Supporting Information

Developing chemoselective and biodegradable polyester elastomers as bio-scaffolds

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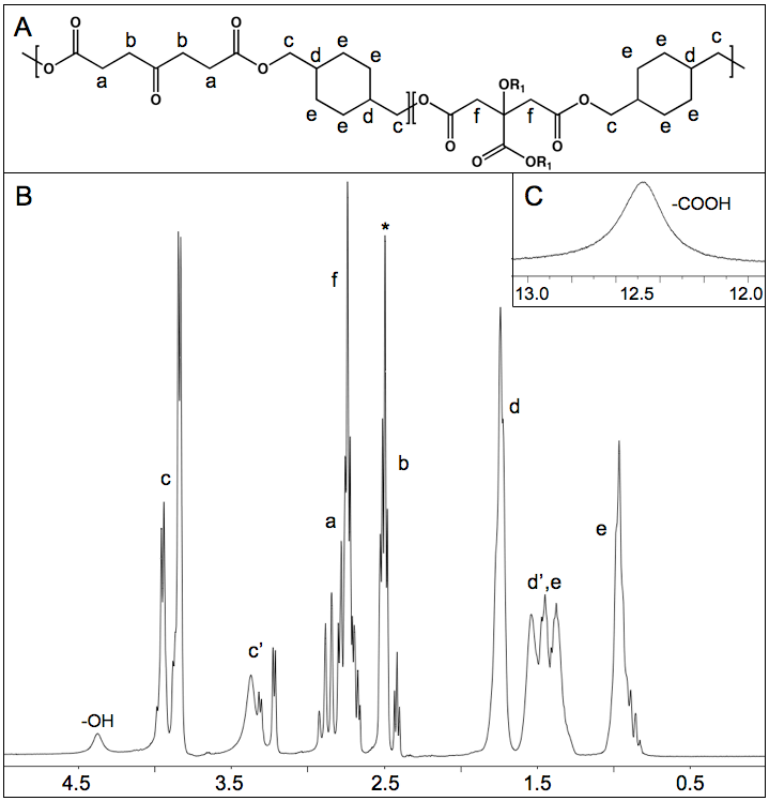
Full citation for reference 19:

(19) Mahdavi, A.; Ferreira, L.; Sundback, C.; Nichol, J. W.; Chan, E. P.; Carter, D. J.; Bettinger, C. J.; Patanavanich, S.; Chignozha, L.; Ben-Joseph, E.; Galakatos, A.; Pryor, H.; Pomerantseva, I.; Masiakos, P. T.; Faquin, W.; Zumbuehl, A.; Hong, S.; Borenstein, J.; Vacanti, J.; Langer, R.; Karp, J. M. *Proc. Natl. Acad. Sci. U. S. A.* **2008**, *105*, 2307-2312.



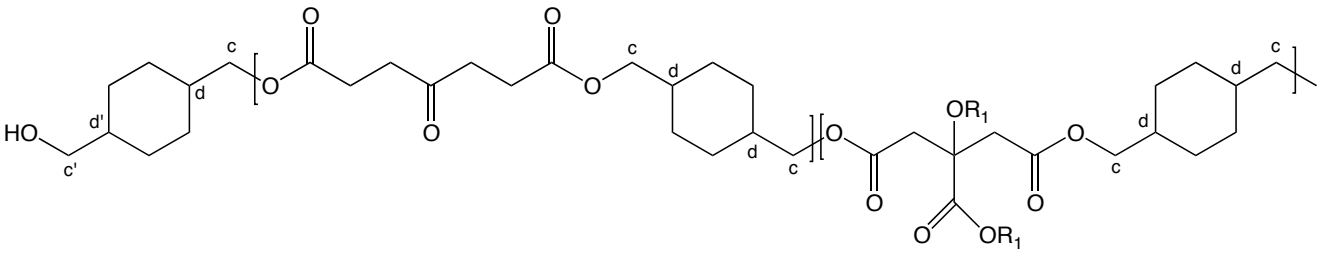


Figure S1. Fully labeled ^{1}H spectrum of PP-CHDM in deuterated DMSO. c' and d' represent protons near end groups unreacted with alcohol. Labels without (') represents protons near esters on internal repeat units

