

Supplementary material (ESI) for *Nanoscale*

Supporting information for:

Photoinduced Cleaning of Patterned Superhydrophilic/Superhydrophobic Substrates

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Experimental

Fabrication of SCAs modified with PFS: SCAs on silicon substrate were fabricated using reactive ion etching (RIE) with two dimensional silica colloidal crystals of ~1115 nm as masks. And RIE was performed by Plasmalab 80 Plus (Oxford Instrument) with a gas mixture of CHF₃ at 30 sccm and SF₆ at 4 sccm. Total gas pressure was 5 mTorr, and the RF power and the ICP power were 100 W and 500 W, respectively. The etching duration was 210 s at a temperature of 10 °C. Modification of PFS was carried out using chemical vapor deposition by putting the substrate in a sealed vessel full of PFS vapor for 2 hours at 80 °C. The obtained PFS coating were relatively stable after the substrate was placed in air for at least 3 months.

Supporting Figures

Figure S1: SEM image of obtained TNCs not well patterned.

