Isothermal Flow-induced Crystallization of Polyamide 66 melts

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Supporting Information

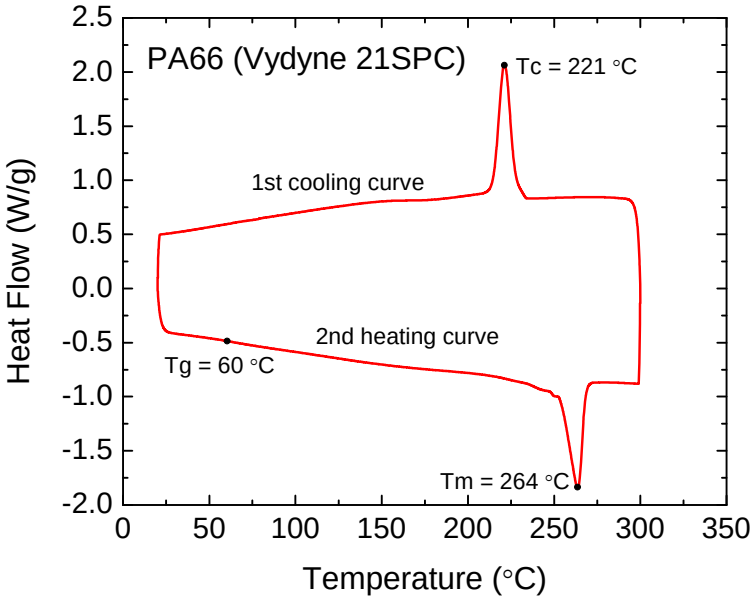

Figure S1. DSC 1st cooling and 2nd heating trace of polyamide 66 (Vydyne 21SPC). The cooling and heating rate were 10 ºC/min. The Tg, Tm, and Tc were 60, 264, and 221 ºC, respectively.

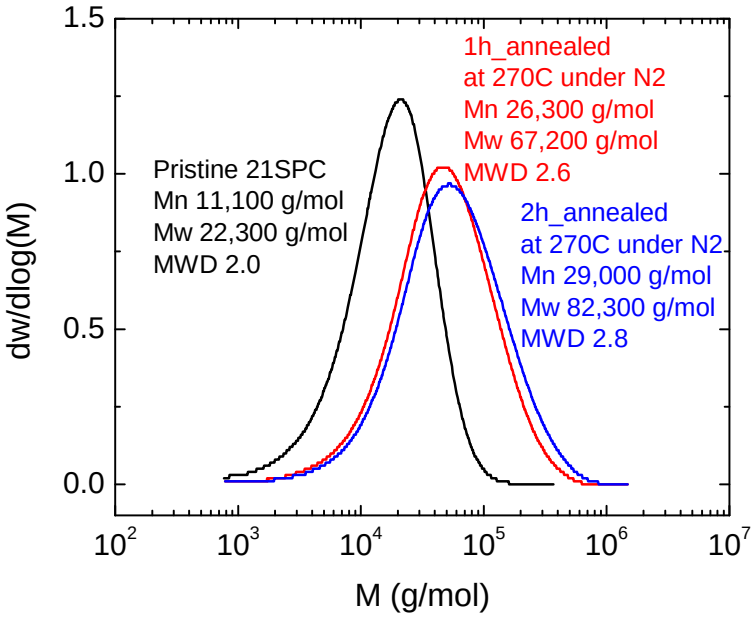

Figure S2. The molecular weight distributions of polyamide 66 (Vydyne 21SPC) pristine (black), annealed for 1 hour (red), and annealed 2 hours (blue) at 270 ºC under N2, respectively. The

prepared PA66/HFIP solution (0.05 wt%) was filtered prior to SEC measurement in order to remove insoluble gels. The weight loss of 1 hour and 2 hours annealed PA 66 after the filter were 5.4 and 7.3 wt%, respectively.

