



CHEMICAL AND BIOLOGICAL ENGINEERING DEPARTMENT SEMINAR SERIES

Motion of Droplets on Surfaces Induced by Noise and a Bias

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Time: Wednesday, September 24; 3:15 – 4:30 pm

Location: Perlstein Hall Auditorium

Short Abstract

Understanding of the motion of droplets on surfaces is important in various fields, such as water repellent surfaces, microfluidics, and removal of condensate in thermal managements to name a few. These motions can be induced by a chemical or thermal gradient or simply by gravity. It has been known for a long time that interactions of the drops with surface imperfections manifesting in terms of wetting hysteresis hinder the drop motion. However, research from our group as well as others show that the effect of hysteresis can be overcome by agitating the drop with various types of deterministic and stochastic noises. We will discuss some of the interesting behaviors of drops subjected to such noises and various external forces.