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The Colloidal Force of Bead-Spring Chains in a Good Solvent JOHN MCCOY, New Mexico Tech, JOHN CURRO, Sandia National Laboratories — A recently developed Density Functional Theory (DFT) for tethered Bead-Spring chains is used to investigate colloidal forces for the good solvent case. A planer surface of tethered chains is opposed to a bare, hard wall, and the force exerted on the bare wall by the tethered chains is calculated by way of the contact density. In this manner, the surface force is found as a function of separation. The resulting force function is analyzed for varying surface coverages, and chain lengths.

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