

## Supplemental information

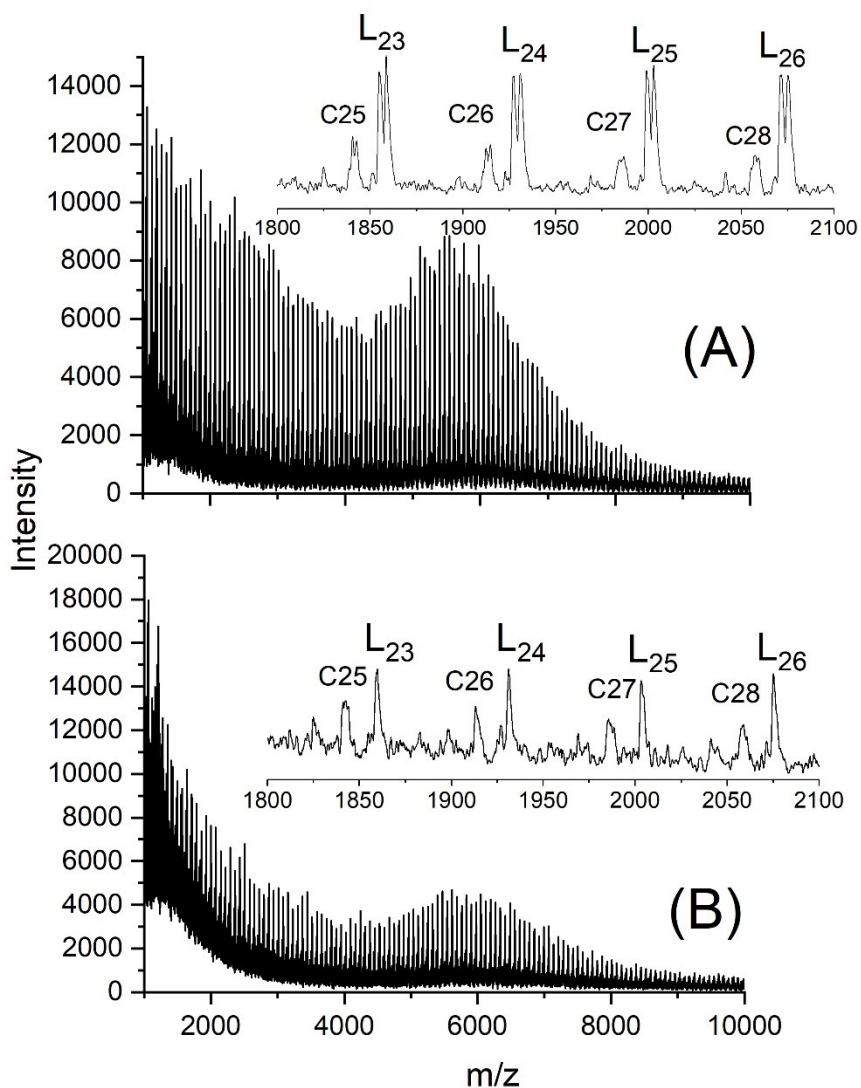
### High $T_m$ linear poly(L-lactide)s prepared via alcohol-initiated ROPs of L-lactide

Hans R. Kricheldorf<sup>a</sup>, Steffen. M. Weidner<sup>b</sup> and Andreas Meyer<sup>c</sup>

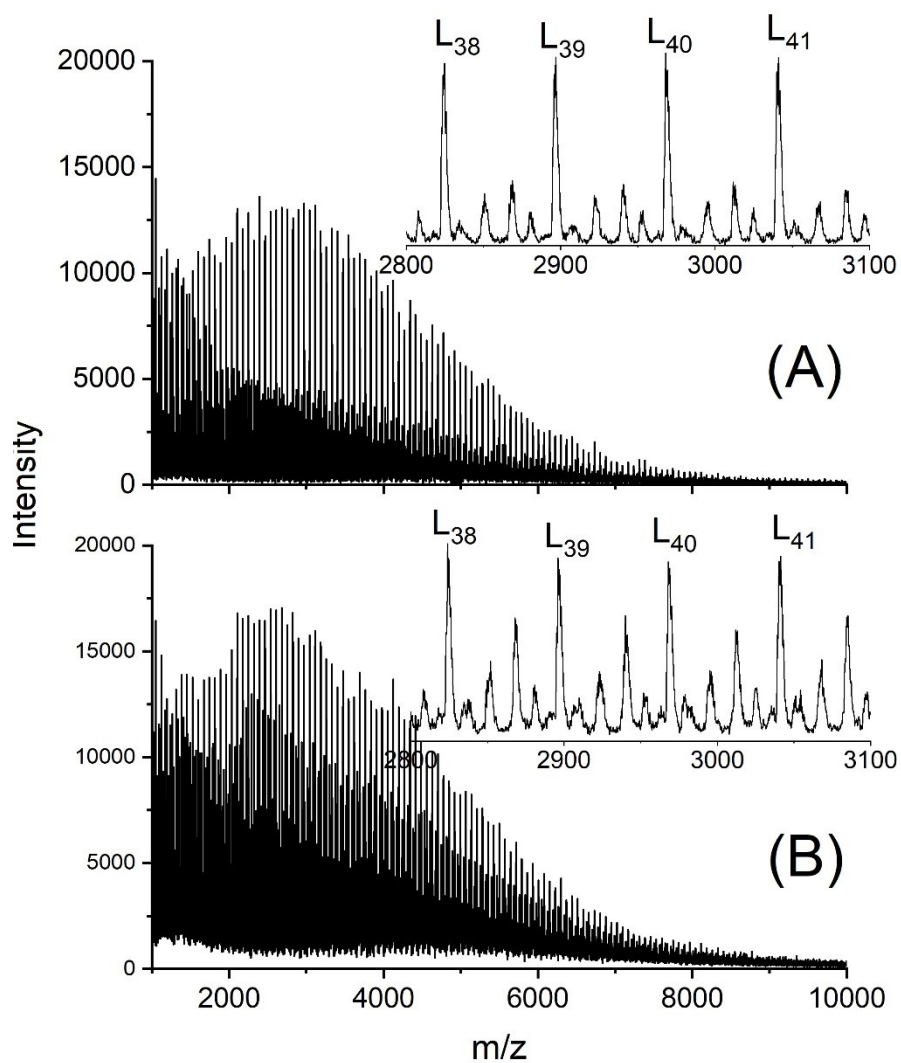
a) Institut für Technische und Makromolekulare Chemie der Universität Hamburg, Bundesstr. 45, D-20146 Hamburg.

