubbling of $LTi(O-iPr)_2$ (1)

$i\text{Pr}_2$ (**1**)

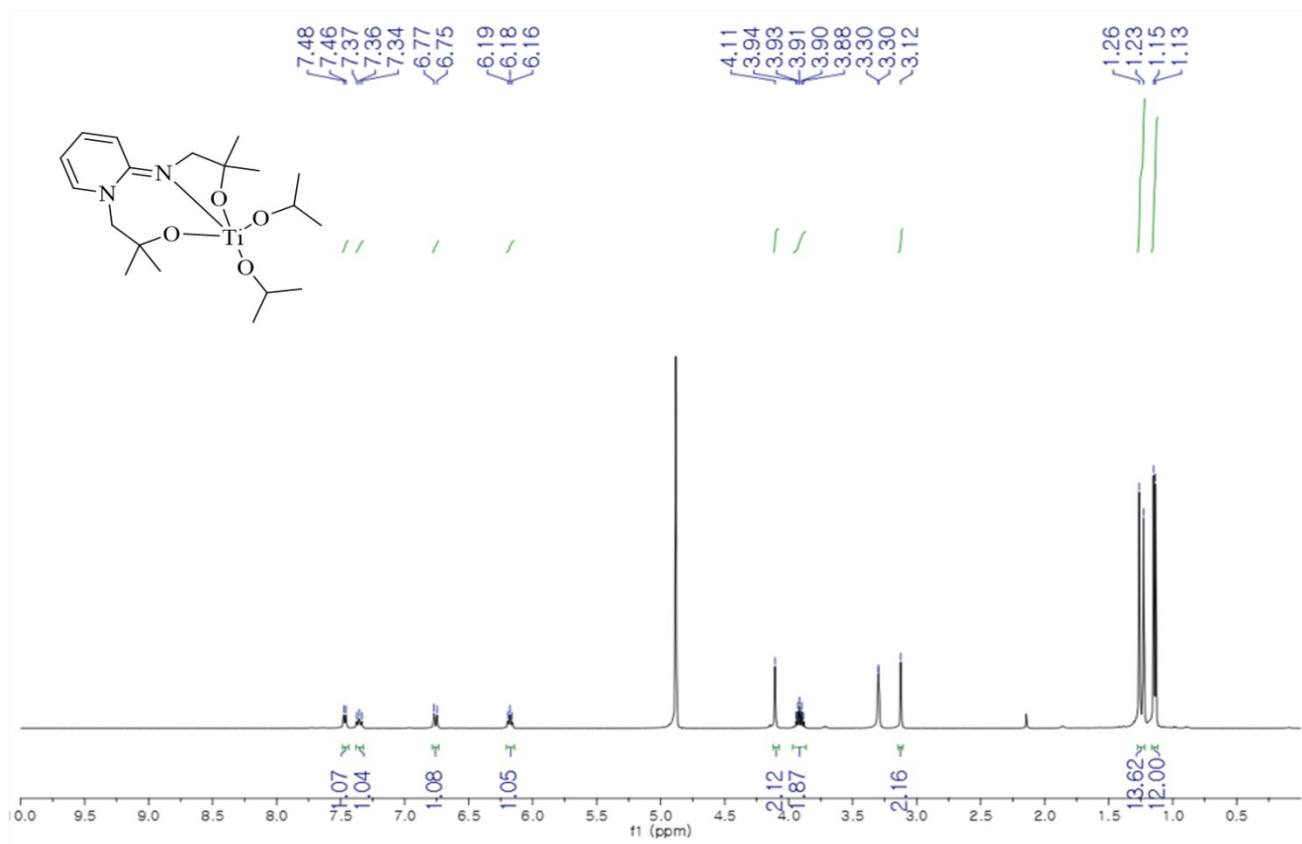


Figure S18. ^1H NMR spectrum in CD_3OD in CD_3OD for the compound after dry air bubbling of $\text{LTi}(\text{O}-i\text{Pr})_2$ (**1**)

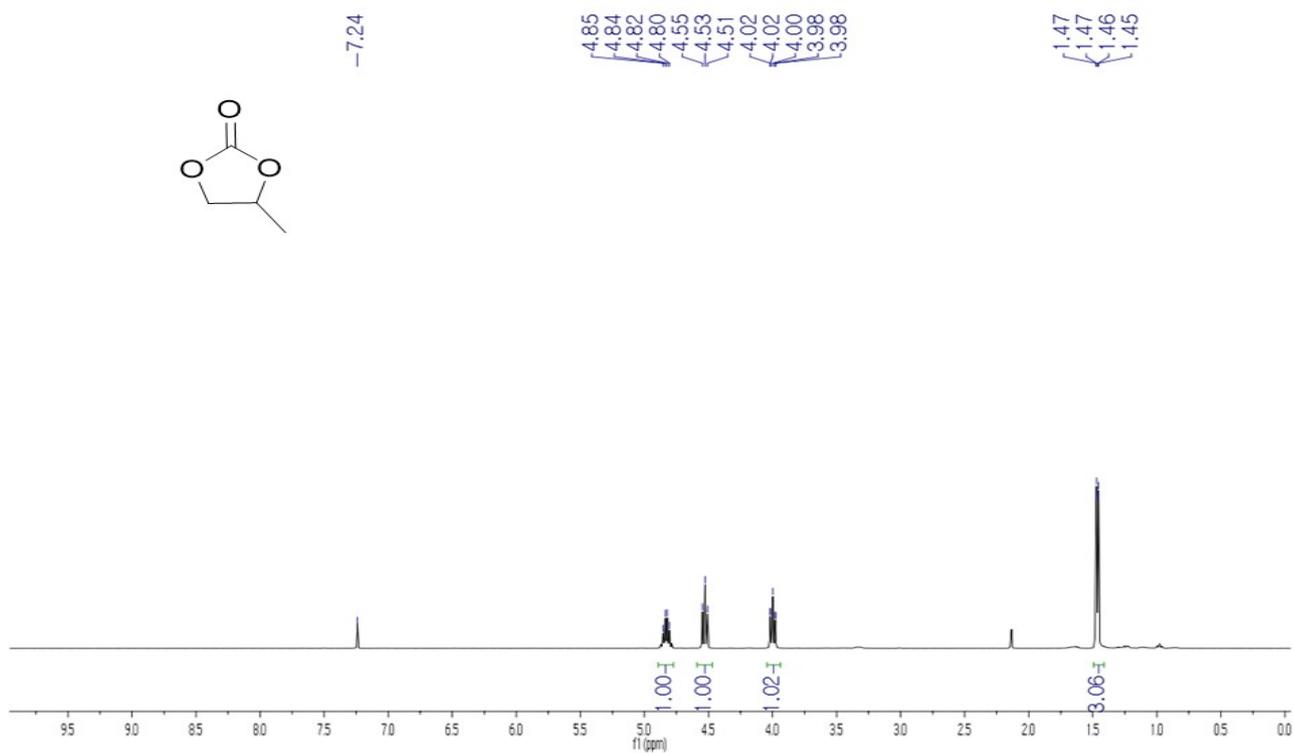


Figure S19. ¹H NMR spectrum of cyclic propylene carbonate (Table 3, entry 1)

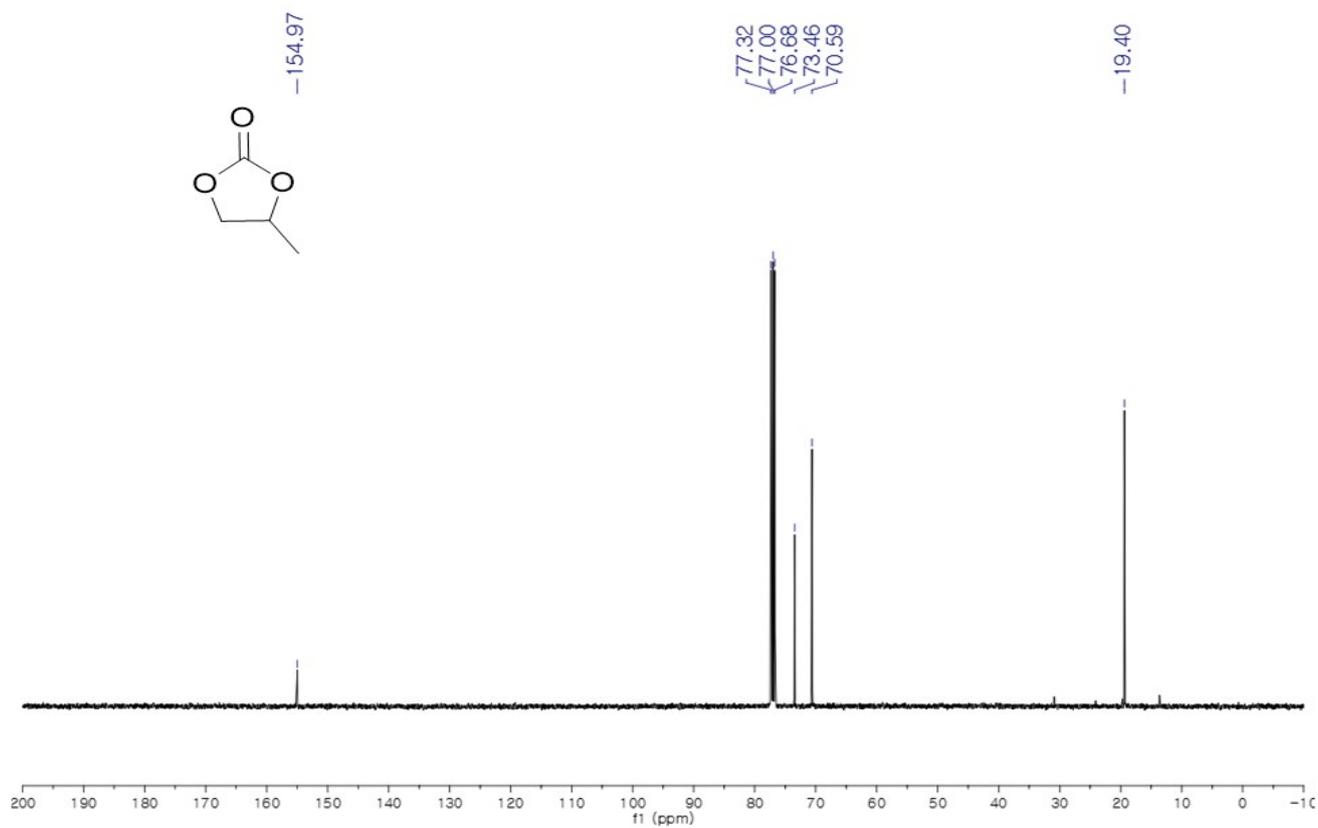


Figure S20. ¹³C NMR spectrum of cyclic propylene carbonate (Table 3, entry 1)

