Electronic Supporting Information (ESI)

Sustainable Synthesis and Characterization of Bisphenol A-Free Polycarbonate from Six-Membered Dicyclic Carbonate

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Figure S1. Synthesis of BPA-free PC from DTMPC (100 mg, 0.33mmol) by ROP under various conditions. Effect of temperature under condition of (A) 0.09 µmol TBD and 14 µmol 1,3-PDO, (B) 7.2 µmol TEA and 35 µmol 1,3-PDO, and (C) 8.2 µmol DMAP and 35 µmol 1,3-PDO at 110°C (◆), 130°C (■) and 150°C (▲).

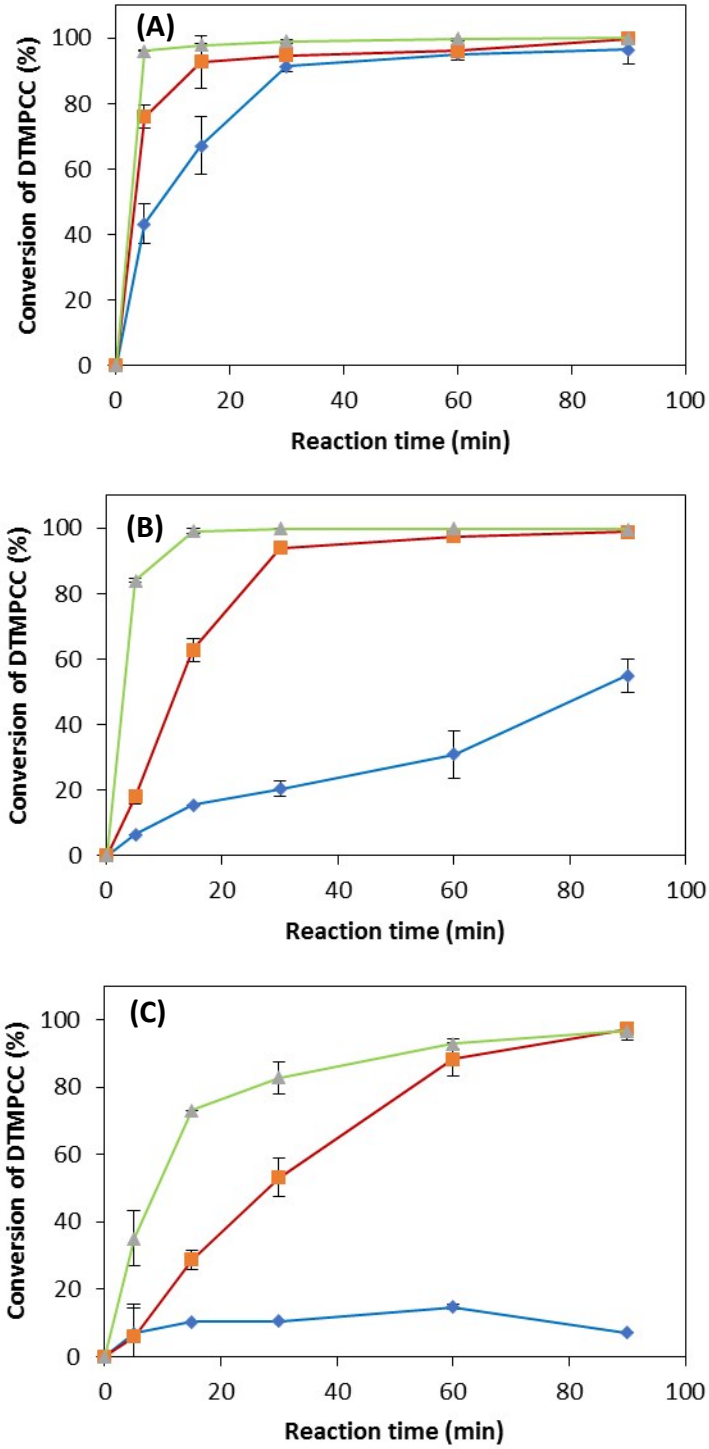

Figure S2. Representative GC chromatograms on the synthesis of BPA-free PC from DTMPC (0.33 mmol) by 1.7 μmol DBU and 3.5 μmol 1,3-PDO at 130°C. (A) 0.5mg DTMPC/mL, (B) 0.1mg DTMPC/mL, (C) DTMP peak at 5 min reaction, (D) DTMP peak at 15 min reaction, (E) DTMP peak at 30 min reaction (Table 1. Run 12), (F) DTMP peak at 60 min reaction (Table 1. Run 13).

