

# SOME RECENT ACTIVITIES IN WETTING:

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&

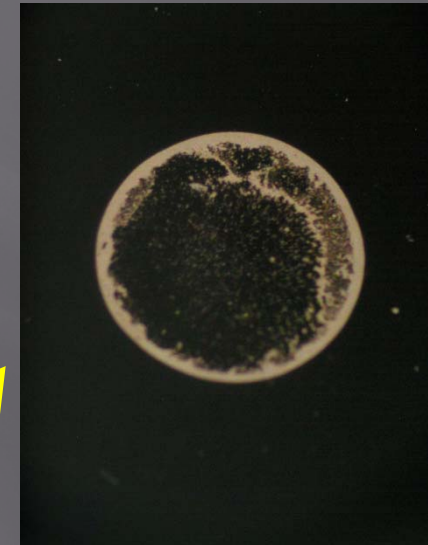
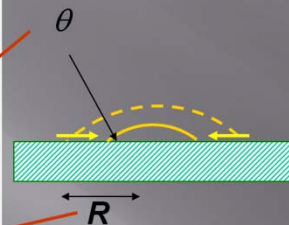
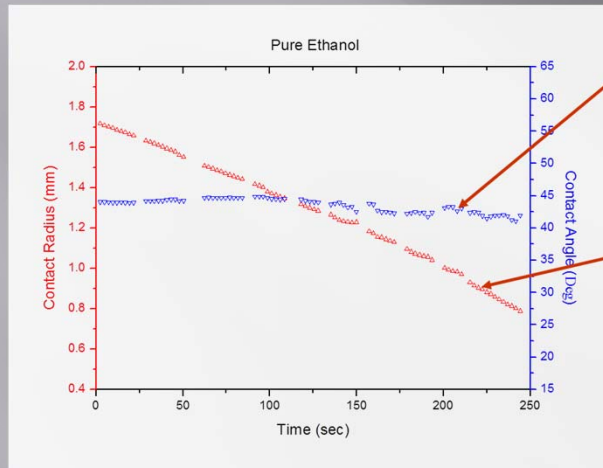
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UNIV. EDINBURGH (UK)

1. Nanofluids, evaporation and contact line dynamics
2. Superspreaders
3. Electrowetting
4. Polymers drying

# Evaporation & nano-particles

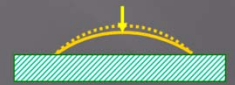
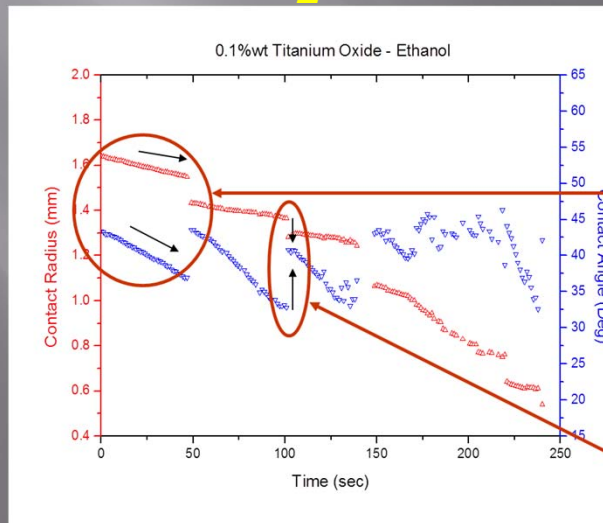
e.g. Moffat, Sefiane, Shanahan, *J. Phys. Chem. B* 2009, 113, 8860

## Pure ethanol



60°C

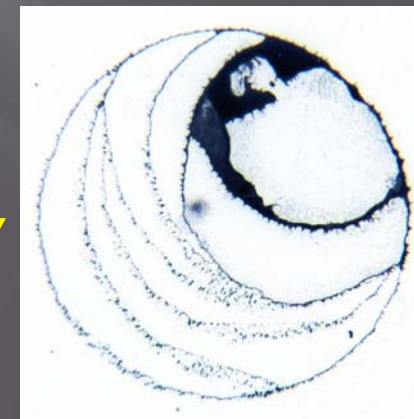
## 0.1% TiO<sub>2</sub>/ ethanol



$R$  (~) constant  
 $\theta$  decreases  
(TL *stick*)



