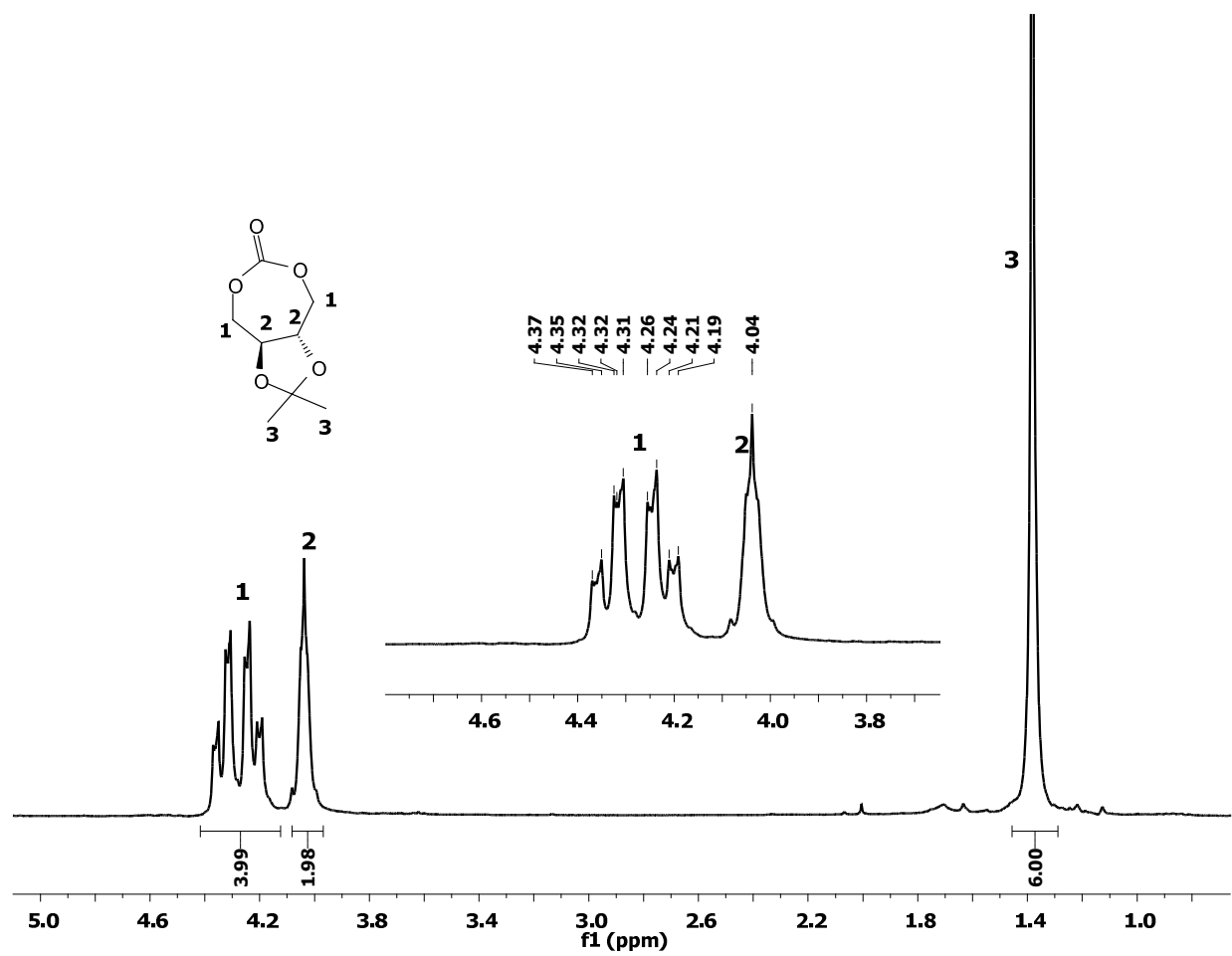


## Supporting Information

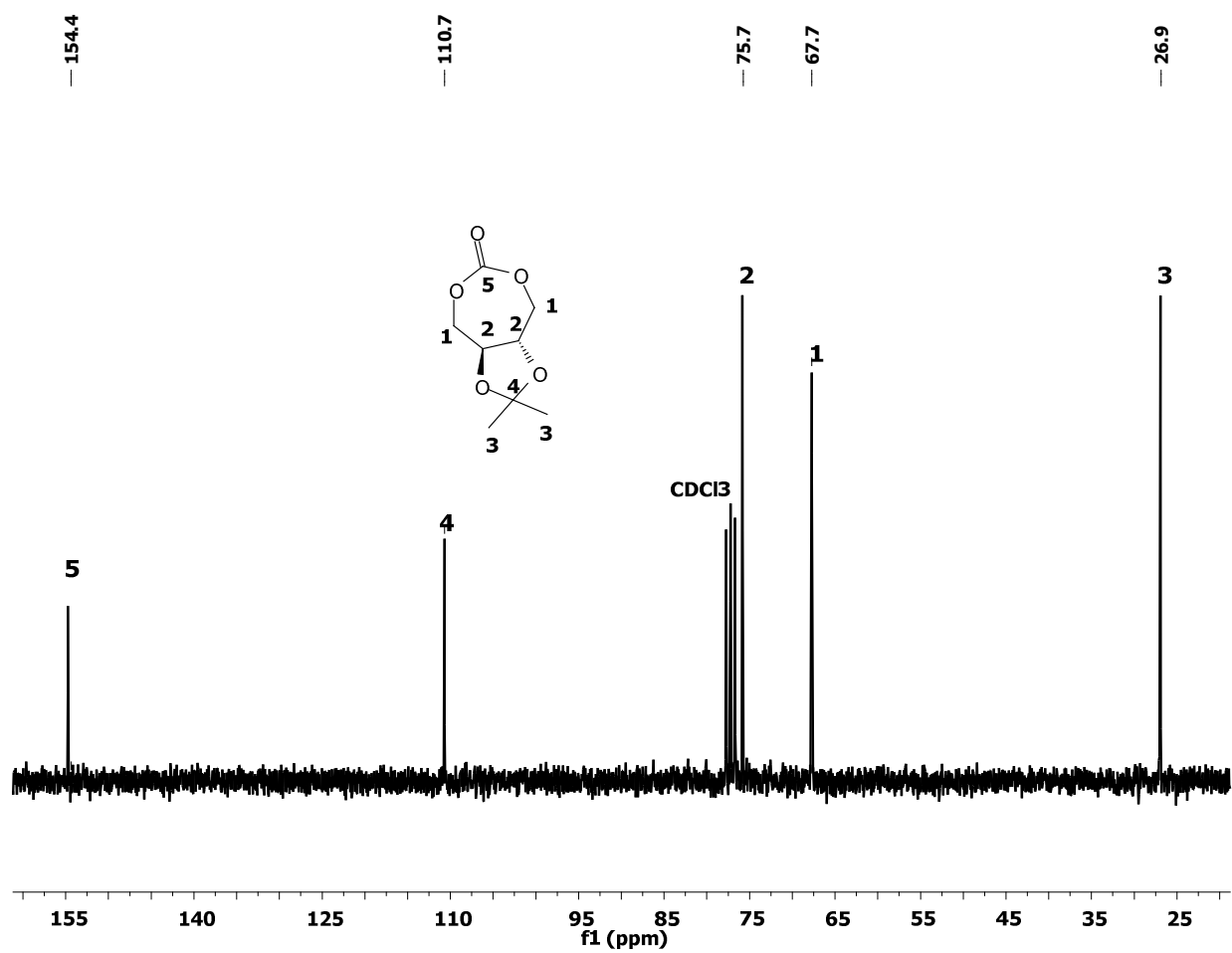
### **One-shot Block Copolymerization of a Functional