Electronic Supplementary Information

Tri- and tetra-dentate imine vanadyl complexes: Synthesis, structure and ethylene polymerization/ring opening polymerization capability

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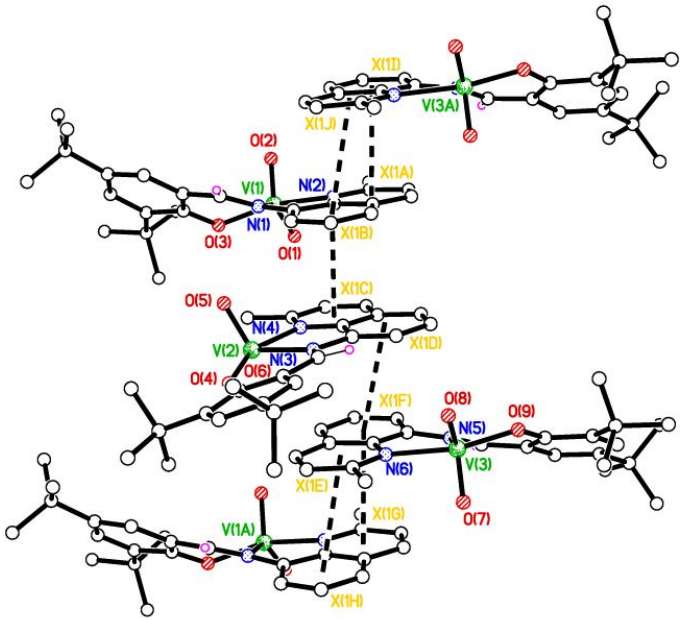


Figure S1. Stacking of **2** along the *b* axis.

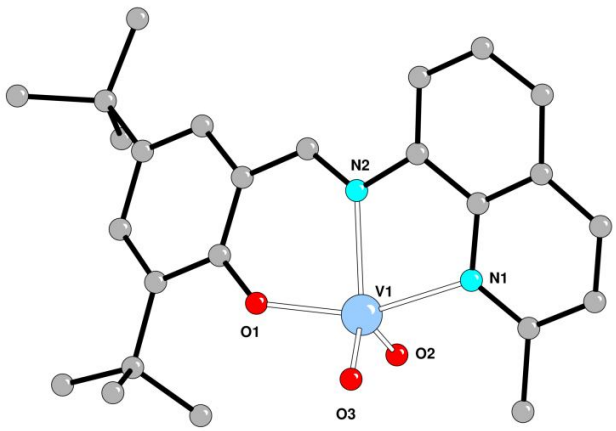


Figure S2. CAMERON representation of **2′** showing the atom numbering scheme. Selected bond lengths (Å) and angles (°): V1 – O1 1.8880(18), V1 – O(2) 1.629(2), V1 – O(3) 1.623(2), V1 – N1 2.185(2), V1 – N2 2.161(2); O1 – V1 – N1 155.48(8), O2 – V(1) – N2 117.45(9), O3 – V1 – N2 131.41(10).

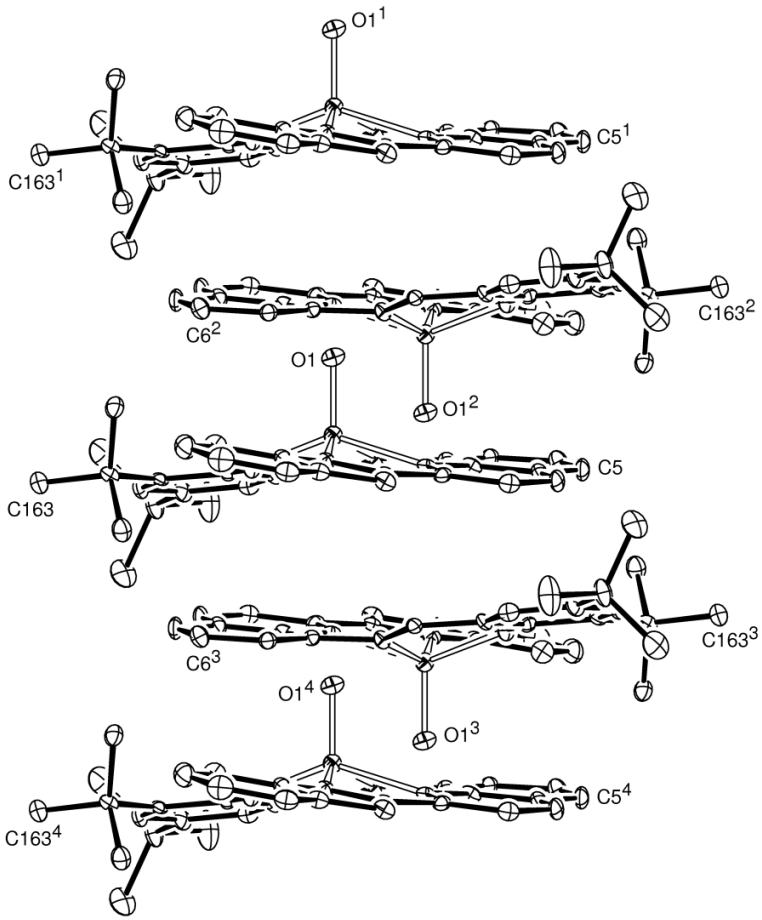


Figure S3. Stacking of the vanadium complex molecules in **3**.MeCN. The overlapping regions of molecules involve centrosymmetrically-related units of the quinolinyl-benzimidazole groups.

