coatings

Supplementary materials: One-step Methods to Fabricate Durable Superhydrophobic Coatings for Flexible Electronic Sensors

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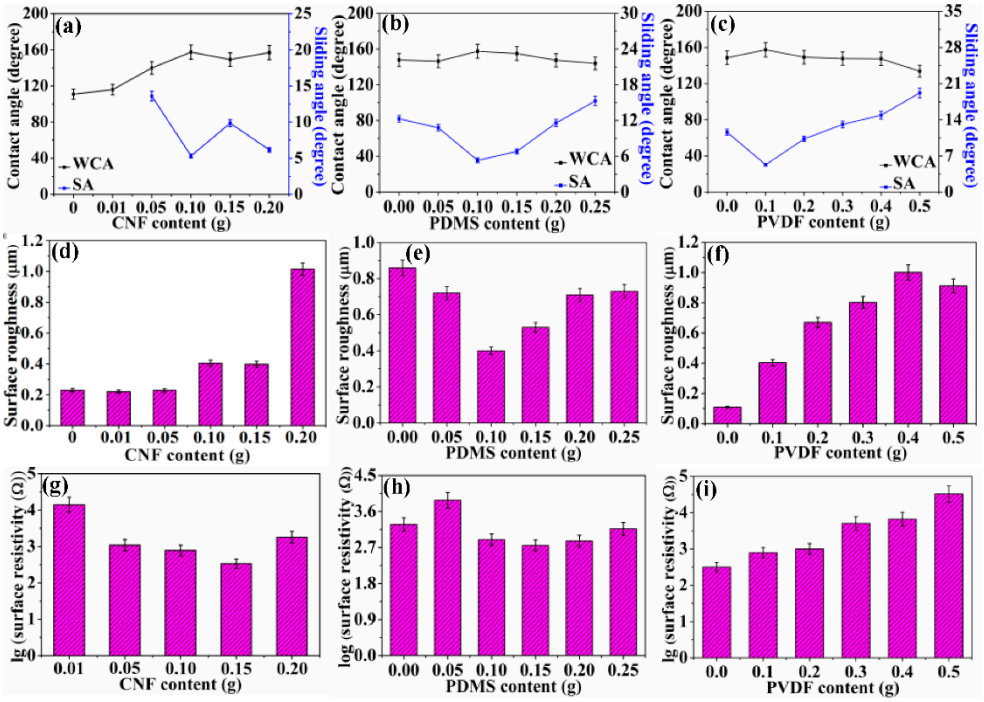

Figure S1. Line charts of the contact angle and sliding angle of the FCS coating at different (**a**) CNF, (**b**) PDMS and (**c**) PVDF contents. Variations in the surface roughness with (**d**) CNF, (**e**) PDMS and (**f**) PVDF contents. Variations in the surface resistivity with (**g**) CNF, (**h**) PDMS and (**i**) PVDF contents.

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Table S1. The effect of CNF content on the surface resistivity.

CNF Content (g)	wt %	Surface Resistivity (Ω)	lg (Surface Resistivity)
0.01	4.76	1.41×10^4	4.15
0.05	20.00	1.09×10^3	3.04
0.10	33.33	7.84×10^2	2.89
0.15	42.86	3.39×10^2	2.53
0.20	50.00	1.81×10^3	3.26

Table S2. The contact angle of water and diiodomethane on the polished FCS coating surface. The dispersion force and polarity force of water and Diiodomethane.

Liquid Drop	Contact Angle(°)	Dispersive Force (mN/m)	Polarity Force (mN/m)
Deionized water	106.3	21.8	51.0
Diiodiomethane	82.8	49.5	1.3