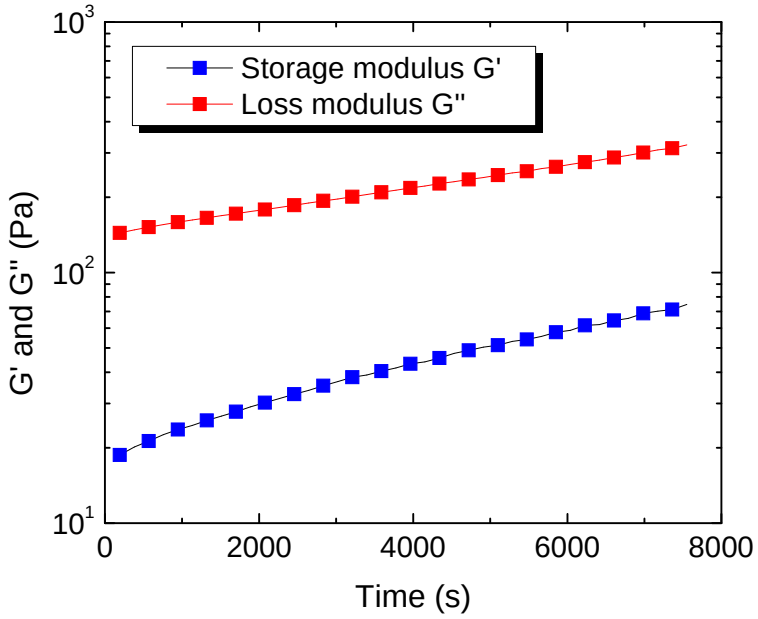

Figure S3. Oscillatory time sweep of polyamide 66 (Vydyne 21SPC) at 270 ºC under N2. 25 mm cone and plate were used with a frequency of 0.05 rad/s and a strain amplitude of 0.05.

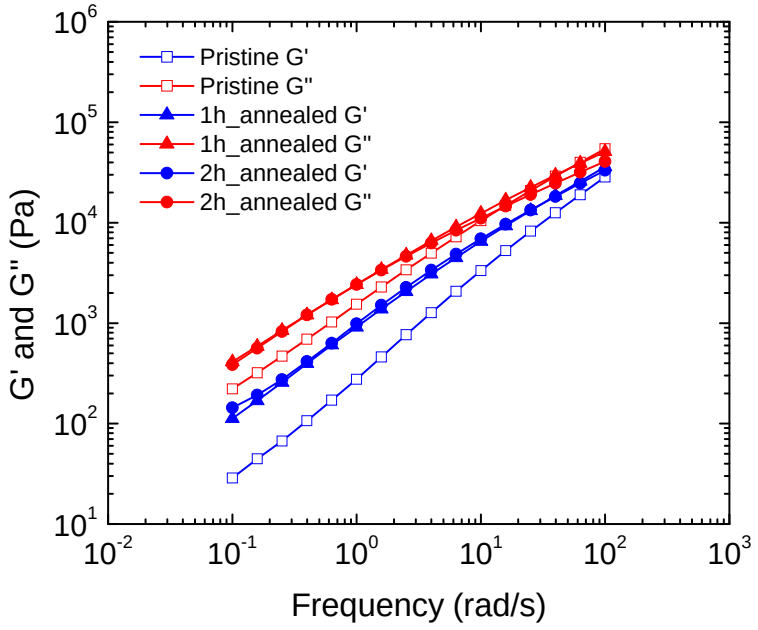

Figure S4. Linear viscoelastic behaviors of polyamide 66 (Vydyne 21SPC) pristine (open square), annealed for 1 hour (solid triangle), and annealed for 2 hours (solid circle) at 270 ºC under N2, respectively. 8 mm parallel plates were used with a strain amplitude of 0.05.

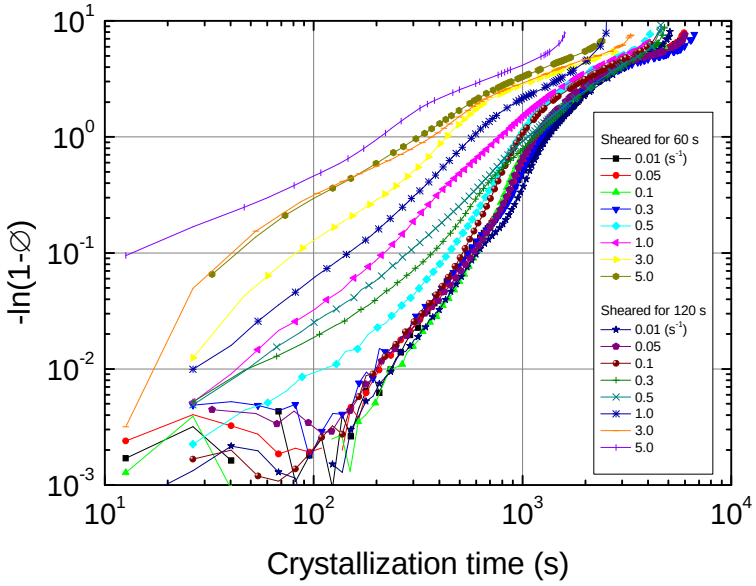

Figure S5. Avrami plot constructed with storage modulus evolution of PA 66 (Vydyne 21SPC) at $T_c = 245$ ℃ as a function of crystallization time. The samples were prepared by shearing at $T_s = 270$ ℃ for 60 s and 120 s using 8 mm parallel plates. The constant frequency of 1 rad/s was applied during crystallization with the constant strain amplitude of 0.05.