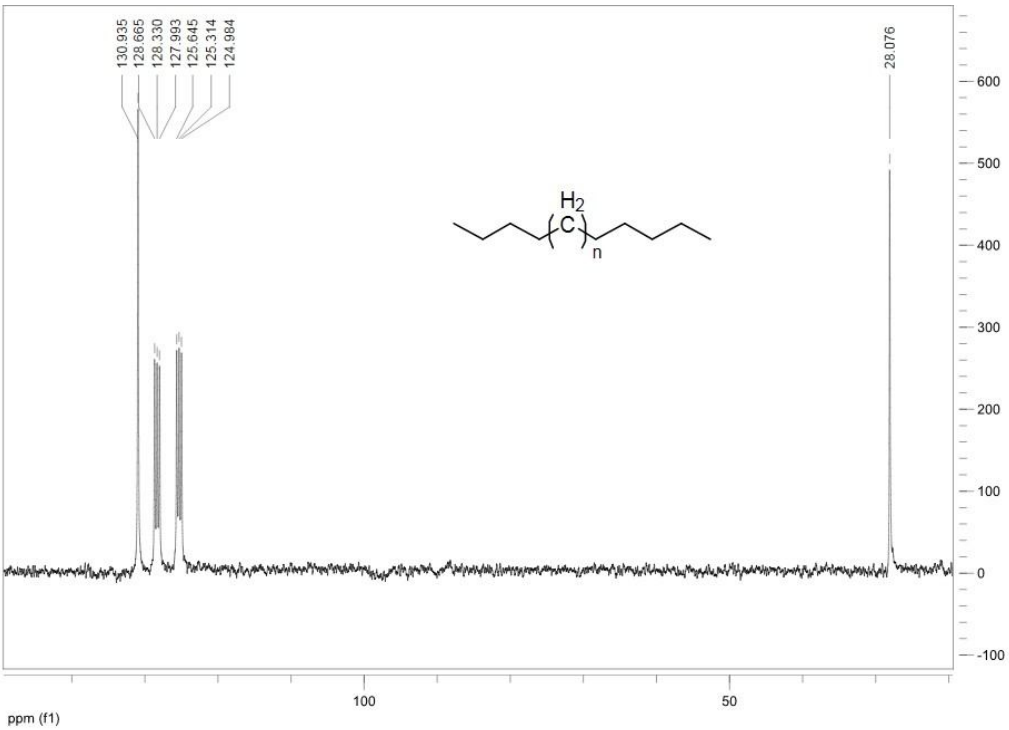


Figure S4. ^{13}C NMR spectrum of polyethylene from run **3.**

Figure S5. ^{13}C NMR spectrum of polyethylene from run **8.**

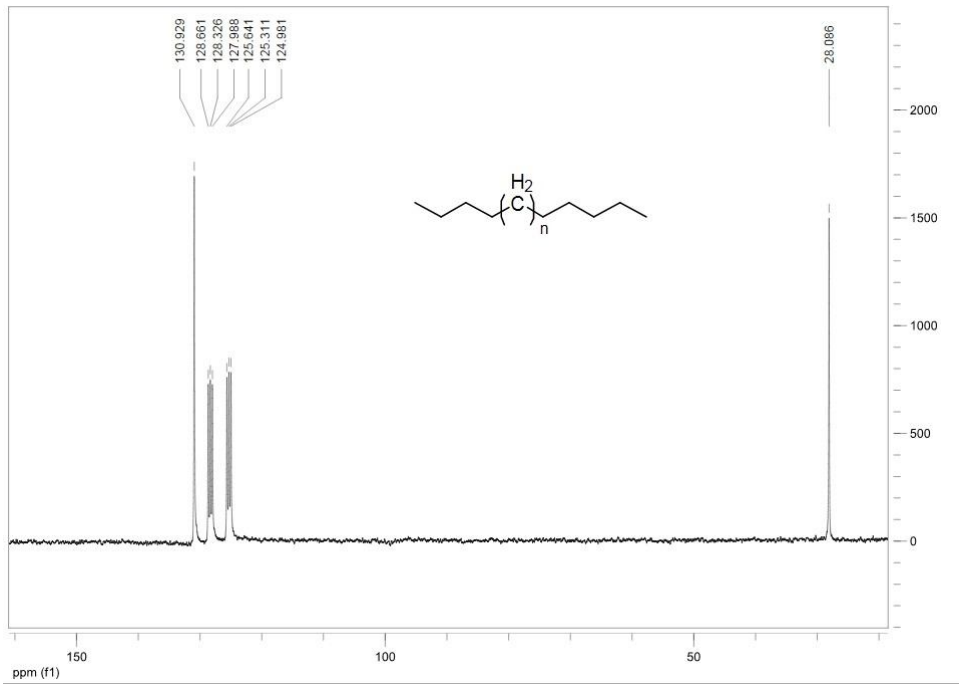


Figure S6. ^{13}C NMR spectrum of polyethylene from run **10.**

