

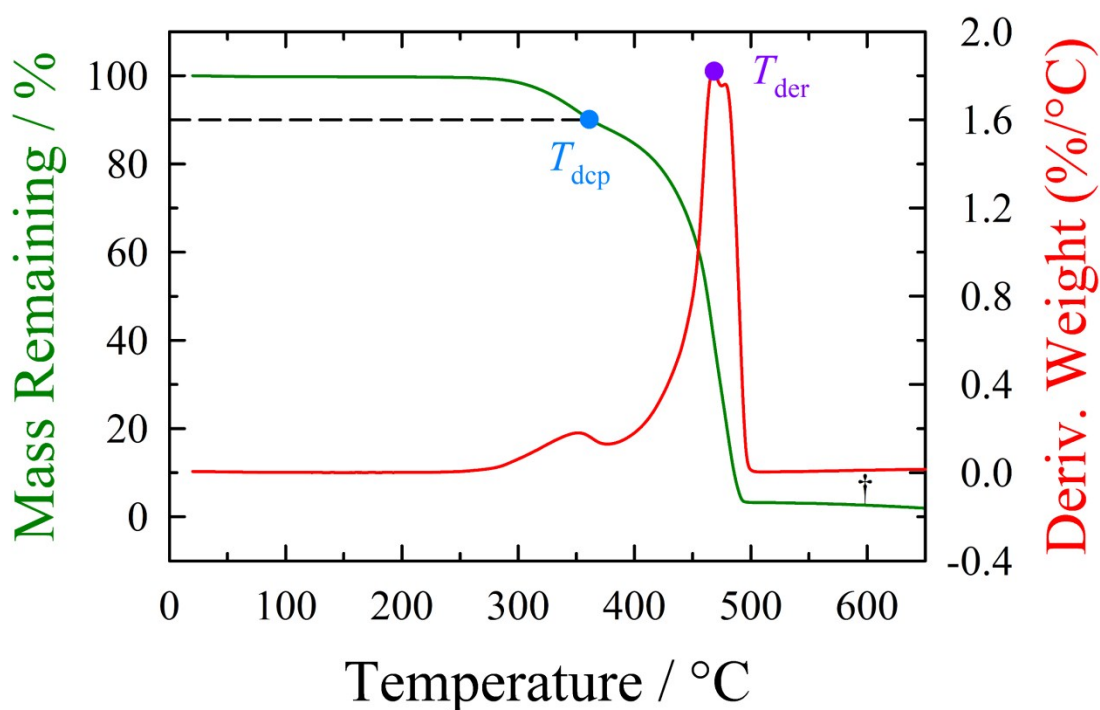
*Electronic Supporting Information (ESI)*

**Glycol-Functionalized Ionic Liquids for High-Temperature Enzymatic Ring-Opening Polymerization**

Hua Zhao,<sup>\*1</sup> Lennox O. Afriyie,<sup>1</sup> Nathaniel E. Larm,<sup>2</sup> and Gary A. Baker<sup>2</sup>

