

Supporting Information for Using M_w dependence of surface dynamics of glassy polymers to probe the length scale of free surface mobility

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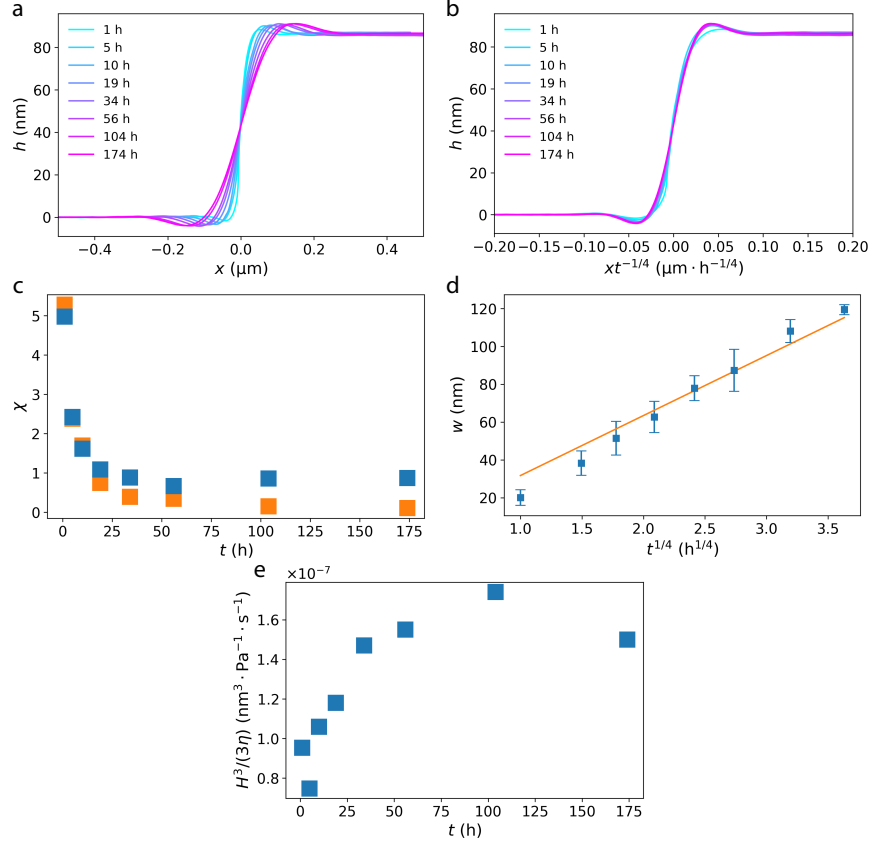


Figure S1: Levelling experiment of $M_w = 11.9$ kg/mol PS at $T = T_g - 3$ K, where $h_1 = h_2 = 90$ nm: (a) AFM height profiles at different times. (b) AFM height profiles at different times, with the self-similar variable $xt^{-1/4}$ as the new x -axis. (c) Time-dependent correlation functions introduced in the main text, where the blue squares stand for χ_{GTFE} and the orange squares represent χ_{TFE} . (d) Time-dependent profile widths (w) determined by fitting the experimental profiles to $\tanh[x/(w/2)]$, where the solid line shows a $t^{1/4}$ relation. (e) Time-dependent surface mobility (where $H = h^*$) extracted from the fit of the self-similar experimental profile (panel b) to the solution of the GTFE (see main text).

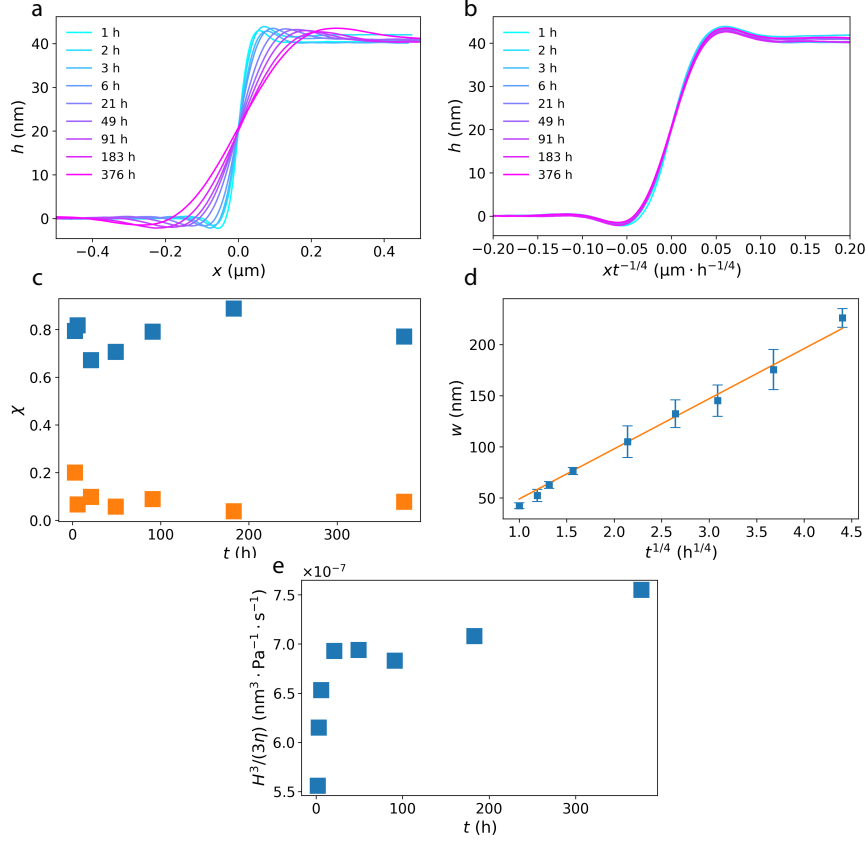


Figure S2: Levelling experiment of $M_w = 11.9$ kg/mol PS at $T = T_g - 3$ K, where $h_1 = h_2 = 40$ nm: (a) AFM height profiles at different times. (b) AFM height profiles at different times, with the self-similar variable $xt^{-1/4}$ as the new x -axis. (c) Time-dependent correlation functions introduced in the main text, where the blue squares stand for χ_{GTFE} and the orange squares represent χ_{TFE} . (d) Time-dependent profile widths (w) determined by fitting the experimental profiles to $\tanh[x/(w/2)]$, where the solid line shows a $t^{1/4}$ relation. (e) Time-dependent surface mobility (where $H = h^*$) extracted from the fit of the self-similar experimental profile (panel b) to the solution of the GTFE (see main text).