

Figure S1. X-ray photoelectron spectra of PANI coating, silica coated PANI coating and nanotubular coating.

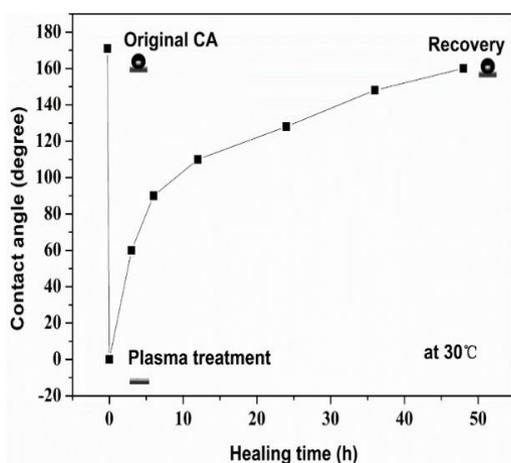


Figure S2. Static water contact angles of a plasma treated surface with the healing time at 30 °C.

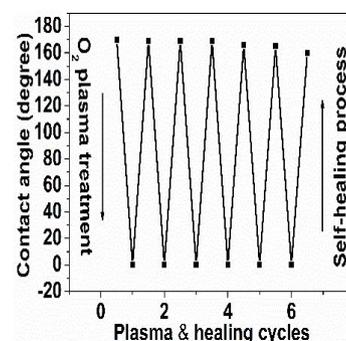


Figure S3. Static water contact angles after 6 plasma-etching/healing cycles at 70 °C for the coating loading POTS.

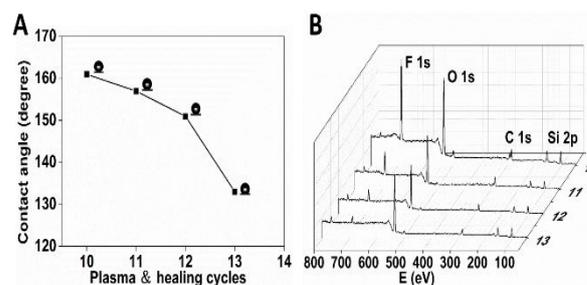


Figure S4. Plasma-etching/healing cycles for the nanotubular surface at 70 °C and X-ray photoelectron spectra of the surface corresponding.

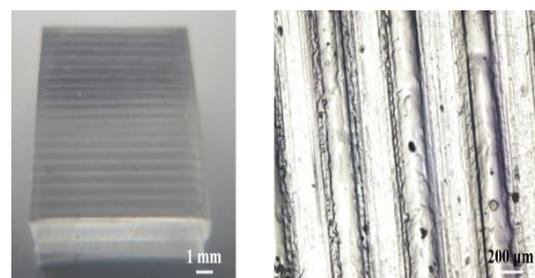


Figure S5. Photos of polydimethylsiloxane stamp and its stripes.

Movie S1. The superhydrophilicity of the surface after plasma treatment.

Movie S2. The superhydrophobicity of the surface after 10 plasma-etching/healing cycles.

Movie S3. Mechanical resistance evaluated by sand abrasion and its superhydrophobicity after sand abrasion.