Supporting Information

for Small, DOI: 10.1002/smll.201500647

Hydrophobic/Hydrophilic Cooperative Janus System for Enhancement of Fog Collection

Moyuan Cao, Jiasheng Xiao, Cunming Yu, Kan Li,* and Lei Jiang*
Supporting Information

**Hydrophobic/hydrophilic cooperative Janus system for enhancement of fog harvesting**

*Moyuan Cao, Jiasheng Xiao, Cunming Yu, Kan Li*, and Lei Jiang*

![Graph showing weight of collected water](Image)

Figure S1. The test of fog collection using the meshes with different pore-diameters (~100 and ~500 μm) was exhibited. After 5 minutes of fogging, the collected water was weighed and analyzed. The similar ability to enhance fog collection was observed on the Janus system.
Figure S2. The top view of the fog collection process, similar to the phenomenon observed in Figure 2. Water would gradually cover the surface of the hydrophobic copper mesh, whereas only tiny droplets existed on the upper surface of the Janus system.
**Figure S3.** The fog with a velocity of ~50 cm/s was flowing across the upper surface of the mesh. However, the penetrated fog only had a velocity of 1~3 cm/s, indicating the fog flow’s dramatic deceleration after penetrating the copper mesh. It was the main reason that the fog droplets did not condense on the lower surface.
Figure S4. The water evaporation rates in different samples were evaluated. Water, wetted cotton, and water preserved in Janus system were placed in the thermostatic oven with a constant air flow. The test temperatures were set as 25 °C (room temperature), 40 °C, and 60 °C, and the evaporation rates were obtained. Results showed that the water in Janus system had a 30% lower evaporation rate as compared to the other groups, indicating the Janus system can facilitate the fog collection by reducing the re-evaporation rate of preserved water.