

Abstract Submitted
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Surfactant spreading on thin viscous films ANGELICA AESSOPOS,
MIT, JOSE BICO, ESPCI, ANETTE HOSOI, MIT — A surfactant drop spreading
on a thin viscous film may be accompanied by a fingering instability. The spreading is
driven by Marangoni stresses and resisted by viscous dissipation in the sublayer. We
present experimental results in a variety of regimes showing how the film thickness
and viscosity affect the characteristics of the spreading droplet. Spreading data at
short time scales, recorded with a high speed camera, are analysed as well as steady
state phenomena. A number of new scaling laws are observed.

Anette Hosoi
MIT

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