Supporting Information

Covalent segmented polymer networks composed of poly(2-isopropenyl-2-oxazoline) and selected aliphatic polyesters: Designing biocompatible amphiphilic materials containing degradable blocks.

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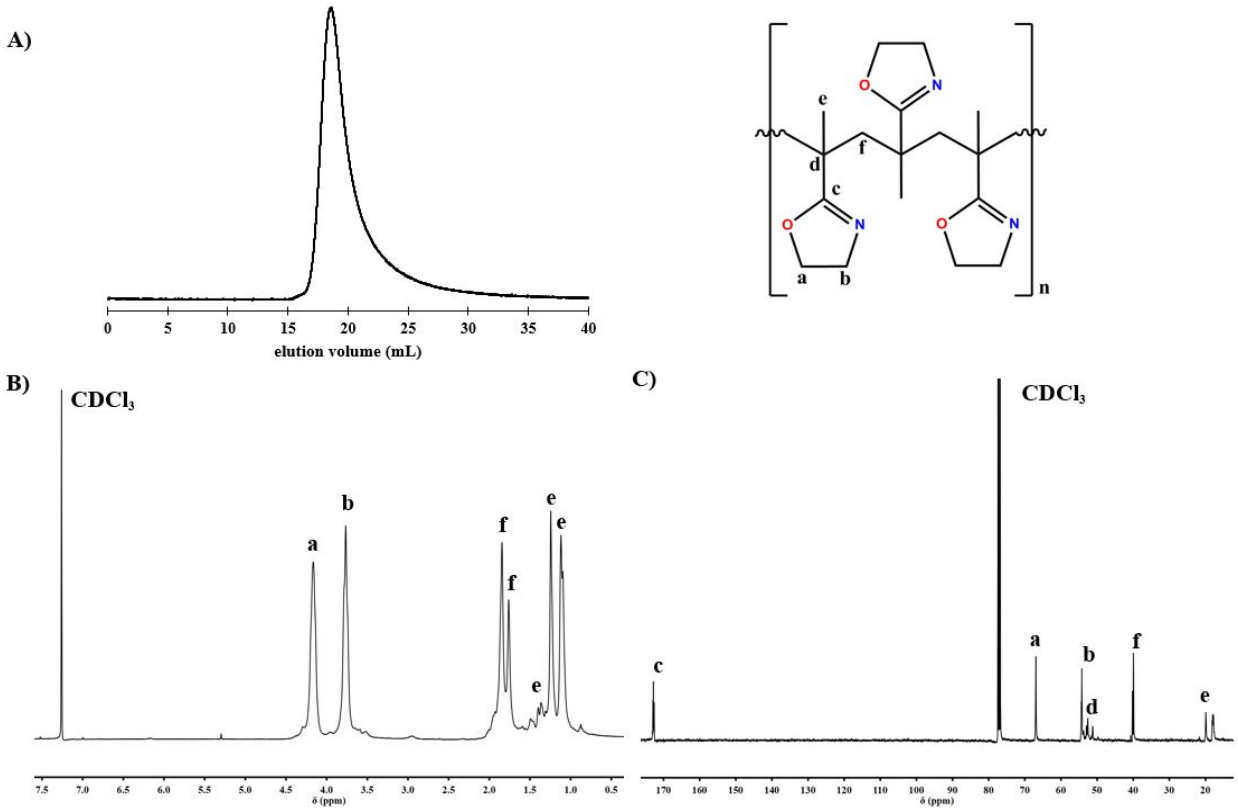

Figure S1. PiPOx characterization: A) SEC (H_2O), B) ^{1}H NMR and C) ^{13}C NMR spectra (400 MHz, $CDCl_3$).

