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Two Simple Models of Monoatomic Glass Formers VITALIY KAPKO, DMITRY MATYUSHOV, AUSTEN ANGELL, Arizona State University — Glass formation in one component systems remains a challenge for computer simulations, and therefore most studies to date have been done on binary mixtures. Here we explore the origin of resistance to crystallization of single component systems for two examples: modified silicon potential (Stillinger-Weber model) and Lenard-Jones ellipsoids (Gay-Berne model of liquid crystals). To produce glass formers these potentials were tuned by optimization of the parameter of three-body interaction (for the former) and aspect ratio (for the later). The kinetic properties and the potential energy landscapes of both models are studied.

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