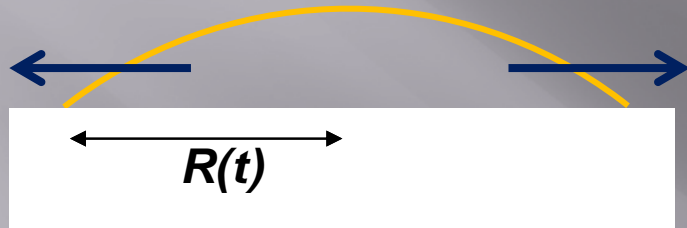
$R$  decreases  
 $\theta$  Increases!  
(TL *slip*)



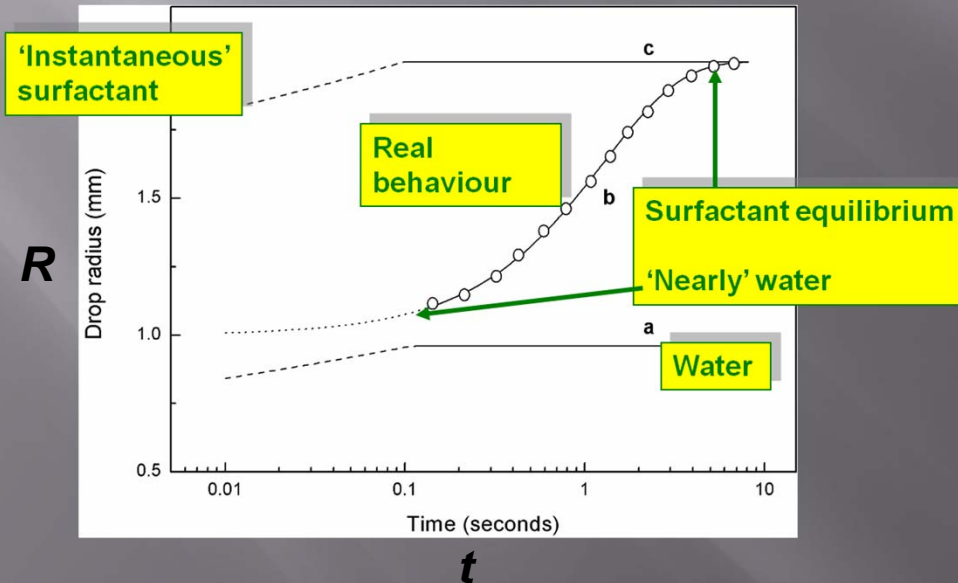
20°C

# “Superspreaders”

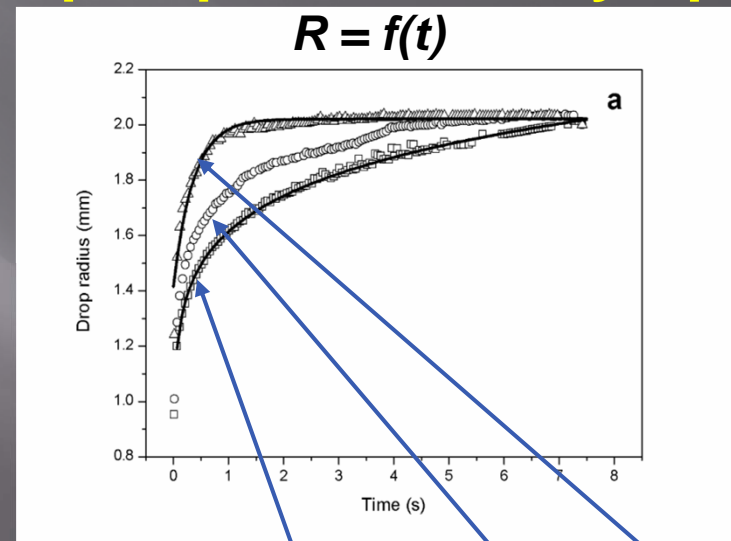
e.g. Radulovic, Sefiane, Shanahan, *J. Phys. Chem. C* 2010, 114, 13620



**$R = f(t)$ : Overall Behaviour**



## Superspreader on Cytop<sup>®</sup>



0.125 wt %

0.0625 wt %

0.025 wt %