

Students' Annual Seminar

Glass Transition in Super-cooled liquid with medium range crystalline order

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If allowed to relax for astronomically long time at low temperatures, whether a glass forming liquid will start to form locally favored crystalline structures and eventually form a crystal is still actively researched with no clear consensus. Are the molecular mechanisms for glass transition in liquids with and without medium range crystalline order (MRCO) same? This is an important issue to resolve. To answer the question we have performed extensive molecular dynamics simulations of few glass forming liquids in two dimensions and showed that the static and dynamics of glasses with MRCO are generically different from other glass forming liquids with no predominant local order. This study also resolves an important issue regarding Point-to-set correlation function in correctly measuring the relevant length scale associated with dynamic slowing down.

Tuesday, Apr 11th 2017

4:00 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS