Supporting Information

Scope and Limitations of Ring-Opening Copolymerization of Trimethylene Carbonate with Substituted γ-Thiolactones

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Figure S1. SEC-RI chromatogram (normalized) of the isolated poly(TMC-co-TL0).

Figure S2. $^1$H NMR of the isolated poly(TMC-co-TL0) in CDCl$_3$. 
Figure S3. SEC-RI chromatogram (normalized) of the isolated poly(CL-co-TL0).

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M_n = 4320 \text{ g.mol}^{-1} \\
D = 2.31
\]

Figure S4. \(^1\)H NMR of the isolated poly(CL-co-TL0) in CDCl\(_3\).
Figure S5. SEC-RI chromatogram (normalized) of the isolated poly(TMC-co-TL1) using Bz-OH as initiator.

Figure S6. SEC-RI chromatograms (normalized) of the isolated poly(TMC-co-TL2) using Bz-OH as initiator (a) and PM as initiator (b).
**Figure S7.** SEC-RI chromatogram (normalized) of the isolated poly(TMC-co-TL3).

**Figure S8.** SEC-RI chromatograms (normalized) of the isolated poly(TMC-co-TL1) with TBD as catalyst (a) and the isolated poly(TMC-co-TL1) with DBU as catalyst (b).
Figure S9. Isolated poly(TMC-co-TL2) using Bz-OH as initiator (A) and PM as initiator (B) under UV-light at $\lambda = 365$ nm.

Figure S10. MALDI-TOF MS spectra of the isolated poly(TMC-co-TL1)s.
Figure S11. DSC thermograms of the different polymers.

- poly(TMC); $T_g = -18.4 \, ^\circ C$
- poly(TMC-co-TL1); $T_g = -29.3 \, ^\circ C$
- poly(TMC-co-TL2); $T_g = -23.8 \, ^\circ C$
- poly(TMC-co-TL3); $T_g = -28.7 \, ^\circ C$
- poly(TMC-co-TL1); $T_g = -29.3 \, ^\circ C$