

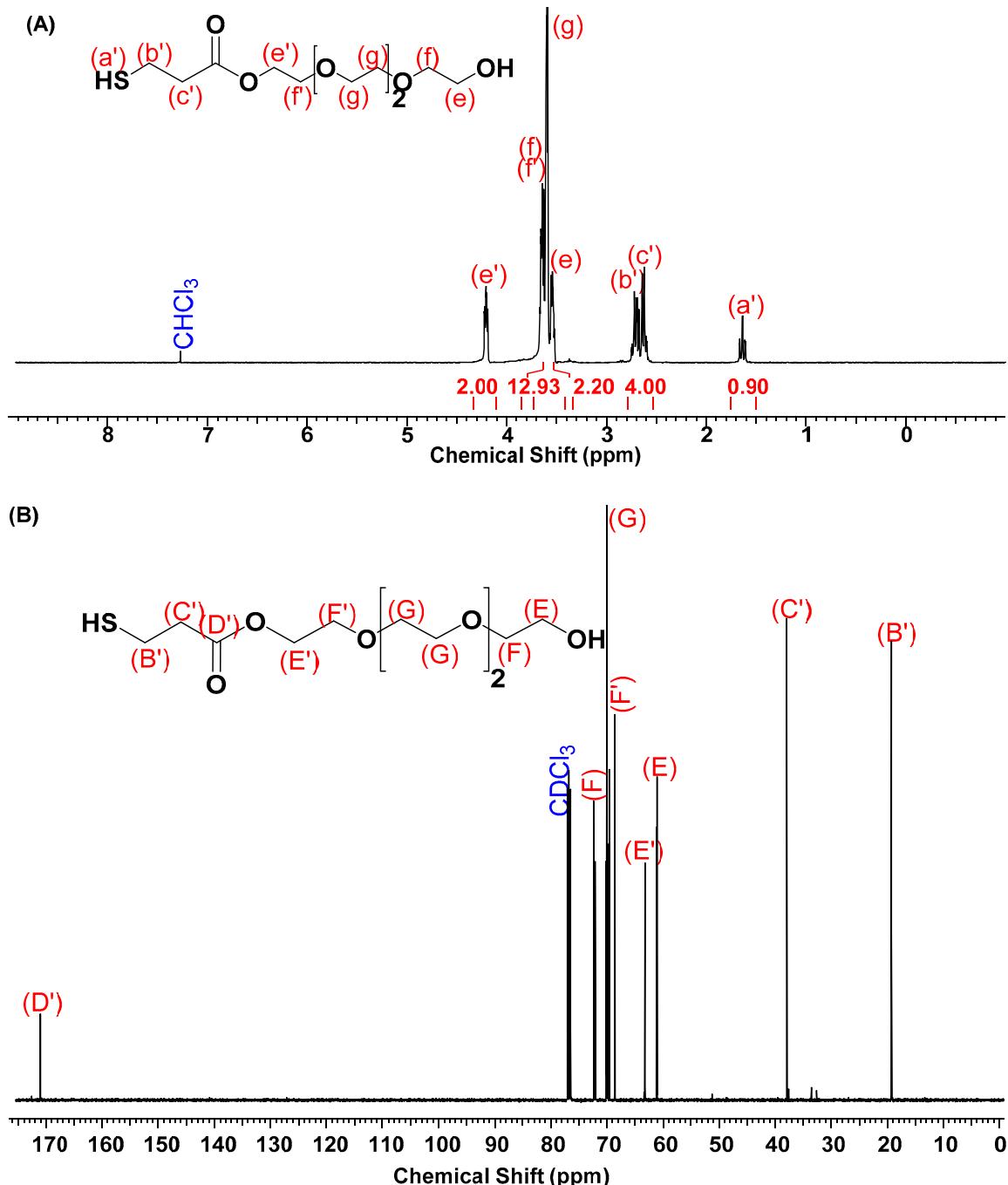
# Supplementary Materials: Synthesis of Mono- and Dithiols of Tetraethylene Glycol and Poly(ethylene glycol)s via Enzyme Catalysis

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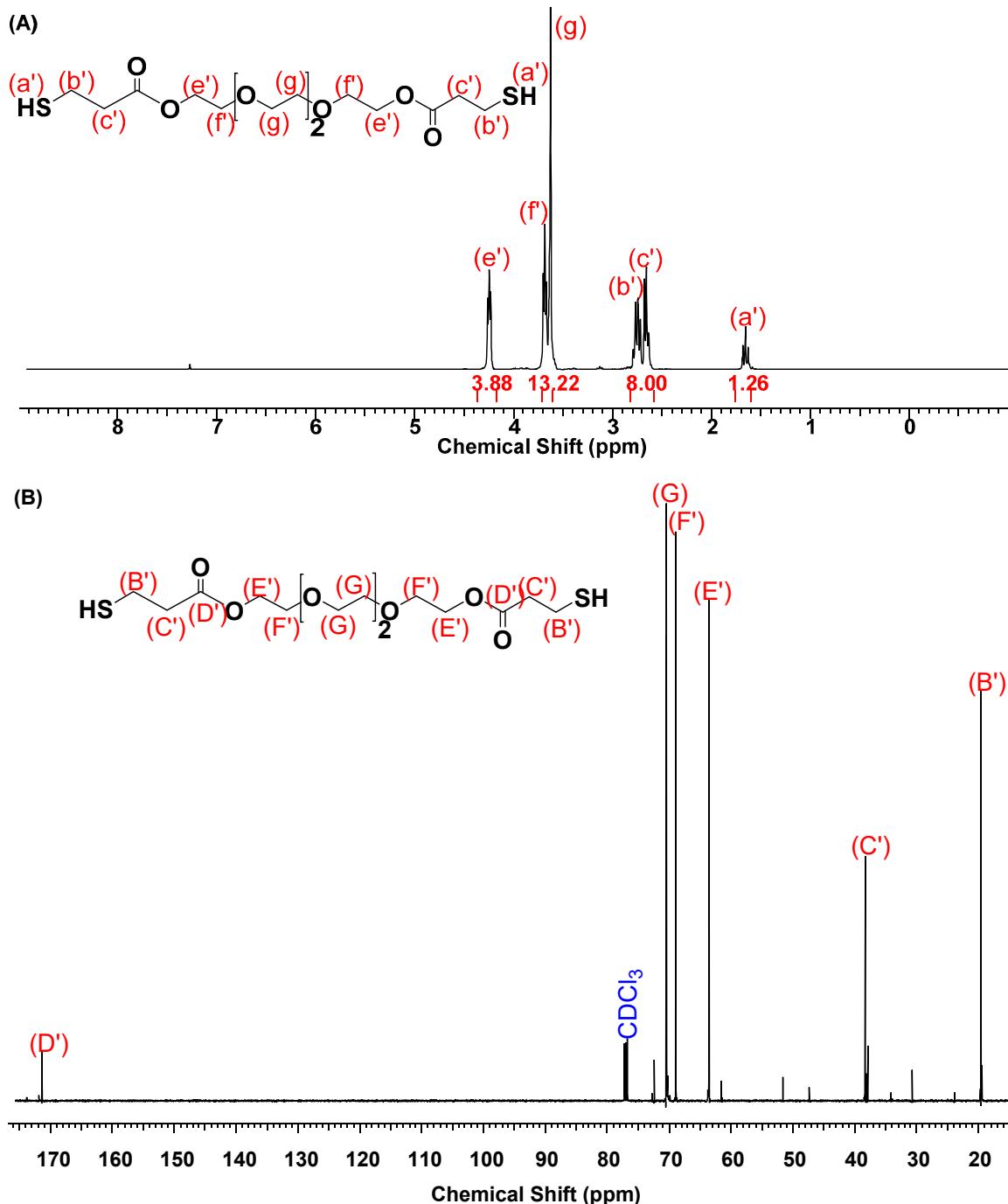
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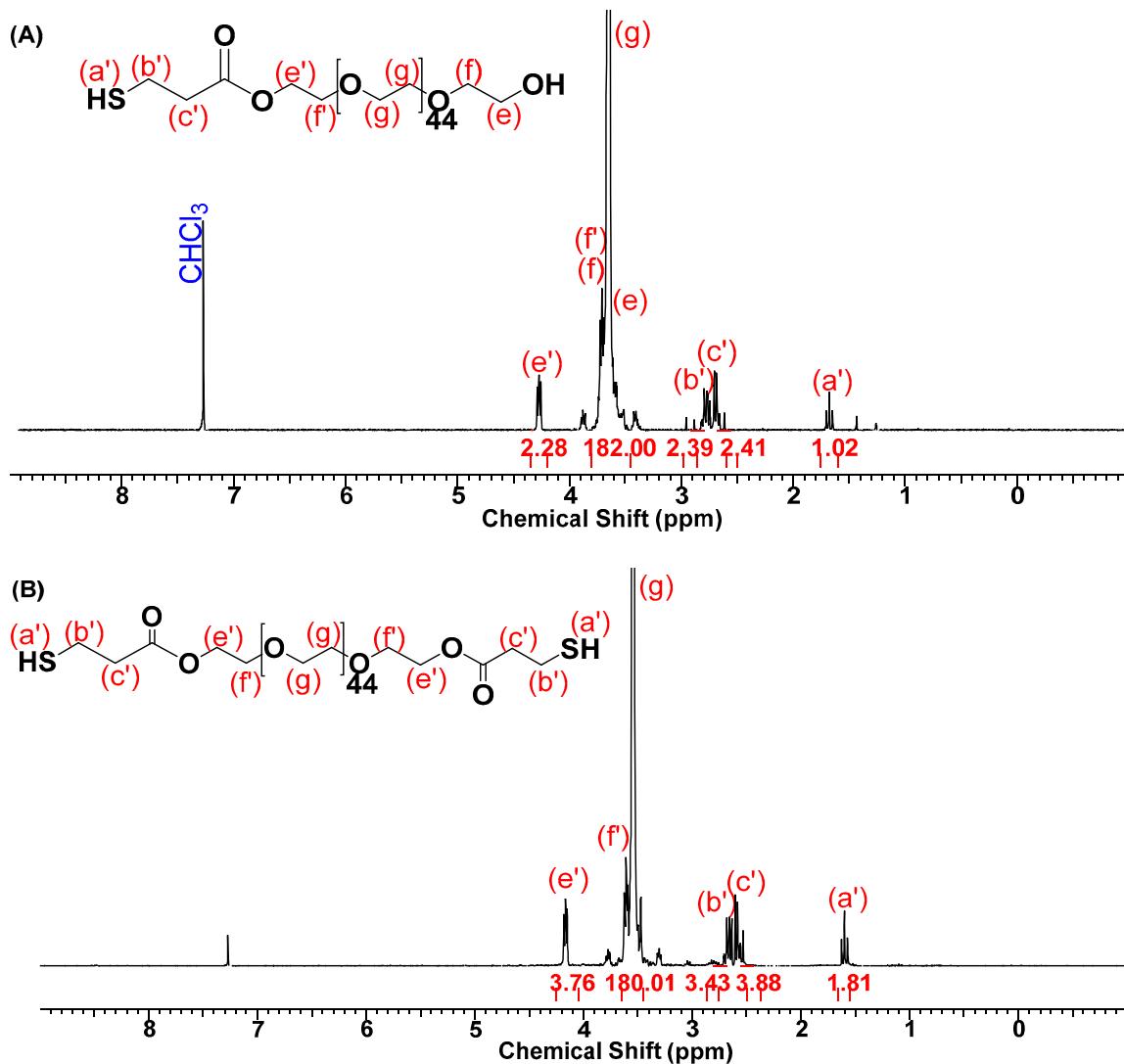
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**Figure S1.