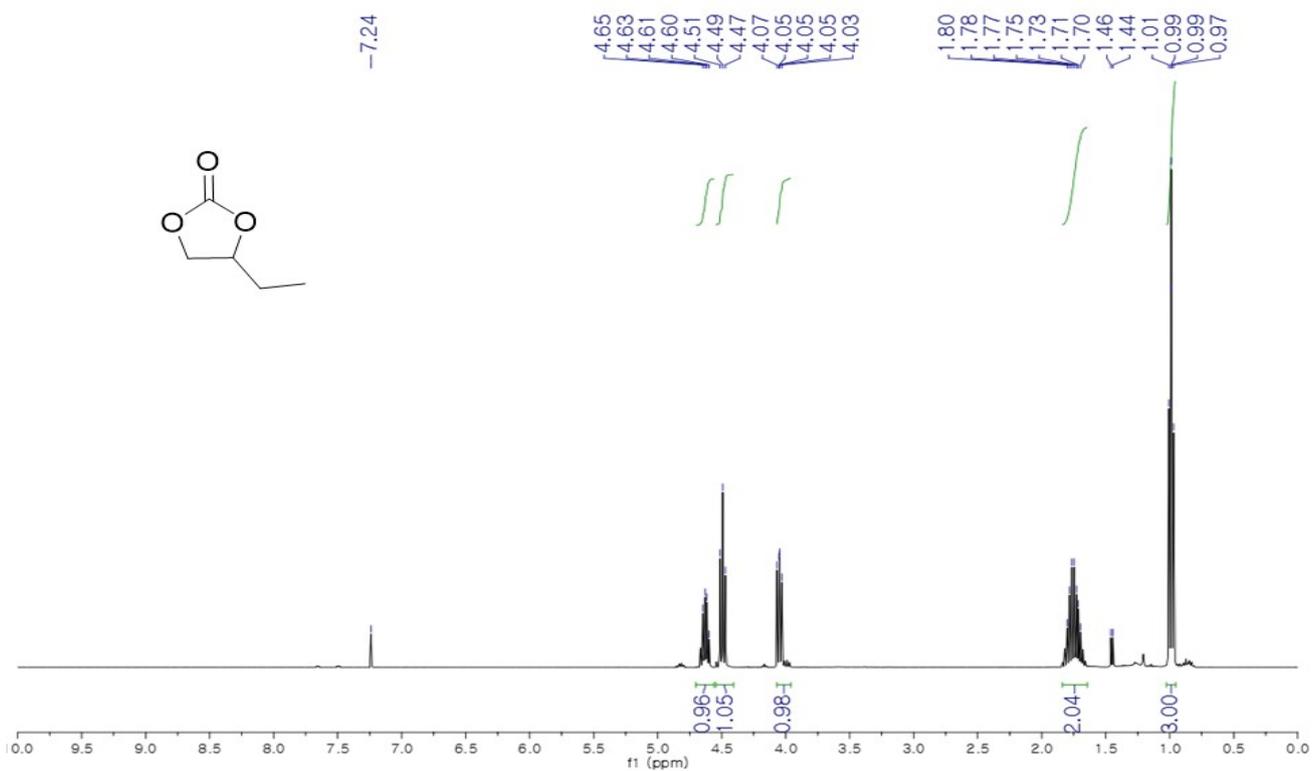


Figure S21. ^1H NMR spectrum of cyclic 1,2-butylene carbonate (Table 3, entry 2)

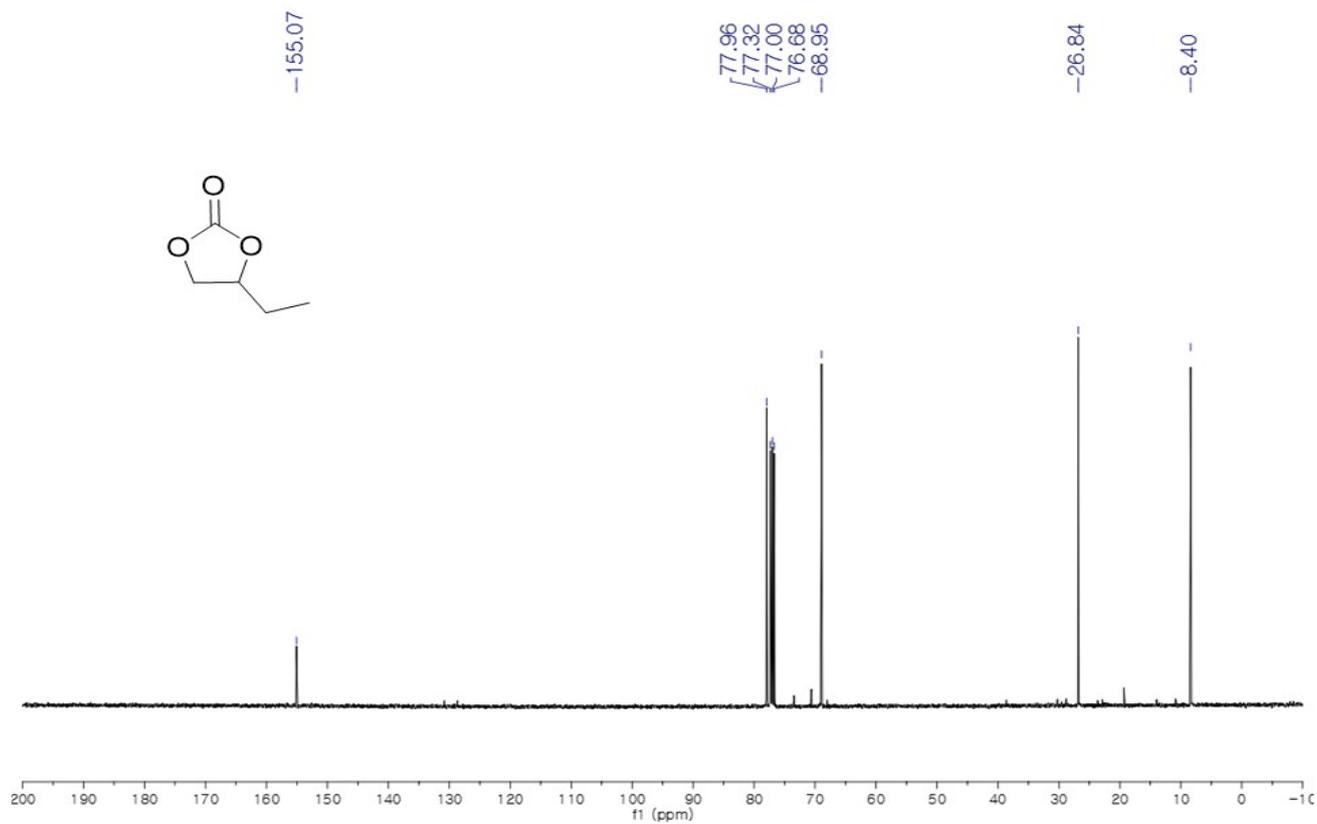


Figure S22. ^{13}C NMR spectrum of cyclic 1,2-butylene carbonate (Table 3, entry 2)

