

Structure of a Phase-Separating System in the Presence of Oscillatory Particles

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Abstract: We numerically simulate the processing of the phase separation of the polymer blend-particle system under fluctuating fields by new discretization's form. Due to the presence of oscillatory particles which have an affinity for one of the components, the ordering mechanism of phase separation will be changed. By changing the oscillatory frequency ω and amplitude γ , we can find the formation of the striped structures either parallel or perpendicular to the oscillatory direction and obtain a diagram describing the orientational ordering of the domain structures.

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