** (A)  $^1\text{H}$ -NMR and (B)  $^{13}\text{C}$ -NMR spectra of TEG-monothiol. [ $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$  4.23 (2H) 3.64 (4H) 3.61(8H) 3.54 (2H) 2.74 (2H) 2.64 (2H) 1.65 (1H).  $^{13}\text{C}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$  171.0, 72.38, 70.0, 68.5, 63.2, 61.16, 37.9, 19.2].



**Figure S2.** (A)  $^1\text{H}$ -NMR and (B)  $^{13}\text{C}$ -NMR of TEG-dithiol. [ $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$  4.23 (2H) 3.64 (4H) 3.61(8H) 2.74 (2H) 2.64 (2H) 1.65 (1H).  $^{13}\text{C}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$  171.3, 70.4, 68.9, 63.6, 38.3, 19.6].



**Figure S3.**  $^1\text{H}$ -NMR spectrum of (A) PEG<sub>2050</sub>-monothiol and (B) PEG<sub>2050</sub>-dithiol. [PEG<sub>2050</sub>-monothiol:  $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$ : 4.23 (2H) 3.60(182H) 2.71 (2H) 2.64 (2H) 1.65 (1H); PEG<sub>2050</sub>-dithiol:  $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ):  $\delta$ : 4.17 (4H) 3.54 (180H) 2.66 (4H) 2.58 (4H) 1.60 (1H)].