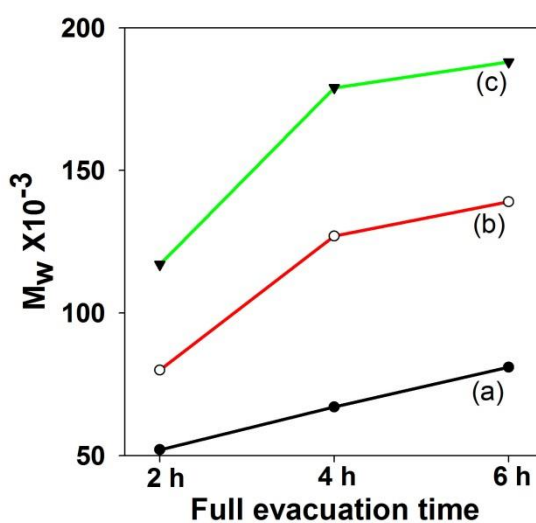


## Supporting Information

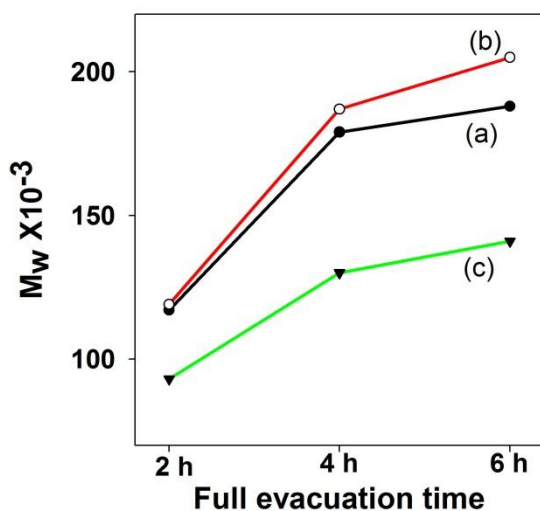
# Preparation of High-Molecular-Weight Poly(1,4-butylene carbonate-*co*-terephthalate) and Its Thermal Properties.

*Jung Jae Lee, Jong Yeob Jeon, Ji Hae Park, Youngeun Jang, Eun Yeong Hwang, and Bun Yeoul Lee\**

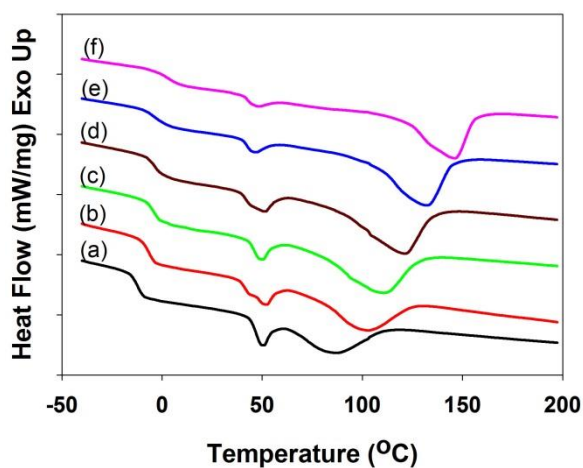
Department of Molecular Science and Technology, Ajou University, Suwon 443-749 Korea



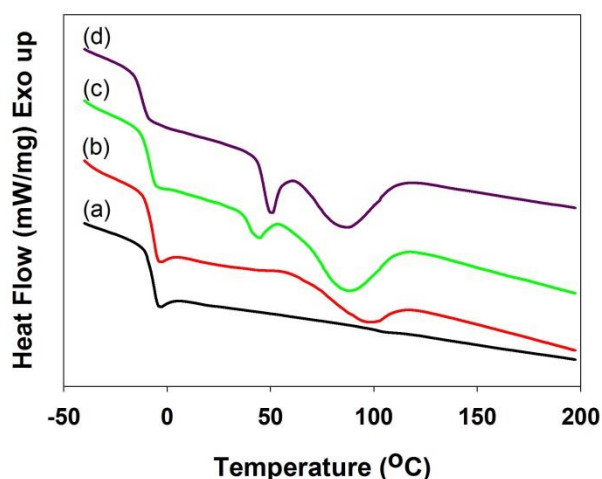
**Figure S1.** Increase of molecular weight as a function of time at full vacuum at 190 °C (entry 1, Table 2) (a), 200 °C (entry 2, Table 2) (b), and 210 °C (entry 3, Table 2) (c)



