

## Supporting Information

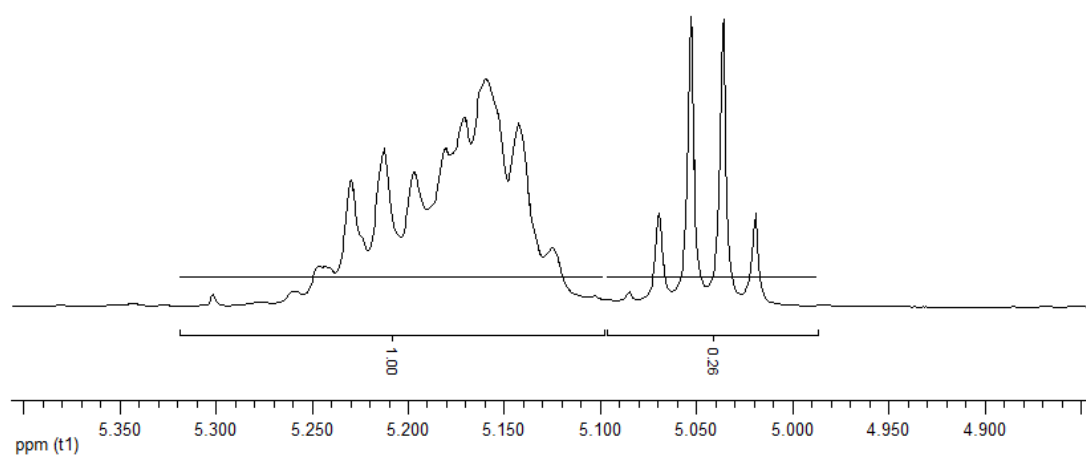
Ring-opening polymerization of *rac*-lactide catalyzed by  
magnesium and zinc complexes supported by NNO ligand