Seven-Membered Cyclic Carbonate Derived from L-Tartaric Acid with $\epsilon$ -Caprolactone**

Ruizhi Wu, Talal F. AL-Azemi<sup>†</sup>, and Kirpal S. Bisht<sup>\*</sup>

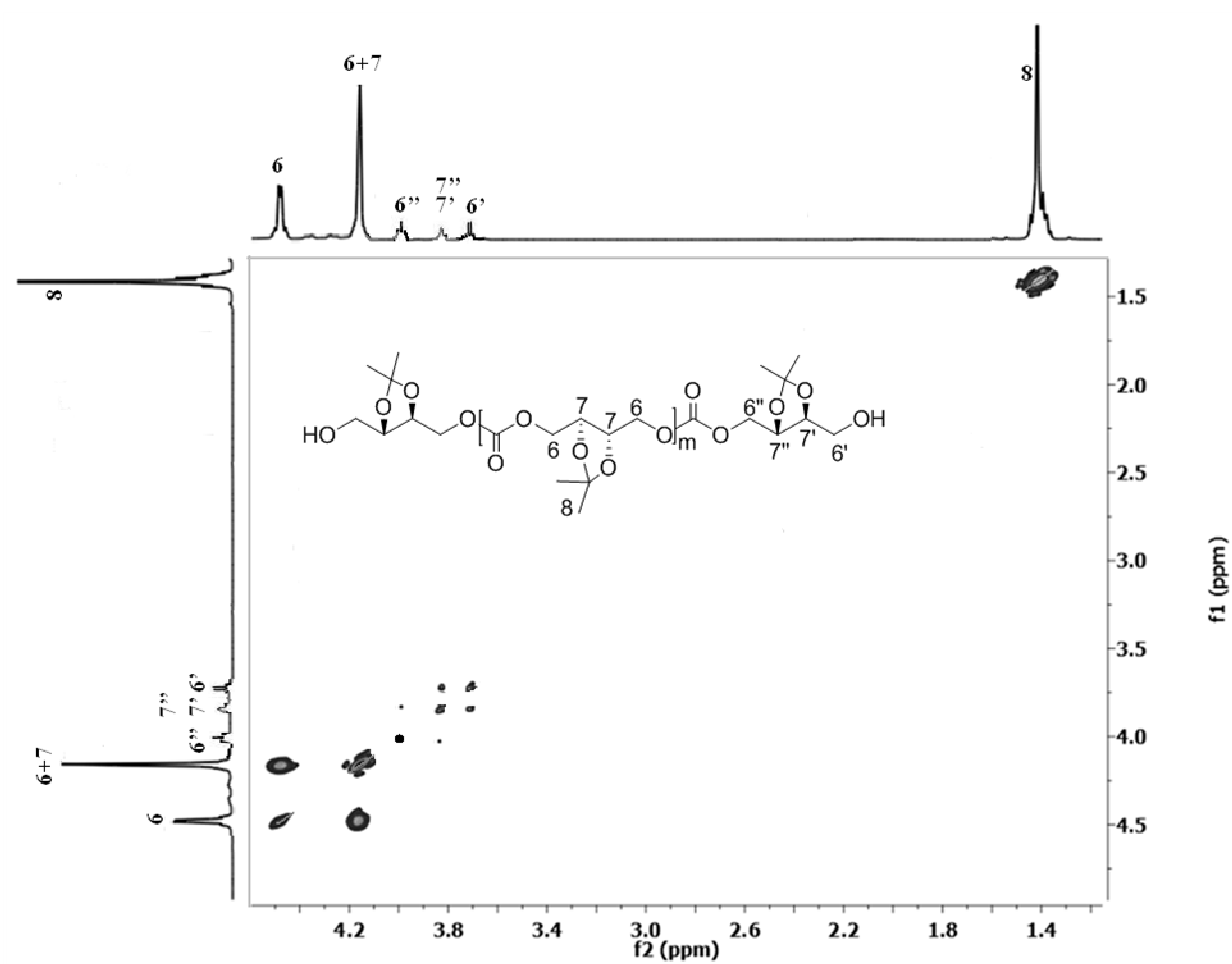
*Department of Chemistry, University of South Florida, 4202 East Fowler Avenue, Tampa, Florida 33620*



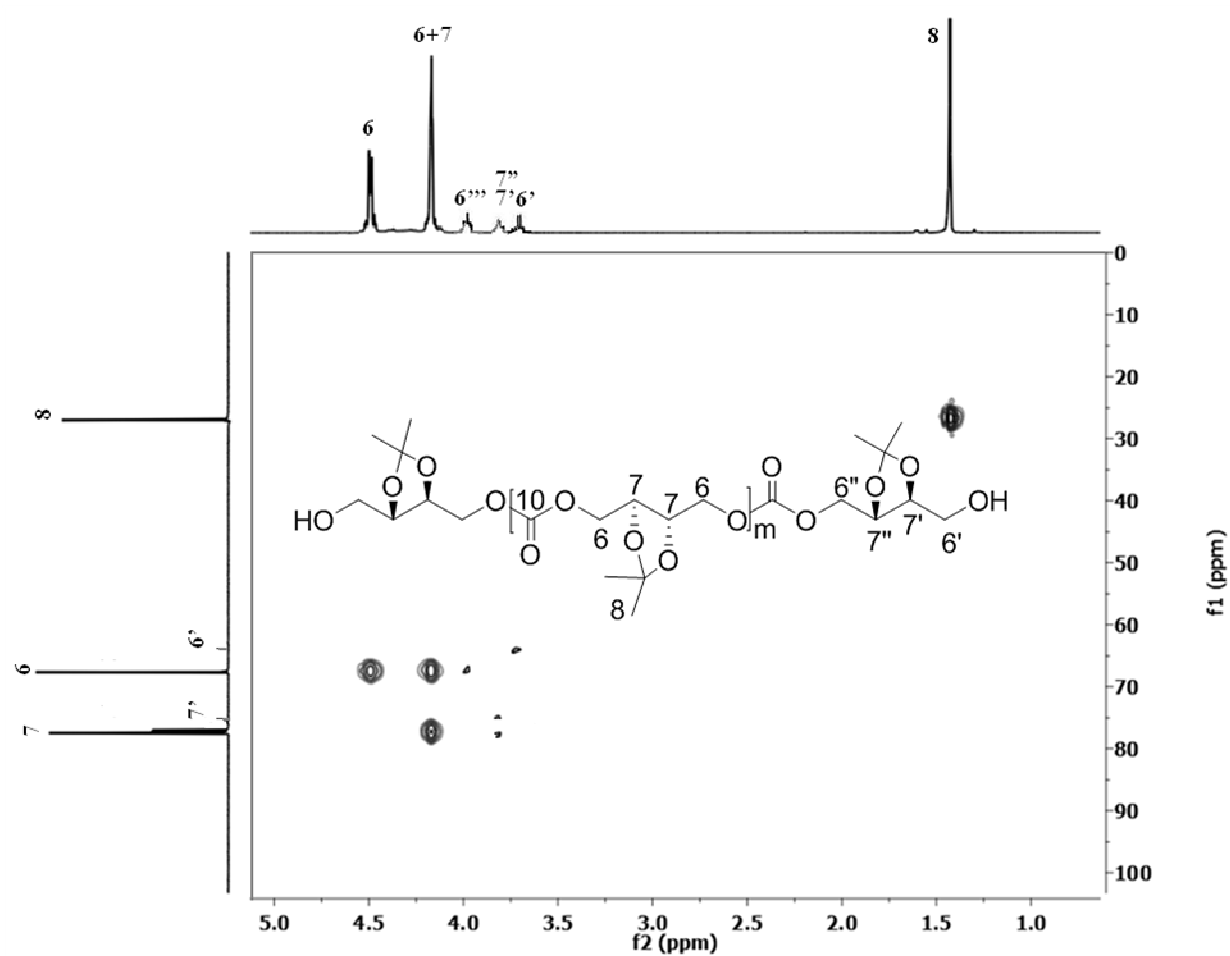
**Figure S1.**  $^1\text{H-NMR}$  (250 MHz,  $\text{CDCl}_3$ ) spectrum of (5*S*, 6*S*)-Dimethyl 5,6-*O*-isopropylidene-1,3-dioxepin-2-one (ITC, 3).