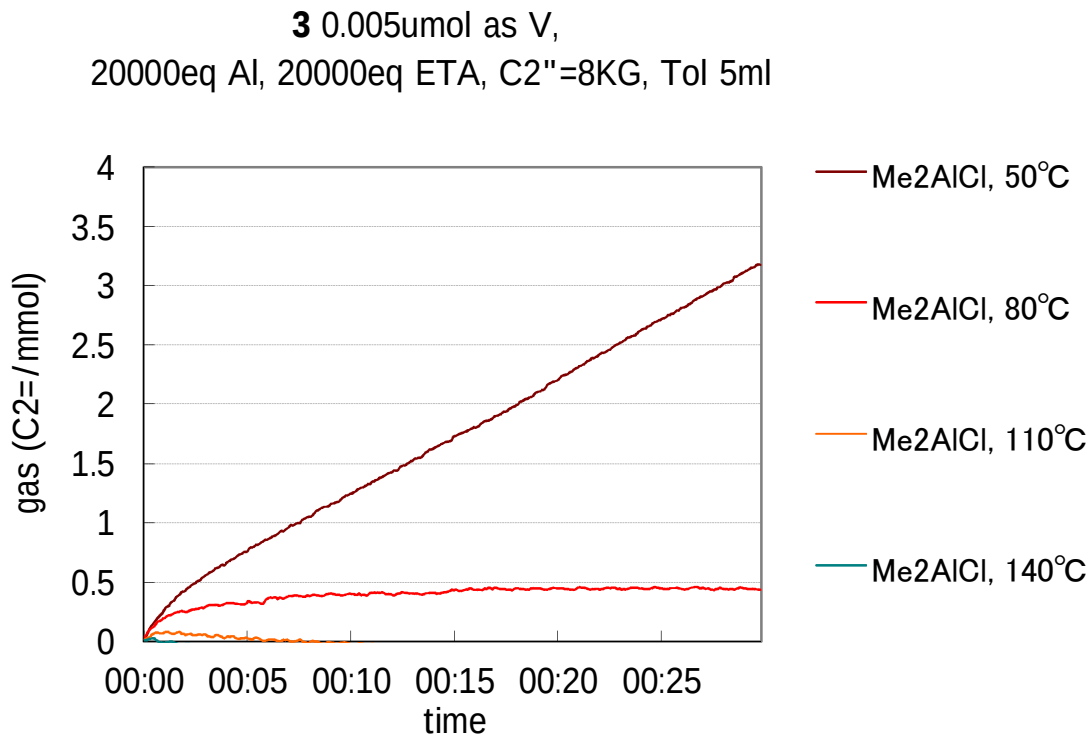


Figure S7. Ethylene uptake for **3** in the presence of DMAC at different temperatures.

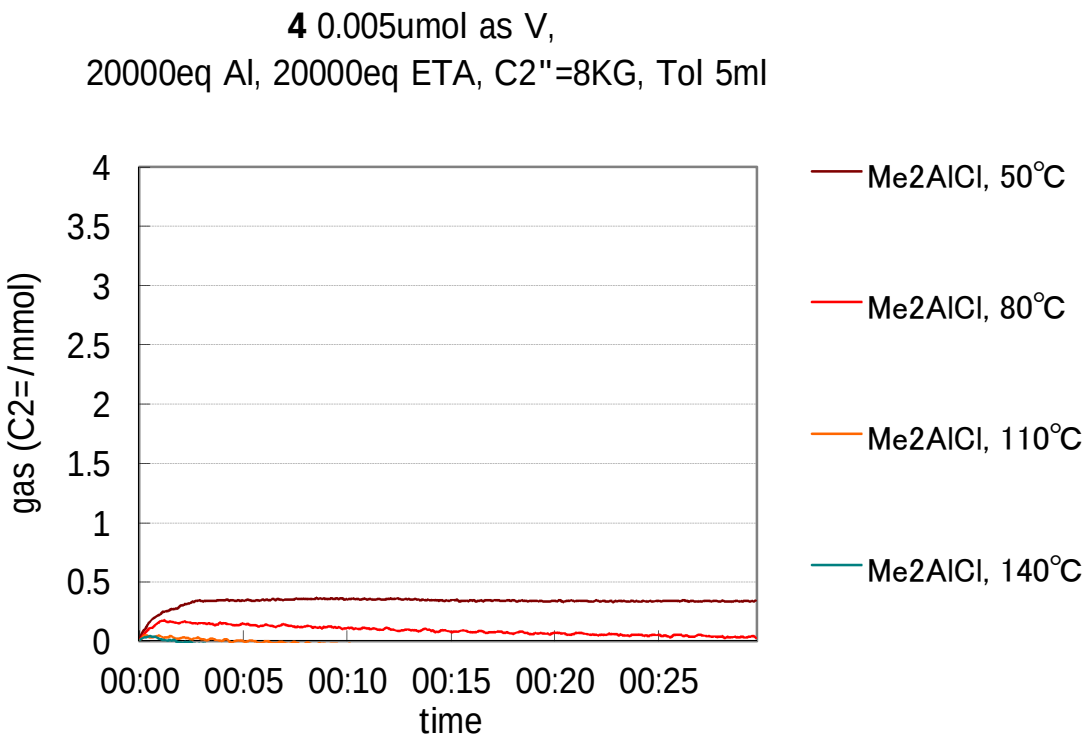


Figure S8. Ethylene uptake for **4** in the presence of DMAC at different temperatures.

