

Supplemental Information

to

Polycondensations and Cyclization of Poly(L-lactide) Ethyl Esters in the Solid State

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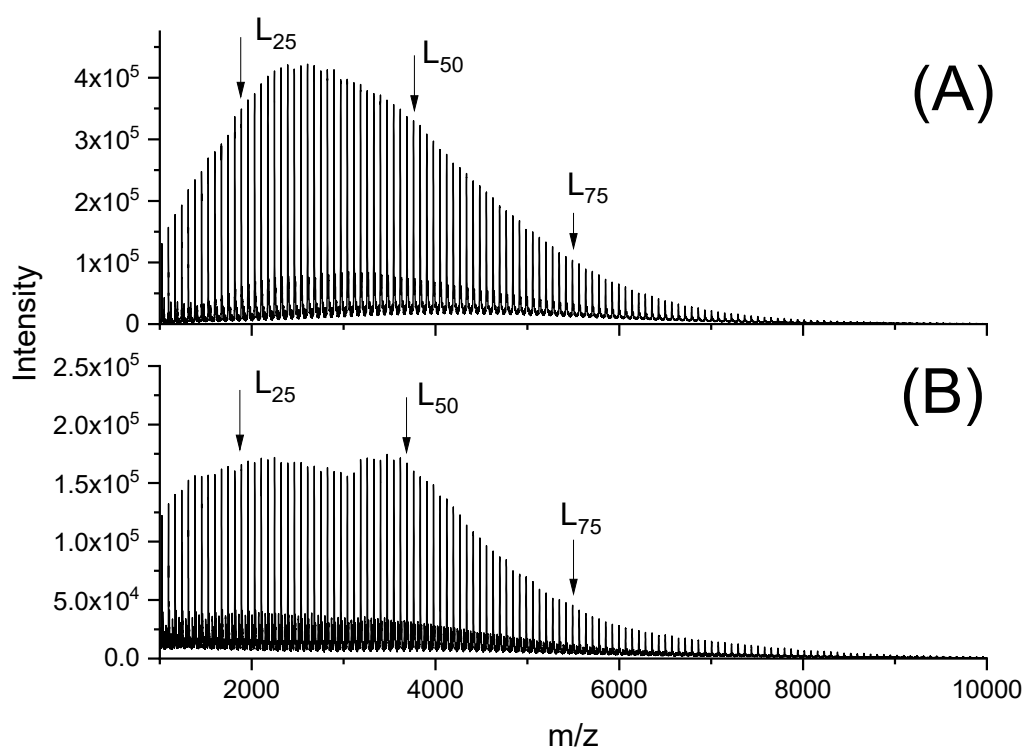


Figure S1: MALDI-TOF mass spectra of PLAs prepared by co-polycondensation of ELA in bulk T=150 °C/6 d: (A) with SnCl₂ (1, Table 1), (B) with BuSnPhF (7, Table 1)