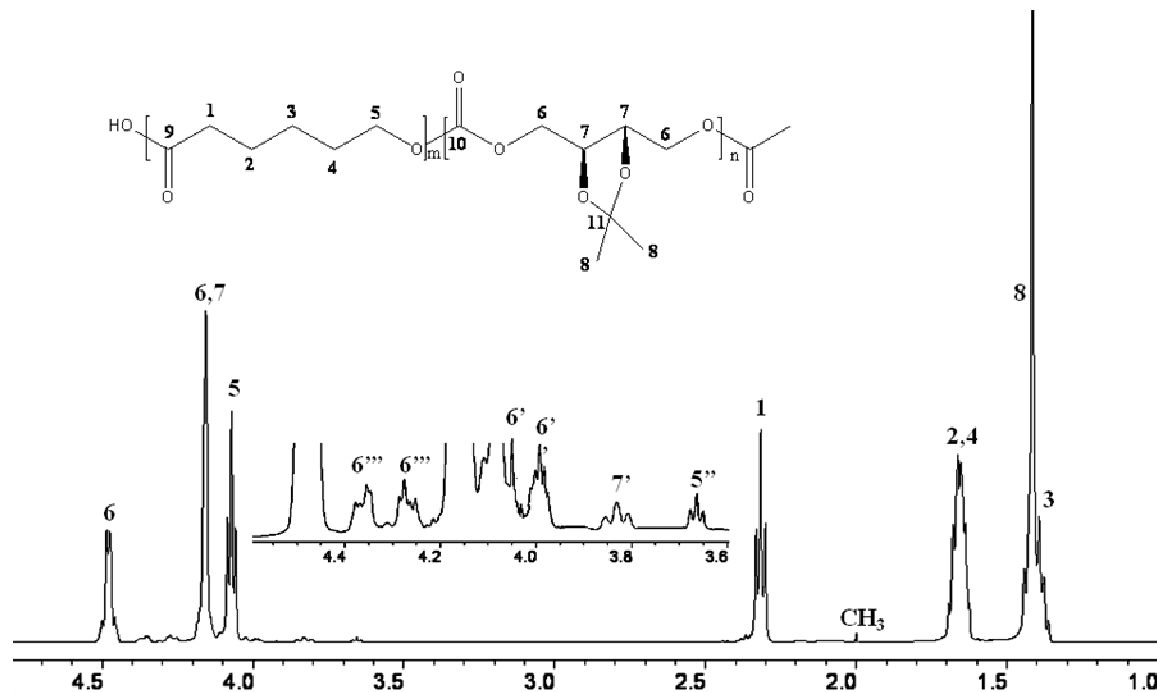
**Figure S2.**  $^{13}\text{C}$ -NMR (62.9 MHz,  $\text{CDCl}_3$ ) spectrum of (5*S*, 6*S*)-Dimethyl 5,6-*O*-isopropylidene-1,3-dioxepin-2-one (ITC, **3**).



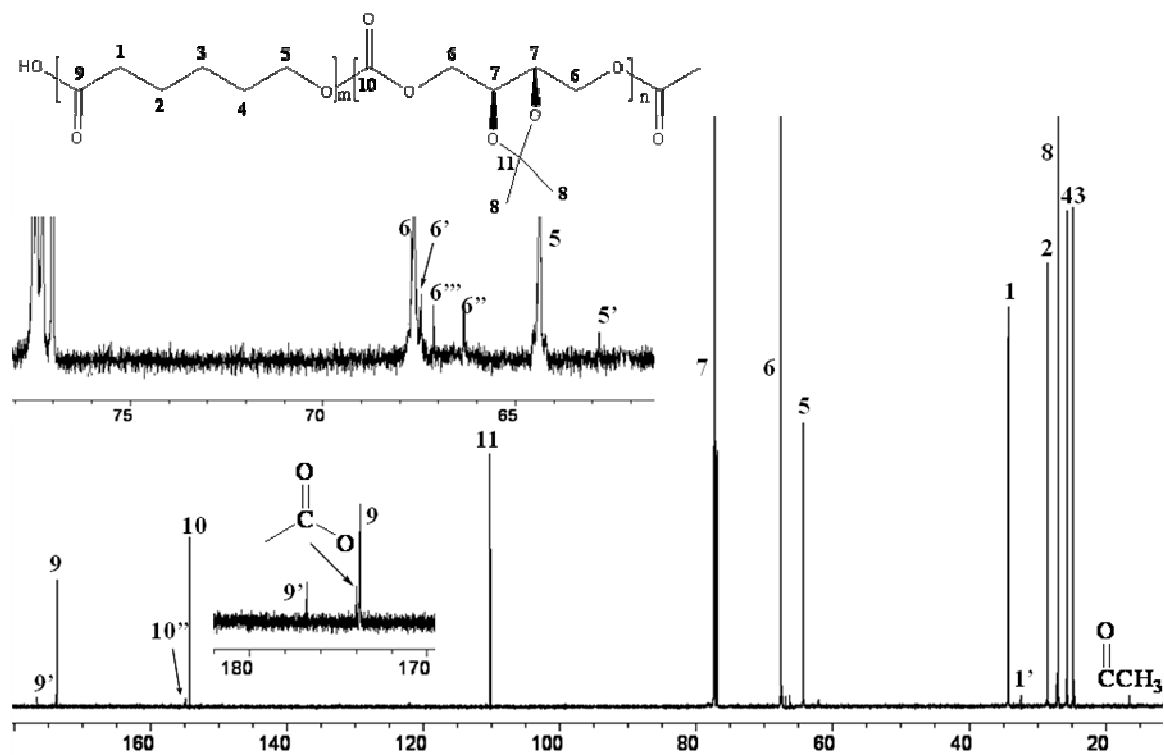
**Figure S3.**  $^1\text{H}$ - $^1\text{H}$  COSY-NMR (500 MHz,  $\text{CDCl}_3$ ) spectrum of Poly(ITC) [Table 1, entry 1].