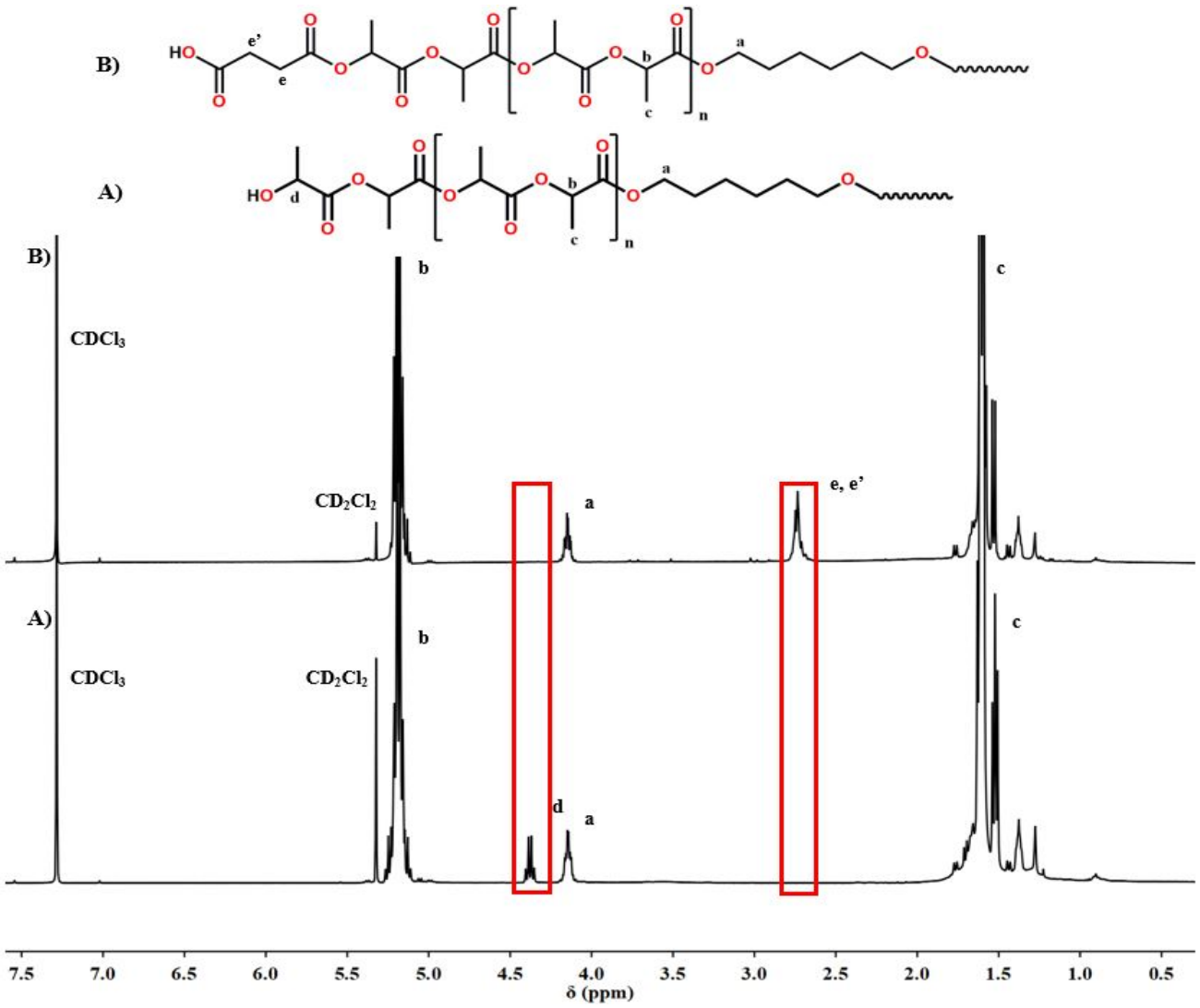

Figure S2. ^{1}H NMR spectra of: A) starting and B) modified poly(lactide) diol: HOOC-PLA-COOH (400 MHz, $CDCl_3$).

