



Thursday,  
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3:00 pm

Room 8335  
Chemistry Building

# ***Effect of Dynamic Asymmetry on the Crystallization and Phase Separation in Polymer Blends***

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In a realistic polymer blend system, for example, a polyolefin blend or a toughened polystyrene system, phase separation is often encountered together with either crystallization or glass transition or sometimes both. These will make the phase separation kinetics very complicated, so is the morphology and the properties of the materials. However, this will give many more opportunities to control and select properties from the same set of polymer system. The most common cases include the interactive phase separation and crystallization, and/or asymmetrical phase separation due to the large molecular weight difference or glass transition temperature difference between the components. The situation could become much more complicated when all three transitions are close to each other and interact with each other spatially as well as temporally. Some fundamental questions related to multiple phase transitions can be discussed in general. In this presentation, a dynamically asymmetrical system of PEO/PMMA (polyethyleneoxide/ polymethylmethacrylate) blend will be used to illustrate the interactive phase separation/crystallization process under the influence of glass transition.