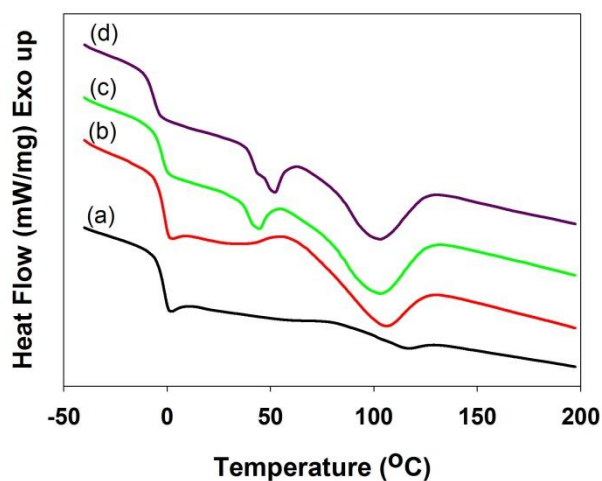
**Figure S2.** Increase of molecular weight as a function of time at full vacuum at 210 °C using 0.2 mol % NaH (entry 3, Table 2) **(a)**, 0.1 mol % (entry 4, Table 2) **(b)**, and 0.05 mol % (entry 5, Table 2) **(c)**.



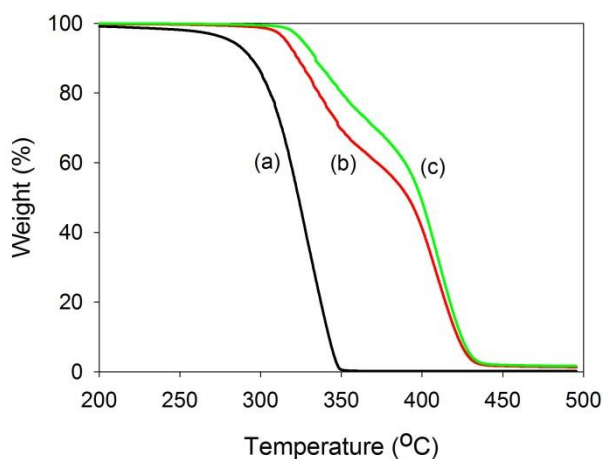
**Figure S3.** DSC curves of PBCTs, after annealing at 30 °C for 12 h, prepared at [DMT]/[BD] ratio of 0.30 (entry 7, Table 1) **(a)**, 0.35 (entry 8, Table 1) **(b)**, 0.38 (entry 9, Table 1) **(c)**, 0.40 (entry 10, Table 1) **(d)**, 0.45 (entry 11, Table 1) **(e)**, and 0.50 (entry 12, Table 1) **(f)**



**Figure S4.** DSC curves of PBCT prepared at [DMT]/[BD] ratio of 0.30 (entry 7, Table 1): the second scan after rapid cooling ( $\sim 30$  °C/min) (a), after annealing at 30 °C for 0.5 h (b), after annealing at 30 °C for 1 h (c), and after annealing at 30 °C for 12 h (d)



**Figure S5.** DSC curves of PBCT prepared at [DMT]/[BD] ratio of 0.35 (entry 8, Table 1): the second scan after rapid cooling ( $\sim 30$  °C/min) (a), after annealing at 30 °C for 0.5 h (b), after annealing at 30 °C for 1 h (c), and after annealing at 30 °C for 12 h (d)



**Figure S6.** TGA curves of PBC ( $M_w$  146 000) (a), PBCT prepared at [DMT]/[BD] ratio of 0.40 (entry 10, Table 1) (b), PBCT prepared at [DMT]/[BD] ratio of 0.50 (entry 12, Table 1) (c)



**Figure S7.** Polymerization apparatus for the scale of 100 g-polymer/batch and the isolated polymers