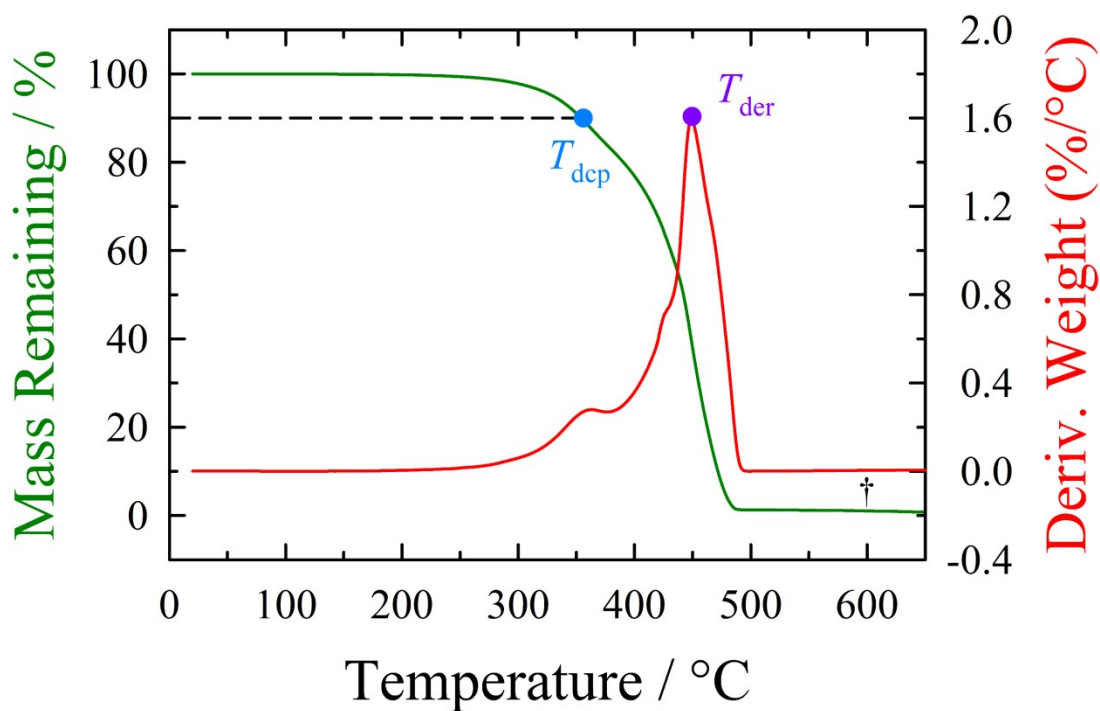
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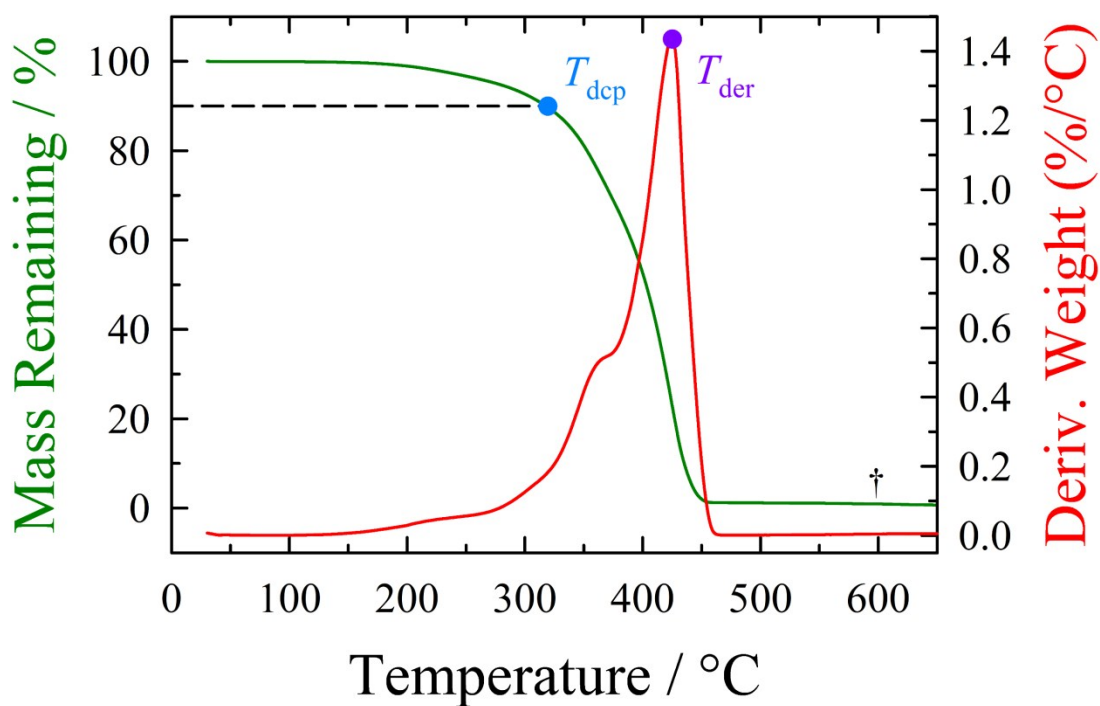


**Figure S1.** Thermogravimetric analysis of IL #1 (see Table 1).

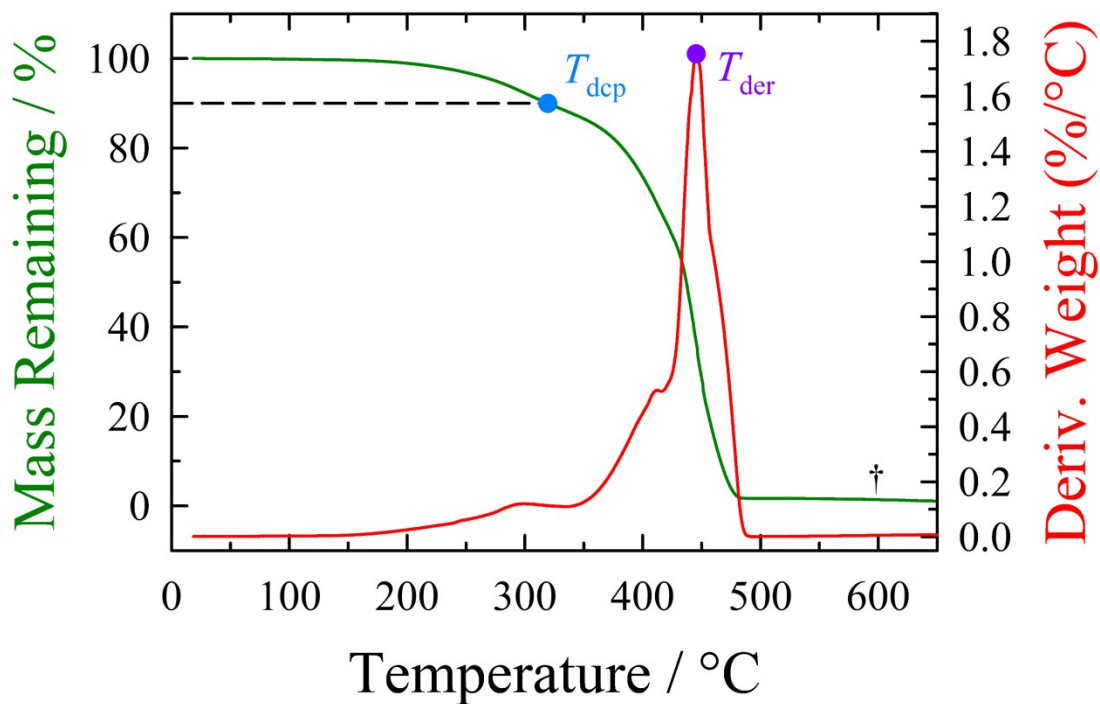
<sup>\*</sup> Corresponding author. Email: [hua.zhao@unco.edu](mailto:hua.zhao@unco.edu), or [huazhao98@gmail.com](mailto:huazhao98@gmail.com)



