## Abstract Submitted for the MAR09 Meeting of The American Physical Society

MD simulations of nanofibers ROBERT LIVERPOOL, JOSEPH ORTIZ, DILIP GERSAPPE, Department of Materials Science and Engineering, Stony Brook University — We use MD simulations to study the strength of polymeric nanofibers. The simulations will examine the role of chain orientation, internal stresses and surface effects on the modulus of nanofibers. The simulations are performed at above and below the glass transition temperature of the polymer. We also examine the effect of inclusions in the fiber on the modulus.

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