

## Supporting Information for

### Synthesis of mono(guanidinate) rare earth metal bis(amide) complexes and their performance for the ring-opening polymerization of L-lactide and *rac*-lactide

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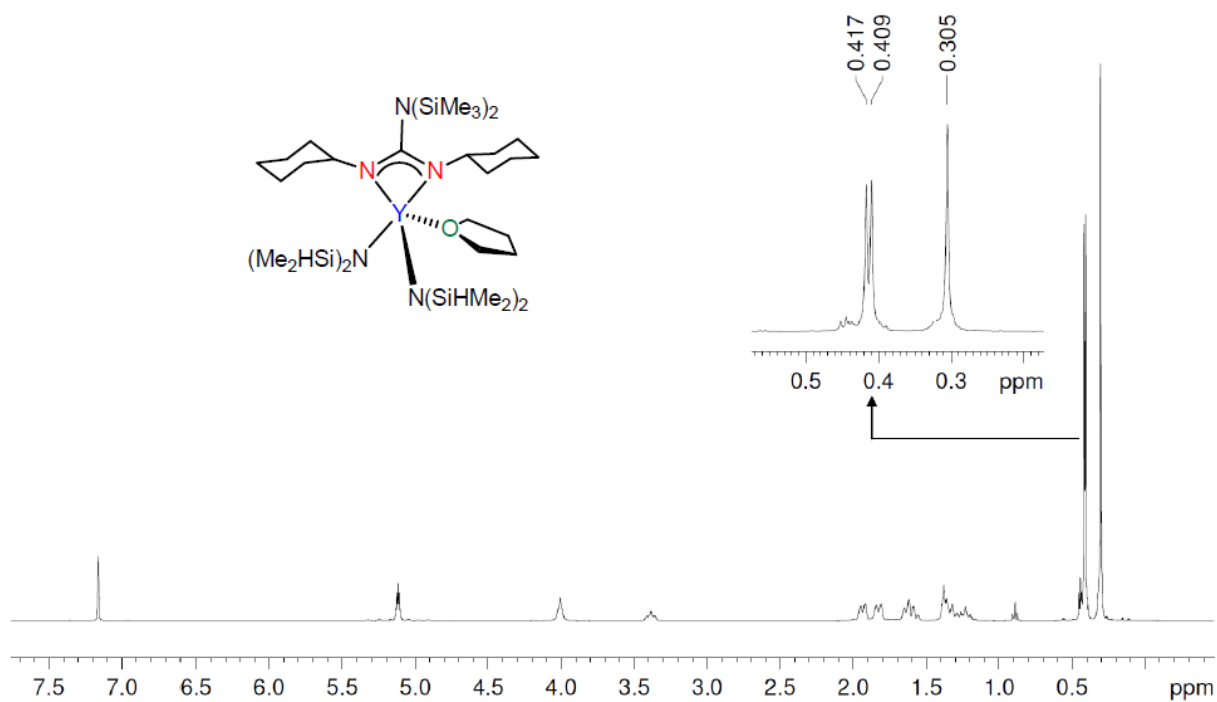
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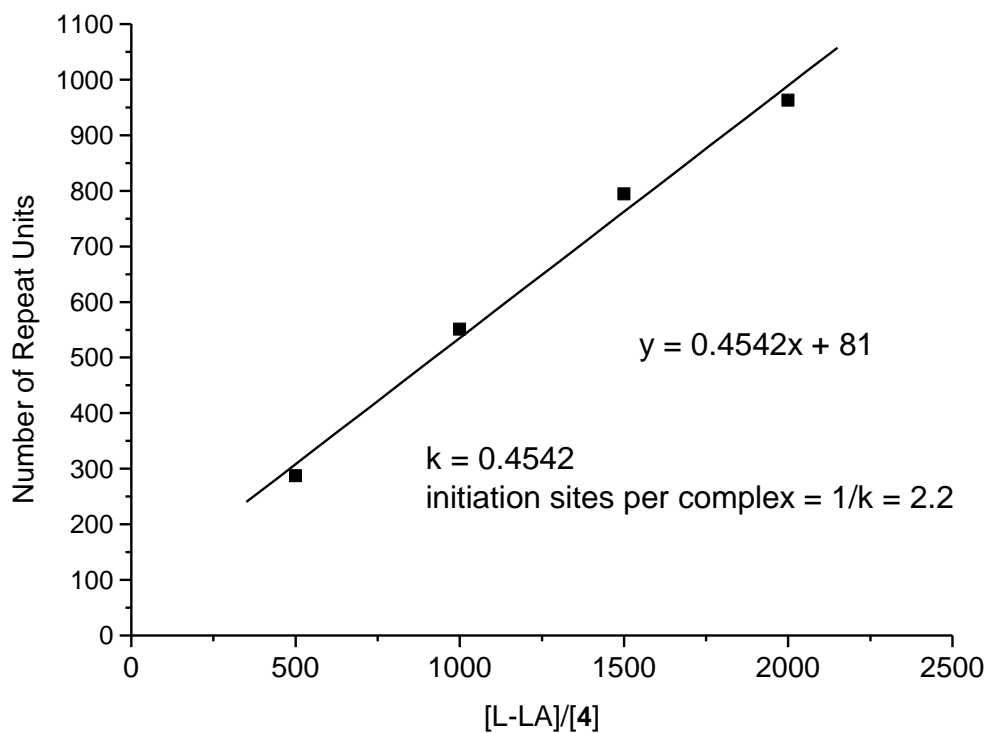
**Fig. S1** <sup>1</sup>H NMR spectrum of **4**