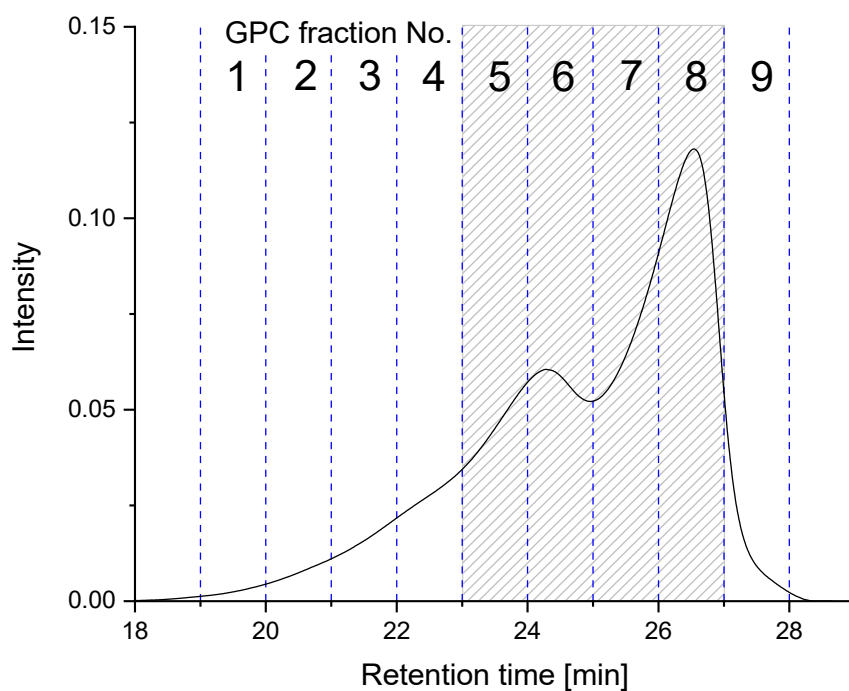


Figure S2 GPC elution curve of a PLA prepared with BuSnPhF at 140 °C and annealed for 1 d, with indication of fractions (4BX, Table 2)

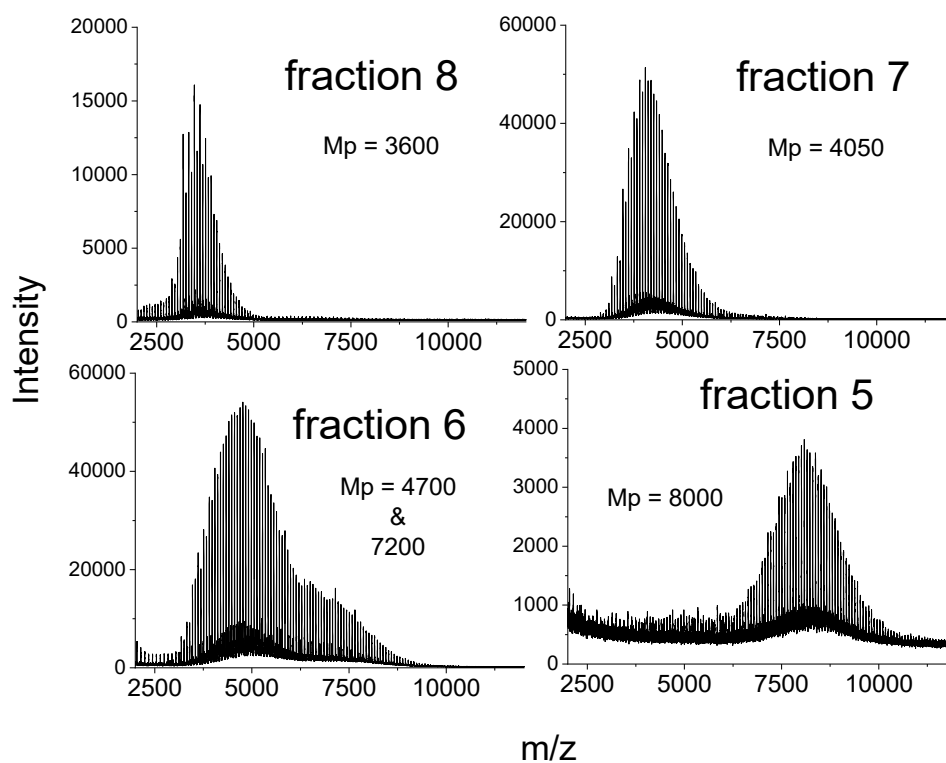


Figure S3 MALDI TOF mass spectra of 4 GPC fractions recorded from the PLA prepared with BuSnPhF at 140 °C/ 1 d (4BX, Table 2, GPC elugram see Figure S2)

