

Directional adhesion of superhydrophobic butterfly wings

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Three superhydrophobic states

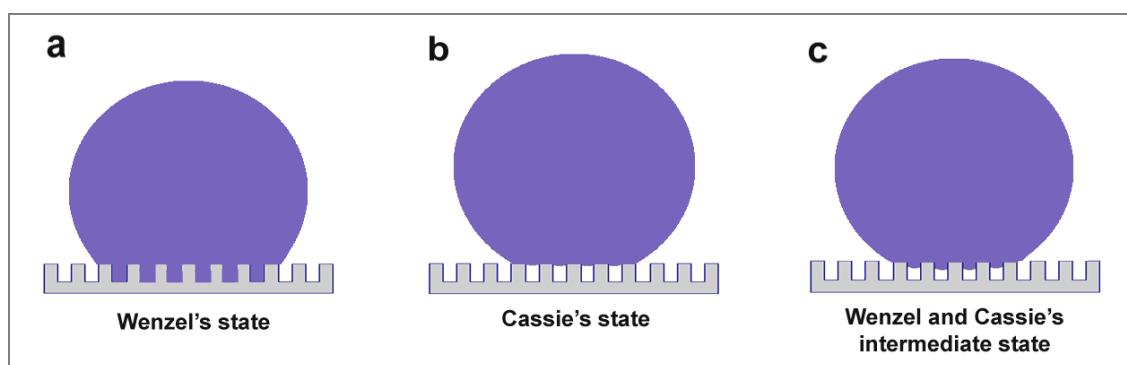


Fig. S1 The superhydrophobic states. (a) The Wenzel's state. Droplet is fixed by a wetting contact with solid surface, which is pinned even on upright surface. (b) The Cassie's state. Droplet is lifted by the larger trapped-air on composite surface, which is unstable and easily rolls. (c) The intermediate state between the Wenzel's and the Cassie's. A droplet partially wets the submicrometer-scale hollows that remain to trap air on composite surface.