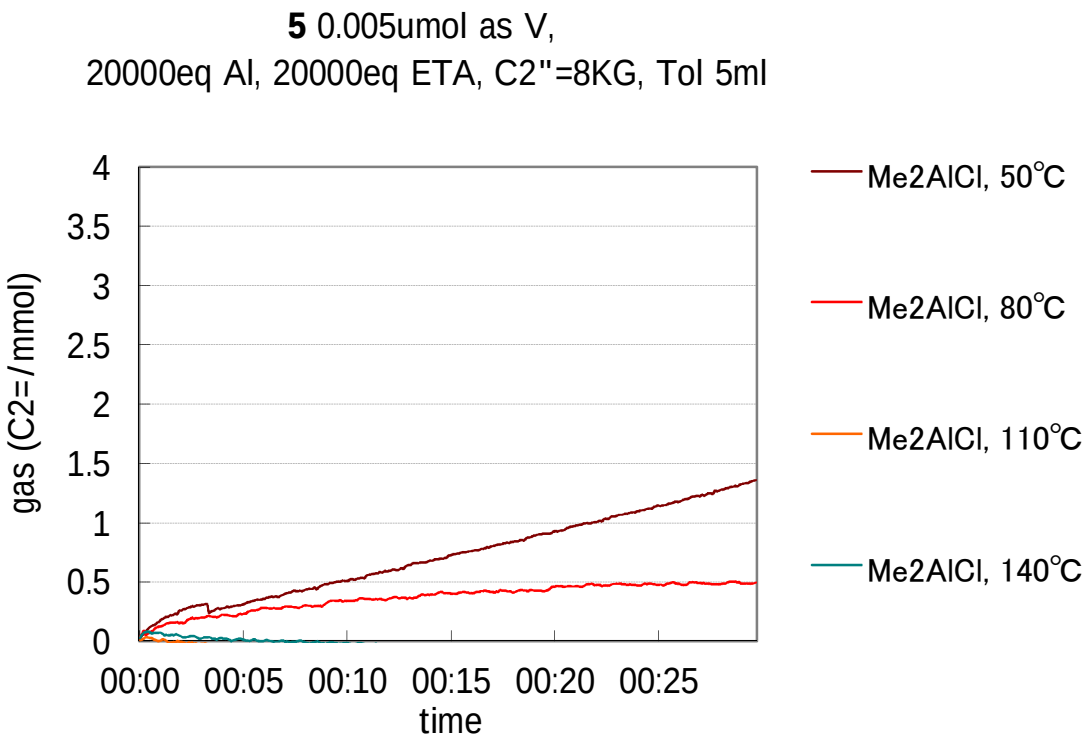


Figure S9. Ethylene uptake for **5** in the presence of DMAC at different temperatures.

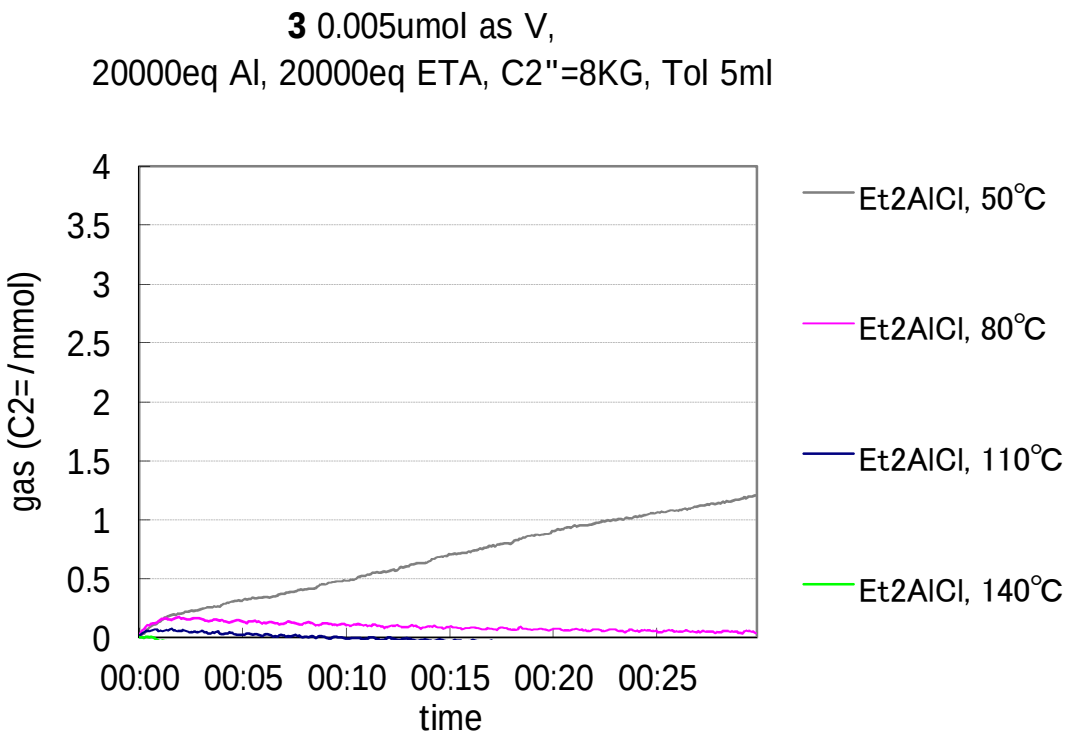


Figure S10. Ethylene uptake for **3** in the presence of DEAC at different temperatures.