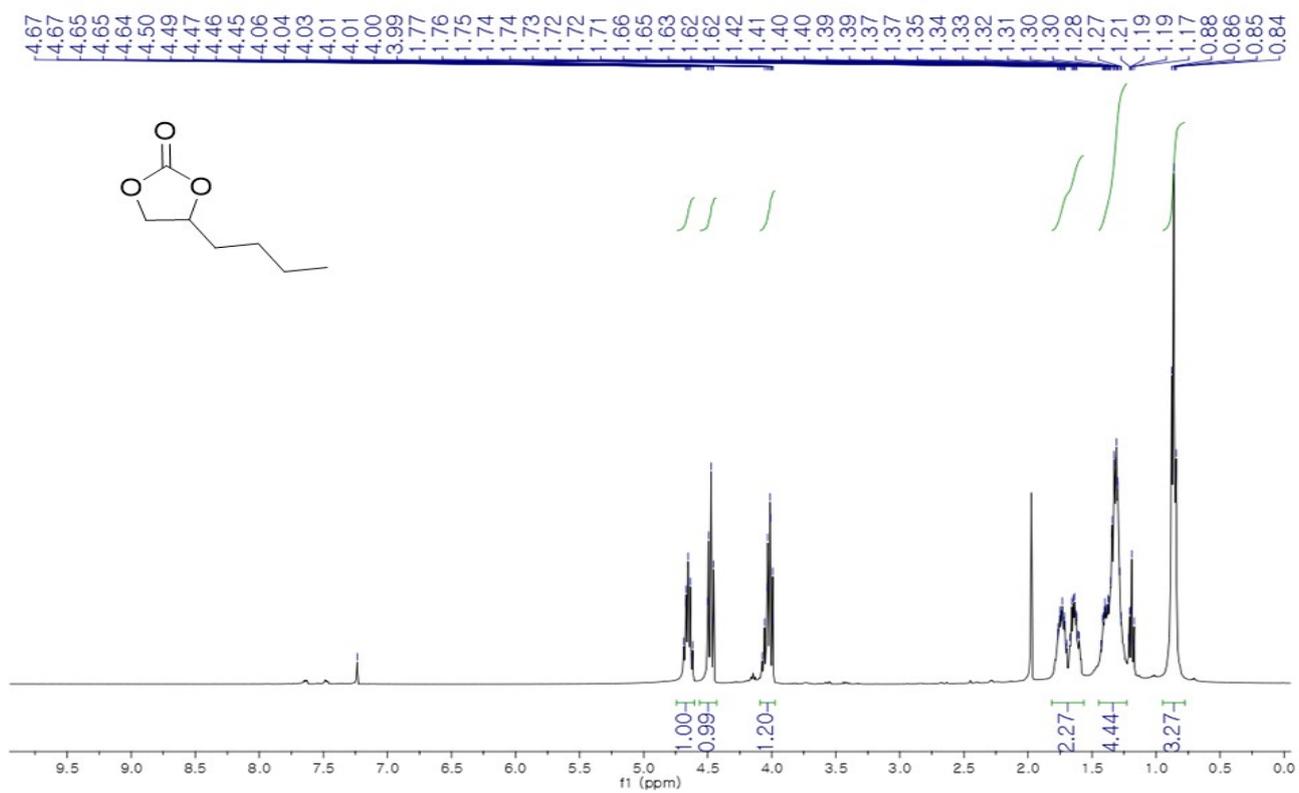


Figure S23. ^1H NMR spectrum of cyclic 1,2-hexylene carbonate (Table 3, entry 3)

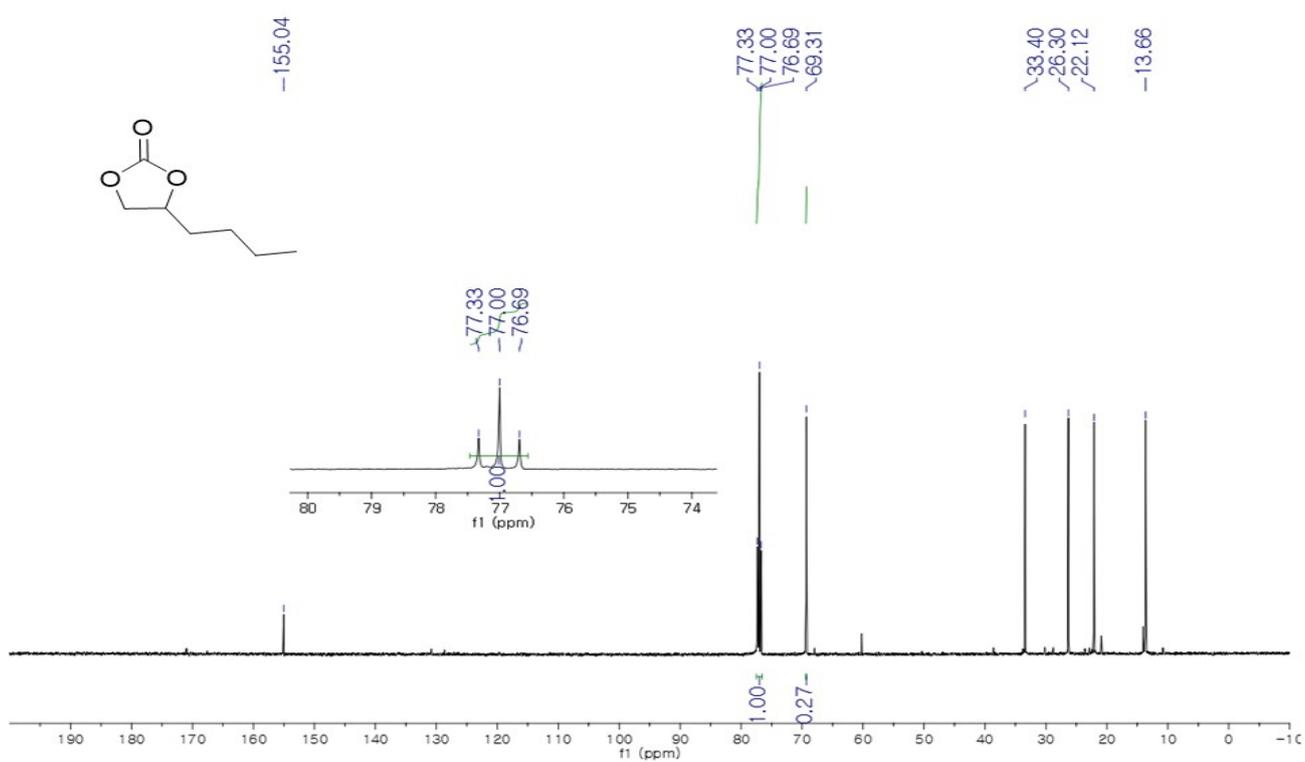


Figure S24. ^{13}C NMR spectrum of cyclic 1,2-hexylene carbonate (Table 3, entry 3)

