

Controlling evaporation lifetimes of sessile droplets on the superhydrophobic paper by simple stretch

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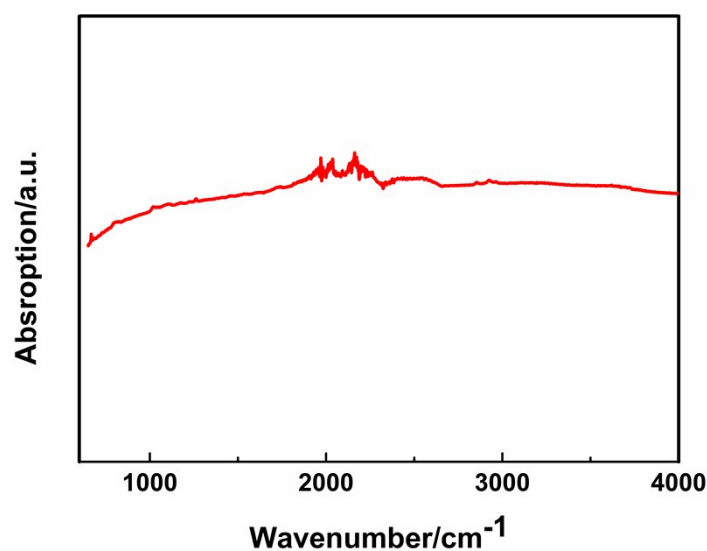


Fig.S1 ATR-IR spectrum of the coated paper.

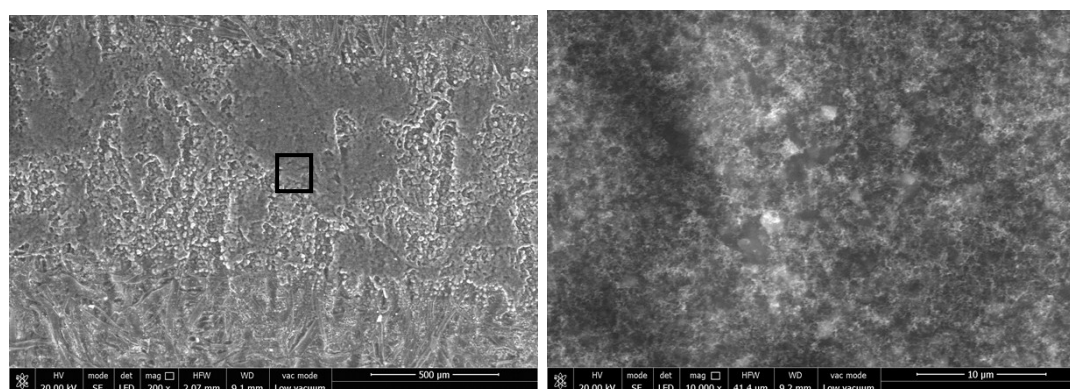


Fig. S2 SEM images of the coated paper which was stretched to break in the air. Left image is the low-magnification SEM image and the right one is magnified SEM image in the black frame.

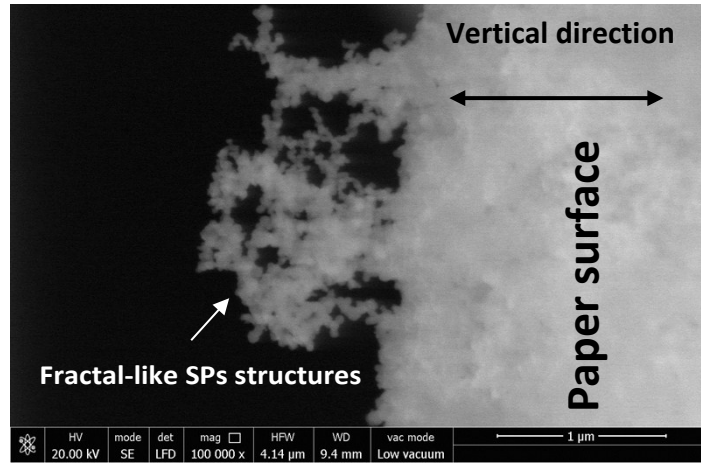


Fig. S3 SEM image of cross-section on the coated paper. It is obvious that some SPs particles can be vertical to the paper surface.

