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Jamming-Unjamming transitions in active flexible filaments

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Active matter comprises systems of living or synthetic constituents that are constantly driven far away from thermodynamic equilibrium. Here we explore the collective self-organization of active flexible filaments using a numerical model of self-propelled bead chains. We explore phase transitions to and from active turbulent states. In particular, we investigate the perhaps counterintuitive result in which extremely flexible polar filaments require more active force transition than their more rigid counterparts.

Field of study

Physics of Complex Systems

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