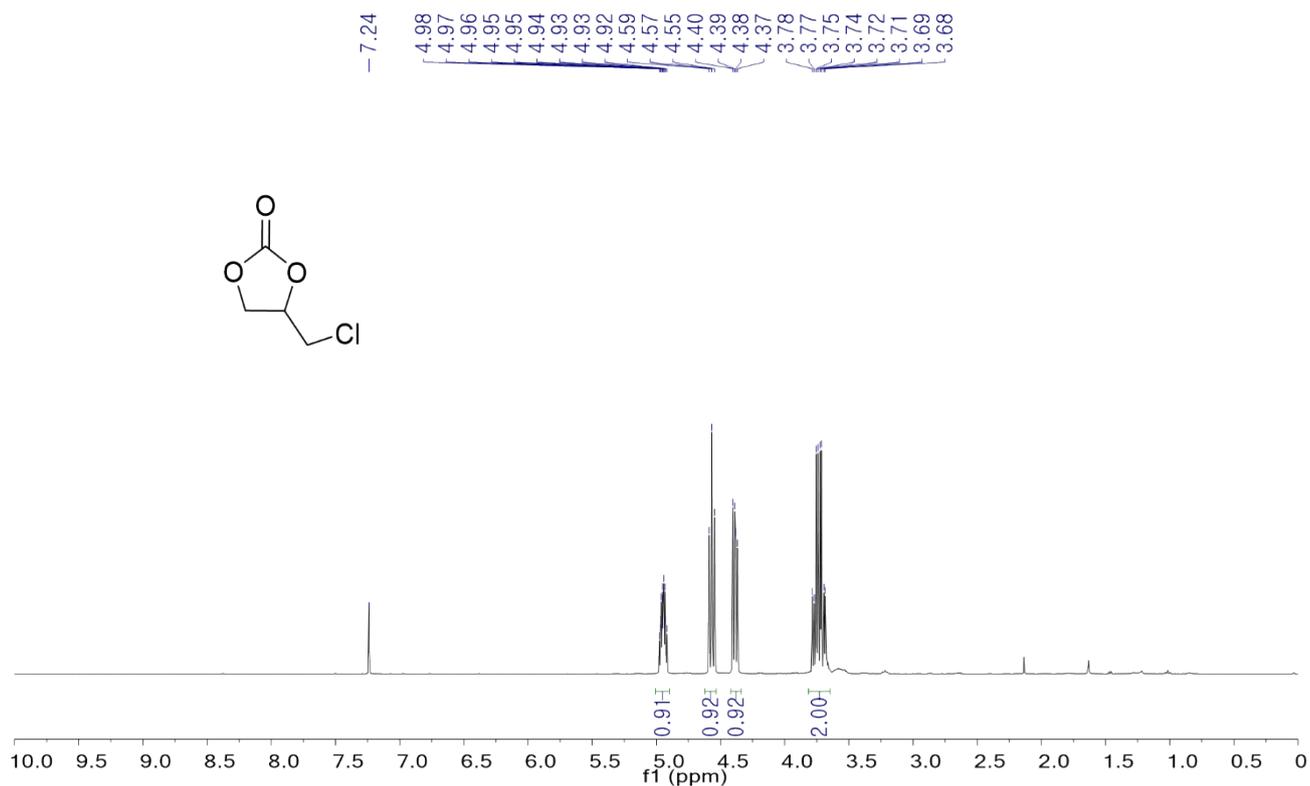


Figure S25. ¹H NMR spectrum of cyclic 3-chloropropylene carbonate (Table 3, entry 4)

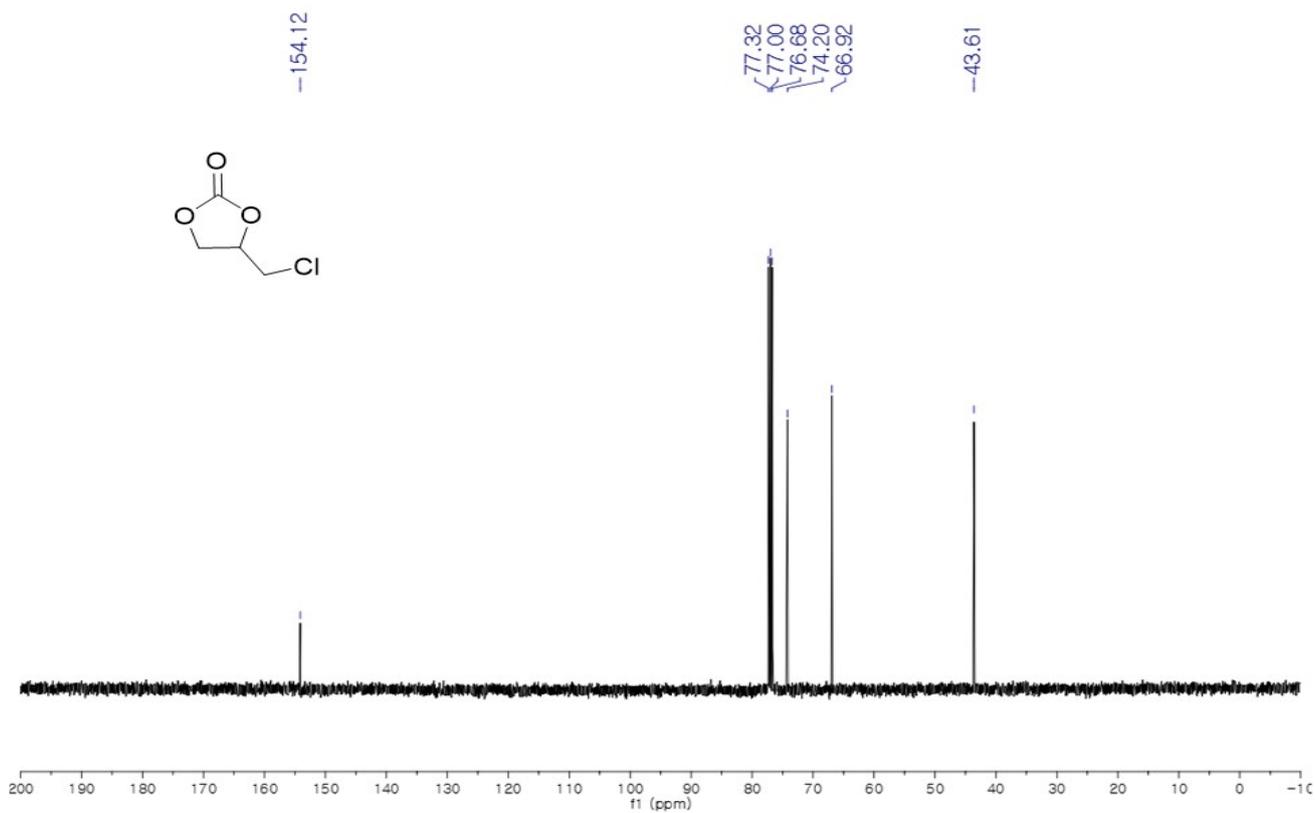


Figure S26. ¹³C NMR spectrum of cyclic 3-chloropropylene carbonate (Table 3, entry 4)

