

Supporting information for
Facile Fabrication of Robust Superhydrophobic Porous Materials
and Their Application in Oil/Water Separation

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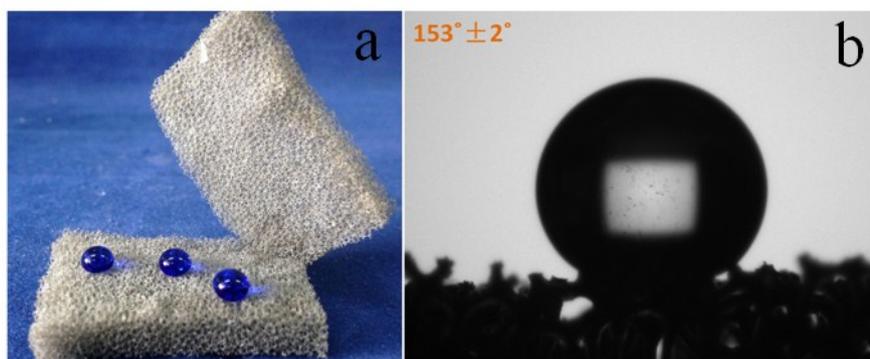


Figure S1. (a) Photo images of blue water droplets on the interior surface of the modified superhydrophobic sponge cut open in the middle. (b) A water contact angle result of the interior of superhydrophobic sponge.

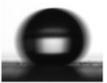
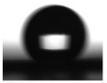
superhydrophobic materials		after 50 cycles	SA	SA'
PTFPMS coating			$7 \pm 1^\circ$	$7 \pm 2^\circ$
gauze			$37 \pm 2^\circ$	$46 \pm 3^\circ$
non-woven fabric			$33 \pm 1^\circ$	$33 \pm 2^\circ$
cotton			$41 \pm 1^\circ$	$51 \pm 3^\circ$
stainless steel mesh			$8 \pm 1^\circ$	$9 \pm 1^\circ$
sponge			$35 \pm 1^\circ$	$43 \pm 2^\circ$

Figure S2. SA and SA' are the sliding angles of the superhydrophobic materials before and after reused 50 times, respectively. For PTFPMS coating, the sliding angles are before and after immersed in solvent (hexane) for 20 h. Photo images showing the moment when 10 μ L water droplets begin to roll on these surfaces.

