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Static properties of equilibrium polymers confined in ultrathin films ANNA CAVALLO, JOACHIM P. WITTMER, ALBERT JOHNER, JOERG BASCHNAGEL, Institut Charles Sadron, 6 rue Boussingault, 67083 Strasbourg, France — The static properties of equilibrium polymer melts confined in ultrathin films are studied by means of Monte Carlo simulations of a lattice model: the bond fluctuation model. In this work we focus on the effects of ultrathin film confinement between two parallel and neutral walls on chain size and molecular weight distribution. We compare our numerical results to analytical calculations by Semenov and Johner [Eur. Phy. J. E, 12, 469 (2003)] who predicted for ultrathin films, logarithmic corrections to the leading mean-field behavior. Our simulation data are compatible with the theoretical results.

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