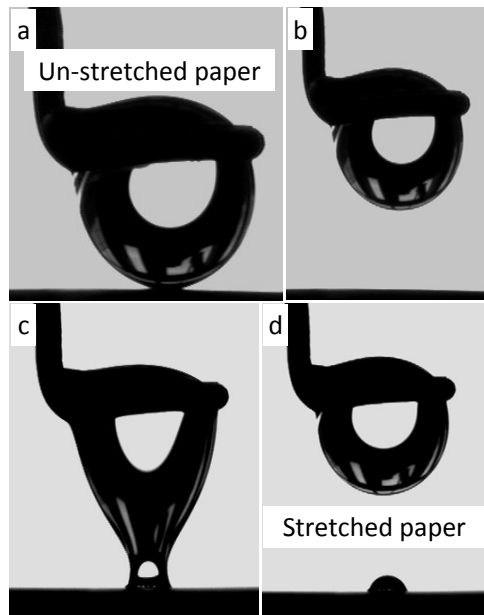


Fig. S4 a) and b) describes that a droplet contacted the un-stretched paper and then it was drawn to leave. It cannot be seen that the droplet is adhesive to the paper. c) and d) illustrates that a droplet contacted the stretched paper and then it was drawn to leave. Strong adhesion can be seen because the droplet broke.

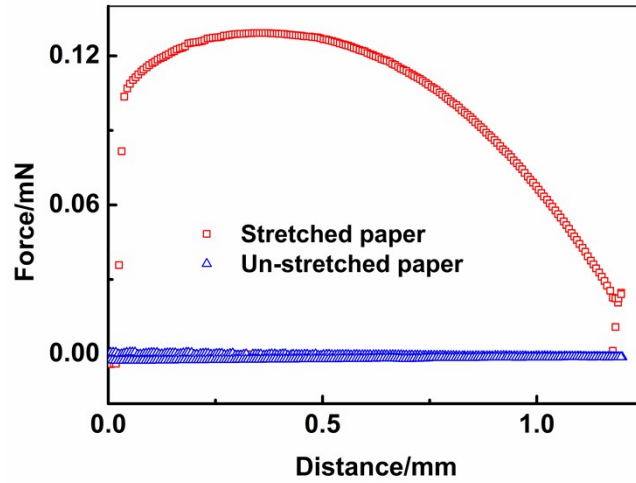


Fig. S5 Plots of the adhesion force versus distance for the stretched and un-stretched paper.

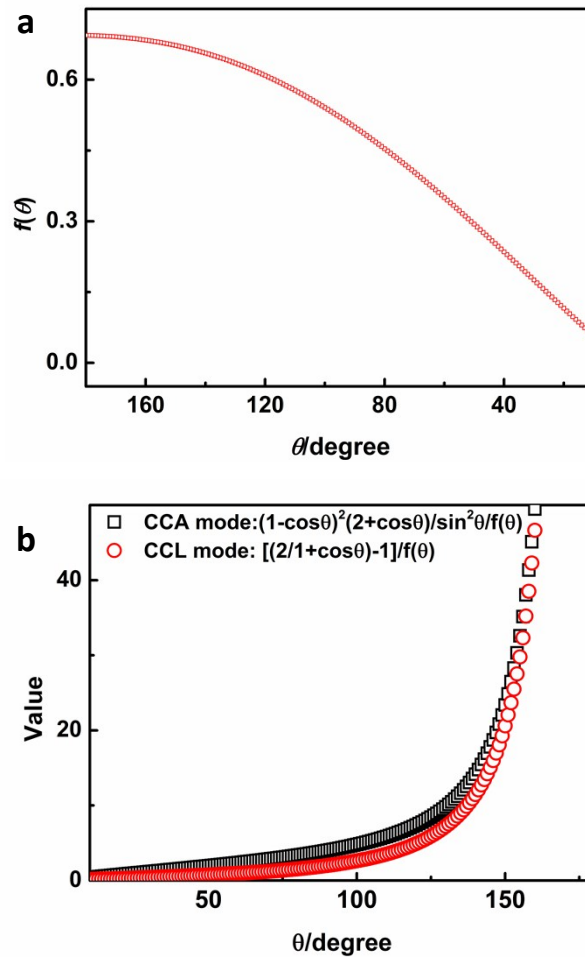


Fig. S6 (a) Plot of the variation of $f(\theta)$ versus the contact angle (θ). (b) Comparisons between eq. 3 and eq. 5 are made. Apparently, droplet evaporation lifetime at CCL mode is shorter one.