

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Crystal Nucleation of Polymers Confined to Droplets: Memory Effects MICHAEL V. MASSA, MICHELLE S.M. LEE, KARI DALNOKI-VERESS
— The crystallisation kinetics of a supercooled polymer melt is often affected by the thermal history of the sample. The crystal nucleation rate, in particular, can be enhanced by a thermal pre-treatment prior to the final crystallisation (self- seeding). Similarly one can study the memory effects of the supercooled melt to elucidate the earliest stages of crystallisation. We investigate the effects of thermal history on the crystallisation in confined polymer melts. By studying an ensemble of isolated and impurity-free droplets, it is possible to make statistically meaningful measurements of the supercooled melt over a large range of temperatures and over long times, due to the absence of heterogeneously nucleated events.

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Date submitted: 21 Mar 2013

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