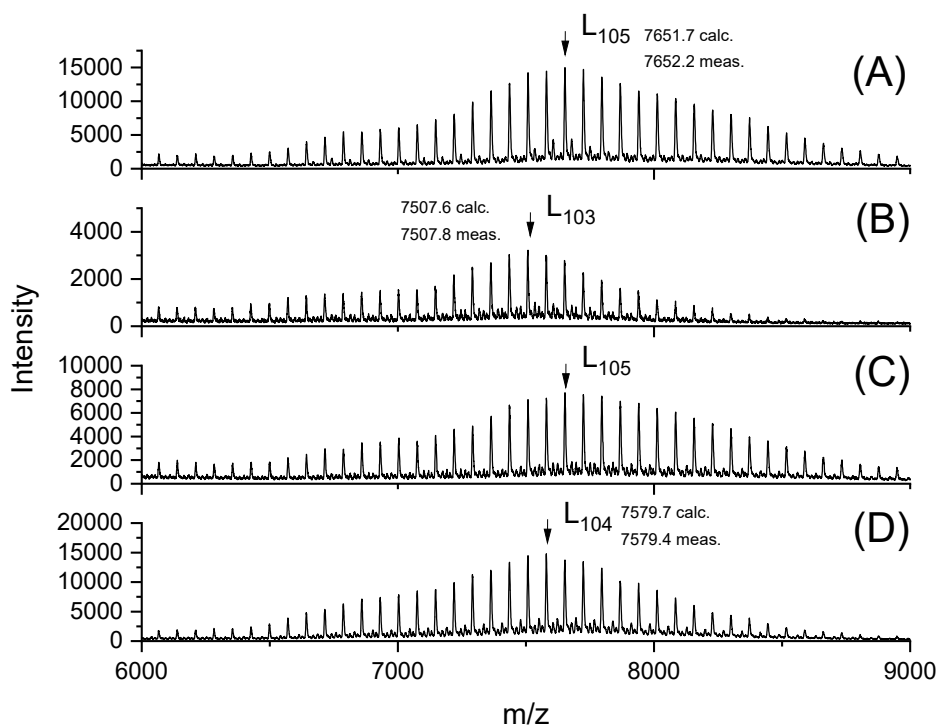


Figure S4 MALDI-TOF mass spectra (segments) of PLAs annealed at 140 °C for 28 d: (A) SnOct_2 , (B) SnCl_2 , (C) BuSnPhCl and (D) BuSnOPF

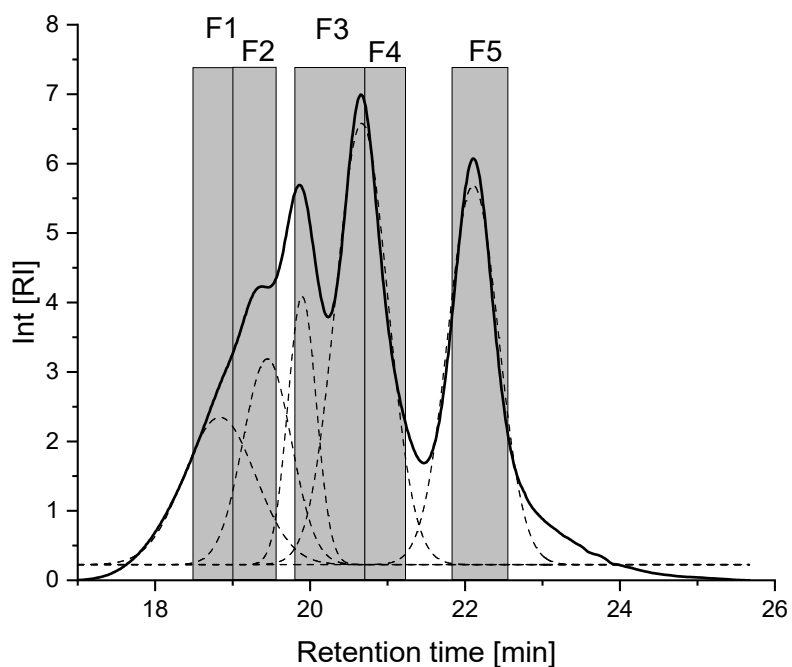


Figure S5 GPC elution curve of a PLA prepared with SnCl_2 at 140 °C/28 d (2D, Table 2) with indication of fractions taken for MALDI TOF MS

