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Fabrication of surface-functionalized PUA composites to achieve superhydrophobicity

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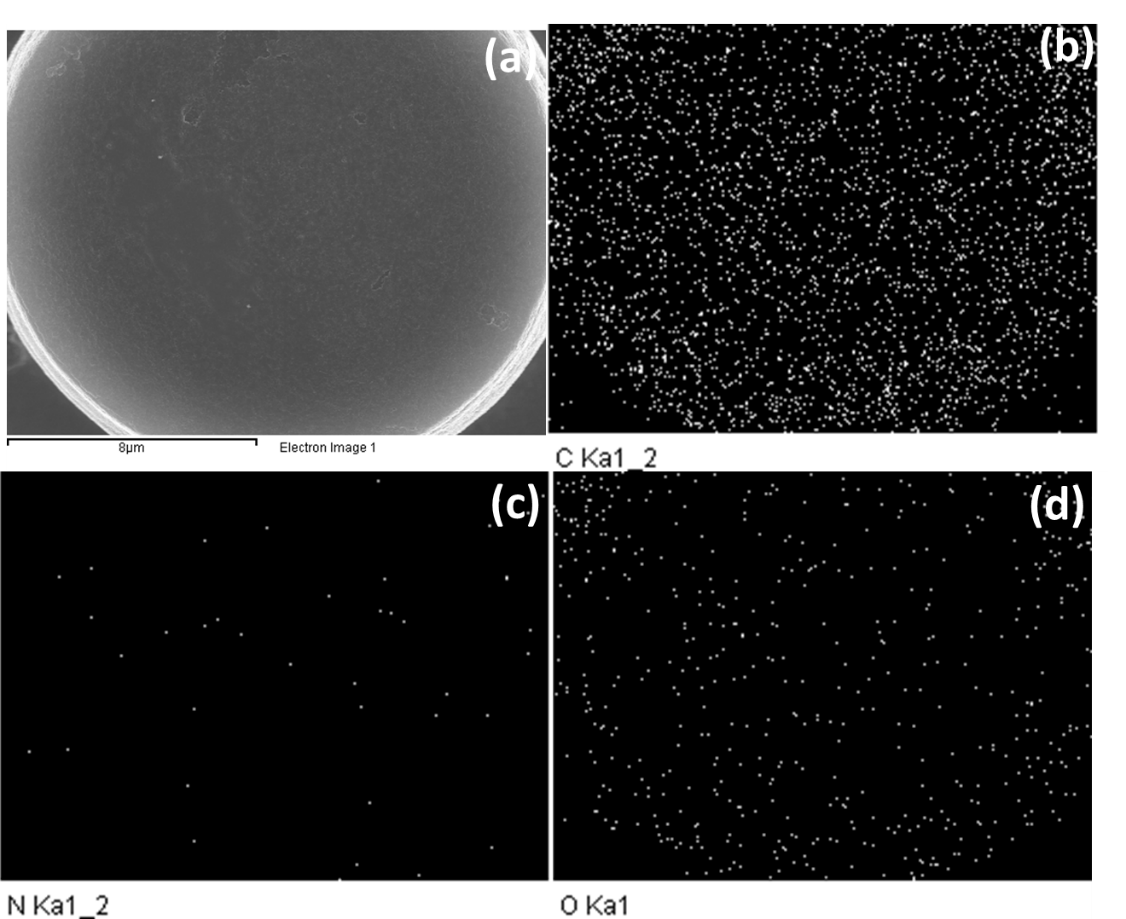
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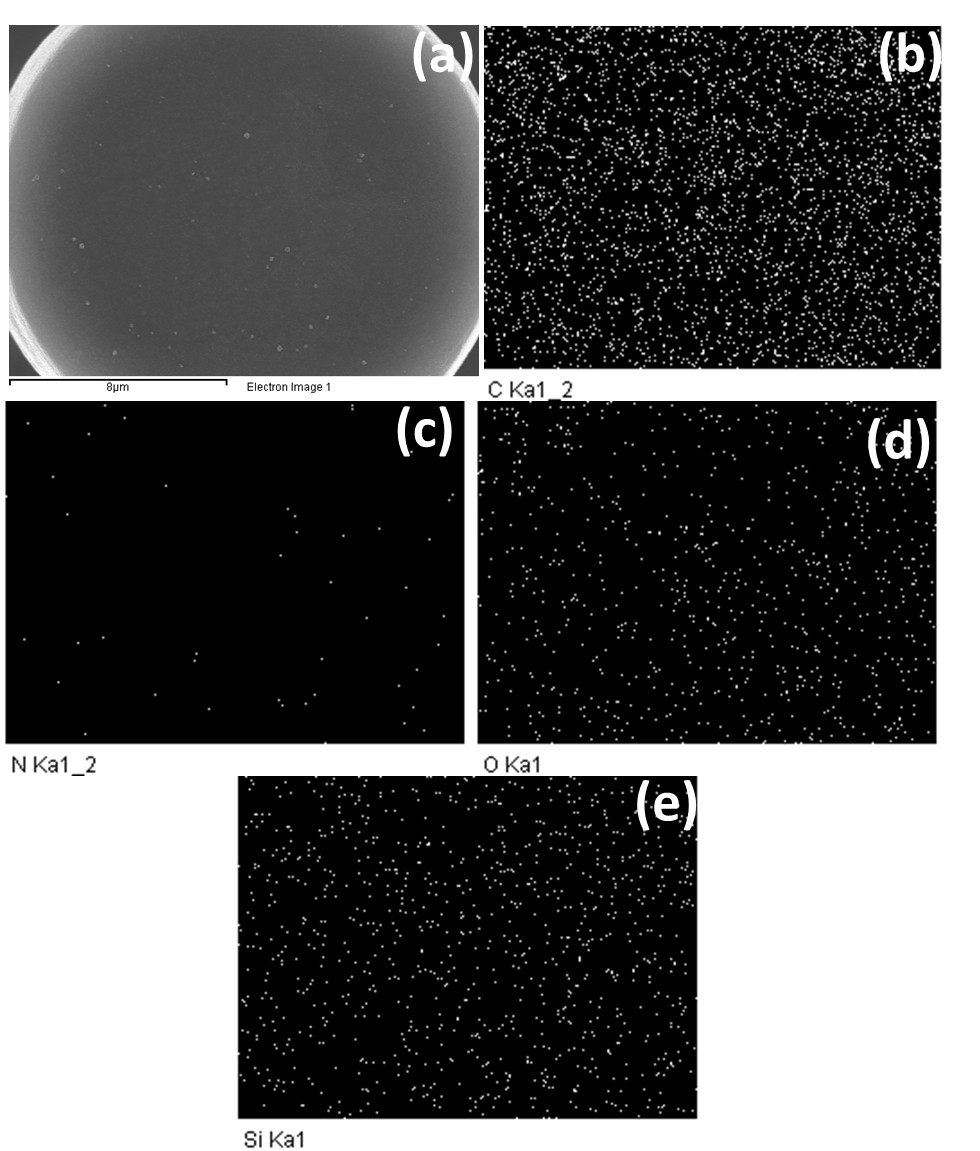
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**Fig. S1.** The PDMS cross-linking polymerization reaction.



