

Supporting information for

Highly trans-1,4-stereoselective coordination chain transfer polymerization of 1,3-butadiene and copolymerization with cyclic esters by neodymium-based catalyst system

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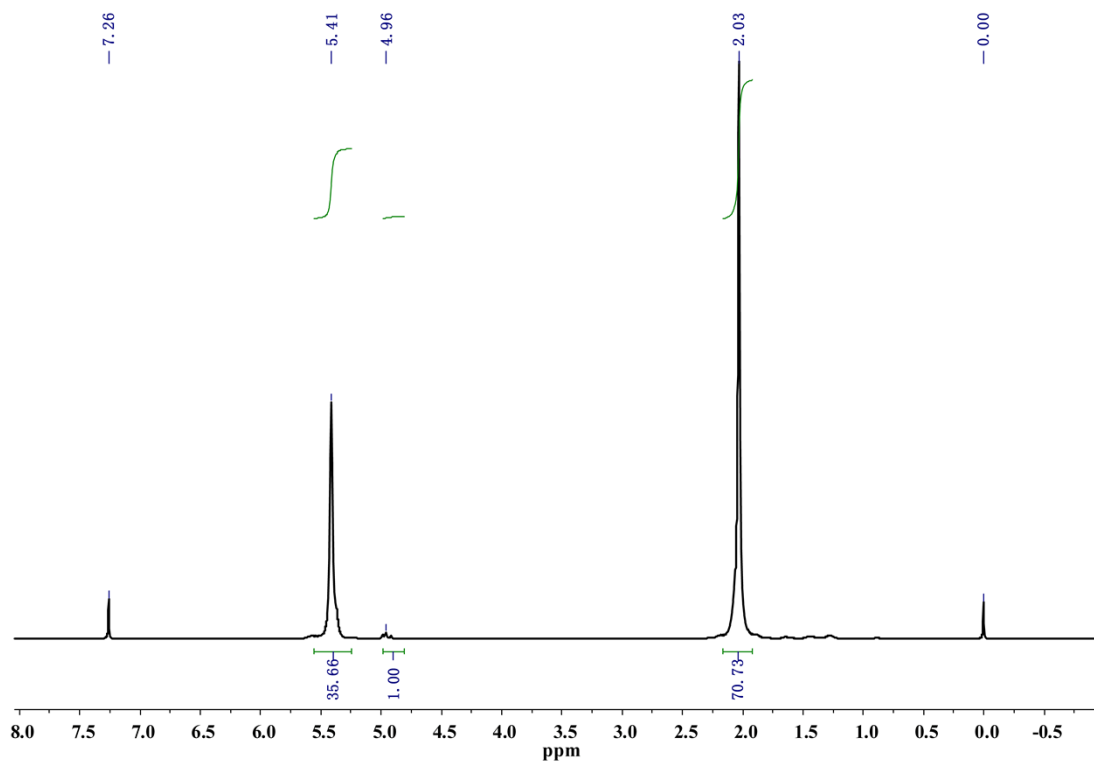


Fig. S1 ^1H NMR spectrum of *trans*-1,4- polybutadiene (run 3 in table 1).