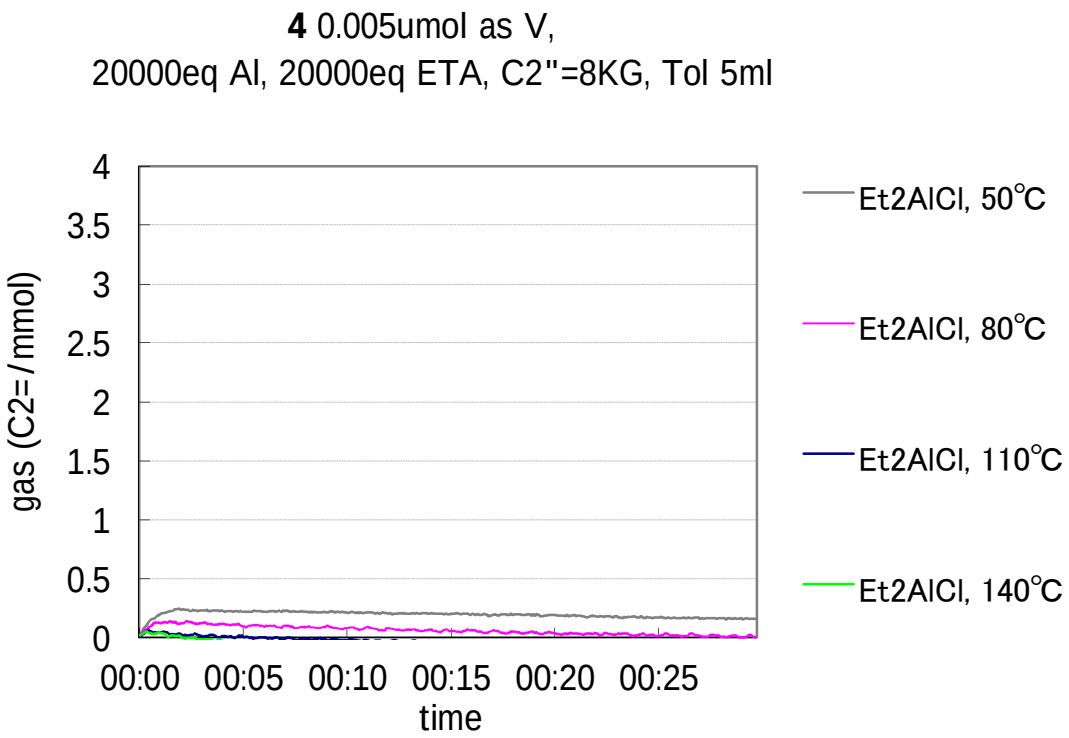


Figure S11. Ethylene uptake for **4** in the presence of DEAC at different temperatures.

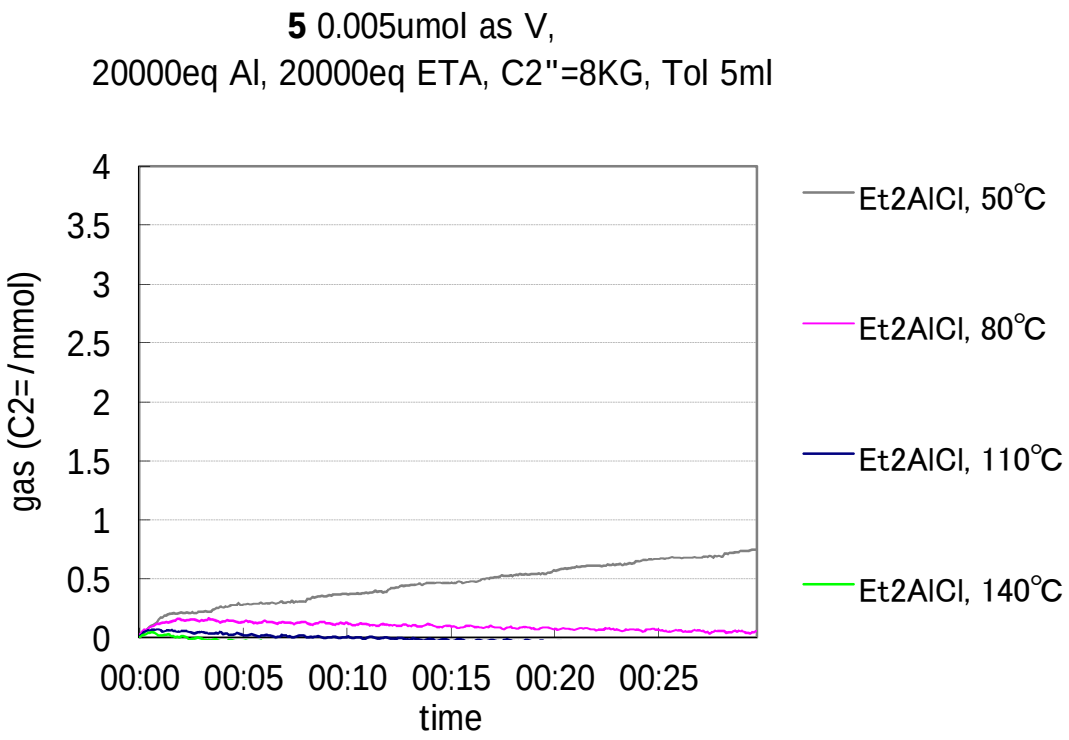


Figure S12. Ethylene uptake for **5** in the presence of DEAC at different temperatures.

