

## Supplementary Information

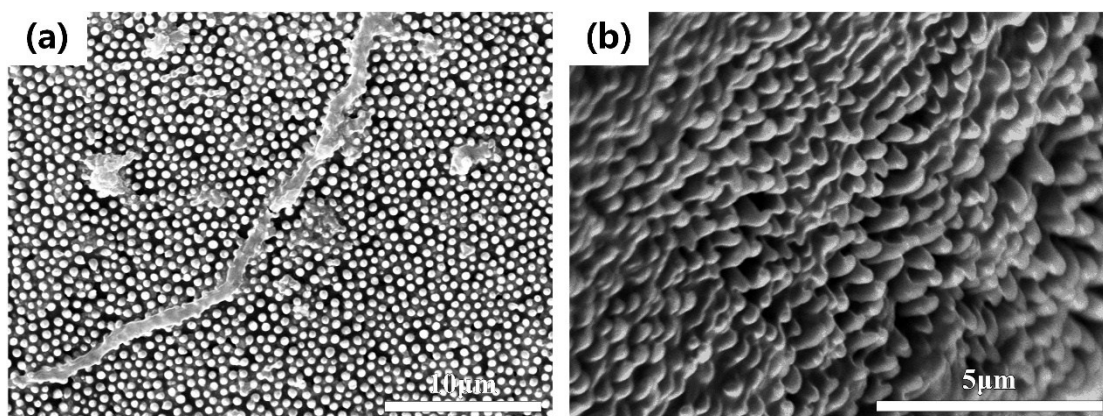
### **Integrated super-hydrophobic and antireflective PDMS bio-templated from nano-conical structures of cicada wings**

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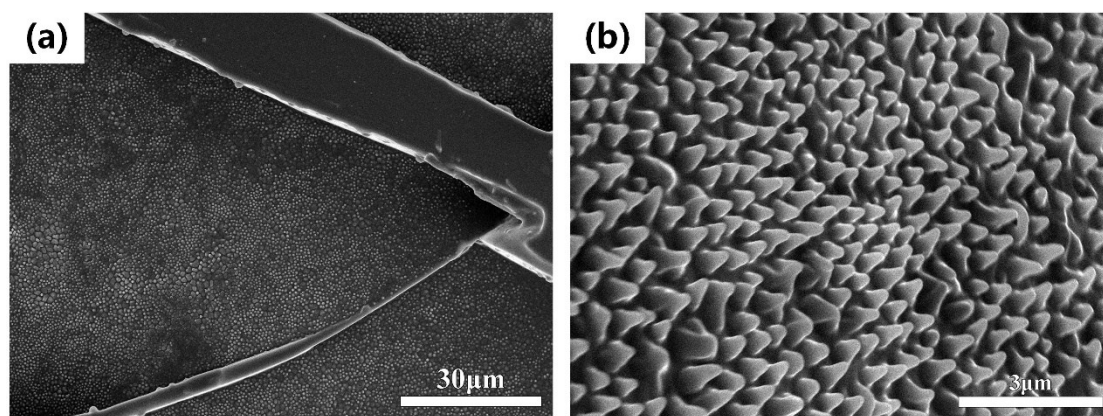
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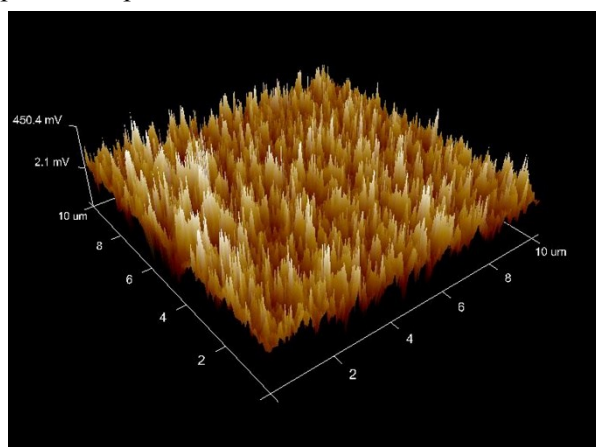
**Figure. S1:** Conical structures of cicada wings.

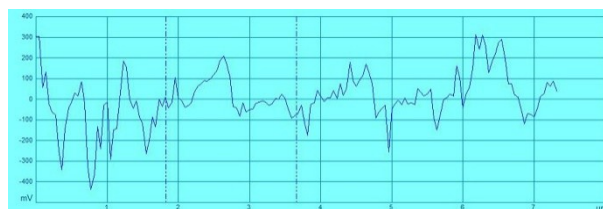
(a) The top appearance of cicada wings under lower magnification. (b) Tilted-view SEM image of the specimen.



**Figure. S2:** Nano-cones structures of PDMS positive replica.

(a) The top appearance of PDMS positive replica under lower magnification. (b) Tilted-view SEM image of the positive replica.





**Figure. S3:** AFM images of nanoscale roughness on top of the nano-cones. The heights of PDMS positive replica ranged between 200nm and 300nm which were lower than cicada wings.

**Table S1:** The comparison of surface energy about the cicada wings, SiO<sub>2</sub> negative replica, planar PDMS and PDMS positive replica.

Comparison of Surface Energy of Cicada Wings, SiO<sub>2</sub> negative replica, Glass Slide, Planar PDMS and PDMS positive replica

Items	SiO <sub>2</sub> negative replica	glass slide	Planar PDMS	PDMS positive replica	Cicada wings
Surface free energy (mN/m)	65.24	50.22	15.44	-11.34	-15.35

### Supplementary Videos

**V1:** A 3  $\mu$ L drop placed on the surface of SiO<sub>2</sub> negative replica. The negative replica is completely permeable, and the water passes through to form an interface with the glass slide beneath.