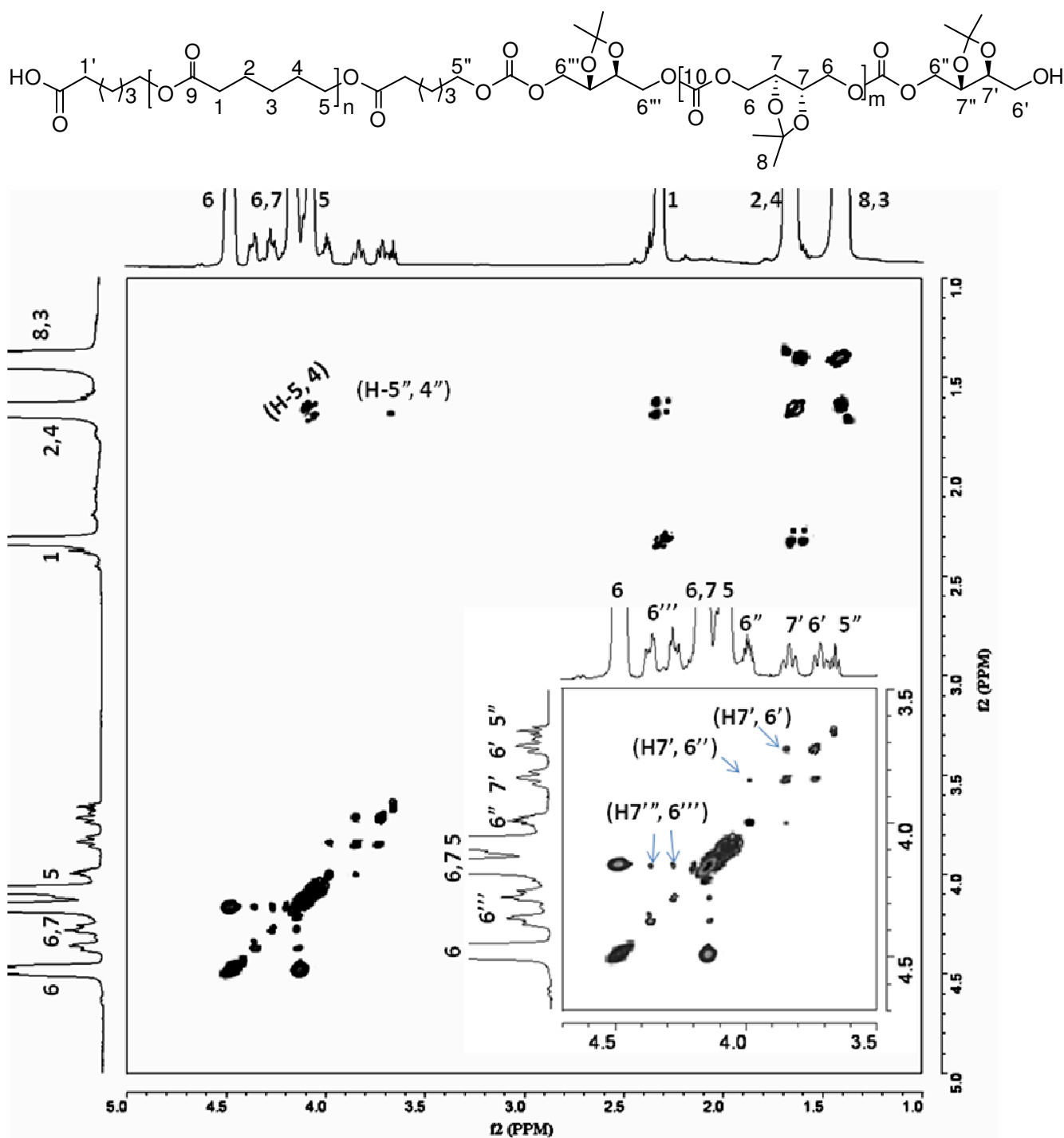
**Figure S4.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC-NMR (500 MHz,  $\text{CDCl}_3$ ) spectrum of Poly(ITC) [Table 1, entry 1].



