

## Coupling of local structure and global dynamics in a model glass former

The arguably most remarkable feature of a supercooled liquid is the divergence between structure and dynamics: while two-point measures like the structure factor show only minute changes, the structural relaxation time increases dramatically by several orders of magnitude. Still, normal and supercooled liquid are far from structurally indistinguishable, with higher-order local motifs forming. For an atomistic model glass former, and along trajectories, we calculate the probability distribution of one such motif, the bicapped anti-prism formed by 11 particles. Biasing trajectories with a dynamical "chemical potential", there is a transition between the supercooled liquid (active) and a cluster-rich, low mobility (inactive) phase. Encouraging the supercooled liquid to form this local motif is thus sufficient to drive the system into a jammed, glass-like state. I will present numerical evidence that this inactive phase indeed corresponds to the glassy states reached through cooling.