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Universal hydrodynamic mechanisms for crystallization in active colloidal suspensions RAJESH SINGH, R. ADHIKARI, The Institute of Mathematical Sciences — We derive, using the boundary integral formulation of Stokes flow, exact expressions for forces and torques between active colloidal particles near a plane wall. From the leading terms of these expressions we identify universal mechanisms for the crystallization of active colloids. Through detailed simulations, we find that active crystallization is not an activated process, as in equilibrium, but proceeds through a spinodal-like instability [1]. [1] Rajesh Singh and R. Adhikari, arXiv:1610.06528: To appear in Physical Review Letters

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