

Supporting Information for:

Surface fluorination modification and anti-biofouling study of pHEMA hydrogel

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Content

Figure S1. Control experiments: (a) the volume of F15; (b) the DMAP content; (c)
reaction temperature; (d) reaction time.

S2

Evaluation of reaction factors. Control experiments were carried out to find out the optimal experimental conditions. The hydrophobic property of the pHEMA-F15 could be enhanced with the grafting density of F15 on the surface. In order to evaluate the extent of grafting, water contact angles (θ) were measured by a contact angle meter (Shanghai Zhongchen co., LTD, JC2000C1) at room temperature. Each sample was tested at 5 different locations of the surface. The highest water contact angle of the membrane was about 135.5° after modification.

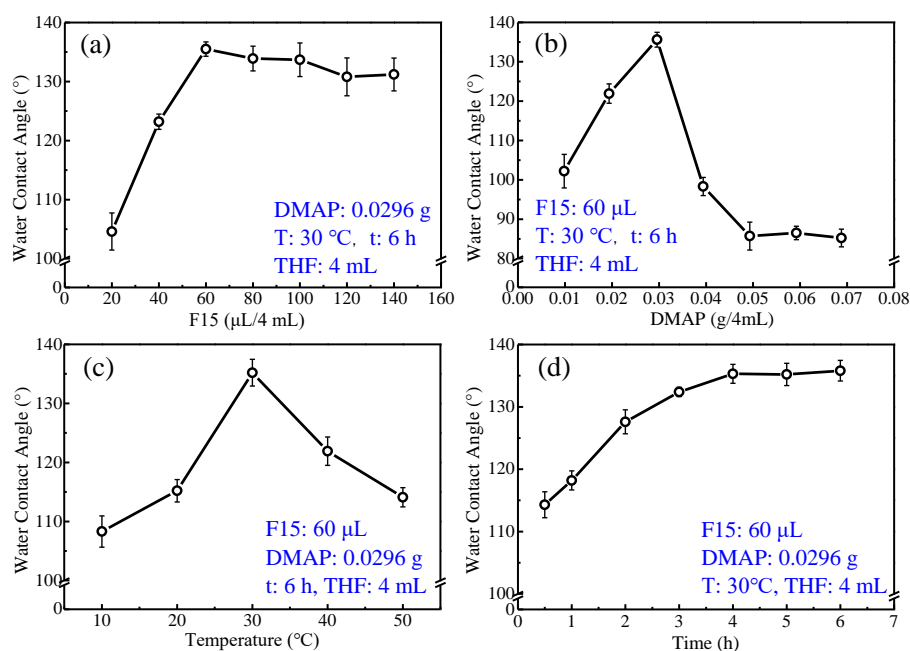


Figure S1. Control experiments: (a) the volume of F15; (b) the DMAP content; (c) reaction temperature; (d) reaction time.

According to the results of the above reaction factor control experiments, the optimal reaction conditions of this fluorinated modification experiment are as follows: F15 = 60 μ L, DMAP = 0.0298 g, T = 30°C, t = 4 h. Under the optimal reaction conditions of the fluorination modification, the hydrophobic property of the modified hydrogel membrane can be improved from $64.2 \pm 1.6^\circ$ to

$135.6 \pm 1.5^\circ$.