

Abstract: Venkat Ganesan

**Mechanisms underlying Ion Transport in Polymer Electrolytes**

In this talk, I will briefly discuss recent results from computer simulations, which have shed light on the mechanisms underlying ion transport in different classes of polymer electrolytes. Specifically, our studies in the context of block copolymer electrolytes have identified the influence of microphase separation on ion coordination and transport. In the context of polymeric ionic liquids, we have identified a mechanism of transport which is distinct from those observed in simple ionic liquids. The implications of these results for the design of mechanically strong, conducting electrolytes will be discussed.