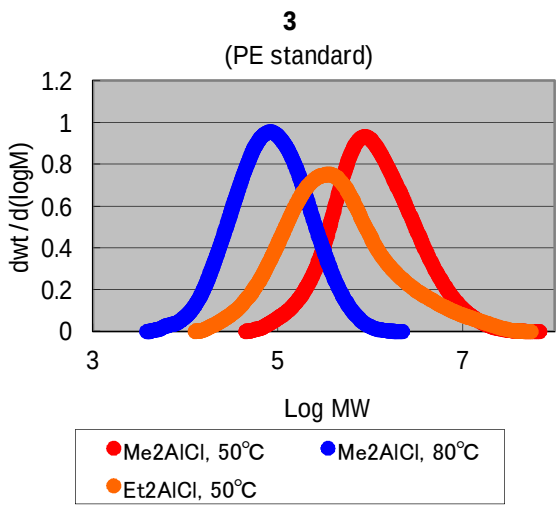


Figure S13. PDIs for **3** at 50 and 80 °C.

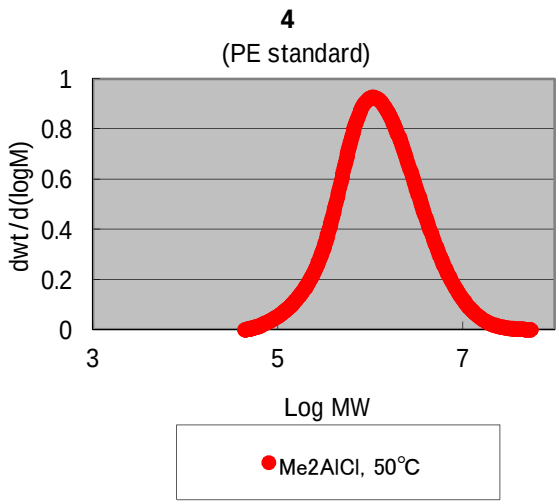


Figure S14. PDIs for **4** at 50 °C.

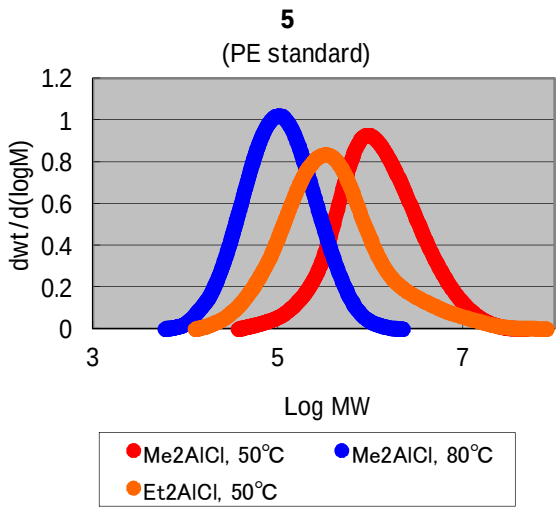
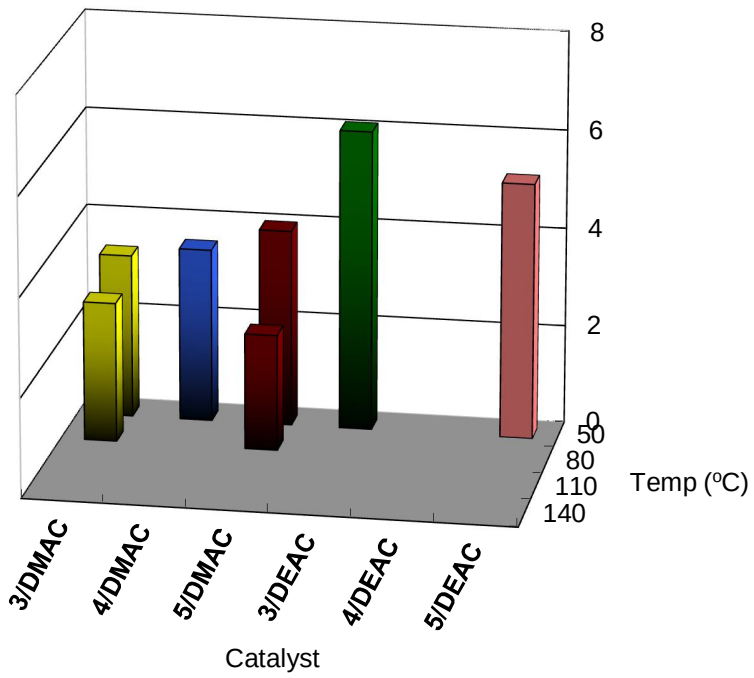


Figure S15. PDIs for **5** at 50 and 80 °C.



Figures S16 PDIs of the PE obtained using **3** - **5** in the presence of DMAC or DEAC at 50 or 80 °C.