**Fig. S2** Plot of the degree of LA polymerization (i.e., number of repeat units) vs [L-LA]/[**4**] at 50 °C in toluene.

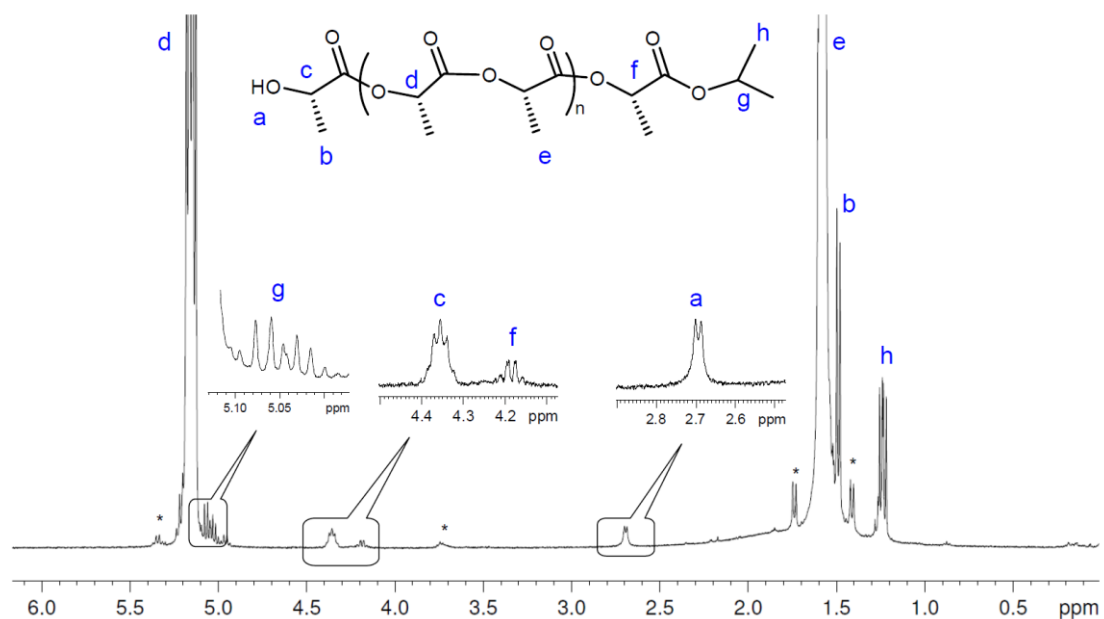
**Fig. S3** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of L-lactide oligomer using **4**/<sup>i</sup>PrOH as an initiator after quenching with ethanol



**Fig. S1** <sup>1</sup>H NMR spectrum of 4



**Fig. S2.** Plot of the degree of LA polymerization (i.e., number of repeat units) vs [L-LA]/[4] at 50 °C in toluene. Initiation sites per complex = 2.2, showing that both amido groups initiated the polymerization



**Fig. S3** <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of L-lactide oligomer using 4<sup>i</sup>PrOH as an initiator after quenching with ethanol (\*, ethanol and monomer signals). Polymerization conditions: [Y]<sub>0</sub>/[<sup>i</sup>PrOH]<sub>0</sub>/[LA]<sub>0</sub> = 1 : 2 : 10, in toluene, 12 min, 20 °C.