

Abstract Submitted
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Stress-Induced Slip at Polymer-Polymer Boundaries ANDREW GUSTAFSON, University of Minnesota — The phenomena of stress-induced tangential slip at polymer-polymer interfaces is studied by simulation and analytic theory. Simulations combine a slip-link model of entanglement with a self-consistent field description of the interface. We consider how the slip velocity depends upon shear stress, interfacial entanglement density, and polymer chain length. Our analysis assumes that the strongly non-linear shear thinning of the interface observed in experiment is a result of convective release of interfacial entanglements.

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