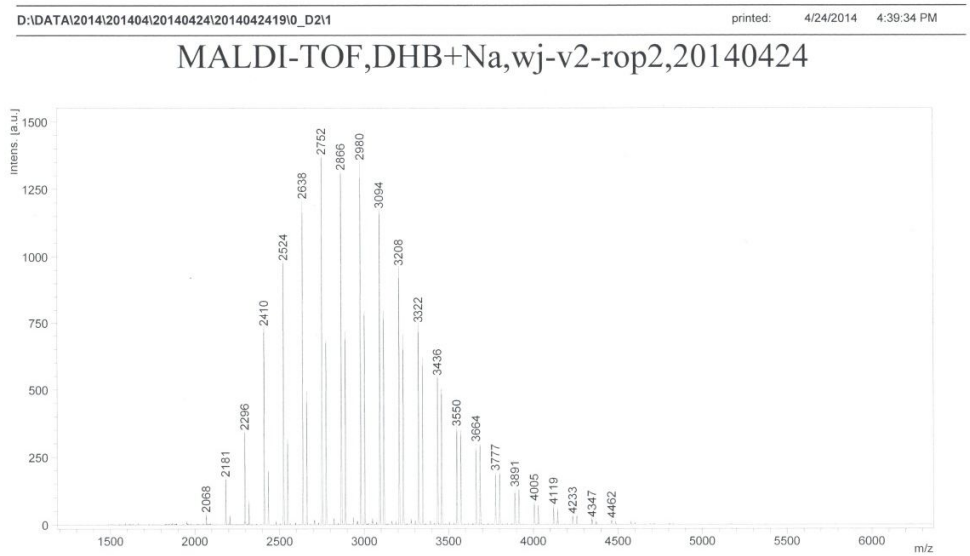


Figure S17. MALDI-TOF of PCL sample initiated by **2** at 60 °C**.**

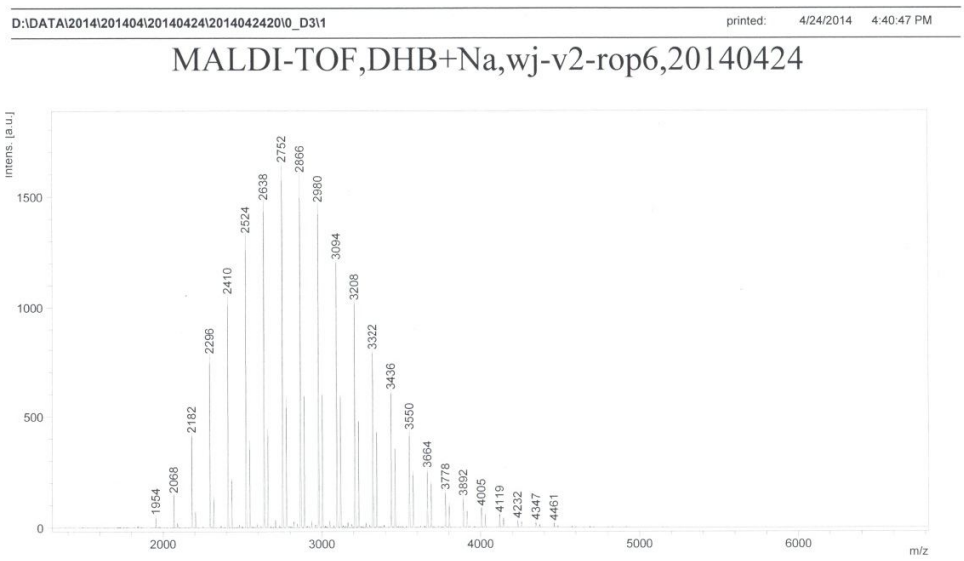


Figure S18. MALDI-TOF of PCL sample initiated by **6** in THF at 60 °C.

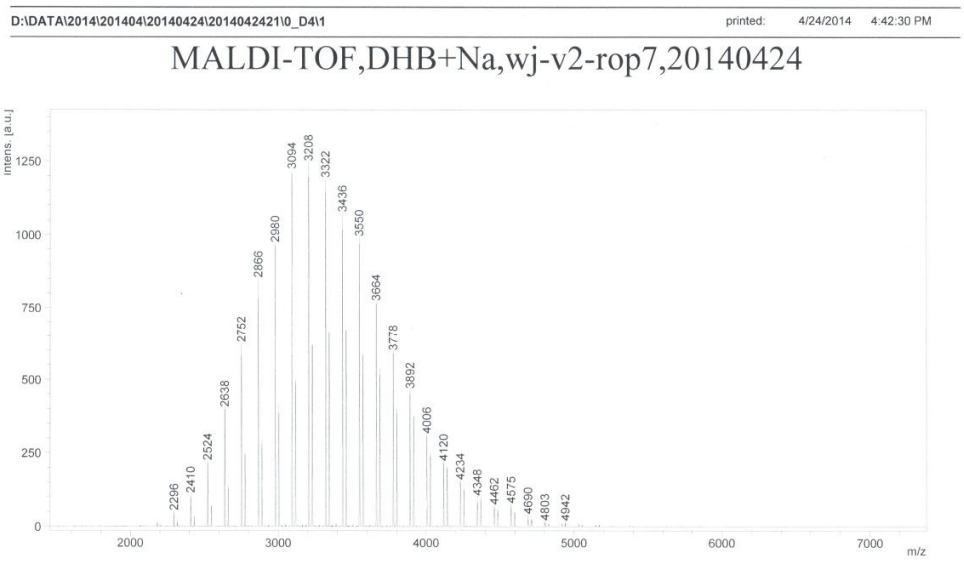


Figure S9. MALDI-TOF of PCL sample initiated by **7** in THF at 60 °C.

