

Additions and Corrections

Contact Angles and Hysteresis on Surfaces with Chemically Heterogeneous Islands

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The contact angles of a hexadecane drop that had engulfed a single etched PFA island on PFA in Table 3 were incorrect. They should have been $\theta_a = 53 \pm 2^\circ$, $\theta_r = 42 \pm 4^\circ$ and $\Delta\theta = 11 \pm 6^\circ$, as shown below. These findings further demonstrate that contact angles are determined by interactions at the contact line, not by those within the interfacial contact area.

Table 3. Apparent Contact Angles and Hysteresis for Water and Hexadecane on Heterogeneous Surfaces^a

| surface: material 2 on material 1 | contact liquids | | | | | |
|---|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| | water | | | hexadecane | | |
| | θ_a (deg) | θ_r (deg) | $\Delta\theta$ (deg) | θ_a (deg) | θ_r (deg) | $\Delta\theta$ (deg) |
| PS on Si | 6 ± 2 | <2 | <6 | <2 | <2 | <2 |
| Etched PFA on PFA | 109 ± 3 | 84 ± 2 | 26 ± 5 | 53 ± 2 | 42 ± 4 | 11 ± 6 |

^a θ_a is the apparent advancing contact angle, θ_r is the apparent receding angle, and $\Delta\theta$ is apparent contact angle hysteresis ($=\theta_a - \theta_r$) of heterogeneous surfaces where the contact width of the liquid drop, w , was greater than the diameter of the heterogeneous patch, D .

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