

Abstract Submitted  
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**Dancing droplets: Contact angle, drag, and confinement** ADRIEN BENUSIGLIO, NATE CIRA, MANU PRAKASH, Stanford University, Dept of Bioengineering — When deposited on a clean glass slide, a mixture of water and propylene glycol forms a droplet of given contact angle, when both pure liquids spread. (Cira, Benusiglio, Prakash: *Nature*, 2015). The droplet is stabilized by a gradient of surface tension due to evaporation that induces a Marangoni flow from the border to the apex of the droplets. The apparent contact angle of the droplets depends on both their composition and the external humidity as captured by simple models. These droplets present remarkable properties such as lack of a large pinning force. We discuss the drag on these droplets as a function of various parameters. We show theoretical and experimental results of how various confinement geometries change the vapor gradient and the dynamics of droplet attraction.

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