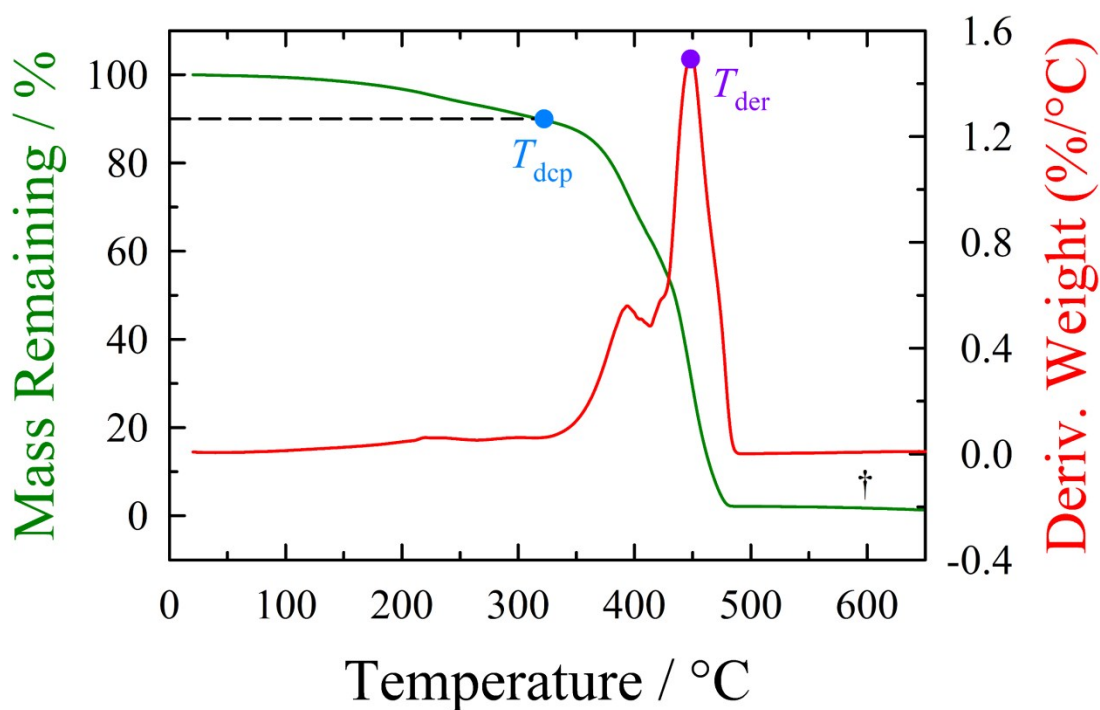
**Figure S2.** Thermogravimetric analysis of IL #2 (see Table 1).



