



**Figure S1.** EDS of the fluorocarbon superhydrophobic coating

The EDS spectra was shown in Figure 4. The results indicate that the coating is mainly composed of four elements: C, Si, O and F. Since EDS can only analyze the elements after atomic number 11, in fact, the resin superhydrophobic coating is mainly composed of C, Si, O, F and H. Si and O are mainly from nano silica particles and resin, while F is the main element which comes from nano silica particles modified by Fas-17. Figure 4 showed the mass ratio of Si, O, C and F in the coating is 11.1 : 24.6 : 54.1 : 9.0.