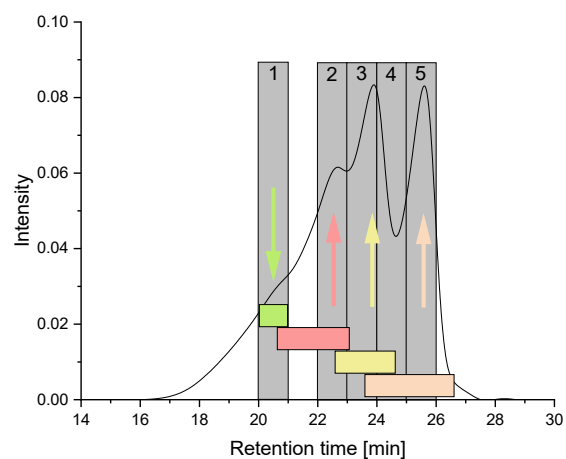


Figure S6 SEC elution curve of a PLA prepared with BuSnPhF (4D, Table 2) with indication of fractions taken for MALDI TOF MS

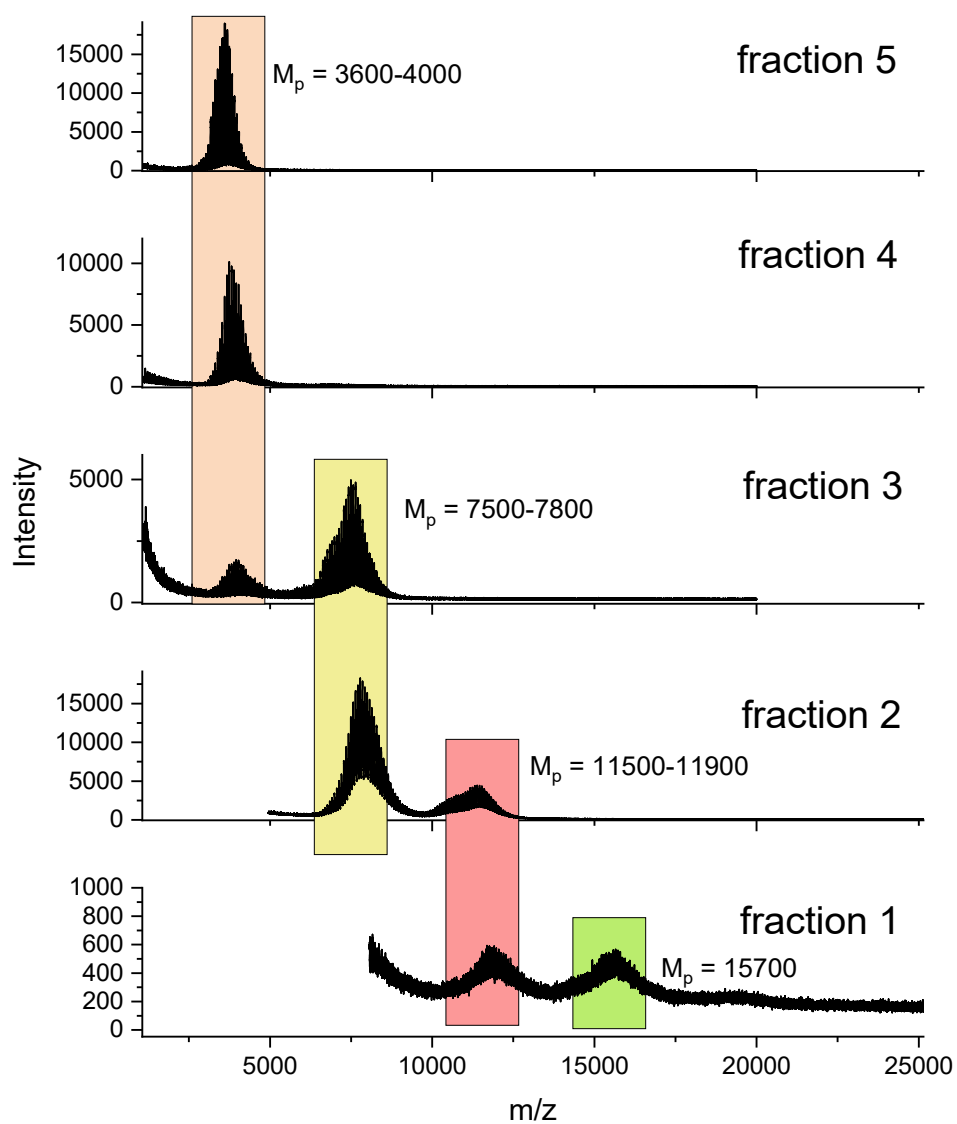


Figure S7 MALDI TOF mass spectra of 5 GPC fractions