Supporting Information for

Facile fabrication of amphiphobic surfaces on copper substrates with a mixed modified solution

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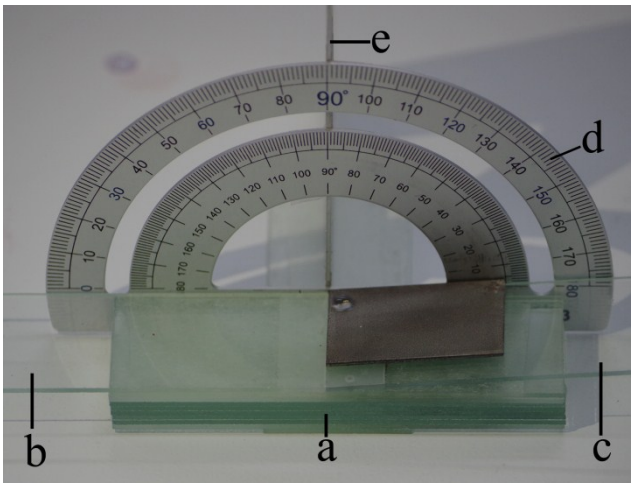

Figure S1†. Photograph of the home-made WSA measurement equipment.

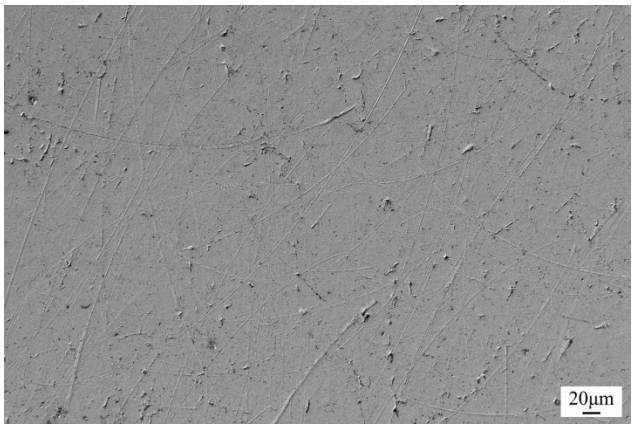

Figure S2†. SEM image of the bare copper substrate.

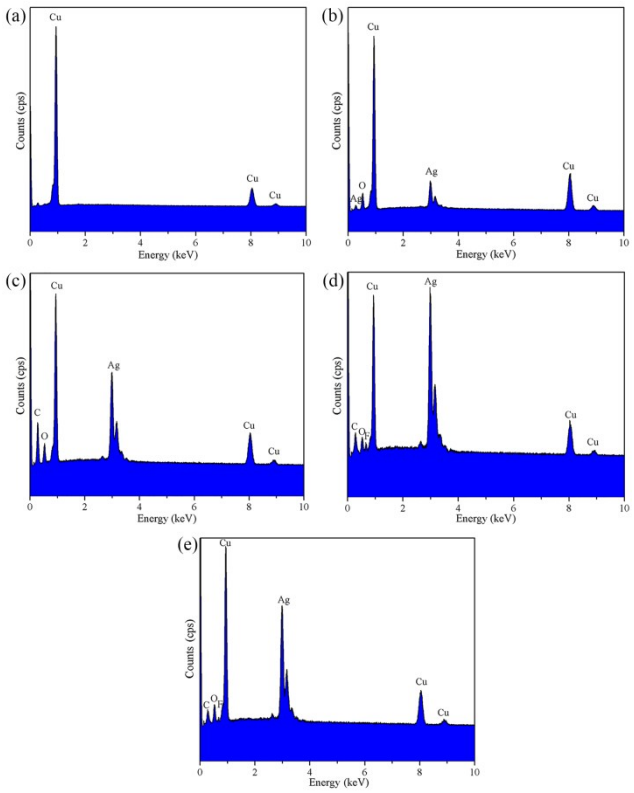

Figure S3†. EDS spectrum of (a) polished Cu substrate, (b) Ag@Cu surface, (c) STA@Ag@Cu surface, (d) PFOA@Ag@Cu surface, (e) STA&PFOA@Ag@Cu surface.

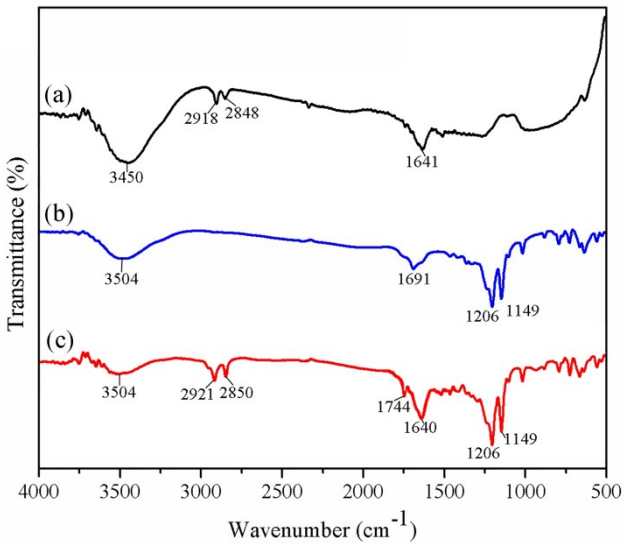

Figure S4†. FT-IR spectra of (a) STA@Ag@Cu surface, (b) PFOA@Ag@Cu surface, (c) STA&PFOA@Ag@Cu surface.

Figure S1† exhibits the photograph of the home-made WSA measurement equipment. Figure S2† demonstrates the morphology of the bare copper substrate. Figure S3† shows the chemical composition of different samples. Figure S4† is the FT-IR spectra of STA@Ag@Cu surface, PFOA@Ag@Cu surface and STA&PFOA@Ag@Cu surface.

Video S1†.avi

Video S1†. Measurement process of WSA for the amphiphobic surface.

Video S2†.avi

Video S2†. Adhesion of water droplets for the Cu@Ag@PFOA surface.

Video S3†.avi

Video S3†. Self-cleaning progress for the amphiphloic surface.

Videos S1† exhibits the measurement process of WSA for the as-fabricated amphiphobic surface. Videos S2† demonstrates the adhesion of water droplets for the Cu@Ag@PFOA surface. Videos S3† shows the entire process to clean up the white chalk power on the as-fabricated amphiphloic surface.

Table S1† The trend of WCA and OCA with the increase of reaction time from 5 to 15 min under the same PFOA content

M_F [%]	WCA[°]	OCA[°]
0	1.8	3.0
20	1.6	57.5
40	5.1	7.3
60	3.9	15.3
80	3.4	2.8
100	2.0	3.6

Table S2† The trend of WCA and OCA with the increase of M_F from 0 to 100% under the same reaction time

time [min]	WCA[°]	OCA[°]
5	8.7	92.1
10	8.4	91.3
15	8.5	92.7
20	6.3	93.5

Table S1† exhibits the trend of WCA and OCA with the increase of reaction time from 5 to 15 min under the same PFOA content. Table S2† exhibits the trend of WCA and OCA with the increase of M_F from 0 to 100% under the same reaction time.