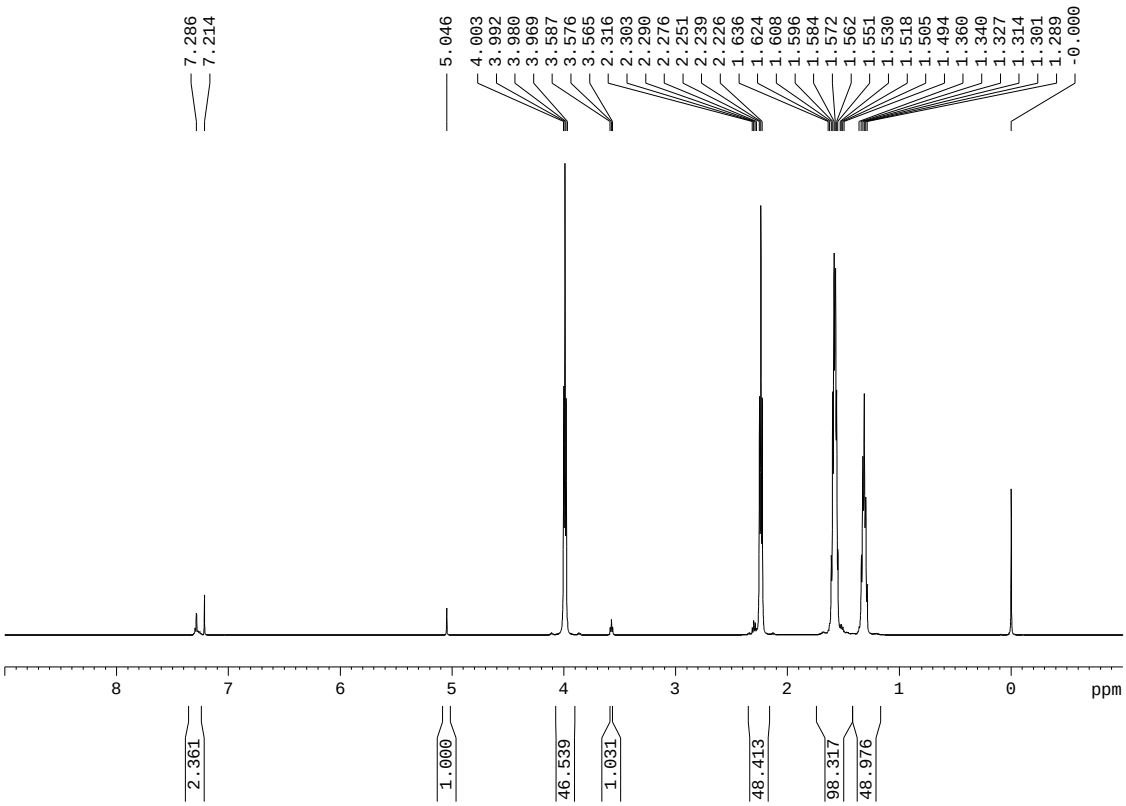


Figure S20. ^{1}H NMR spectrum of PCL sample (from run 3).

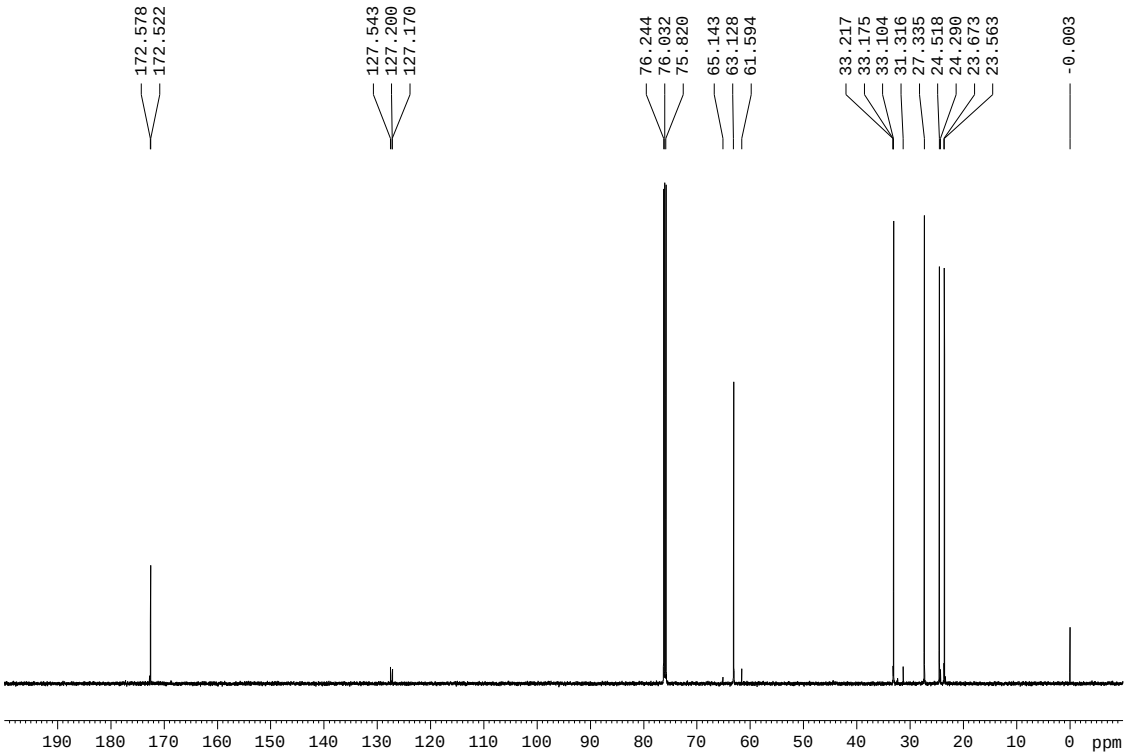


Figure S21. ^{13}C NMR spectrum of PCL sample (from run 3).