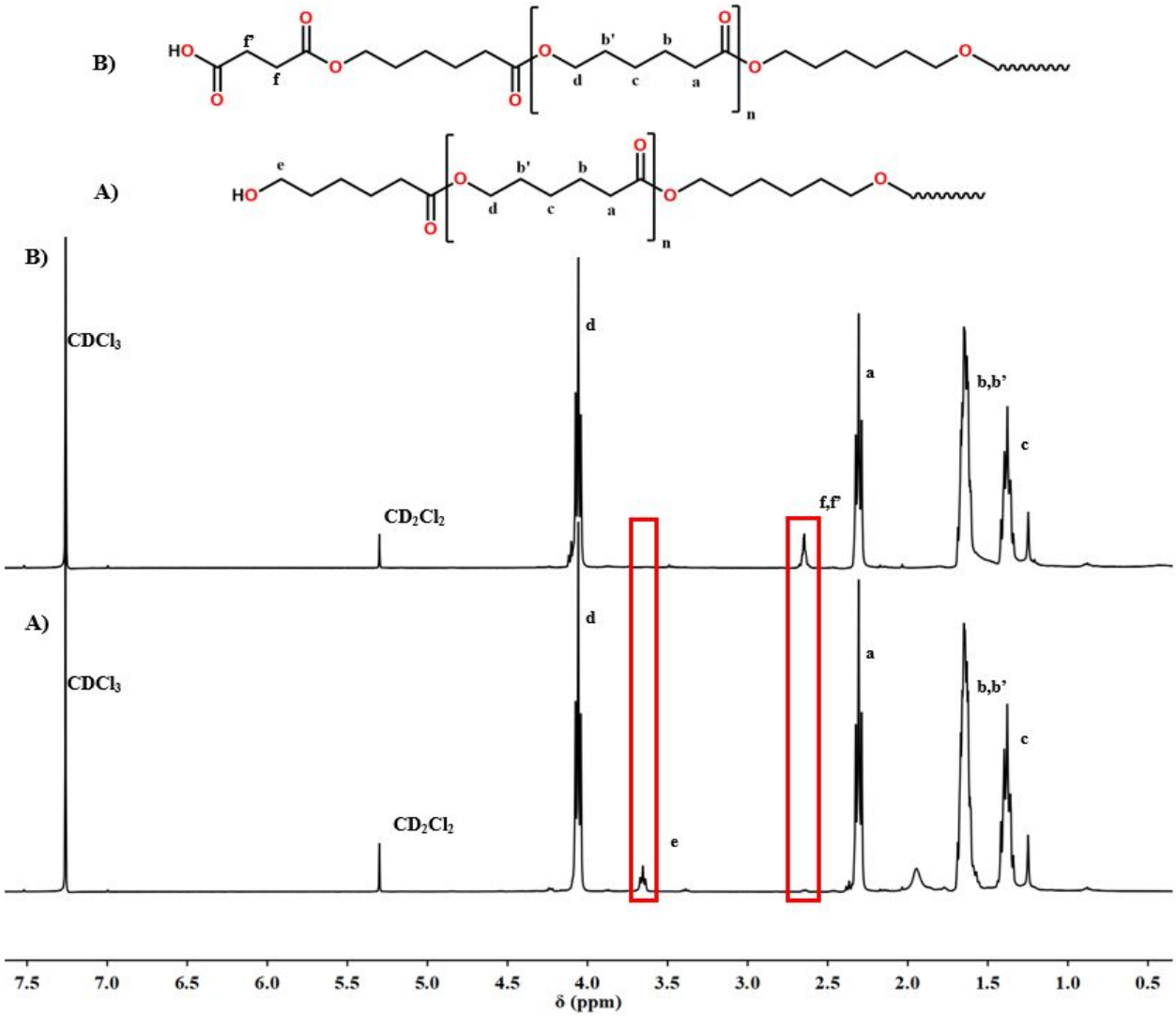

Figure S3. ^{1}H NMR spectra of: A) starting and B) modified poly(caprolactone) diol: HOOC-PCL-COOH (400 MHz, $CDCl_3$).