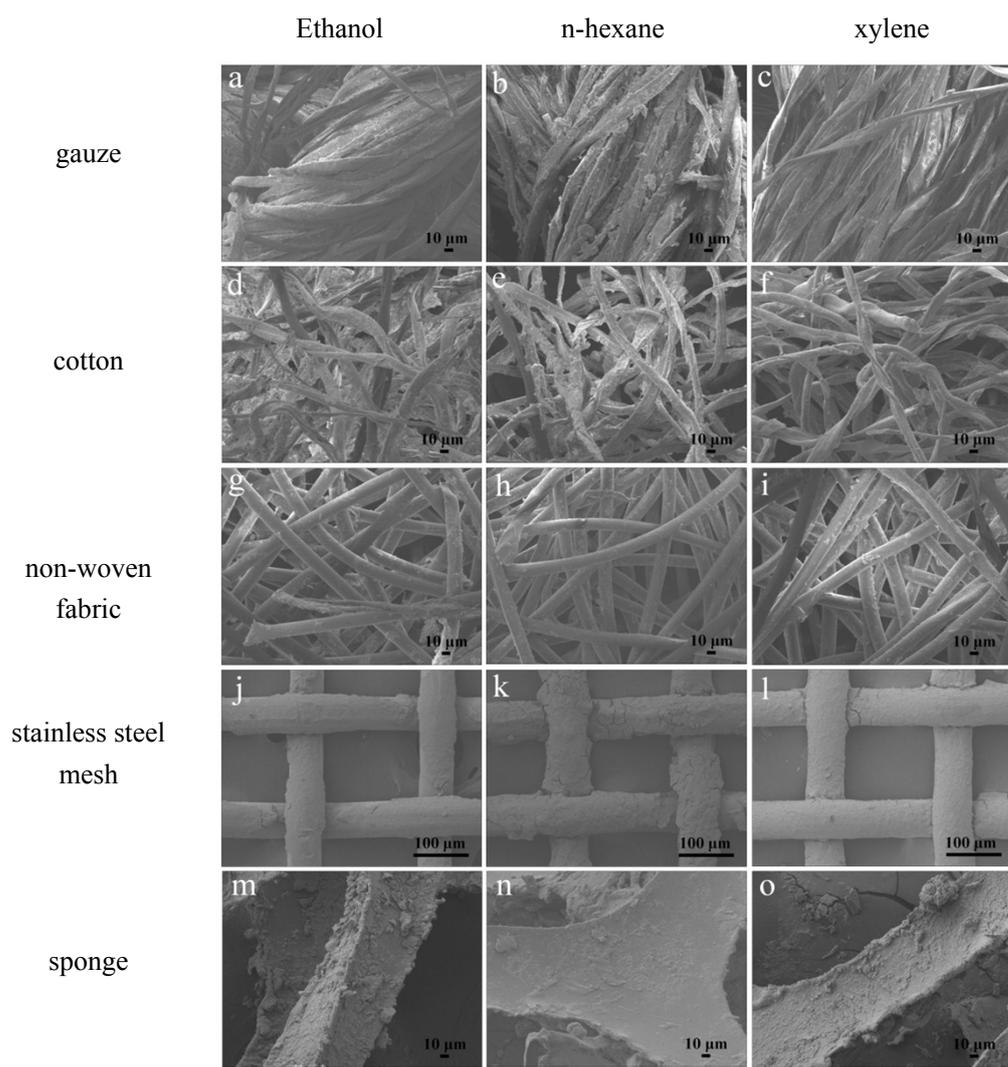


Figure S3. SEM images of prepared (a-c) gauze, (d-f) cotton, (g-i) non-woven fabric, (j-l) stainless steel mesh and (m-o) sponges after ultrasonication in ethanol, n-hexane and xylene for 20 h, respectively.

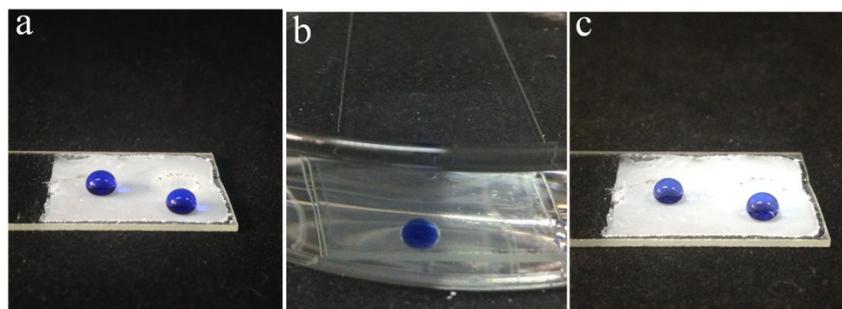


Figure S4. Photo images of water droplets on superhydrophobic PTFPMS coating: (a) before immersing, (b) immersed in n-hexane for 20h, (c) taken out and dried.

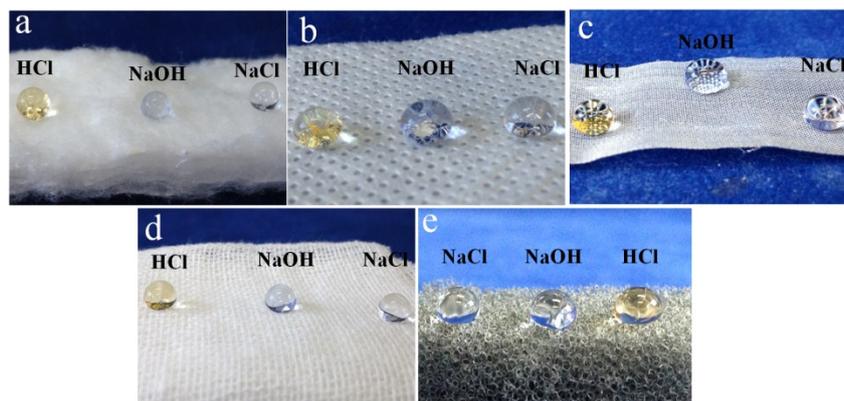


Figure S5. (a-e) Photo images of 10 μL aqueous solutions of acidic (HCl, pH=1), alkali (NaOH, pH=14), and salt (NaCl, pH=7) on the surfaces of the prepared superhydrophobic cotton, non-woven fabric, stainless steel mesh, gauze and sponge, respectively.

