

Watching paint dry

Speaker : Dr. Arash Nikoubashman
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Date & Time : Thursday, April 02, 2020 16:00-17:00 (Open 15:30)

Venue : Yagami campus, 14-2F Seminar Room 2

Host : KGRI, Keio University Global Research Institute

Co-hosts : Department of Mechanical Engineering

Summary of Lecture :

Drying colloidal dispersions are encountered in many technological processes, including painting, inkjet printing, and spraying pesticides. In these technologies, colloidal particles are typically initially dispersed in a solvent, which then evaporates, leaving behind a dried residue of colloidal particles. Previous experiments and simulations of bidisperse colloidal suspensions revealed, that sufficiently fast evaporation can lead to segregated structures. The ability to fabricate structures with such (multi-)layered morphologies in a single processing step is highly promising for applications in coating, catalysis, and chromatography. To understand this counterintuitive behavior, we conducted a range of particle-based simulations and dynamic density functional theory calculations.

Free admission, Open to anyone,
Pre-registration not required

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