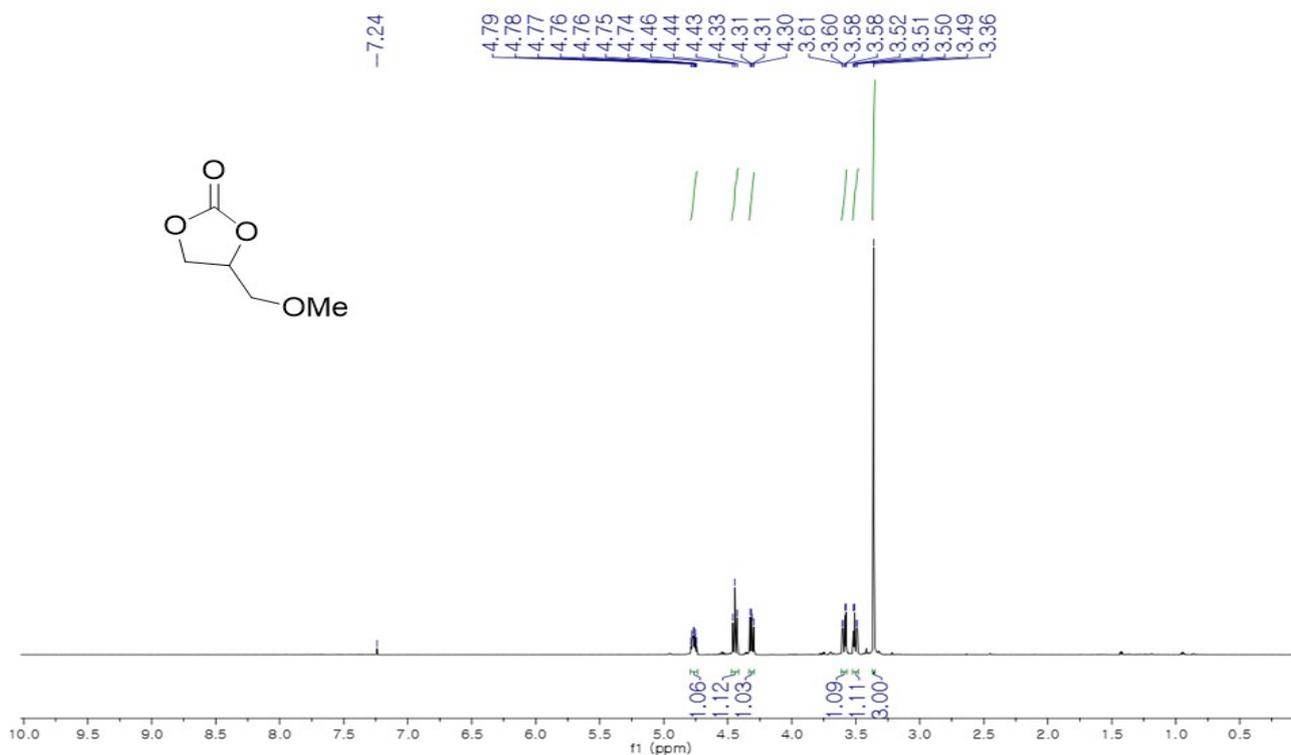


Figure S27. ^1H NMR spectrum of cyclic 3-methoxypropylene carbonate (Table 3, entry 5)

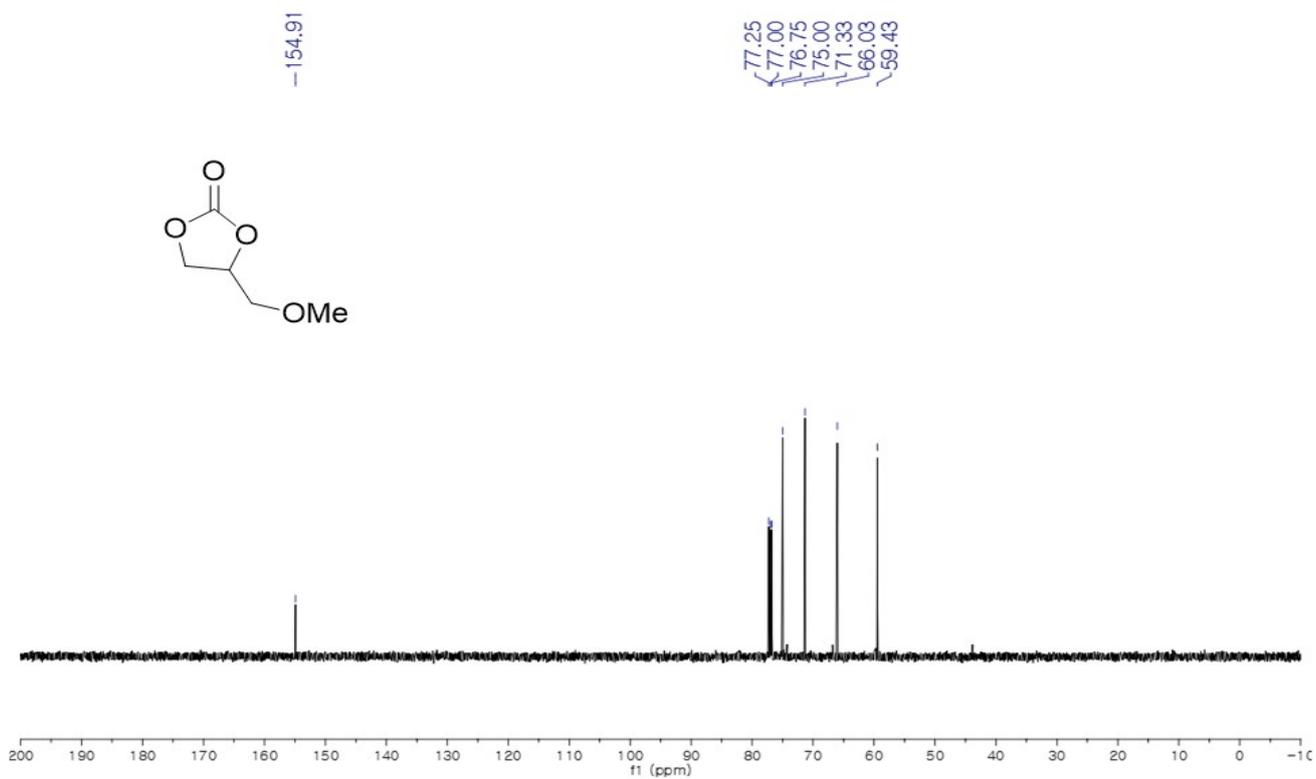


Figure S28. ^{13}C NMR spectrum of cyclic 3-methoxypropylene carbonate (Table 3, entry 5)

