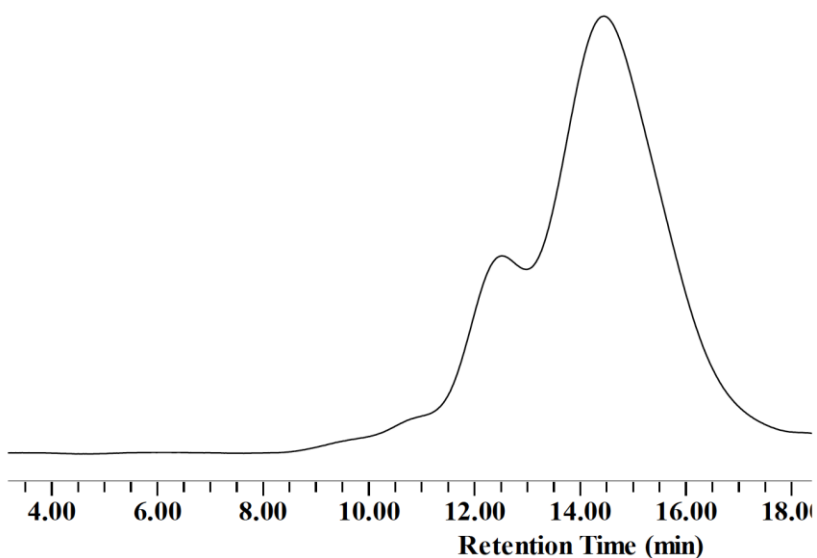


## Supporting Information

### Coordination Ring-opening Copolymerization of Naturally Renewable $\alpha$ -Methylene- $\gamma$ -butyrolactone into Unsaturated Polyesters

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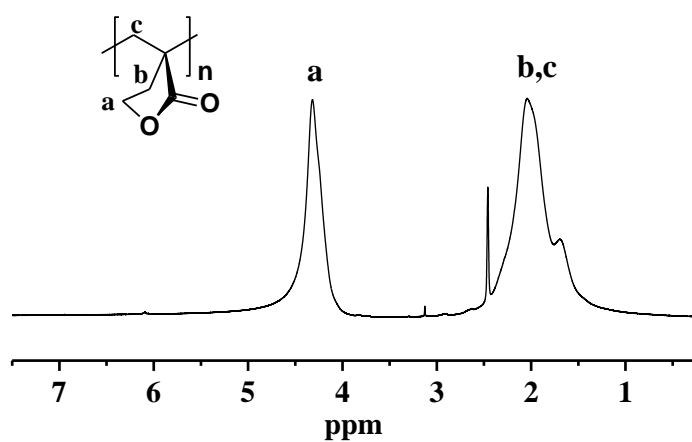
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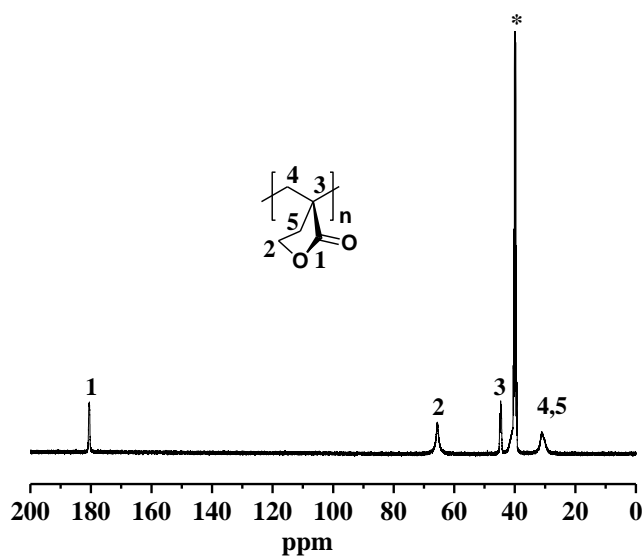
**Figure S1.** GPC (in DMF) trace of the polymer product derived from the copolymerization of neat  $\epsilon$ -CL and MBL (1:1) by  $\text{Bi}(\text{OTf})_3$  at at 130 °C, showing a bimodal MW distribution:  $M_w = 145$  kg/mol, PDI = 1.24 (~16%),  $M_w = 8.35$  kg/mol, PDI = 1.33 (~84%).

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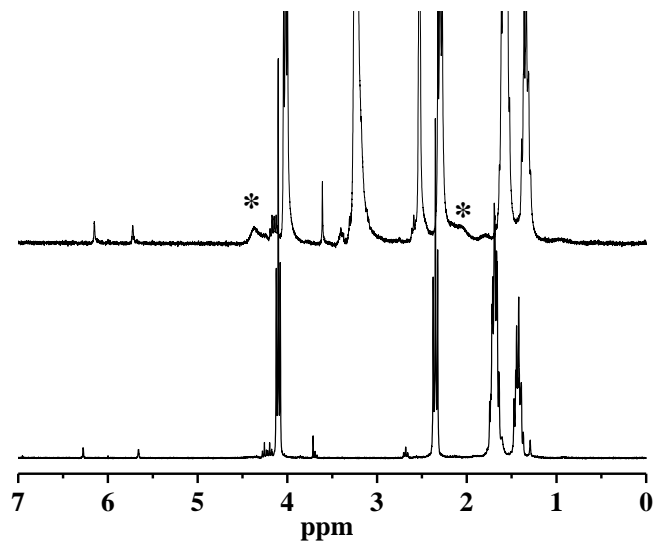
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**Figure S2.**  $^1\text{H}$  NMR spectrum ( $\text{DMSO-}d_6$ ) of PMBL produced by catalyst **1** ( $M_w = 62.5$  kg/mol, PDI = 2.31). Unlabeled sharp peaks were originated from the NMR solvent.



**Figure S3.**  $^{13}\text{C}$  NMR spectrum ( $\text{DMSO-}d_6$ ) of PMBL produced by catalyst **1** ( $M_w = 62.5$  kg/mol, PDI = 2.31). The starred peak was originated for the NMR solvent.



**Figure S4.**  $^1\text{H}$  NMR spectra of the polymer product obtained by  $\text{Y}(\text{CH}_2\text{SiMe}_3)_3(\text{THF})_2$  (**4**) (run 4) in:  $\text{DMSO}-d_6$  (top) and  $\text{CDCl}_3$  (bottom), showing the formation of 18 mol% PMBL (starred peaks), in addition to the desired ring-opening copolymer.