Supporting information

Investigation on the synergistic effect of melt-extension and nanofiller on the crystal-crystal phase transition from form II to I of isotactic polybutene-1

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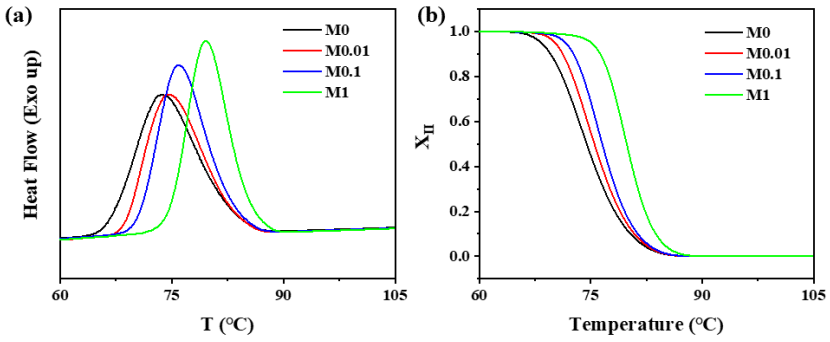

Figure S1 (a) DSC cooling scans during non-isothermal crystallization after melting. (b) The evolution of crystallinity during non-isothermal crystallization.

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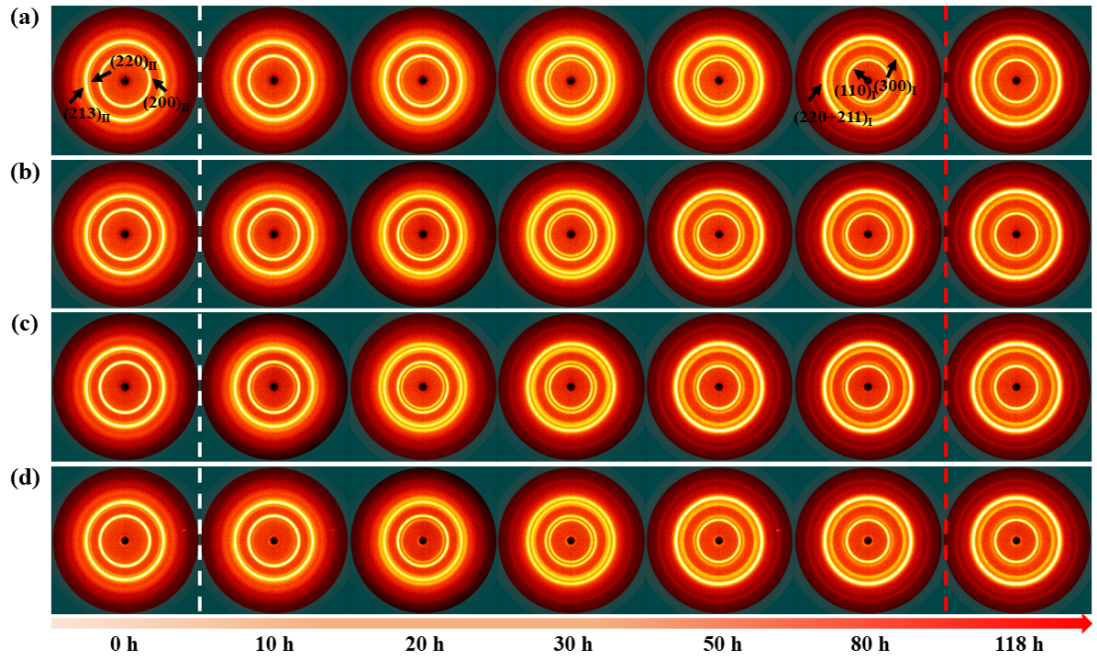

Figure S2 Representative 2D WAXD patterns during phase transition of (a) M0, (b) M0.01, (c) M0.1, and (d) M1 under quiescent condition.

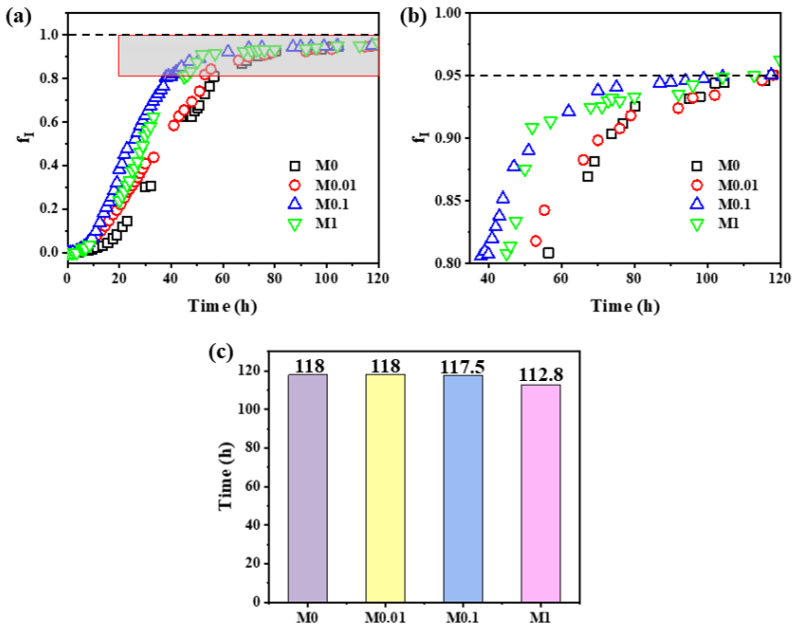

Figure S3 (a) and (b) The evolution of $(110)_I$ (f_I) over time during phase transition. (c) the accomplishment time of phase transition in M0, M0.01, M0.1 and M1.

