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Title:	Clustering in Active Brownian Particles and Defect-Dynamics
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Abstract:	The scope of this work is a detailed study on a system of Active Brownian particles for the phase-separation, defect-properties and their time-dynamics and the analysis of these kinds of systems for pressures existing in the system. We study the phase-separation in these systems with respect to two important control-parameters of the Global Packing-Fraction (Φ), and the propulsion-strength (Pe). We study the structure of the active solid obtained after phase-separation, which appears to hold a crystalline form. We then study the crystal-defects for their types, their relative occurrence in the active solid, the occurrence-variation of these defects in time, as well as the lifetime of each of these defect states with respect to the defect-kind as well as the control parameters. We then study the occurrence and the inter-transition of more-than-one active solid cluster states of the system. Finally we also study the system for different origins of pressures and their magnitude-variation with respect to the control-parameters and the phase of the local-area under observation.
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