

Abstract Submitted
for the DFD10 Meeting of
The American Physical Society

Behavior of contact angles on rough solid surfaces YUMIKO YOSHITAKE, Science and Engineering, Tokyo Denki University, KO OKUMURA, Department of Physics, Ochanomizu University — In this study, we consider a sinusoidal surface and show explicitly how the pinning and depinning occur for a two dimensional liquid drop on such non-ideal surfaces as the volume of the drop is increased or decreased. The surface energy of the drop have a wave like form affected by solid surface shapes and contact lines are pinned by the energy barriers. We show that the contact angle hysteresis (CAH) emerges from this simple model even though we do not take any effect of viscous dissipation into account.

Yumiko Yoshitake
Science and Engineering, Tokyo Denki University

Date submitted: 09 Aug 2010

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