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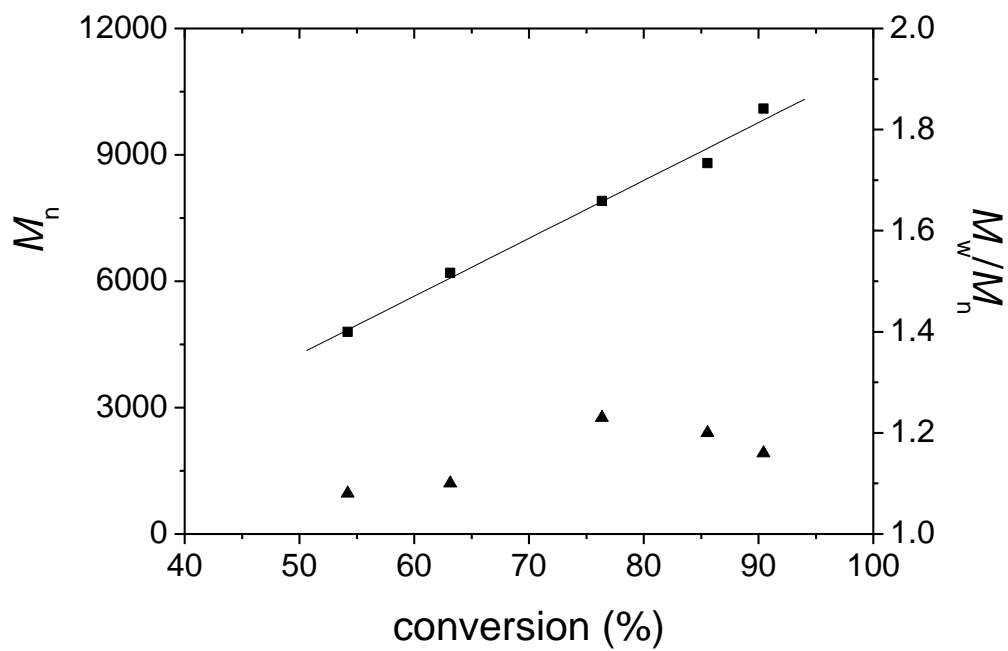
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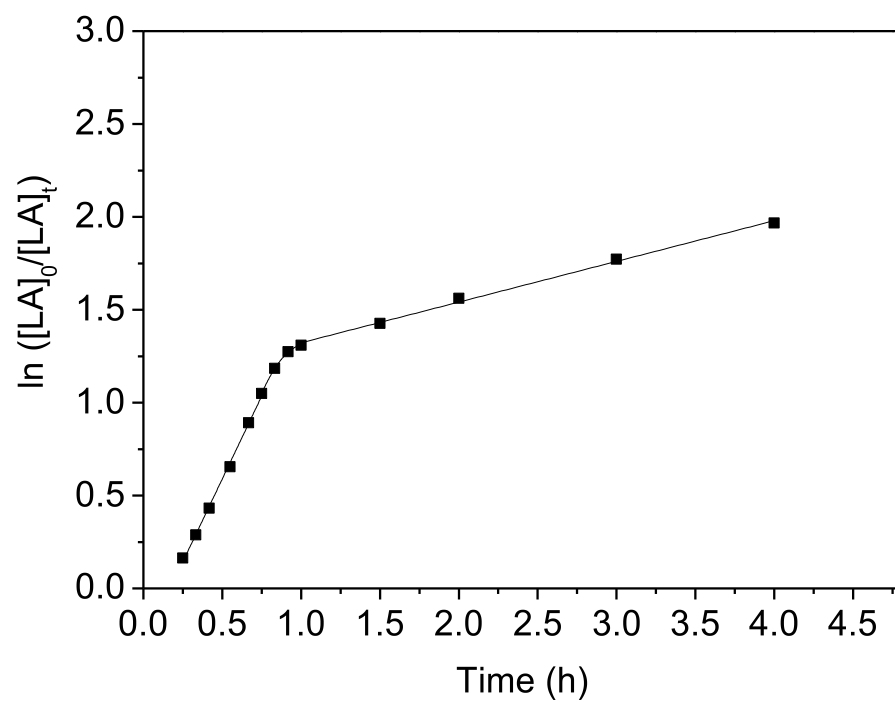
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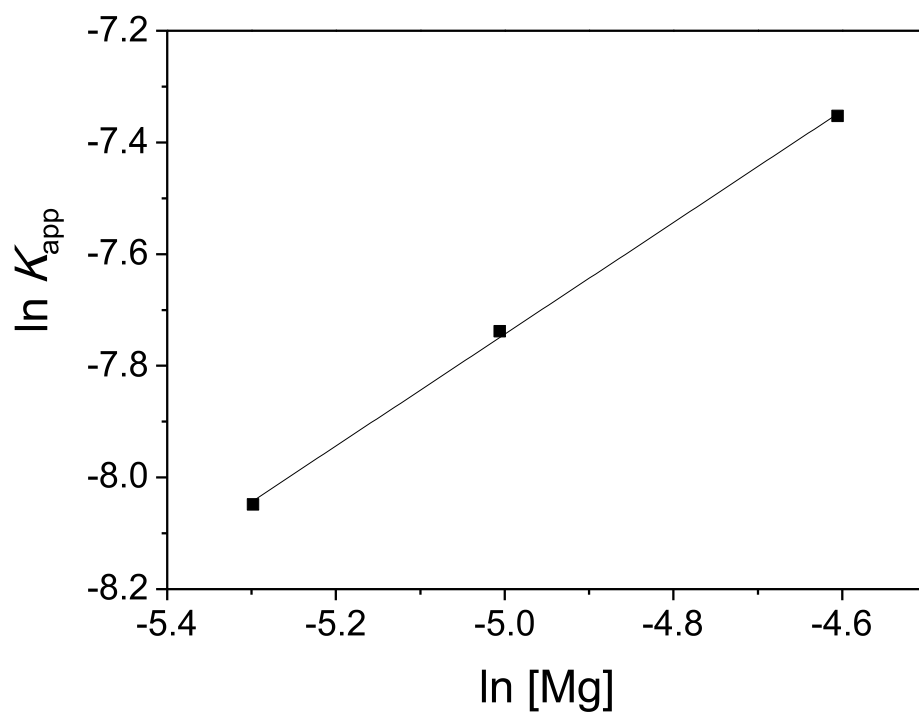
**Fig. S1**  $^1\text{H}$  NMR spectrum of PLA prepared by the polymerization of *rac*-LA.