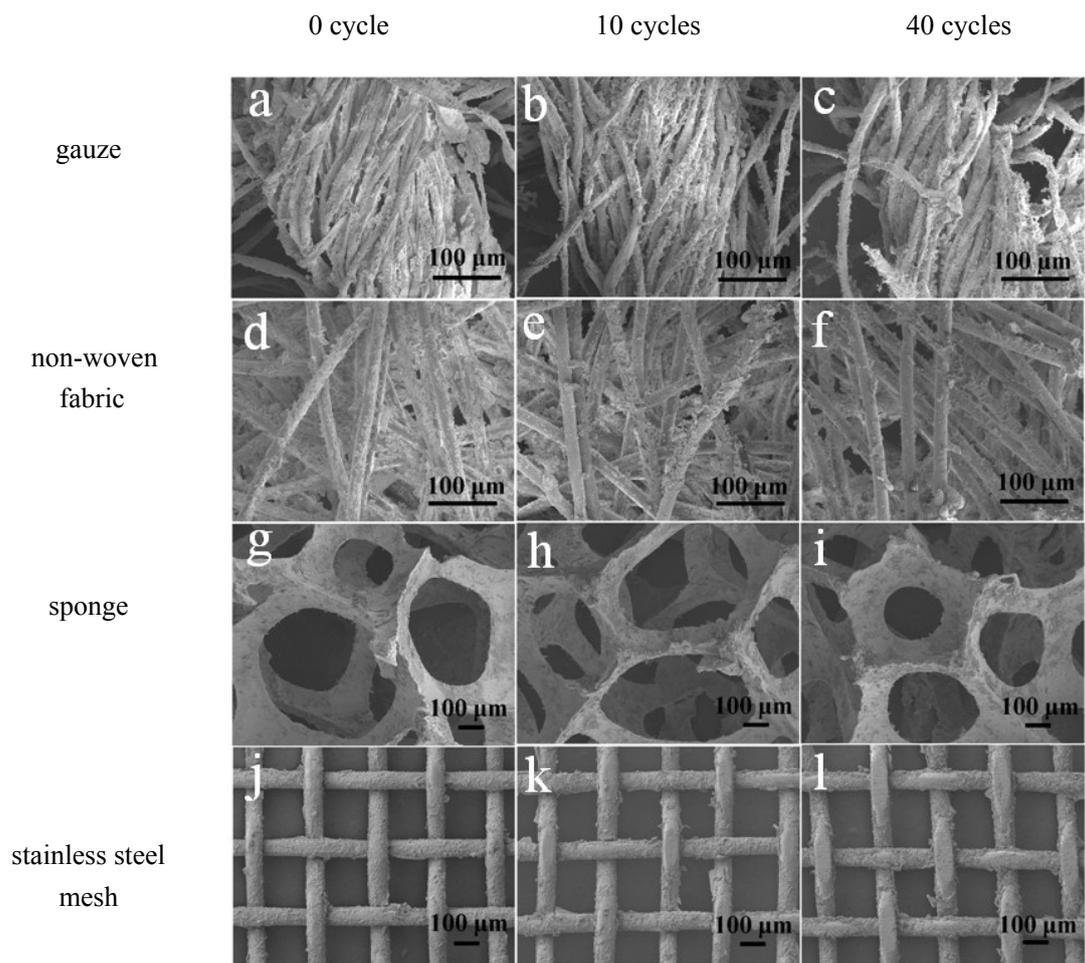


Figure S6. SEM images of prepared (a-c) gauze, (d-f) non-woven fabric, (g-i) sponges, and (j-l) stainless steel mesh after abrasion for 0, 10, 40 cycles, respectively.

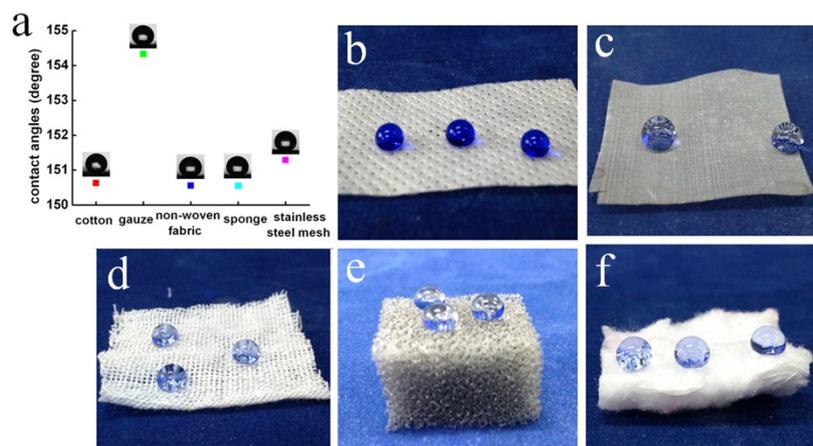


Figure S7. (a) Contact angles of the modified gauze, cotton, non-woven fabric, sponge, and stainless steel mesh after being reused 50 times, respectively. (b-f) Photo images showing water droplets on the superhydrophobic surfaces reused 50 times.