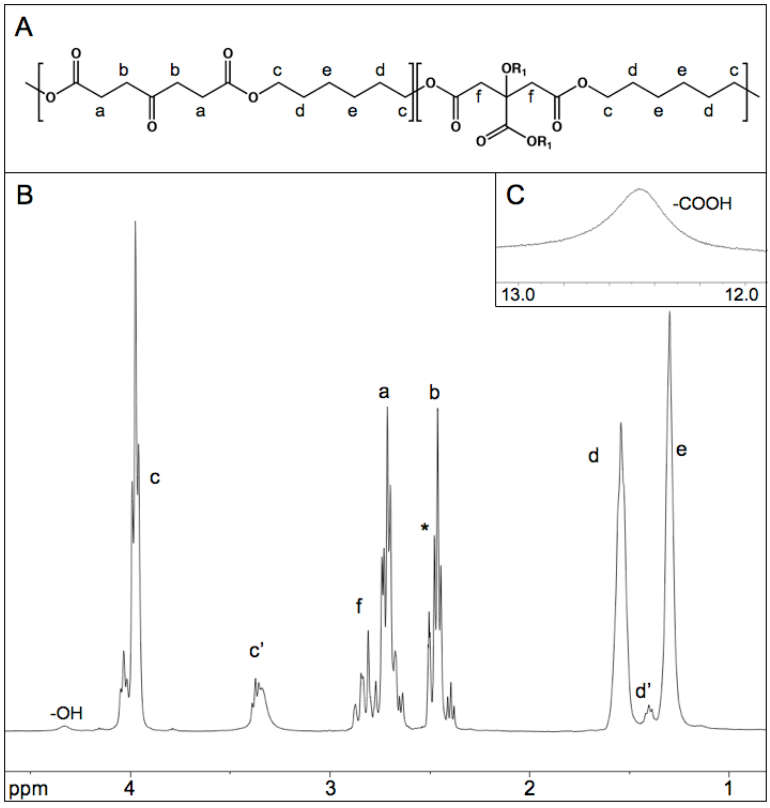


Figure S2. Fully labeled ^{1}H spectrum of PP-HD in deuterated DMSO. c' and d' represent protons near end groups unreacted with alcohol. Labels without (') represents protons near esters on internal repeat units

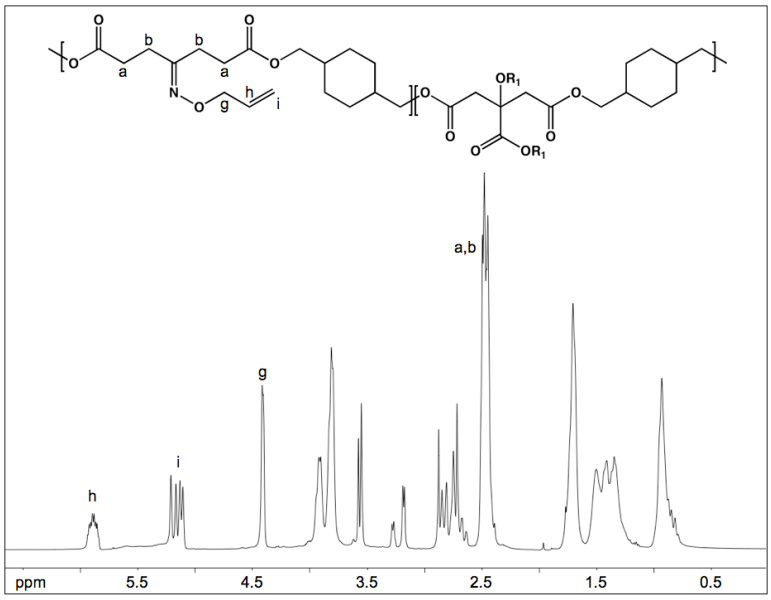


Figure S3. Fully labeled ^{1}H spectrum of PP-CHDM functionalized with *O*-allylhydroxylamine in deuterated DMSO.

