

Kinetic Modeling and Thermodynamic Closure Approximation of Liquid Crystal Polymers

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Abstract

A lot of models are established to study the rich dynamics of orientational order of Liquid Crystal Polymers(LCP) in the past decades. The most interesting part is kinetic theories which was first detailed investigated by M. Doi in 1980s. We will present some new results including nonhomogeneous extension of Doi's theory and corresponding thermodynamic closure approximations. Simulation results will be demonstrated.