

Abstract Submitted  
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**Nucleation, crystallization, and melting of atactic polystyrene.**  
YU CHAI, JAMES FORREST, Univ of Waterloo — Here we present the study of using low molecular weight atactic polystyrene (aPS) as the model system to understand the nucleation, crystallization, and melting behaviors of the stereo-regular polymer chains in aPS. The result is consistent with the theoretical calculation proposed by Semenov. In addition, both the crystallization and melting experiments indicate that all crystals are on or near the surface. Finally, the nucleation experiment below the glass transition temperature provides another piece of evidence of the enhanced surface dynamics in glassy polymers.

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