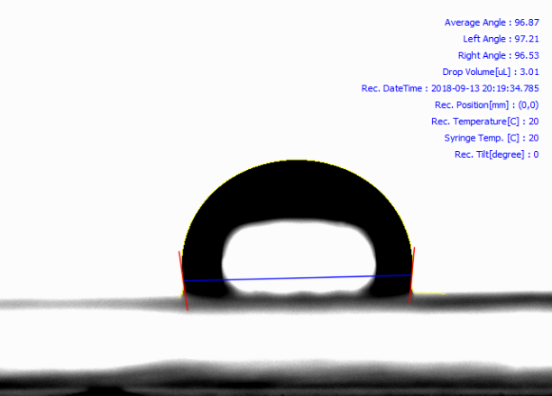
**Fig. S2.** Elemental analysis of the fabricated µ-patterned siloxane functionalized PUA (S-PUA). (a) Electron micrograph of µ-pillar top surface, elemental mapping of (b) carbon, (c) nitrogen and (d) oxygen.



**Fig. S3.** Elemental analysis of the fabricated µ-patterned siloxane functionalized PG (S-PG). (a) electron micrograph of µ-pillar top surface, elemental mapping of (b) carbon, (c) nitrogen, (d) oxygen and (e) silicon.



**Fig. S4.** The water advancing contact angle (WACA), water receding contact angle (WRCA) and sliding angle (SA) of the siloxane functionalized GO incorporated PUA composite (S-PG) film as a function of µ-pillar distance, (n=5, mean ± standard deviation)



**Fig. S5.** Photograph of a water droplet on the surface of the siloxane functionalized flat PG (S-F-PG).



**Fig. S6.** The UV-DRS spectra of the fabricated siloxane functionalized-µ-patterned PG (S-PG) film.