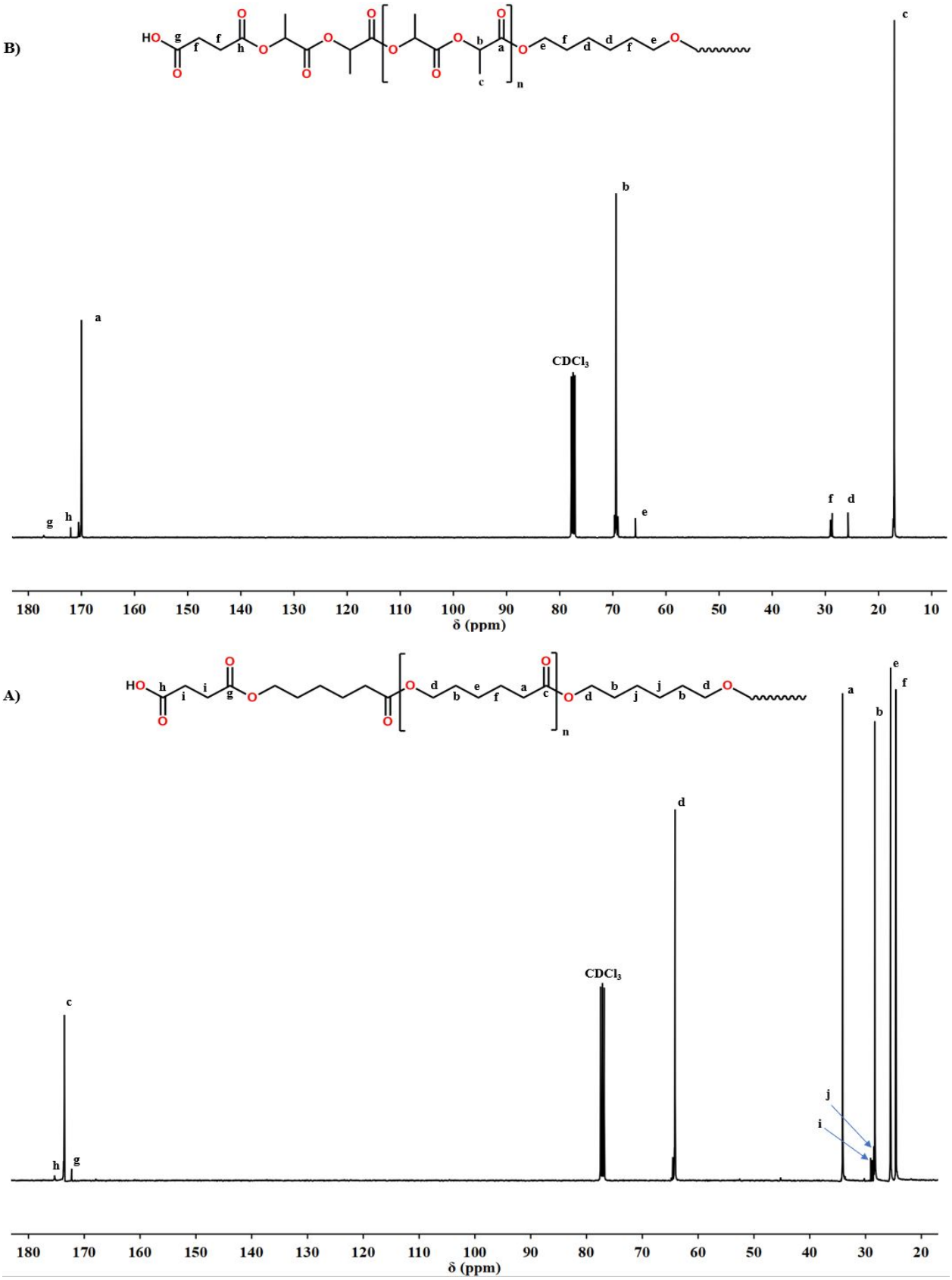

Figure S4. ^{13}C NMR spectra of: modified polyester diols: A) HOOC-PCL-COOH and B) HOOC-PLA-COOH (400 MHz, $CDCl_3$).

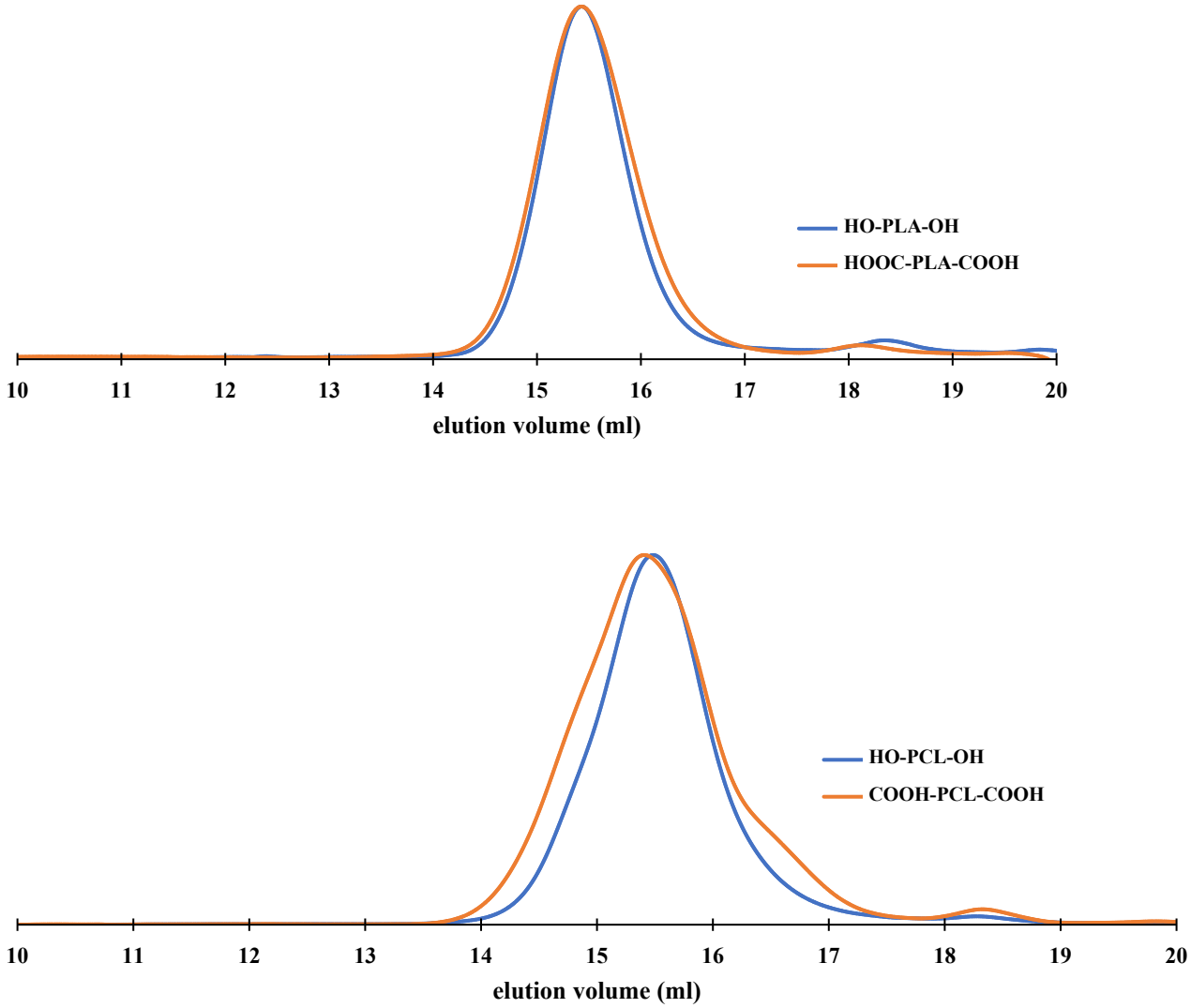

Figure S5. SEC curves of starting and modified polyester diols (CH_2Cl_2).