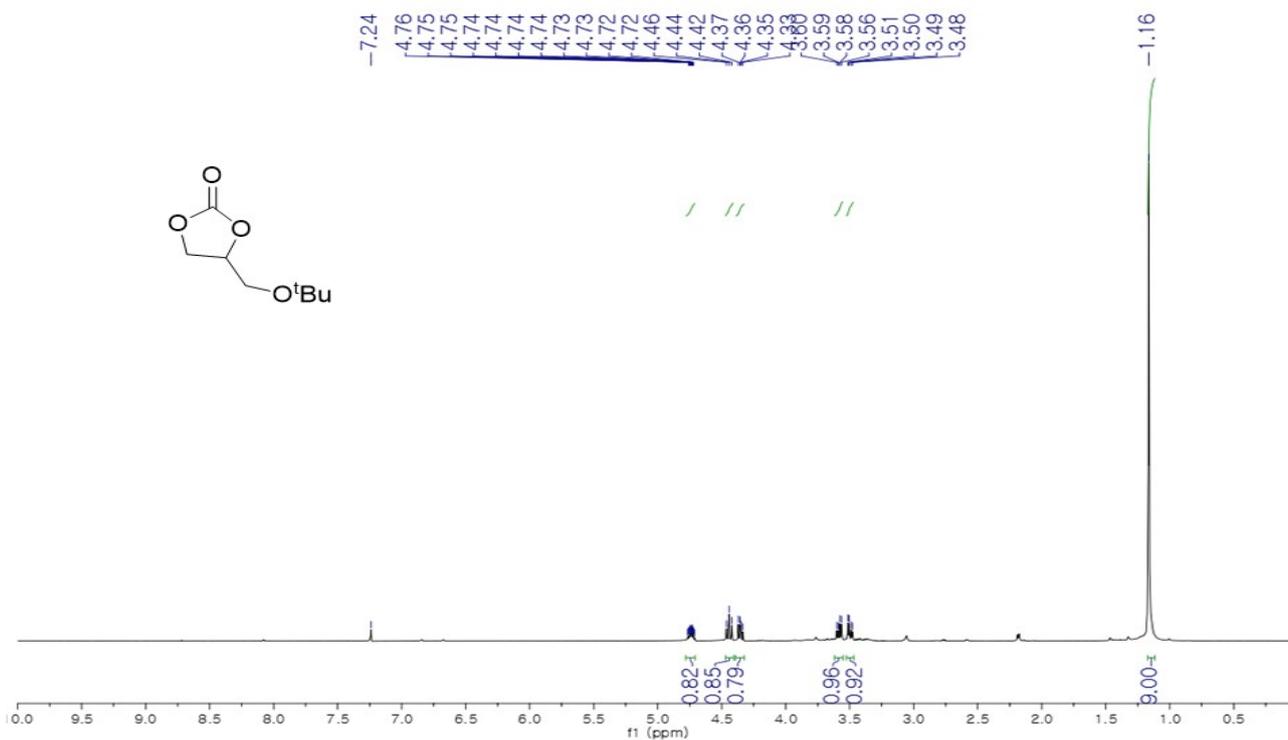


Figure S29. ^1H NMR spectrum of cyclic 3-t-butoxypropylene carbonate (Table 3, entry 6)

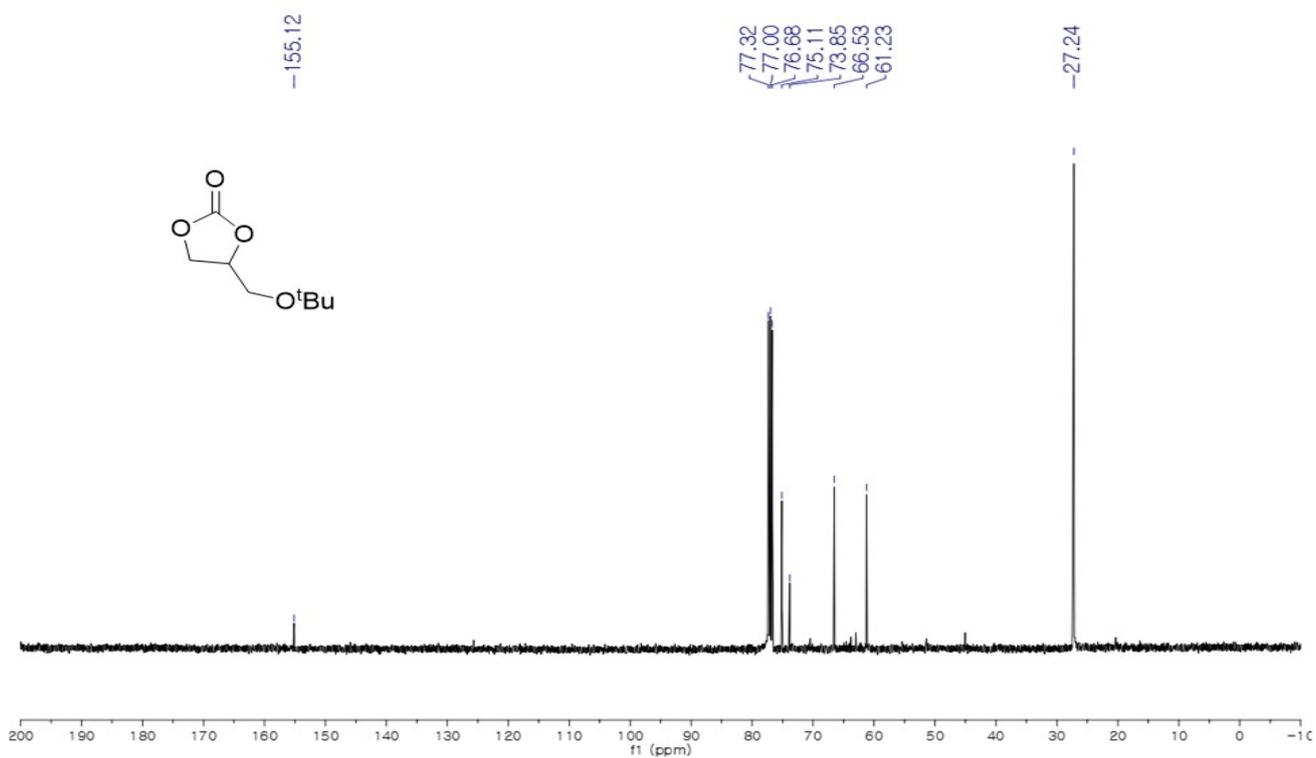


Figure S30. ^{13}C NMR spectrum of cyclic 3-t-butoxypropylene carbonate (Table 3, entry 6)