recorded from the fractionated PLA (see Figure S6) prepared with BuSnPhF (4D, Table 2)

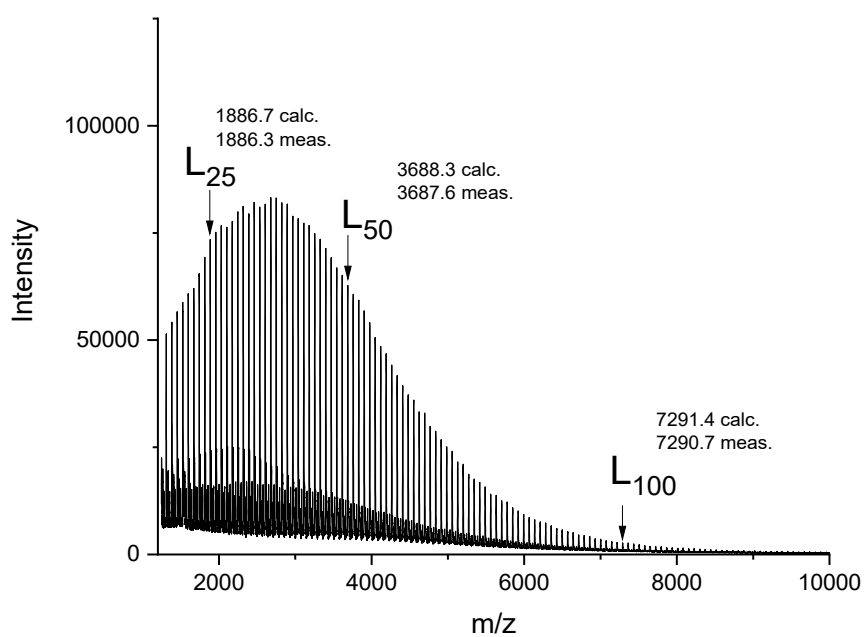


Figure S8 MALDI TOF mass spectrum of a ELA-initiated PLA equilibrated with BuSnPhF (LA/Cat = 400/1) in anisole at 140°C/28d