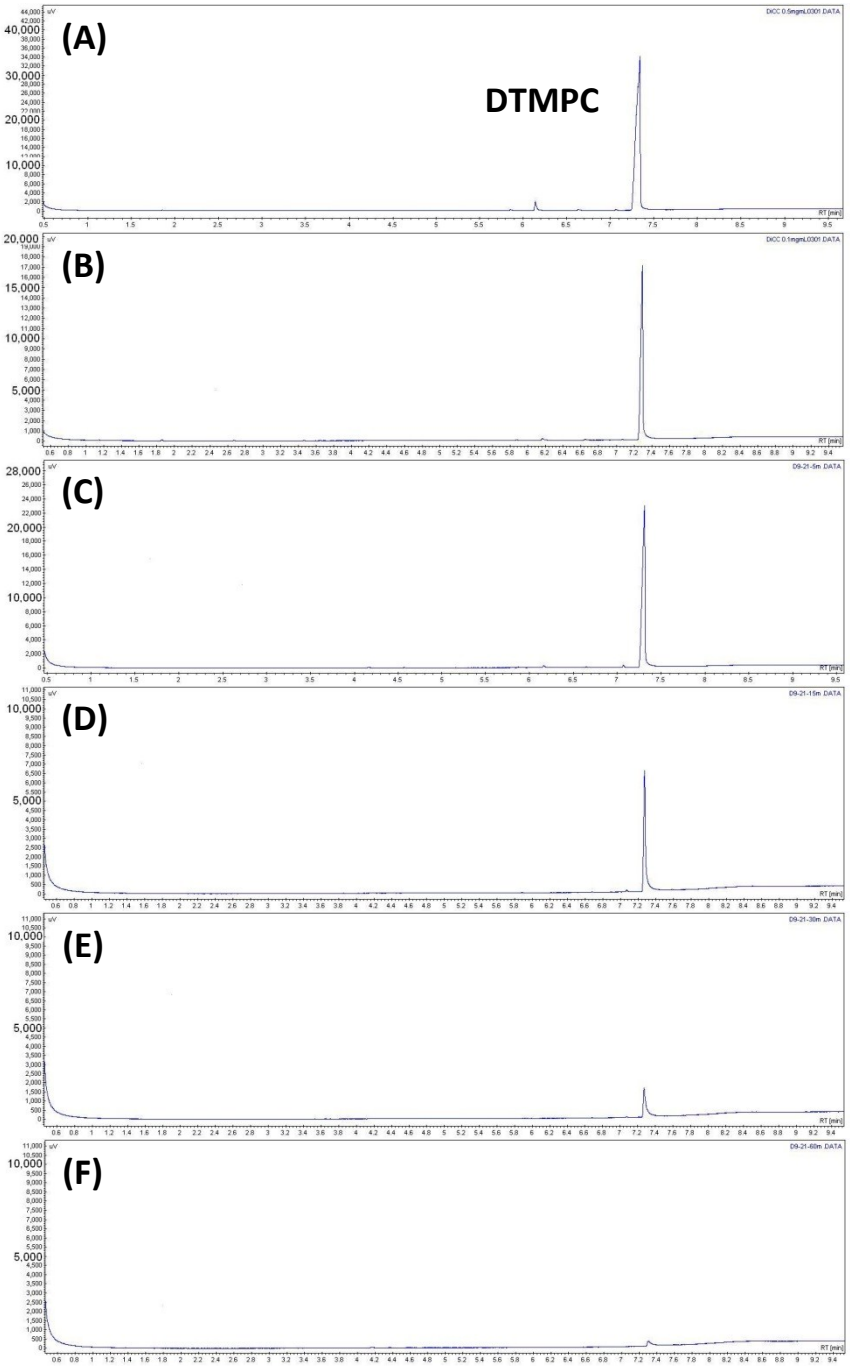

Figure S3. Solid state ^{1}H-NMR (a) and ^{13}C-NMR (b) of polycarbonate prepared from DTMPC.