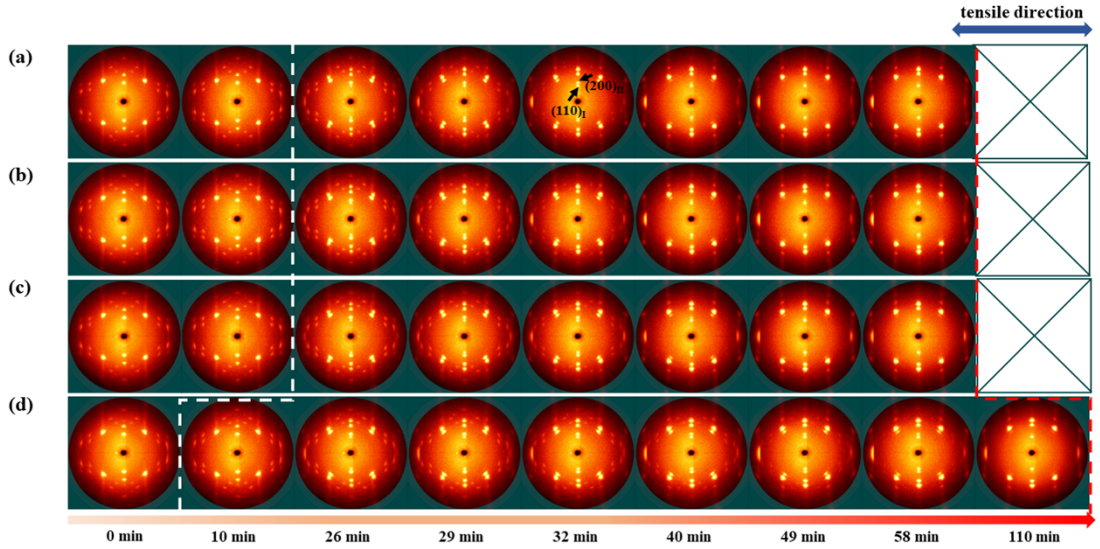

Figure S4 Representative 2D WAXD patterns during phase transition of (a) M0, (b) M0.01, (c) M0.1, and (d) M1 with melt strain of 3.5.

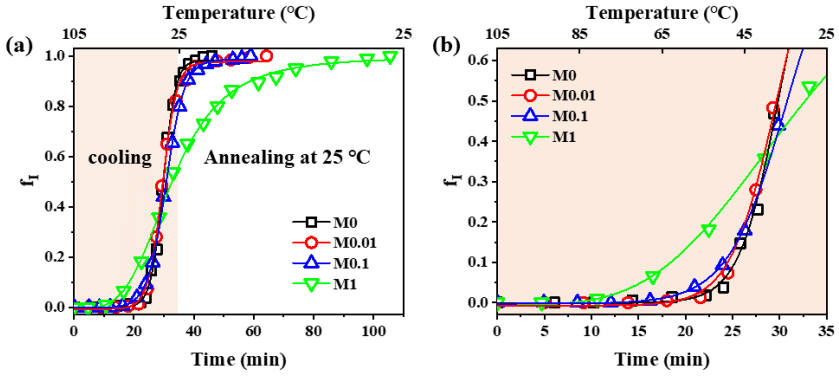

Figure S5 The relationship between the evolution of phase transition and temperature before annealing to room temperature with melt strain 3.5.

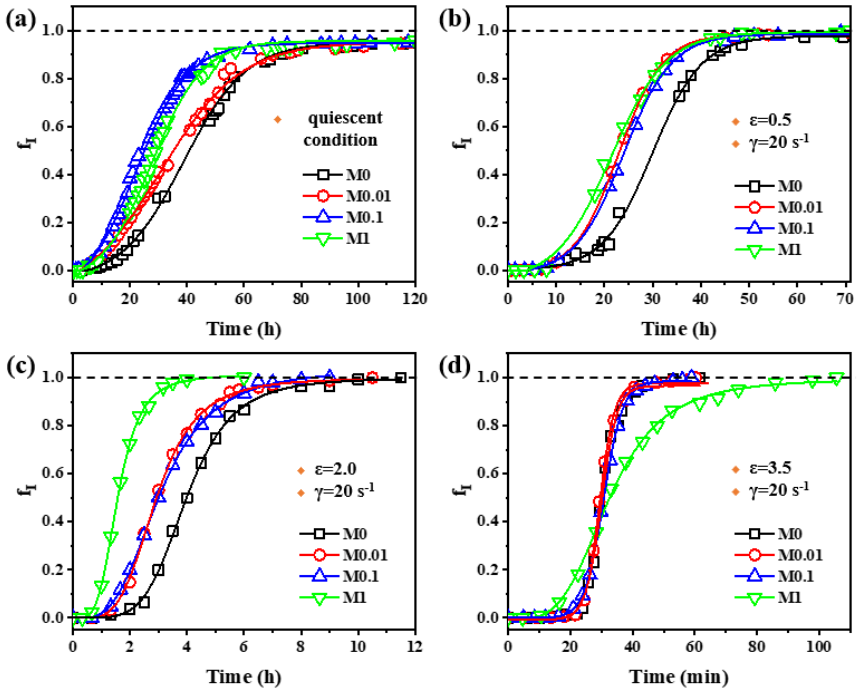

Figure S6 The evolution of form I content (f_I) of samples of M0, M0.01, M0.1 and M1 under (a) quiescent condition, with melt strain of (b) 0.5, (c) 2.0 and (d) 3.5, respectively.