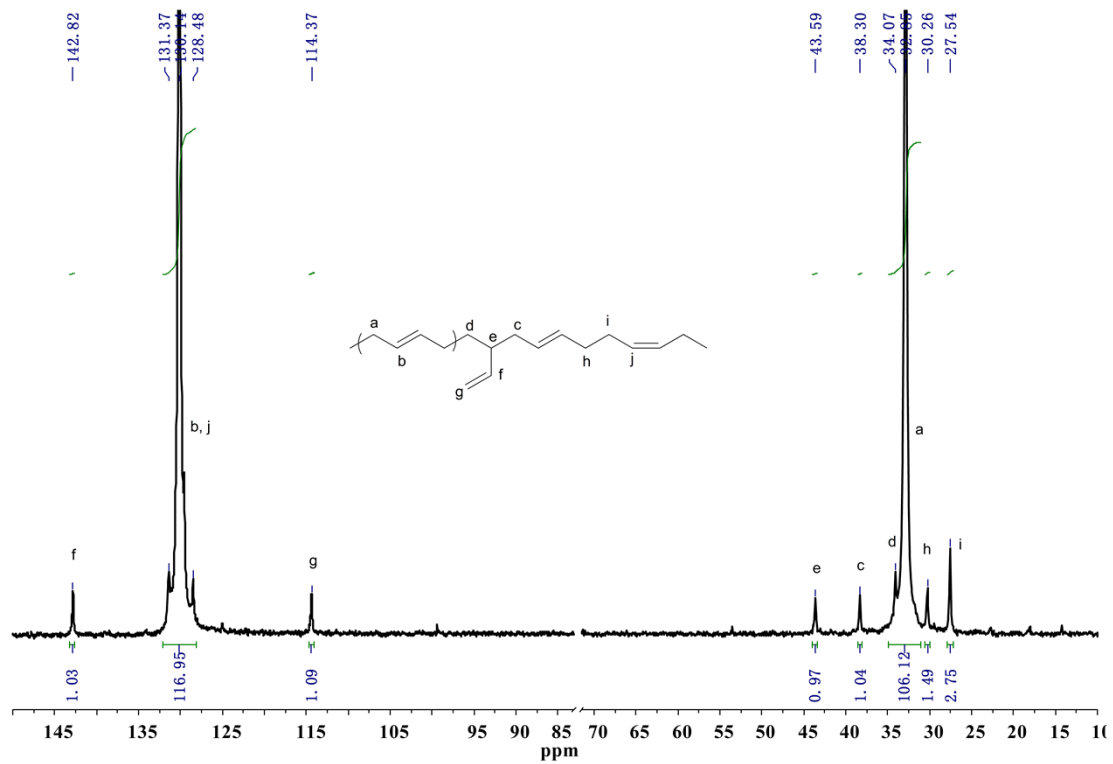


Fig. S2 ^{13}C NMR spectrum of *trans*-1,4- polybutadiene (run 3 in table 1).

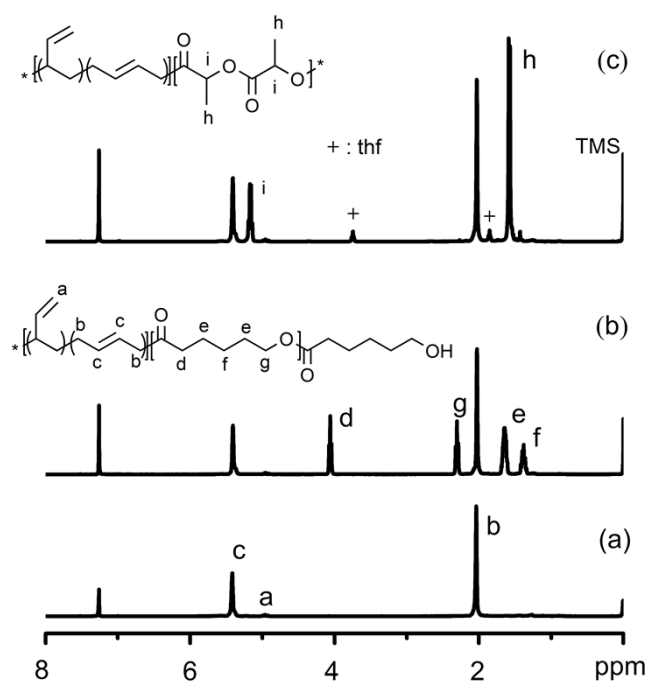


Fig. S3 $^1\text{H NMR}$ spectra of (a) TPB, (b) TPB-*b*-PCL copolymer, and (c) TPB-*b*-PLA copolymer.

Table 1. the dn/dc values of TPB-*b*-PCL copolymers.

| Copolymer | TPB- <i>b</i> -PCL | | |
|-------------------------------|---------------------|---------------------|---------------------|
| ϵ -CL content (mol%) | 27.2 | 46.3 | 62.3 |
| dn/dc (ml/g) | 0.1050 ± 0.0005 | 0.0916 ± 0.0007 | 0.0820 ± 0.0010 |

Table 2. the dn/dc values of TPB-*b*-PLA copolymers.

| Copolymer | TPB- <i>b</i> -PLA | | |
|-------------------|---------------------|---------------------|---------------------|
| LA content (mol%) | 20.5 | 46.0 | 75.0 |
| dn/dc (ml/g) | 0.0742 ± 0.0007 | 0.0742 ± 0.0007 | 0.0742 ± 0.0007 |