

Abstract Submitted
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Investigating Contact Angle Forces with Traction Force Microscopy ELIZABETH JERISON, ERIC DUFRESNE, Yale University — Although the classic Young's relation indicates that the contact angle between a drop and substrate is a constant material property, observation of an evaporating water drop on solid PDMS reveals four phases of contact angle dynamics: spreading, pinning, isotropic contraction, and contraction with a decreasing contact angle. Only in the third phase does the contact angle remain constant. We use traction force microscopy to visualize the forces exerted by the drop contact line on the substrate, with the goal of explaining this contact-angle anomaly.

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