

## Thirty milliseconds in the life of a supercooled liquid

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It is difficult to obtain pertinent insights into the static, structural or thermodynamic nature of the glass transition of dense fluids. Instead, the relaxation dynamics of molecular liquids near the glass transition shows spectacular changes, and elucidating the nature of molecular motion appears as a central scientific question to fully understand glassy materials. I will discuss how and why this question has resisted decades of research, and will introduce various physical ideas, from thermally activated processes to dynamic facilitation. I will also present recent computational developments which may help gain direct microscopic insight into the nature of molecular motion near the experimental glass transition.