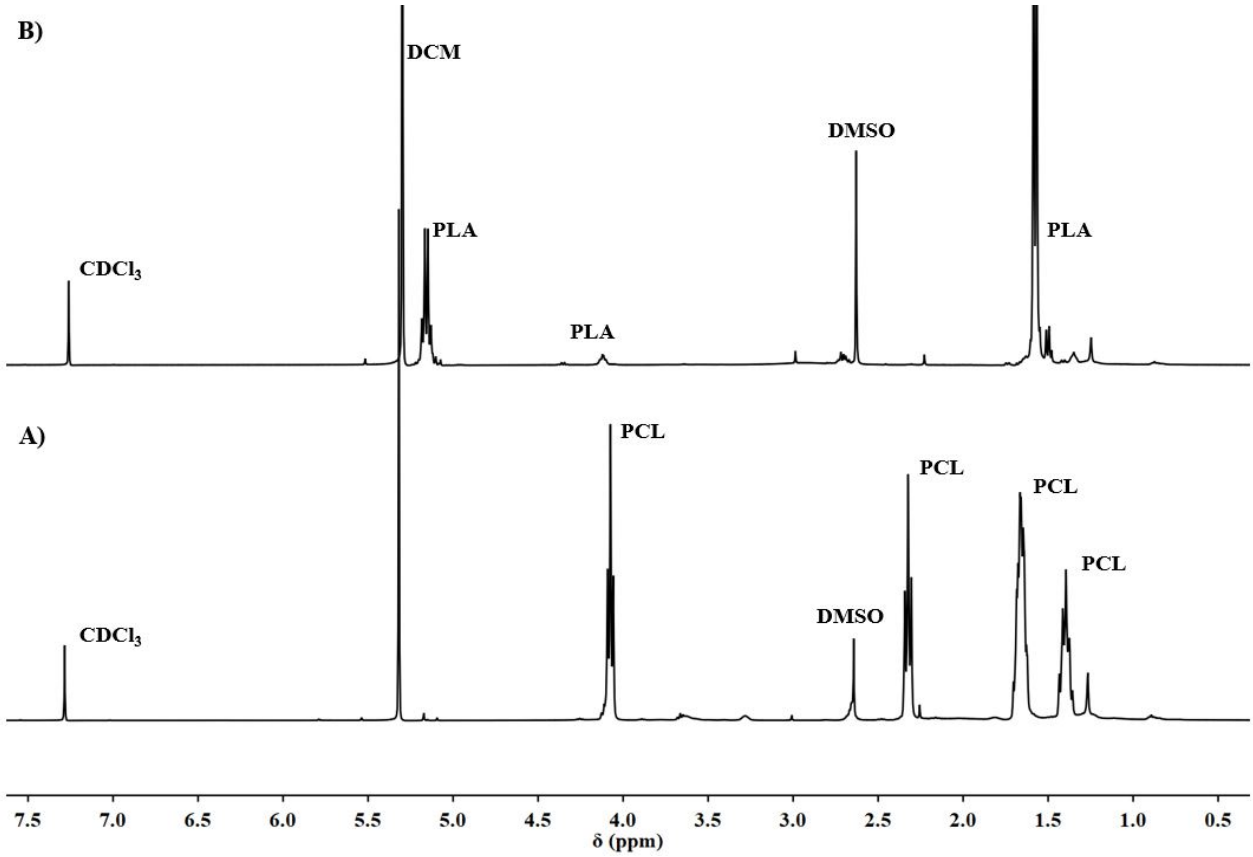

Figure S6. ^{1}H NMR spectrum of the soluble fraction of: A) PCL-*l*-PiPOx and B) PLA-*l*-PiPOx (400 MHz, $CDCl_3$).