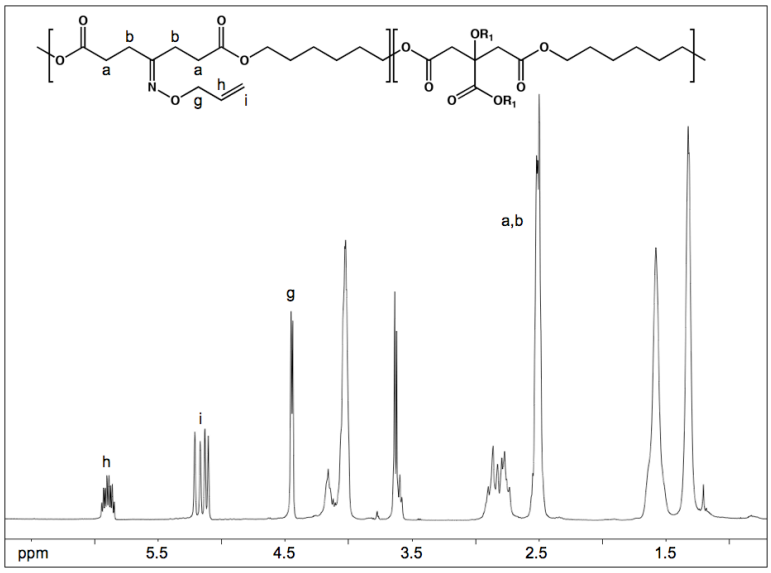


Figure S4. Fully labeled ^{1}H spectrum of PP-HD functionalized with *O*-allylhydroxylamine in deuterated DMSO.

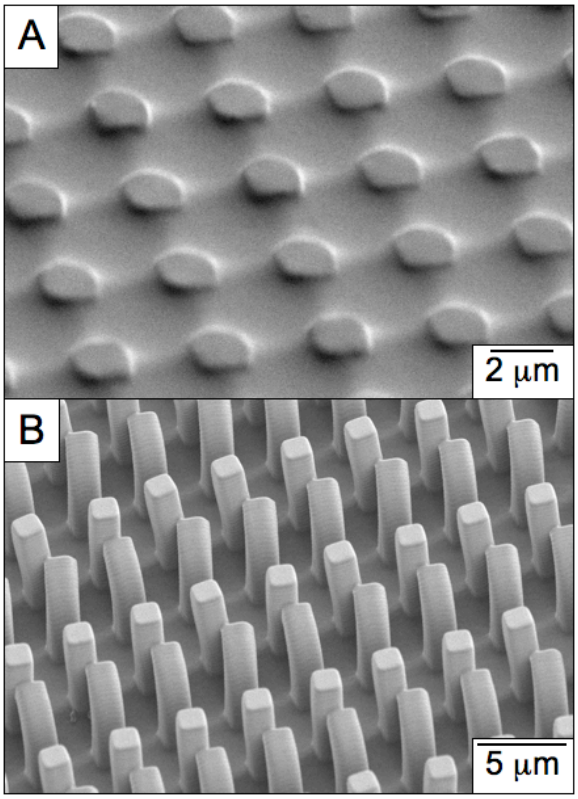


Figure S5. Embossed films of materials 3 (A) and 5 (B) were fabricated by cross-linking in the presence of a PFPE mold.

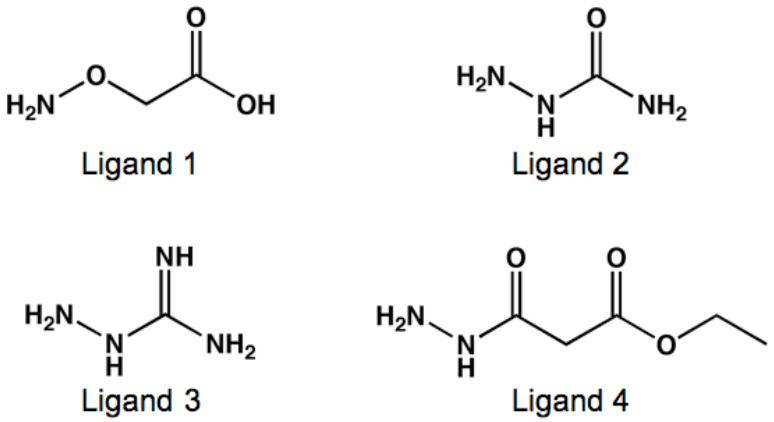


Figure S6. Oxyamine- and hydrazide-containing ligands employed during polymer functionalization studies.

Table S1. Thermogravimetric Analysis of Poly(Diol 4-Ketopimelate -*co*- Diol Citrate) [a]

Elastomer	5 % (°C)	10 % (°C)	50 % (°C)
1	307.0	335.2	438.3
2	310.8	339.8	442.2
3	313.2	343.5	446.8
4	290.7	323.7	428.3
5	296.7	328.9	429.1

[a] determined by TGA in N_2 (10 °C/min).

Table S2. Contact Angle Measurements of Functionalized Polyketoester Films [a]

Ligand	Contact Angle (°)
-	88.10 ± 0.55
1	74.84 ± 0.89
2	77.48 ± 0.62
3	74.80 ± 0.50
4	77.19 ± 0.49

[a] material 5 was used in all functionalization studies.