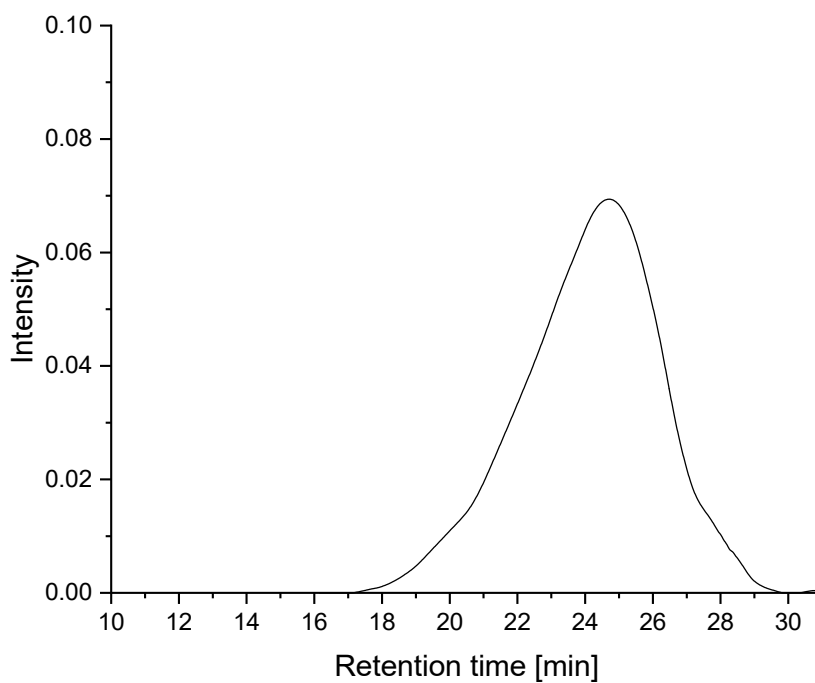


Figure S9 GPC elution curve of an ELA-initiated PLA equilibrated with BuSnPhF (LA/Cat = 400/1) in anisole at 140 °C/28d

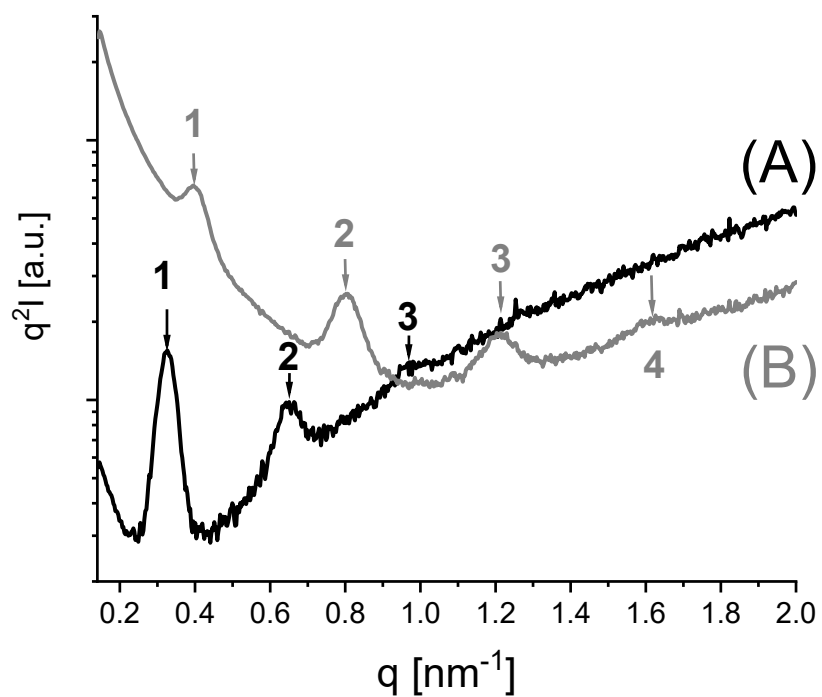


Figure S10 SAXS curves of PLAs prepared at 140 °C with SnCl₂: (A) after 1 d (2B, Table 2), (B) after 28 d (2D, Table 2)