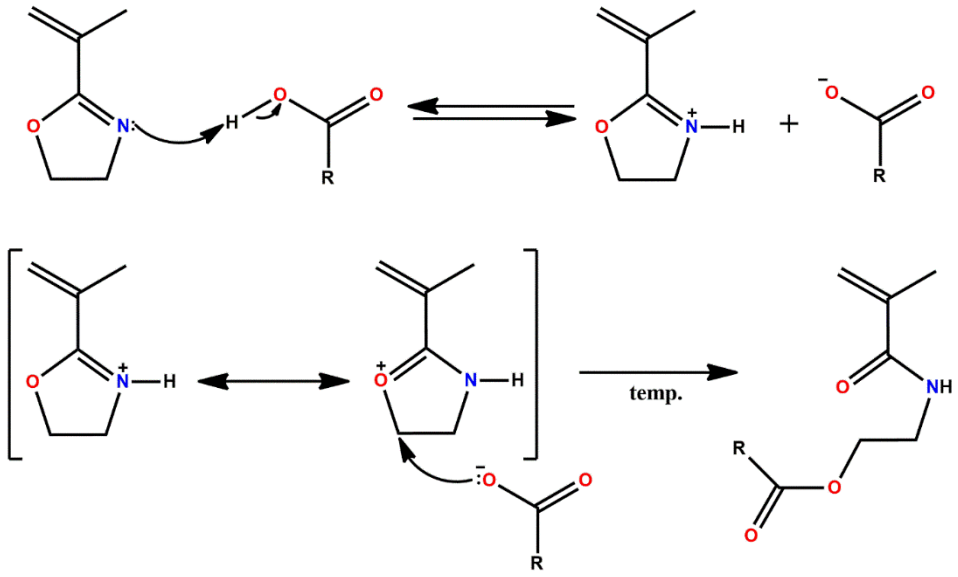

Figure S7. The mechanism for adduct formation with the ester-amide structure obtained by ring-opening oxazoline with a reagent containing carboxyl group. [Reproduced from ref. 33 with permission from Polymer Chemistry, copyright 2022]

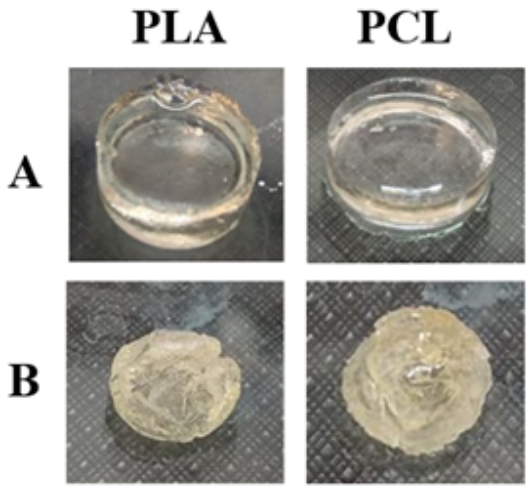

Figure S8. Physical appearance of: A) as-prepared and B) dried (after extraction) PLA_{3000}-*l*-PiPOx-2 and PCL_{3000}-*l*-PiPOx-2 networks.