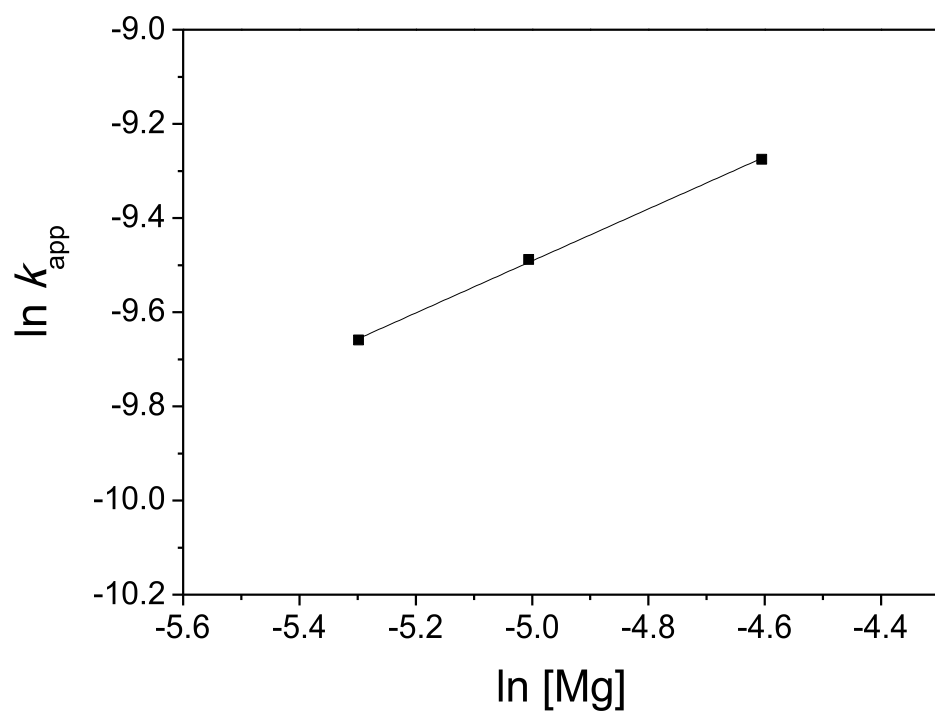
**Fig. S2** Dependence of number average molecular weight and molecular weight distribution on conversions for the polymerization of *rac*-lactide by complex **2** ( $[LA]_0/[2]/[BnOH] = 100/1/1$ ).



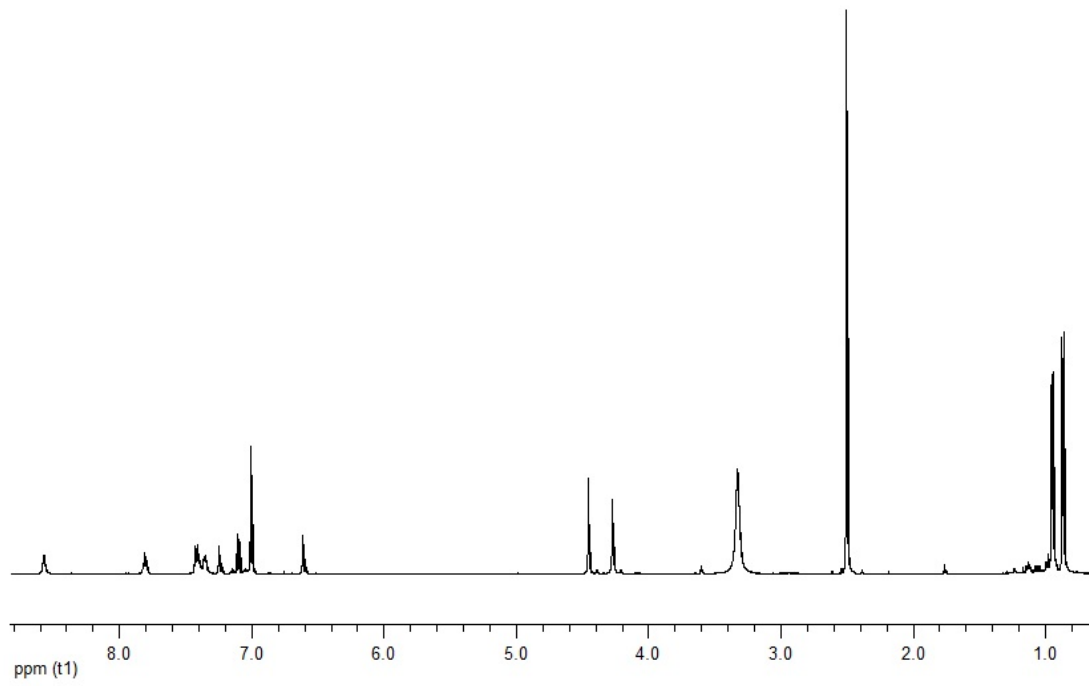
**Fig. S3** First order kinetic plots for polymerizations of *rac*-lactide with time by **2** at 130 °C ( $[LA]_0/[2]/[BnOH] = 100/1/1$ ).