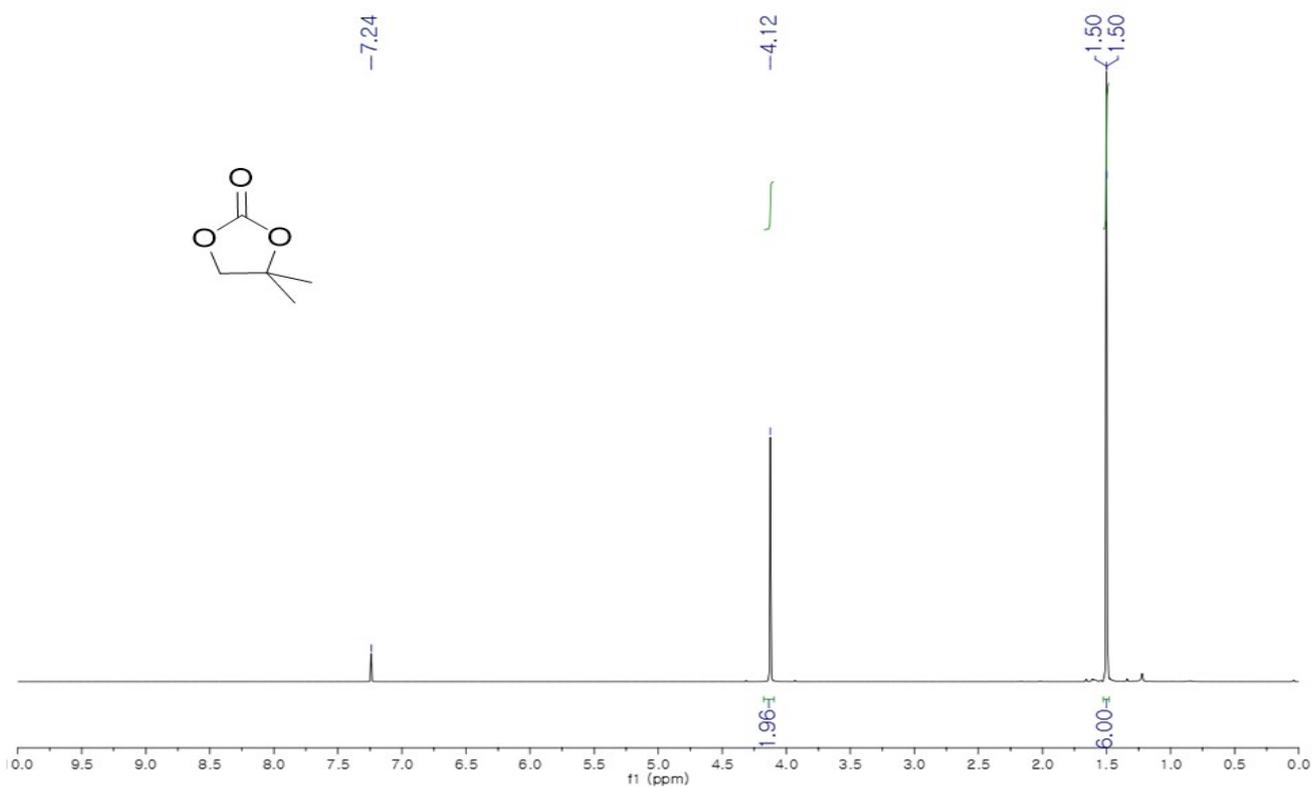


Figure S31. ^1H NMR spectrum of cyclic 1,1-dimethylethylene carbonate (Table 3, entry 7)

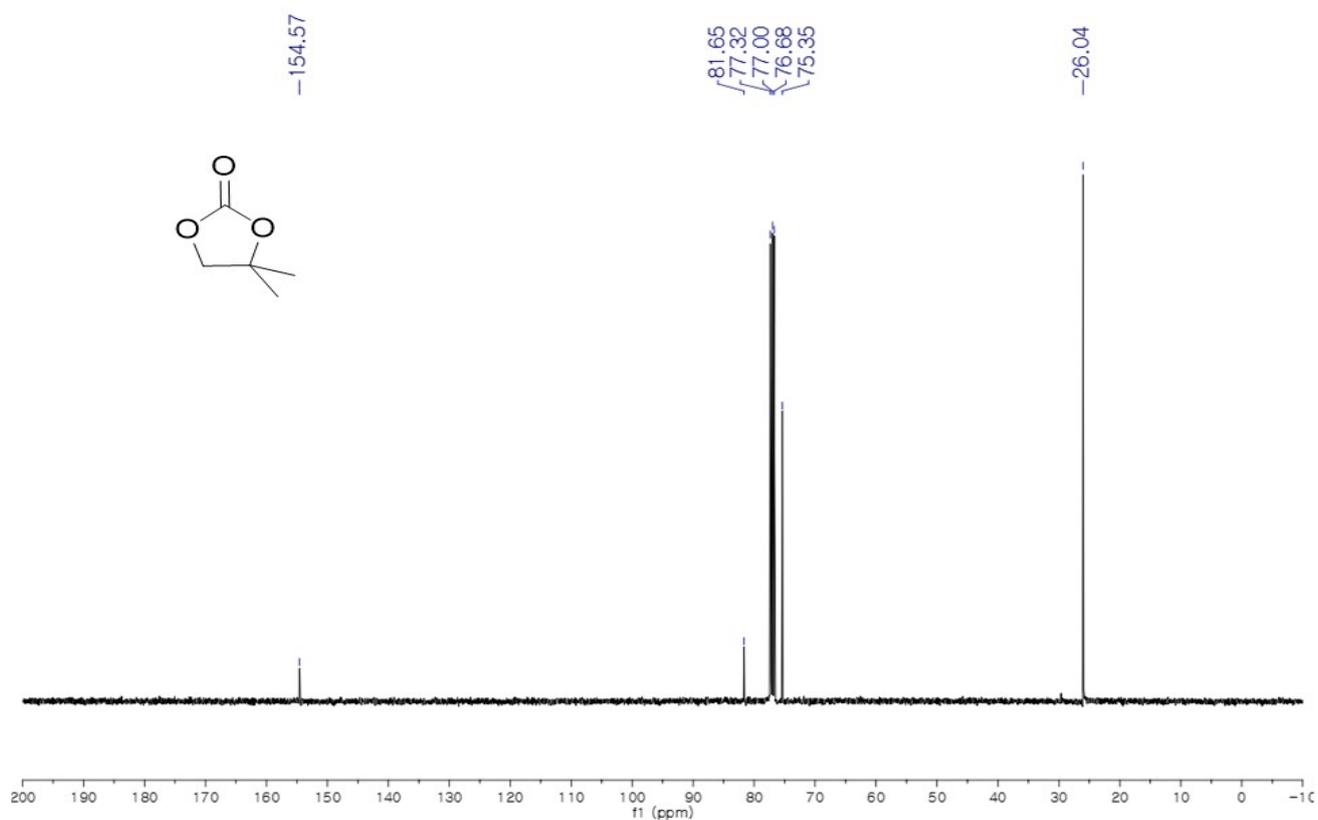


Figure S32. ^{13}C NMR spectrum of cyclic 1,1-dimethylethylene carbonate (Table 3, entry 7)