b) BAM, Bundesanstalt für Materialforschung und -prüfung, Richard Willstätter Straße 11, 12489 Berlin.

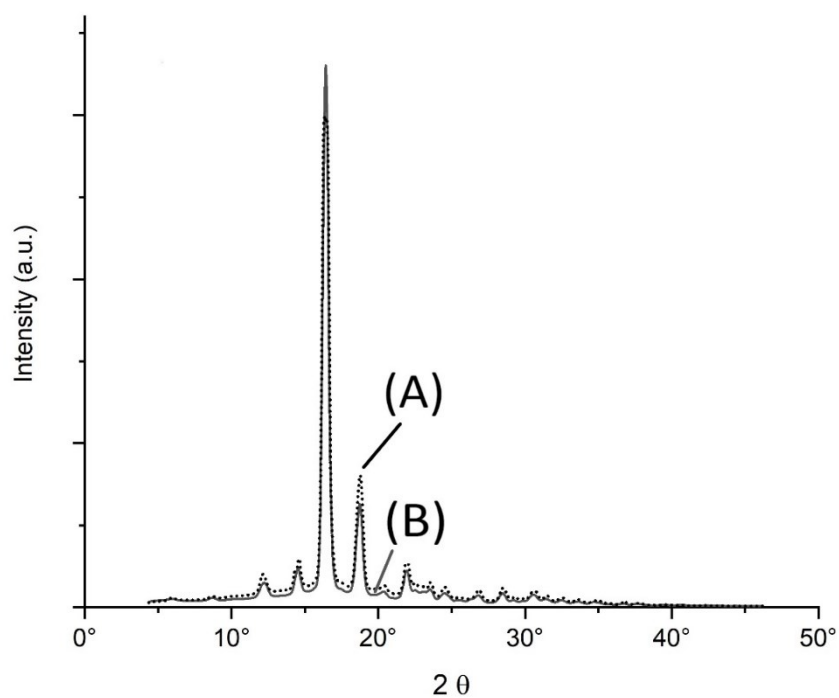
c) Institut für Physikalische Chemie der Universität Hamburg, Grindelallee 117, D-20147 Hamburg



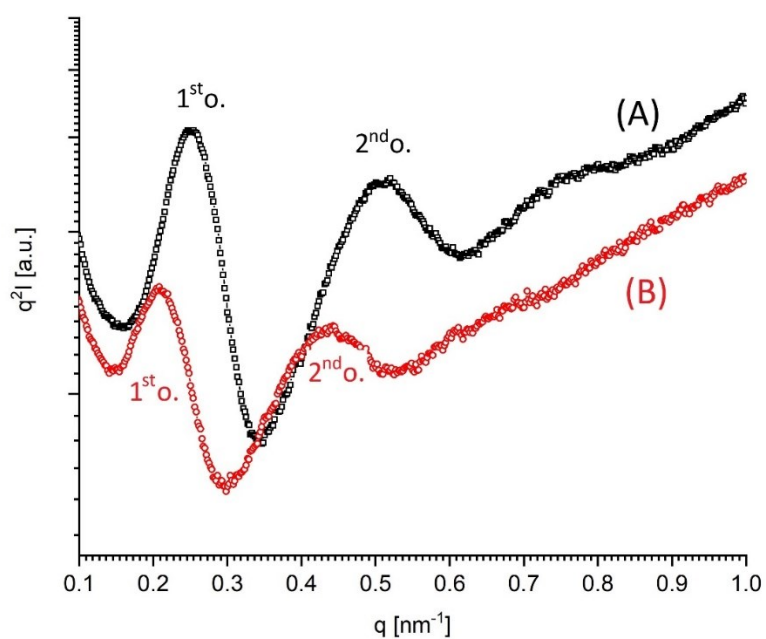
**Figure S1.** MALDI TOF mass spectra of poly(LA)s polymerized with SnBiph and 1-hydroxymethylnaphthalene at 160°C: (A) LA/Cat = 100/1 (No. 6, Table 2), (B) LA/Cat = 200/1 (No. 7, Table 2)



**Figure S2.** MALDI TOF mass spectra of polyLAs polymerized with ethyl L-lactate as initiator at 160°C: (A) SnNaph as catalyst (No. 11, Table 1), (B) BuSnNaph as catalyst (No. 6, Table 1)



**Figure S3.** WAXS powder patterns of polyLAs polymerized with ethyl L-lactate as initiator at 130°C in bulk: (A) with SnBiph as catalyst (No. 4, Table 5), (B) with SnOct<sub>2</sub> as catalyst (No. 8, Table 5)



**Figure 4.** SAXS powder patterns (Kratky plots) of polyLAs polymerized with SnBiph at 160°C/3d: (A) ethyl L-lactate as initiator, LA/In = 300/1 (No. 2, Table 2), (B) 11-undecenol as initiator, LA/In = 100/1 (No. 4, Table 2)