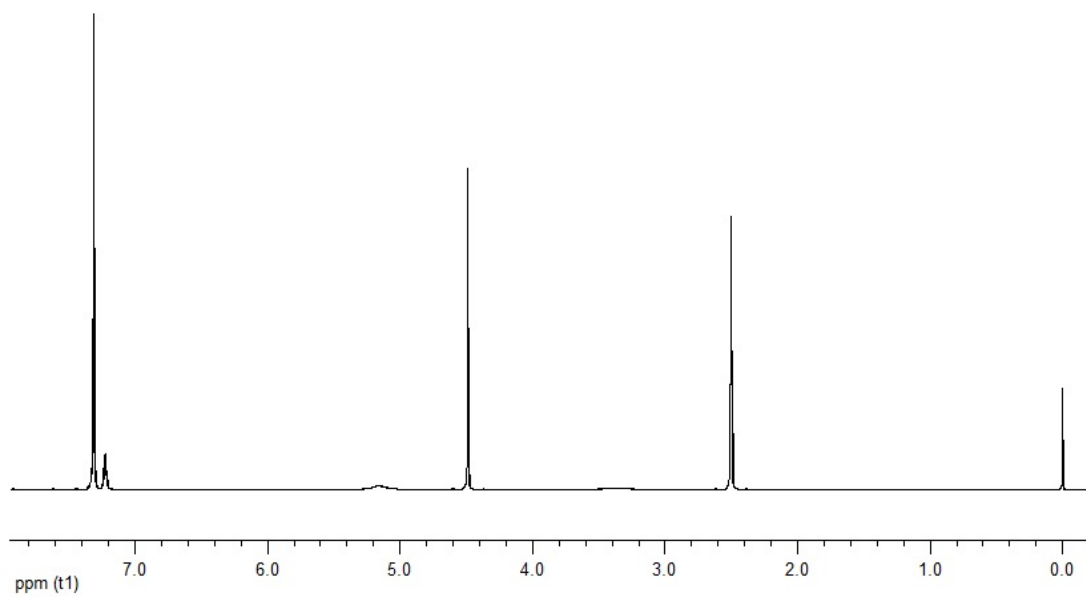
**Fig. S4** Polymerization of *rac*-LA with complex **1** and relationship between  $\ln k_{\text{app}}$  and the  $\ln [\text{Mg}]$  in the first stage.



**Fig. S5** Polymerization of *rac*-LA with complex **1** and relationship between  $\ln k_{\text{app}}$  and the  $\ln [\text{Mg}]$  in the second stage.

