

Abstract Submitted
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Energy landscape picture of overaging and rejuvenation in a sheared glass DANIEL LACKS, Case Western Reserve University, MARK OSBORNE — Molecular simulations and an energy landscape analysis are used to investigate the effects of shear on aging in a glass. Shear beyond the yield point is shown to change the state of a glass such that it resembles (but is not identical to) a different stage in the aging process. A cycle of large strain rejuvenates the glass by relocating the system to shallower energy minima, while a cycle of small strain overages the glass by relocating the system to deeper energy minima. The balance between overaging and rejuvenation is controlled by how well the glass was initially annealed.

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