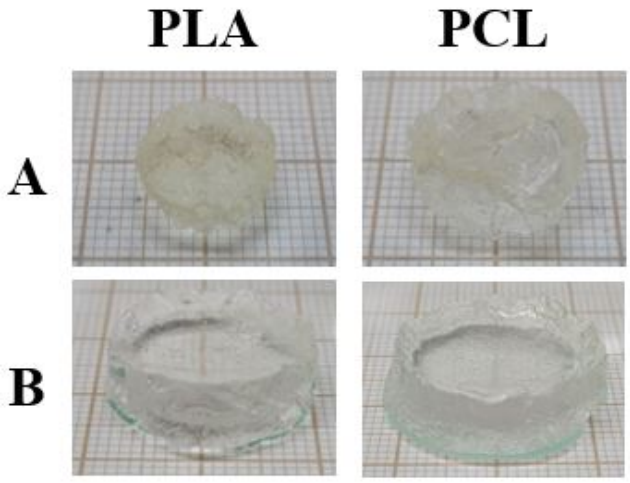

Figure S9. Physical appearance of: A) PLA_{3000}-*l*-PiPOx-2 and PCL_{3000}-*l*-PiPOx-2 networks swollen in water and B) PLA_{3000}-*l*-PiPOx-4 and PCL_{3000}-*l*-PiPOx-4 networks swollen in DMF.

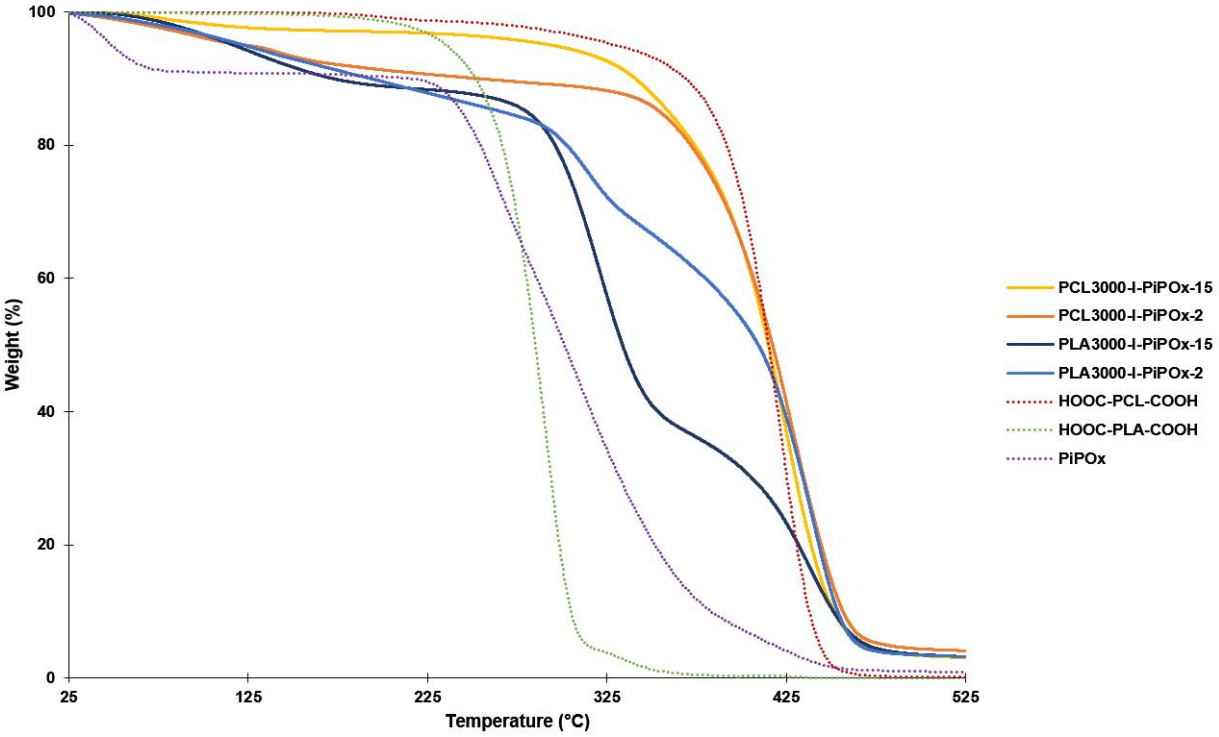

Figure S10. TGA curves of the PLA-*l*-PiPOx and PCL-*l*-PiPOx networks and starting building blocks: PiPOx, HOOC-PLA_{3000}-COOH, HOOC-PCL_{3000}-COOH.