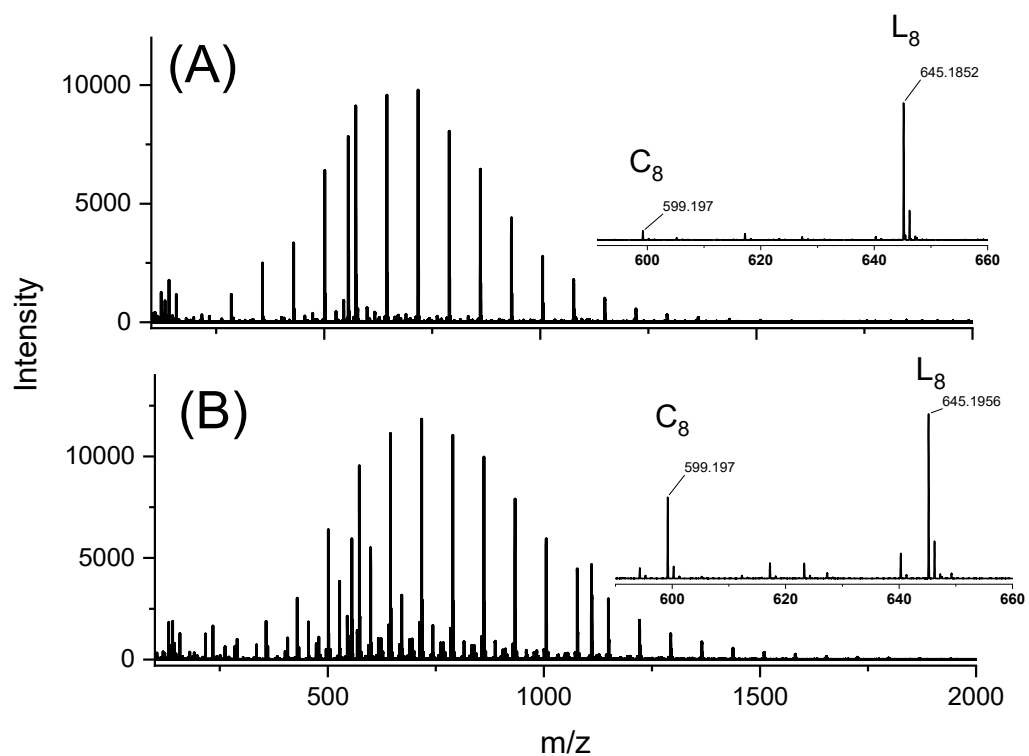
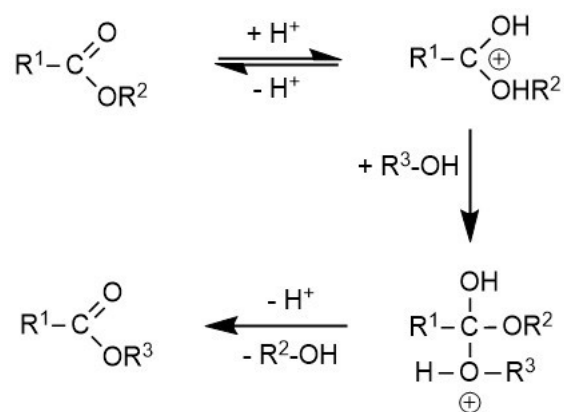
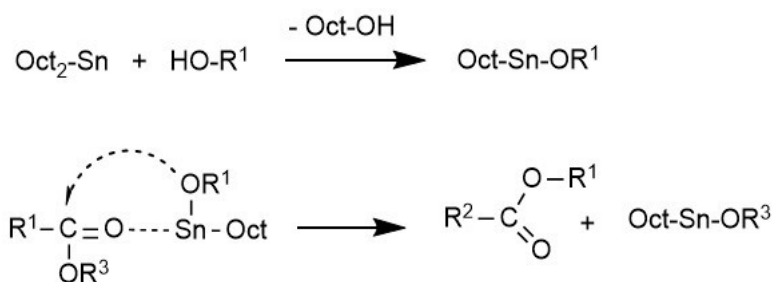