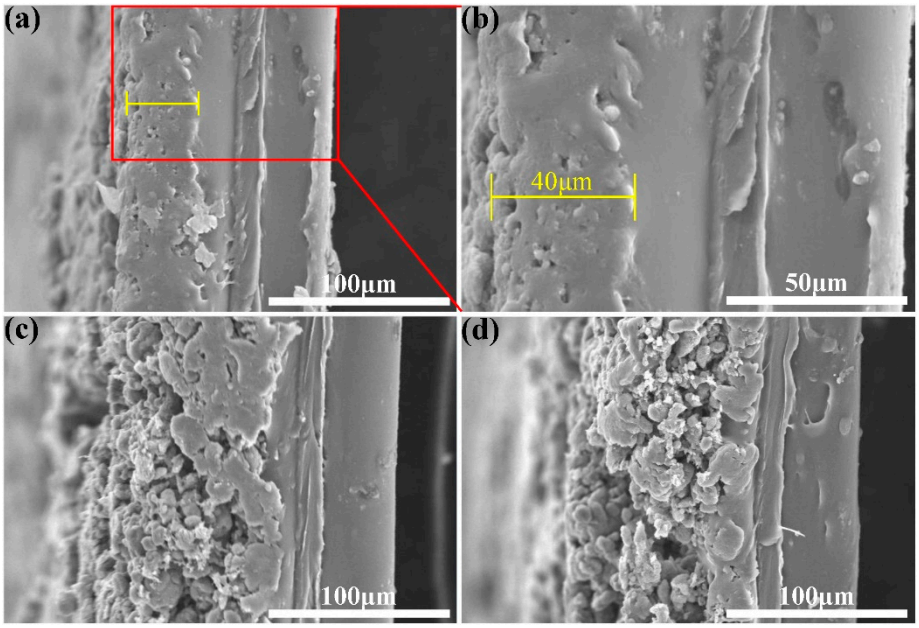

Figure S2. Cross-section morphologies of the FCS coating prepared by brush coating under different magnifications ((**a**) 500× SEM image and (**b**) 1000× SEM image). Cross section morphologies of the FCS coatings obtained by spraying ((**c**) 500× SEM image) and dip-coating ((**d**) 500× SEM image).

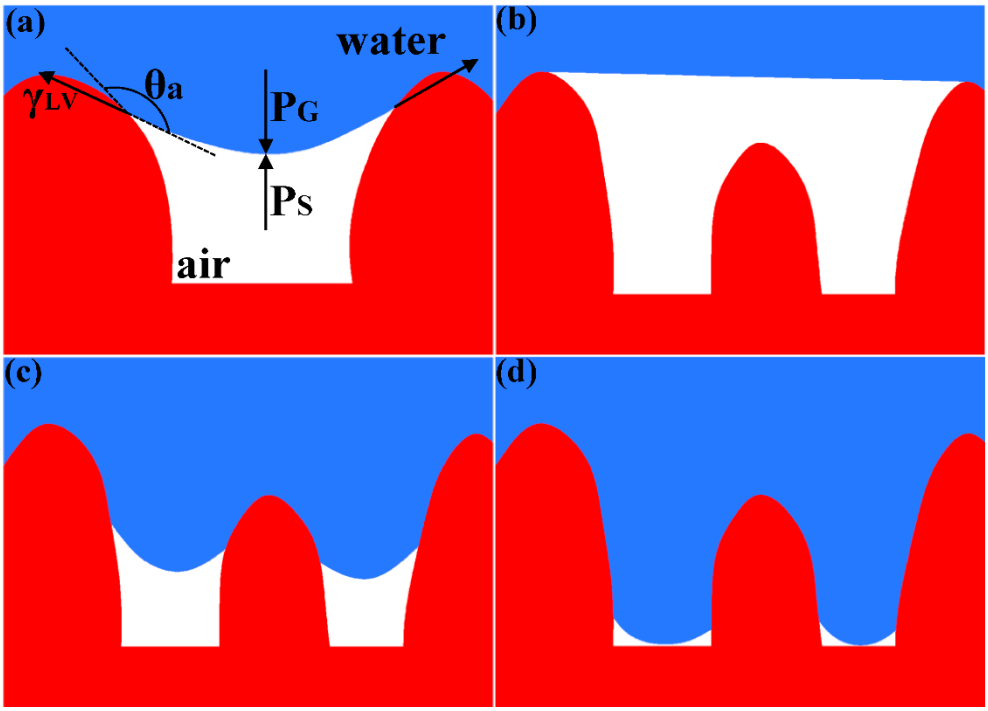

Figure S3. (**a**) Force analysis of water droplet in the FCS coating microstructure. Schematic diagram of gas-liquid interface changing with immersion time (**b**,**c**).