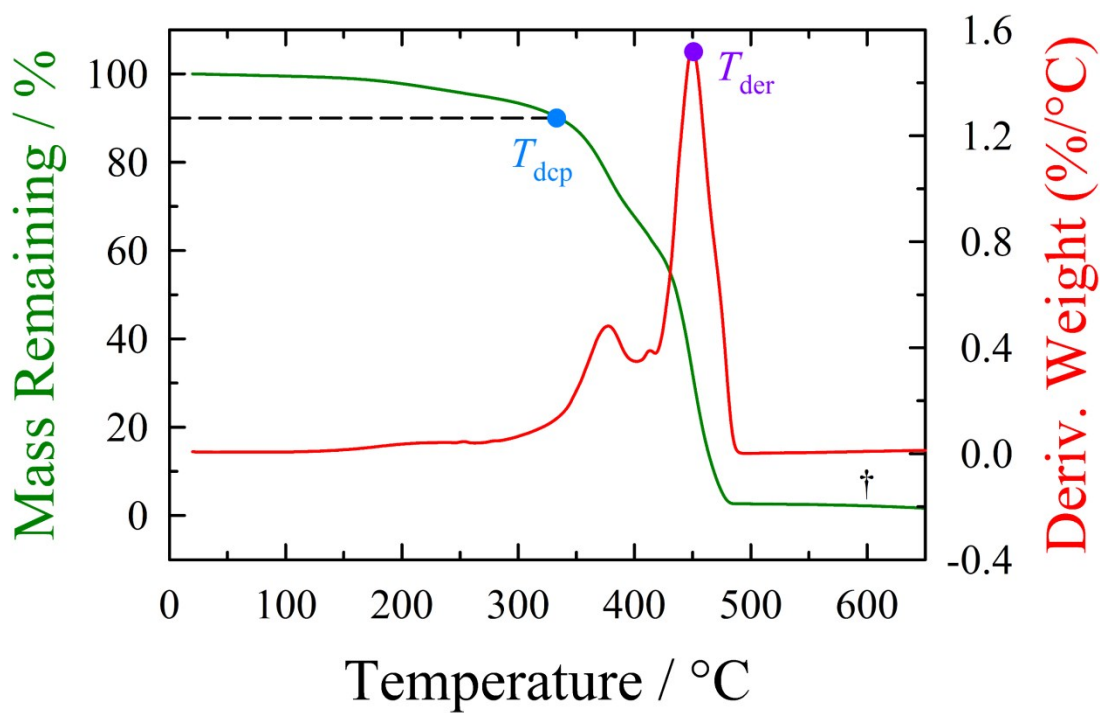
**Figure S3.** Thermogravimetric analysis of IL #3 (see Table 1).



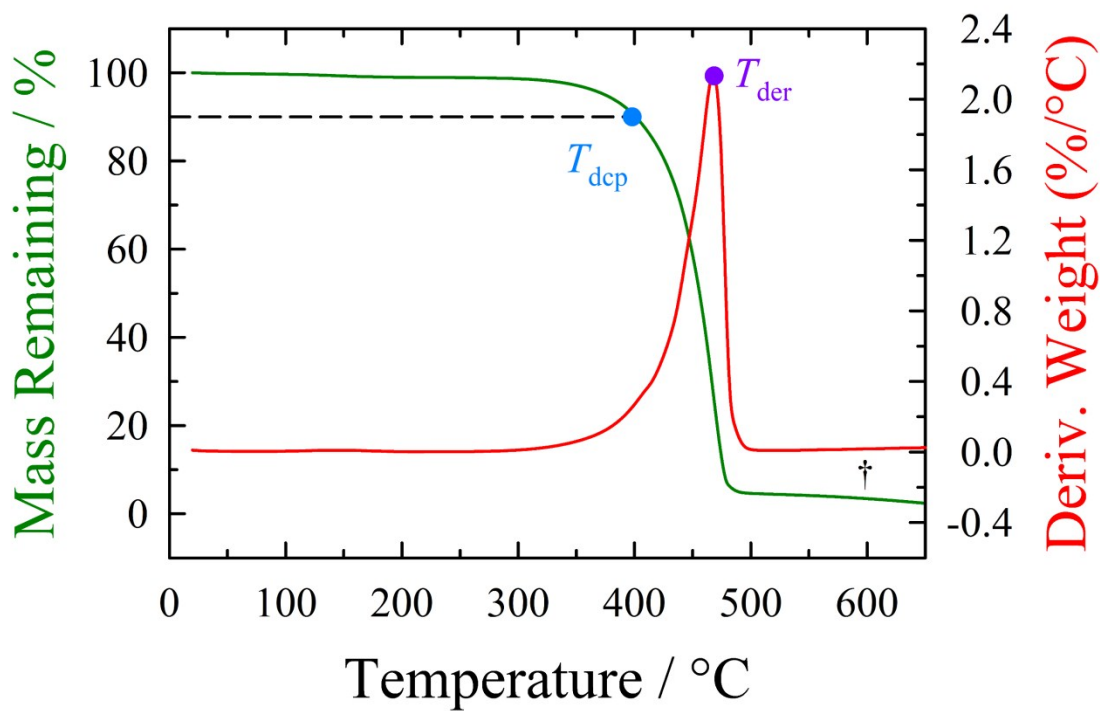
**Figure S4.** Thermogravimetric analysis of IL #4 (see Table 1).