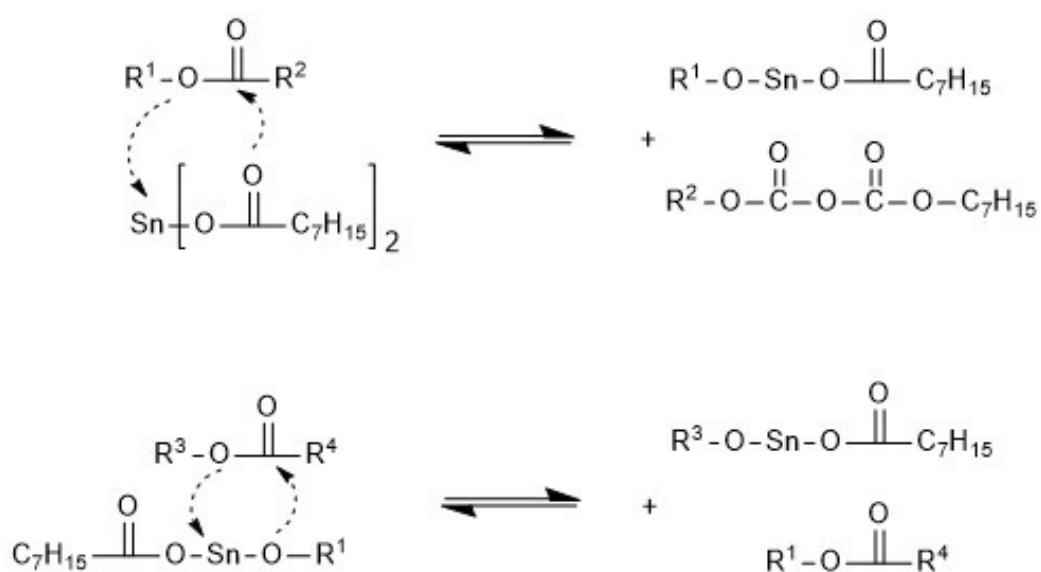
Figure S11 ESI TOF mass spectra of PLAs annealed with SnOct₂: (A) at 140 °C/7d (1C, Table 2), (B) at 160 °C/6d (1B, Table 3)



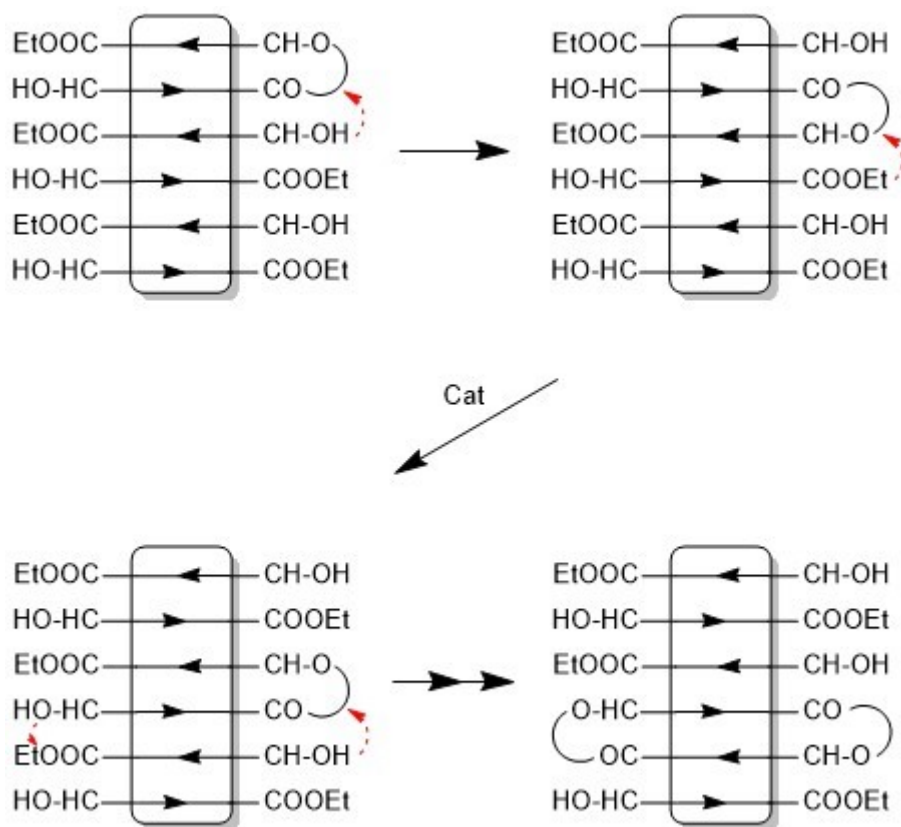
Scheme S1 Proton-catalyzed esterification of a carboxylic acid



Scheme S2 SnOct₂-catalyzed alcoholytic transesterification



Scheme S3 SnOct₂ catalyzed ester-ester interchange reaction



Scheme S4 Schematic illustration of the “wandering loop mechanism”.