سمینار هفتگی ماده چگال نرم

A lattice Model for Simulating the Dynamics of Randomly Branching Double-folded Ring Polymers

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Abstract

We present an extension of the elastic lattice polymer model for double-folded ring polymers and use Monte Carlo simulations to study three systems: ideal double folded rings, self-avoiding double folded rings and rings in the melt state. In all cases, we re-examine statistical properties and investigate the dynamics of the double folded rings and compare the results with the predictions of the theories. In particular, the rings in the melt state adopt compact configurations and segregate into different territories in agreement with the Flory theory and with simulations of melts of randomly branching polymers. Moreover we show that the dynamics of this non-trivial model system for non-concatenated ring polymers and interphase chromosomes is in excellent agreement with a recent scaling theory.

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مکان(کلاس مجازی آقای دکتر اجتهادی) :

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