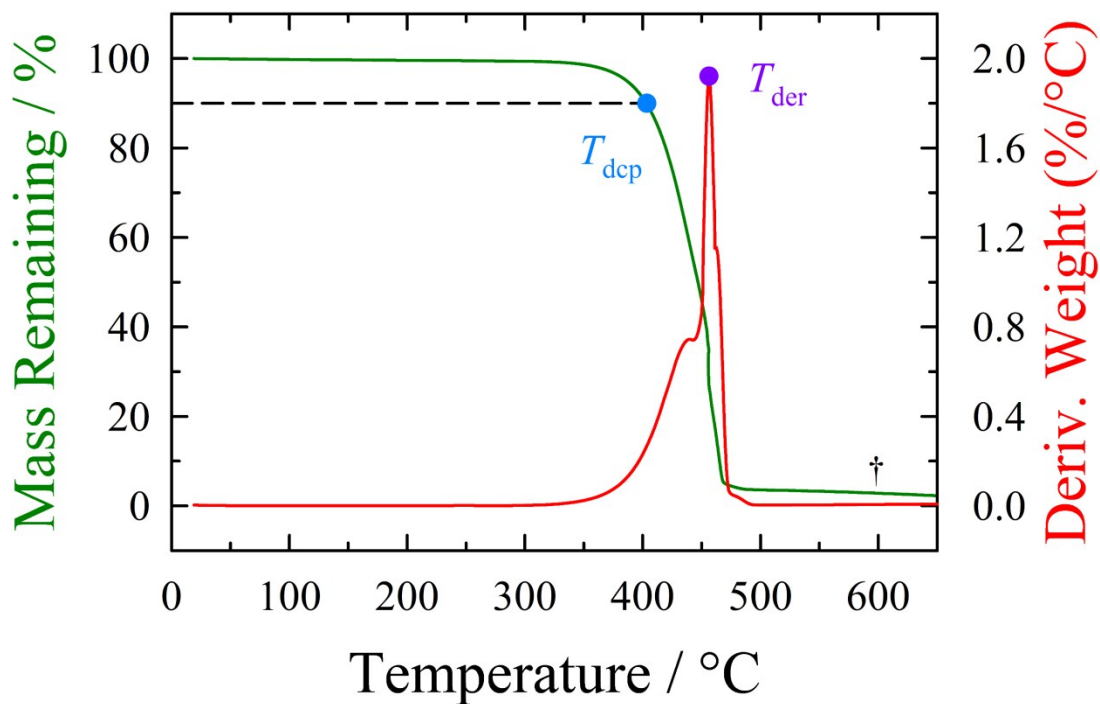
**Figure S5.** Thermogravimetric analysis of IL #5 (see Table 1).



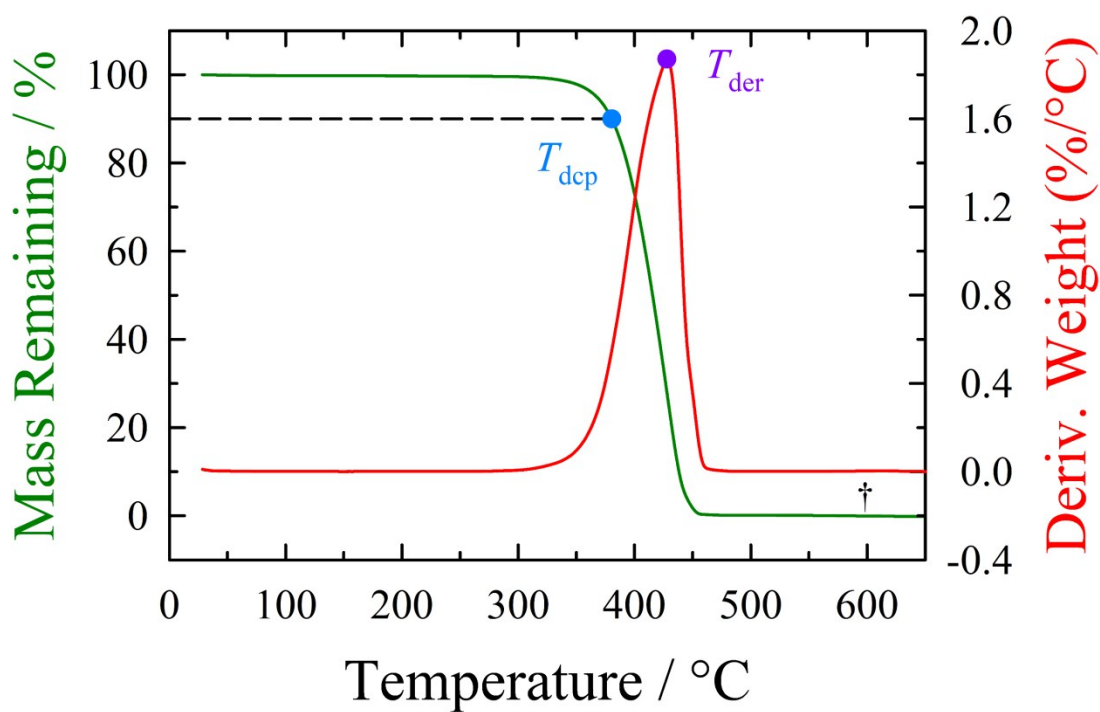
**Figure S6.** Thermogravimetric analysis of IL #6 (see Table 1).