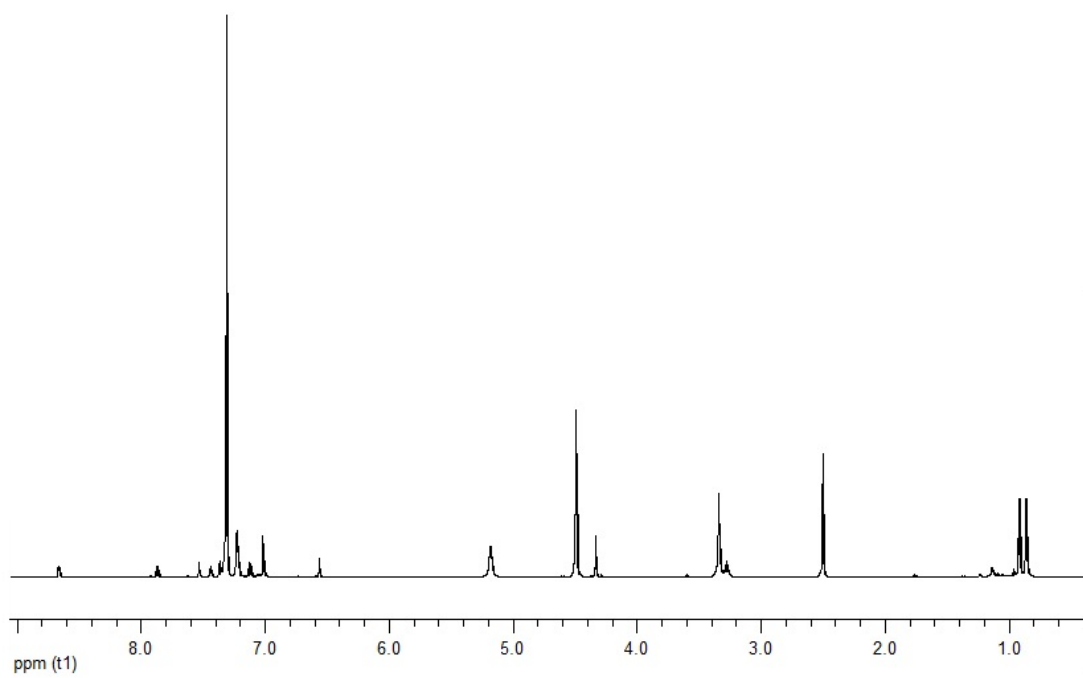


**Fig. S6**  $^1\text{H}$  NMR spectrum of **1** in  $\text{DMSO-}d_6$  at 303 K.

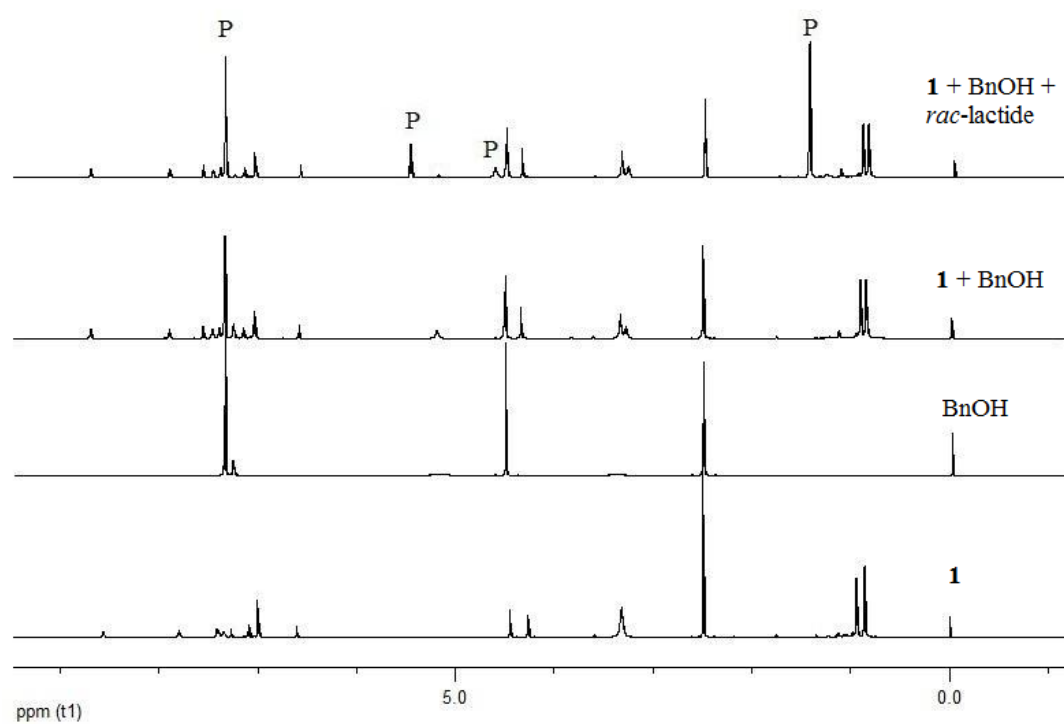


**Fig. S7**  $^1\text{H}$  NMR spectrum of BnOH in  $\text{DMSO-}d_6$  at 303 K.





**Fig. S8**  $^1\text{H}$  NMR spectrum of a 5:1 mixture of BnOH and **1** in  $\text{DMSO-}d_6$  at 303 K.



**Fig. S9** Monitoring of model reactions of **1**, BnOH and *rac*-lactide (in the molar ratio of 1:1 or 1:1:1) by <sup>1</sup>H NMR in DMSO-*d*<sub>6</sub> at 303 K.