

عنوان مقاله:

Chromatin dynamics as polymers

محل انتشار:

پنجمین کنفرانس ملی نوآوری و فناوری علوم زیستی، شیمی ایران (سال: 1400)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Chromatins serve a crucial function of contributing to various biological phenomena inside nucleus. In this study, we aim to investigate some aspects of the structure and dynamics of chromatins when they are interacting with the nucleus. Accordingly, we consider a part of the nuclear periphery and define the interactions of chromatins with the nucleus and with each other. The model is based on biological features of chromatins, and their elasticity plays a significant role in the simulations. We draw the pattern of chromatin's distribution domains when they interact with the nucleus, and the extracted figures correlate with the former experimental study. We also had a close look at the structures and measured the alteration of the chromatin domain near the nucleus. The major point of this study is to examine how different proportions of the two distinct domain segregates, which contribute to chromosomes, can lead to final non-identical structures of chromatin. This is consistent with the scaling regimes in the literature. The results are compared on plots. They could be useful for studies on the self-assembly of polymers as well as the biological behavior of copolymers.

کلمات کلیدی:

chromatin, simulation, interaction

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