

Abstract Submitted  
for the DFD17 Meeting of  
The American Physical Society

**Contact angles on stretched solids**<sup>1</sup> LIZ MENSINK, JACCO SNOEIJER, University of Twente — The surface energy of solid interfaces plays a central role in wetting, as they dictate the liquid contact angle. Yet, it has been challenging to measure the solid surface energies independently, without making use of Young's law. Here we present Molecular Dynamics (MD) simulations by which we measure the surface properties for all interfaces, including the solids. We observe change in contact angles upon stretching the solid substrates, showing that the surface energy is actually strain dependent. This is clear evidence of the so-called Shuttleworth effect, making it necessary to distinguish surface energy from surface tension. We discuss how this effect gives rise to a new class of elasto-capillary phenomena.

<sup>1</sup>ERC Consolidator grant no. 616918

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Date submitted: 24 Jul 2017

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