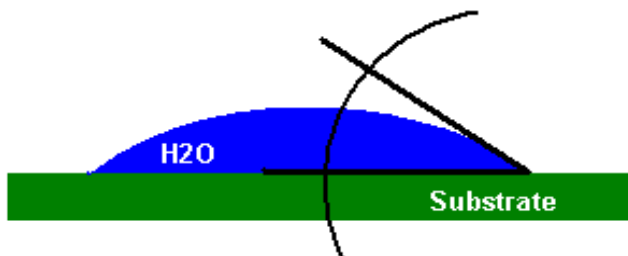


NNCI—Nanoscale Science and Engineering

Exploring Hydrophobic Materials

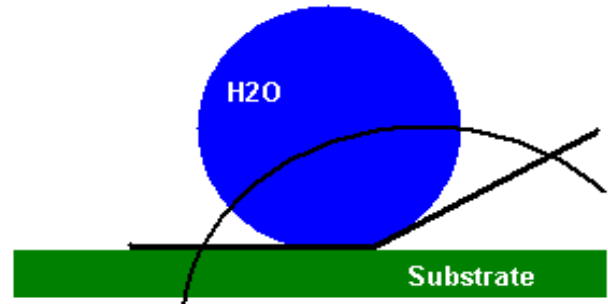
Hydrophobic and hydrophilic are determined by surface contact geometry or angle as shown below:

Hydrophilic



Contact Angle < 90 Degrees

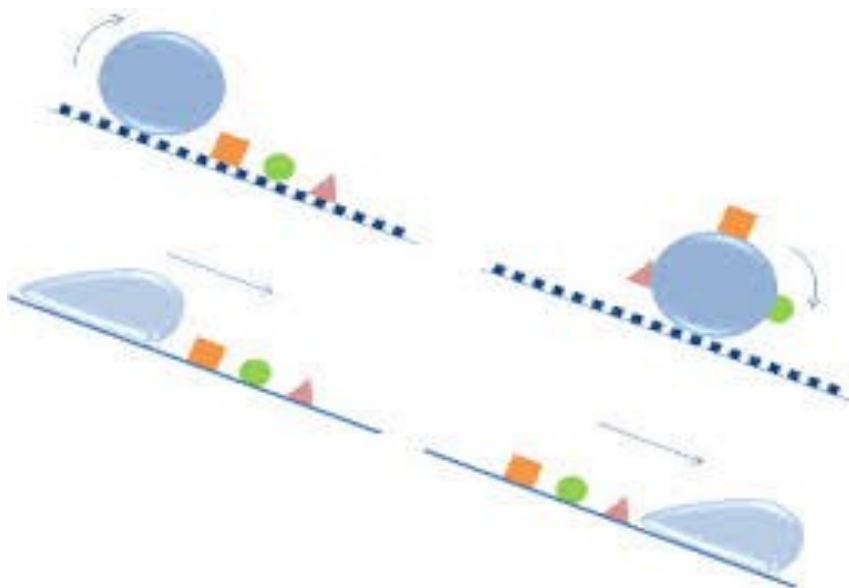
Hydrophobic



Contact Angle > 90 Degrees

Hydrophobicity is used to prevent water from collecting on a surface

- ♦ The water is attracted more to itself than the surface because the surface tension force is greater than the gravitational force.



Superhydrophobic
- dirt adheres
loosely to surface
and is picked up.

Hydrophilic—
water partly wets
the surface and
spreads out leav-
ing most dirt on.

Image at: http://nanoyou.eu/attachments/188_Module-1-chapter-2-proofread.pdf
Creative Commons Attribution ShareAlike 3.0