

Glassy dynamics as a consequence of the equilibrium liquid to solid transition



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We review the underpinning of the microcanonical ensemble and the more refined (and explicitly quantum) "Eigenstate Thermalization Hypothesis". We then find and apply a simple corollary of these to analyze the evolution of a liquid upon supercooling to form a structural glass. Simple theoretical considerations lead to a predictions for general properties of supercooled liquids. Amongst other things, a collapse of the viscosity of glass formers is predicted from this theory. This collapse indeed occurs over 16 decades of relaxation times for all known types of glass formers.

Wednesday

October 12

4:00 P.M.

Rm 118 NSH

Refreshments
in Rm 202 NSH
@ 3:30 pm