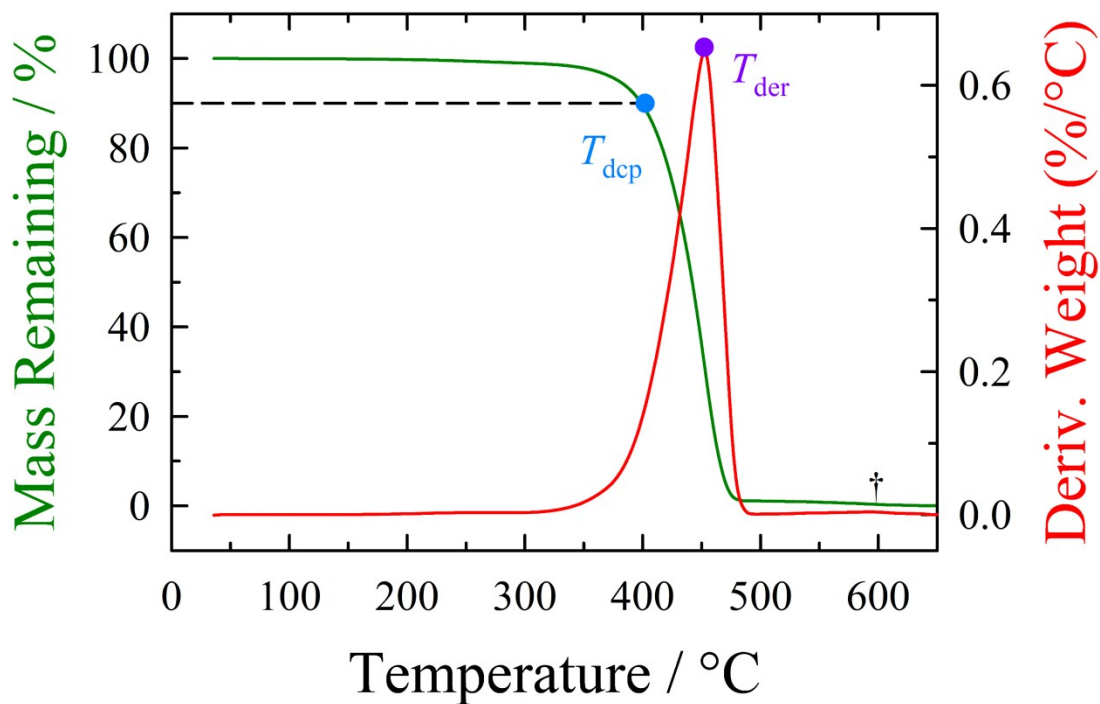
**Figure S7.** Thermogravimetric analysis of IL #7 (see Table 1).



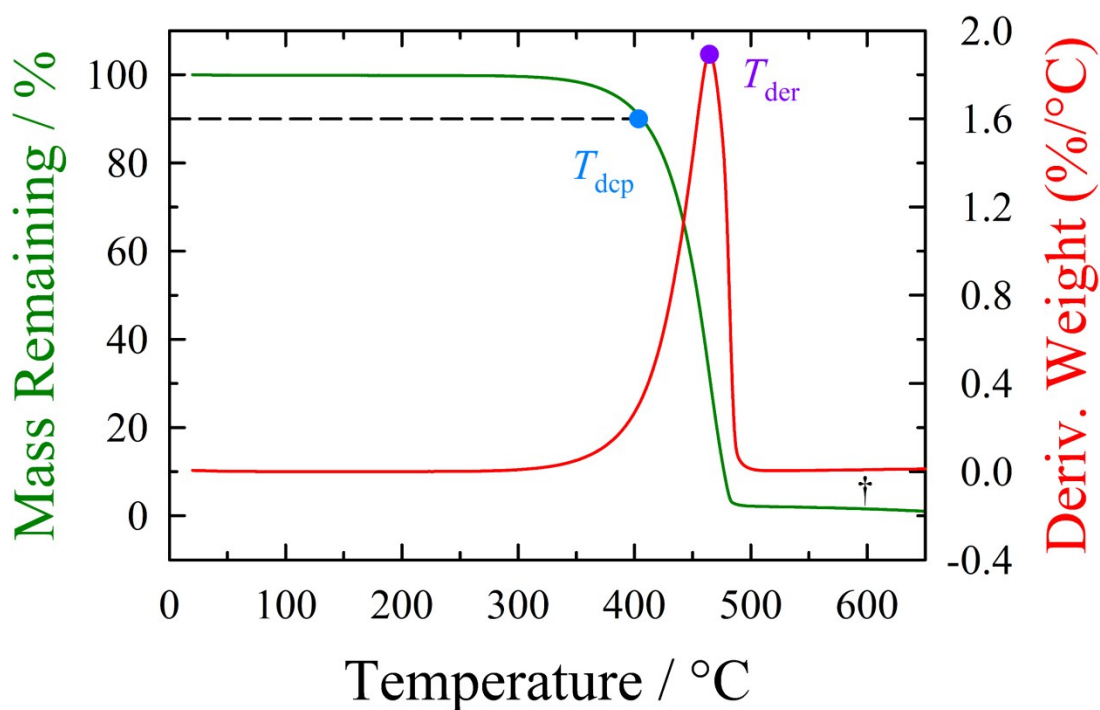
**Figure S8.** Thermogravimetric analysis of IL #8 (see Table 1).



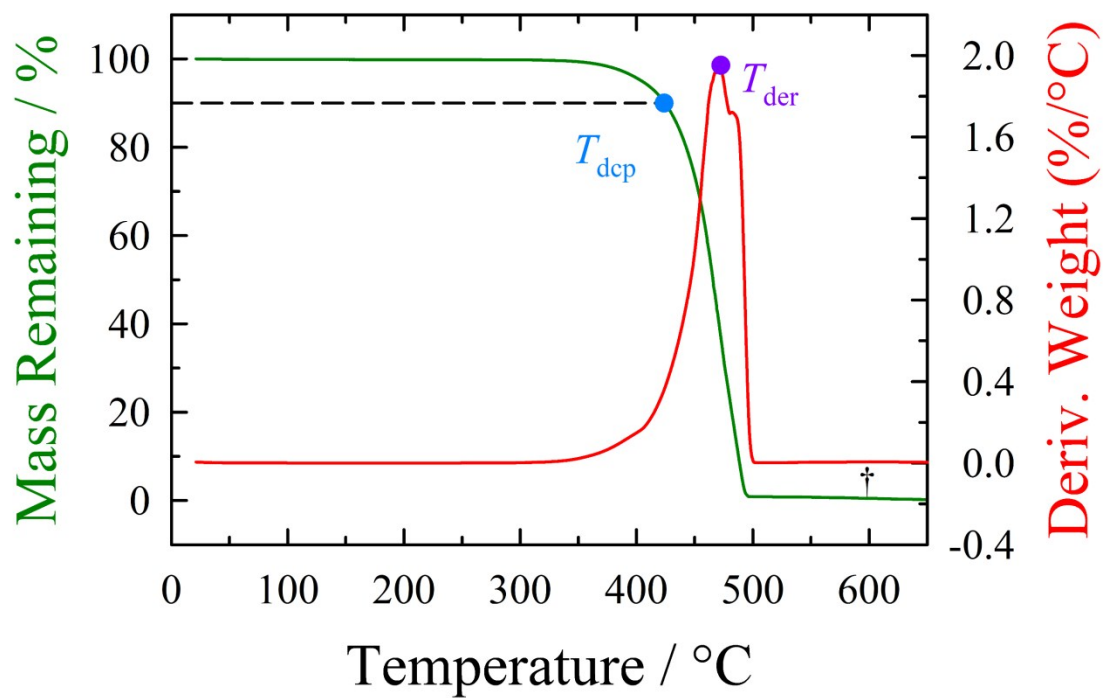
**Figure S9.** Thermogravimetric analysis of IL #9 (see Table 1).



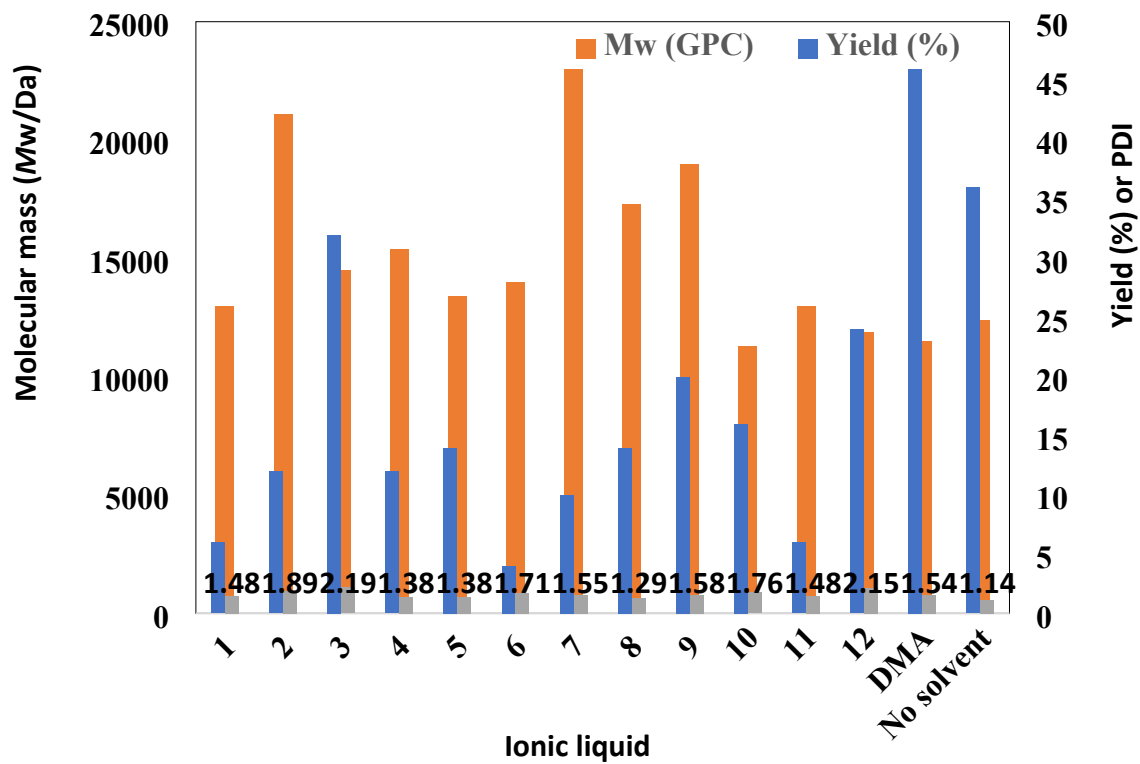
**Figure S10.** Thermogravimetric analysis of IL #10 (see Table 1).



