

Abstract Submitted
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On the origin of contact angle hysteresis YUMIKO YOSHITAKI,
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Physics, Ochanomizu University — In this study, we consider a simple distribution
of defects on a substrate, or 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. 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, which is in contrast with the
conventional theory where the CAH originates from the viscous dissipation inside
the liquid around the contact line just after depinning.

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