Supporting Information

Temperature-tunable wettability on bioinspired structured graphene surface for fog collection and unidirectional transport

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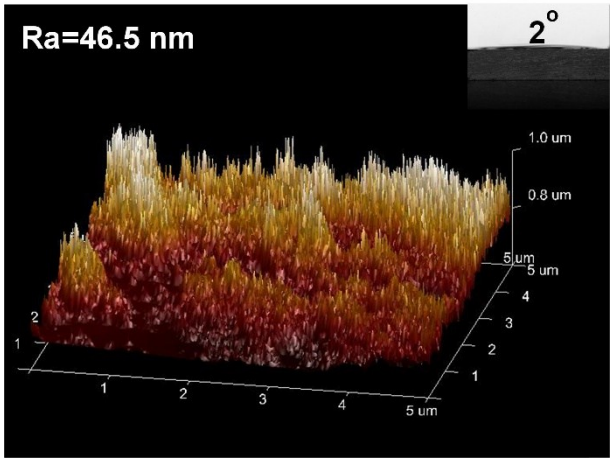

Figure S1. 3D morphology of super hydrophilic glass (inset in S2 shows the water drop profile on the super hydrophilic glass).

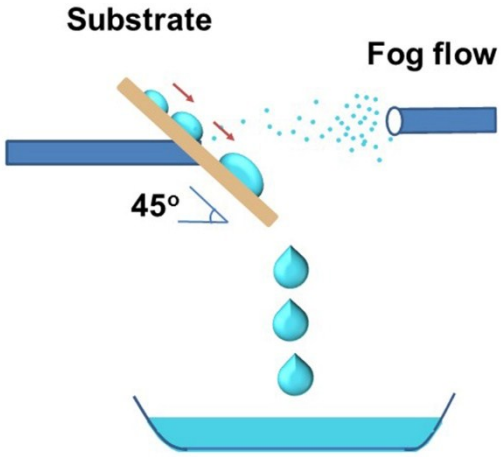

Figure S2. Schematic illustration of the method used to quantitatively measure the fog collection efficiency of different surfaces. The substrate is inclined by 45° from the horizontal plane. A fog flow (~45 cm/s in velocity) containing numerous tiny water droplets is generated by a humidifier. Water droplets are collected on the

substrates at first and then roll into a collector. The total weight of the collected water is measured after 1 h to evaluate fog-collecting efficiency.

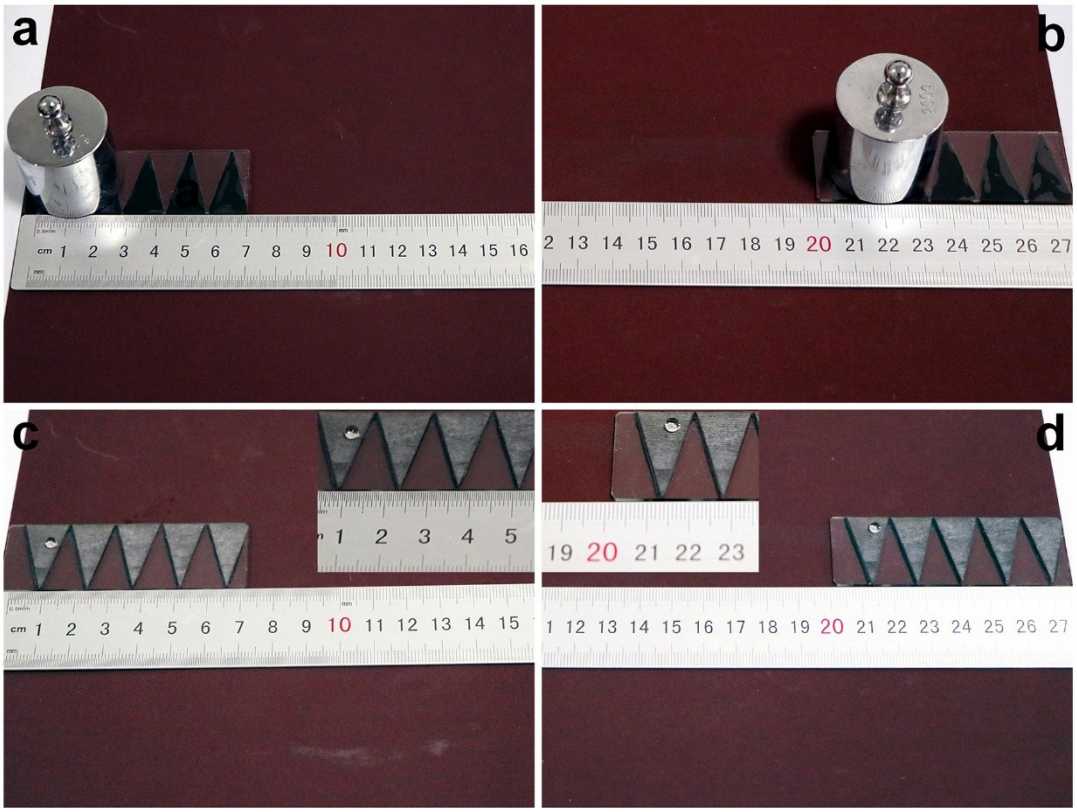

Figure S3. (a) and (b) illustrated the as-prepared sample was sand wiched in the middle of # 1000 sand paper and 200 g weight, and the route of weight from0 cm to 20 cm measured by rule. (c) Before abrasion the as-prepared sample acquired a contact angle of 164.3°. (d) after abrasion, the water contact anger was about ~ 158°.

Vedio 1. We spread the water drops on the low adhesive superhydrophobic surface and water drops of volume 10μL were rolled on the surface with the help of a dropper. The rolling water drop could easily roll from the surface with quartz sand, keeping it clean and dust free.