

ESI (Supporting Information).

Table S1. The diameters of the droplets in the mist stream prepared from various liquids^a

| run | liquid | supporter | diameter of droplets ^b (nm) |
|-----|-------------------------|---------------------------|--|
| 1 | water | silicone oil | 552±65 |
| 2 | MMA solution in hexanol | PAS solution ^c | 557±75 |
| 3 | MMA solution in octanol | PAS solution ^c | 572±83 |

^a conditions for preparing the mist streams: heating at the boiling points of the solvents used, 60 ml/min of the N₂ gas flow rate.

^b the droplets in the mist streams were collected by a liquid supporting material, observed by an optical microscope. The diameters of the droplets were measured from the optical images, and the mean diameter was statistically calculated from 30 samples.

^c the sodium polyacrylate solution in water (average Mw 6000 kD, 0.1 mg/ml).

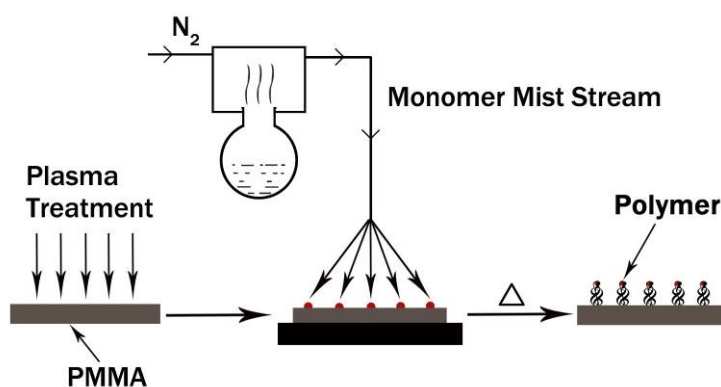


Figure S1. Schematic illustration of the mist polymerization process on a plasma-treated PMMA surface.

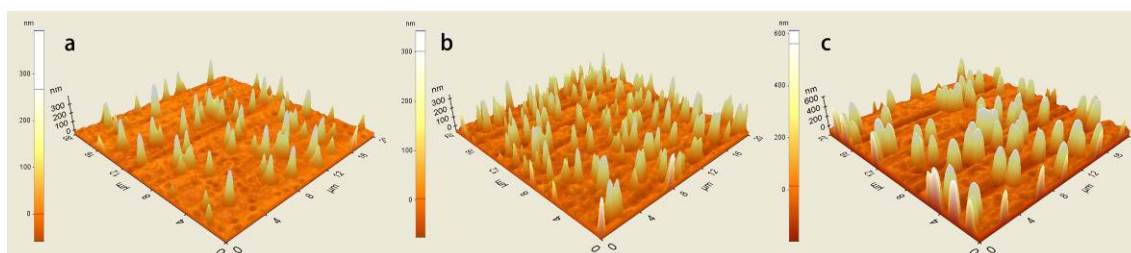


Figure S2. AFM images of the surfaces modified by mist polymerization of HFBMA with exposure times of (a) 20 min, (b) 30 min, and (c) 40 min. The solution used to prepare the mist stream was 1.08 mol/L of HFBMA in ethanol.

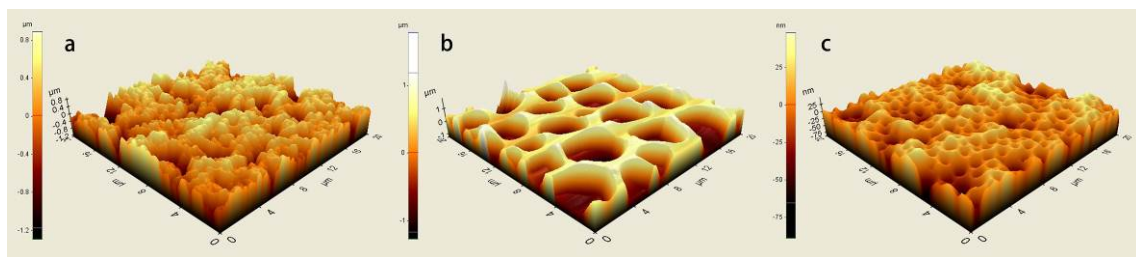


Figure S3. AFM images of the surfaces modified by mist polymerization of HFBMA with HFBMA solutions in (a) i-propanol, (b) i-butanol, and (c) hexanol. The solution of HFBMA (1.08 mol/L) was heated at the boiling point of the solvent used, and the exposure time to the mist stream was 30 min.