**Figure S11.** Thermogravimetric analysis of [BMIM][Tf<sub>2</sub>N] (IL #11 in Table 1).

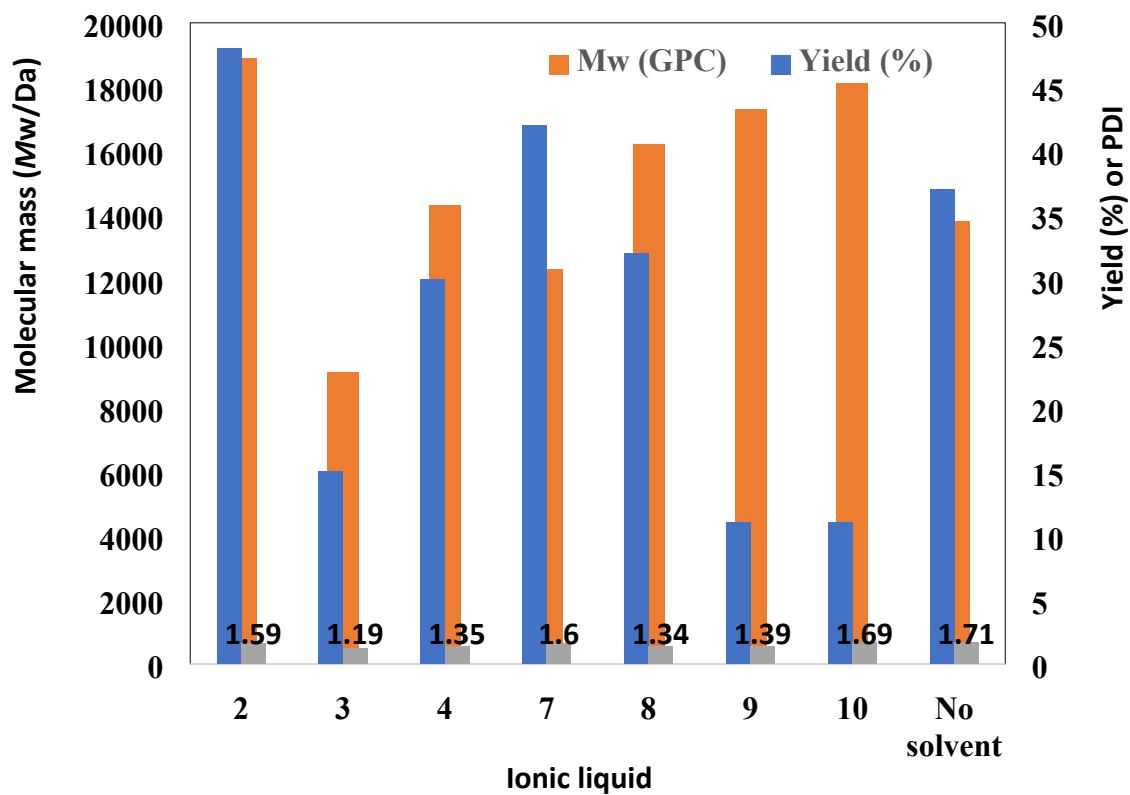


**Figure S12.** Thermogravimetric analysis of [BMIM][PF<sub>6</sub>] (IL #12 in Table 1).



**Figure S13.** Comparison of  $M_w$ , yield and PDI of poly(L-lactide) in various ILs (based on data in Table 3; PDI values are listed in the graph).





**Figure S14.** Comparison of  $M_w$ , yield and PDI of poly( $\epsilon$ -caprolactone) in various ILs (based on data in Table 3; PDI values are listed in the graph).