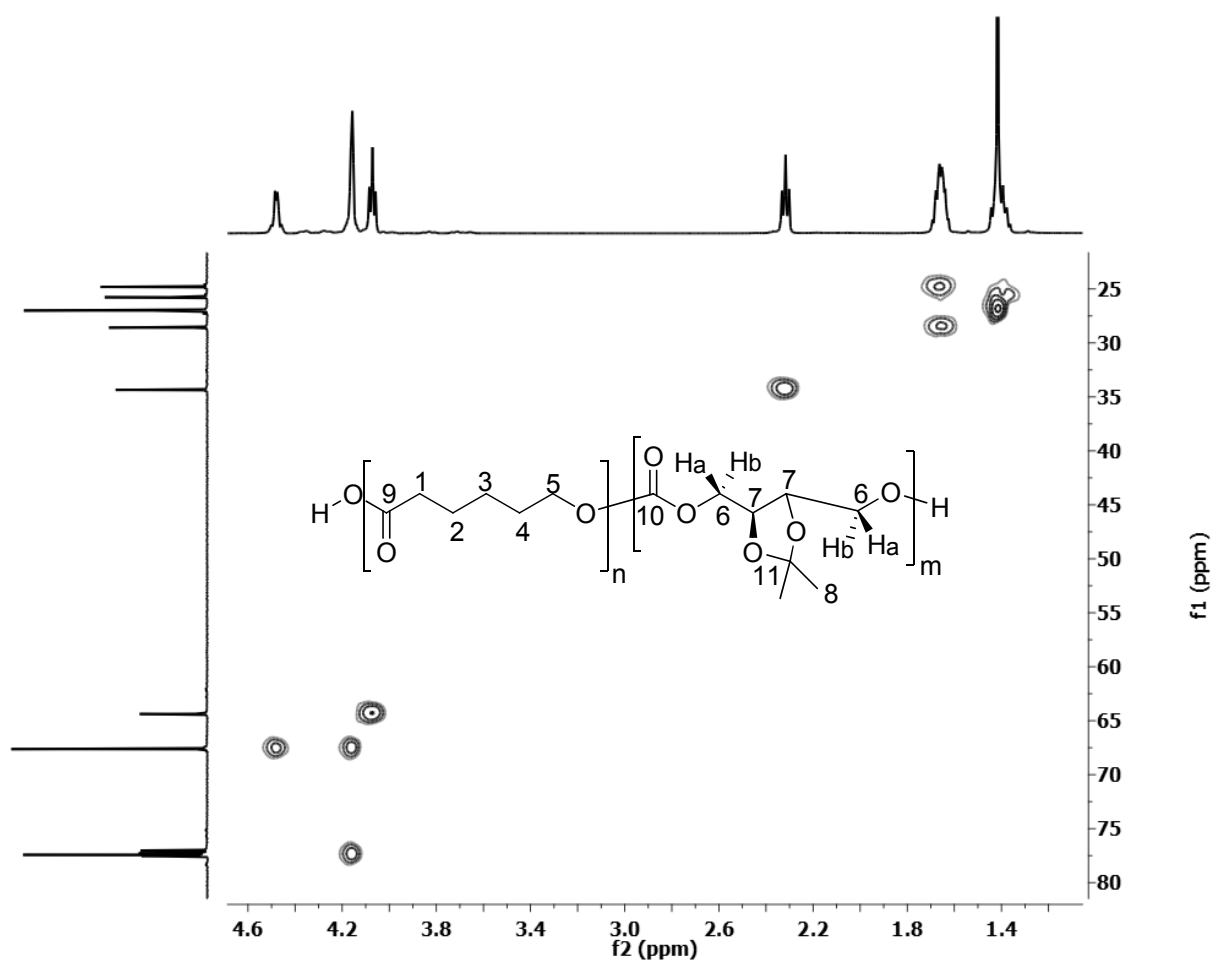
**Figure S5.**  $^1\text{H}$ -NMR (500 MHz,  $\text{CDCl}_3$ ) spectra of Poly[ITC-*block*-CL] after acetylation [Table 2, entry 4]



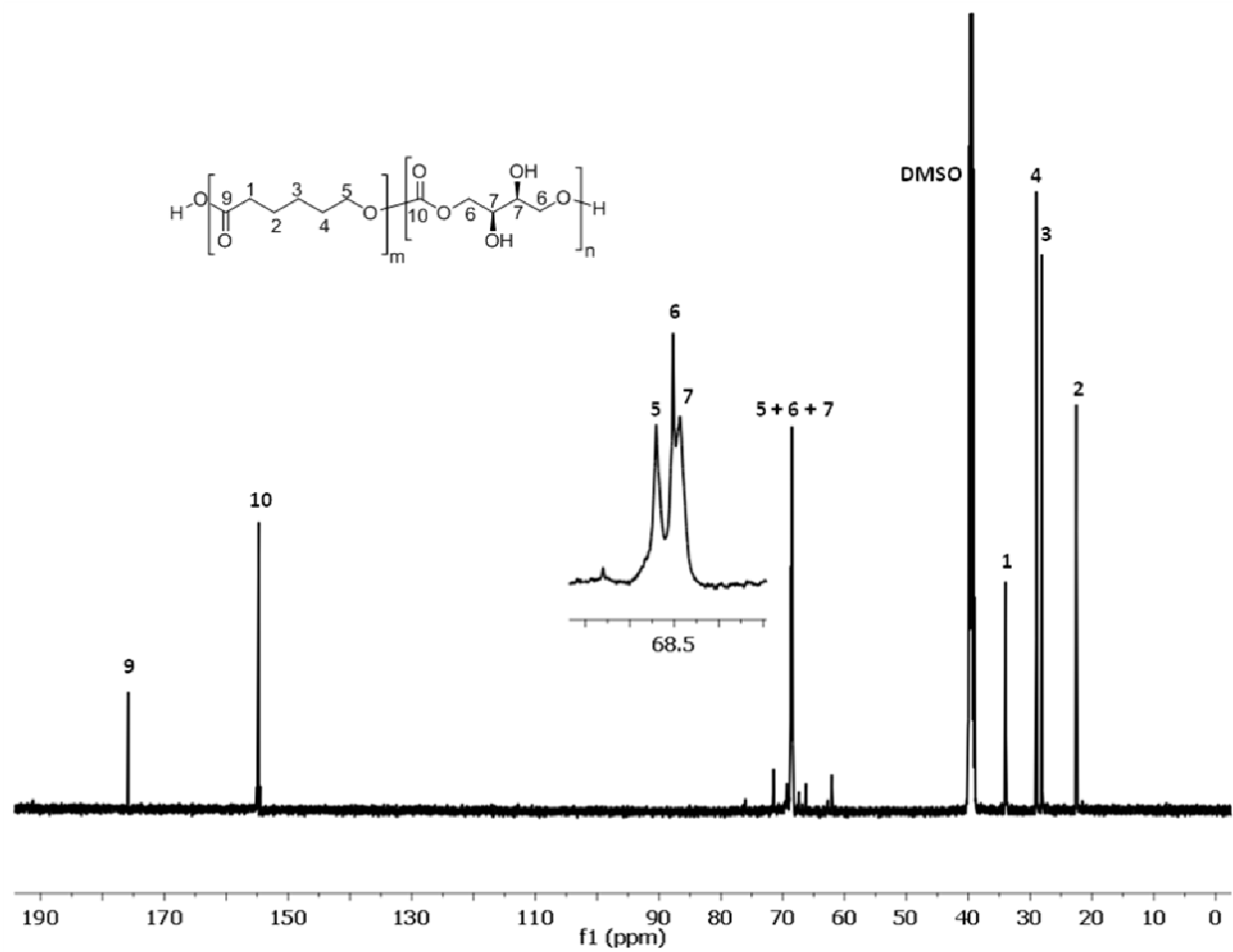
**Figure S6.**  $^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ ) spectra of Poly[ITC-*block*-CL] after acetylation [Table 2, entry 4]



**Figure S7.**  $^1\text{H}$ - $^1\text{H}$  COSY-NMR (500 MHz,  $\text{CDCl}_3$ ) spectrum of Poly(ITC-*block*-CL) [Table 2, entry 4]. Insert shows the end group and the PCL-ITC link correlations.



**Figure S8.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC-NMR (250 MHz,  $\text{CDCl}_3$ ) spectrum of Poly(ITC-*block*-CL) [Table 2, entry 4].



**Figure S9.**  $^{13}\text{C}$ -NMR (125 MHz,  $\text{DMSO-}d_6$ ) spectra of Poly[ITC-*block*-CL] after de-protection [Table 2, entry 4].