

## Electronic Supplementary Information

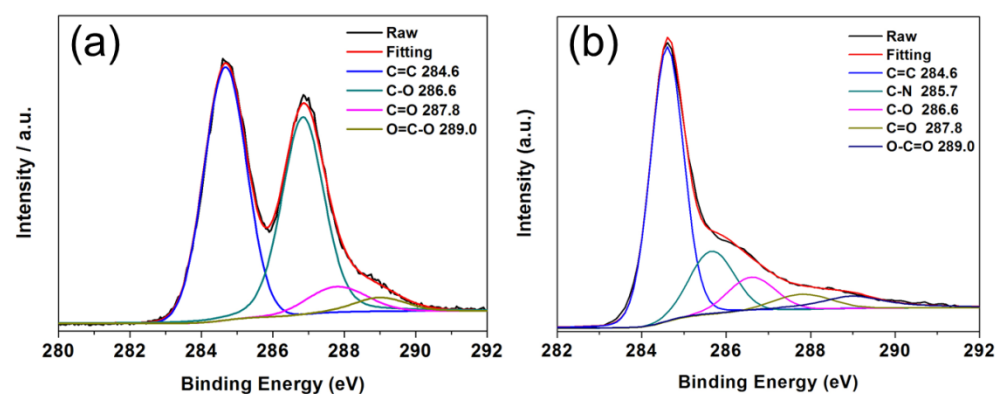
### Three-Dimensional Superhydrophobic Porous Hybrid Monoliths for

### Effective Removal of Oil Droplet from the Surface of Water

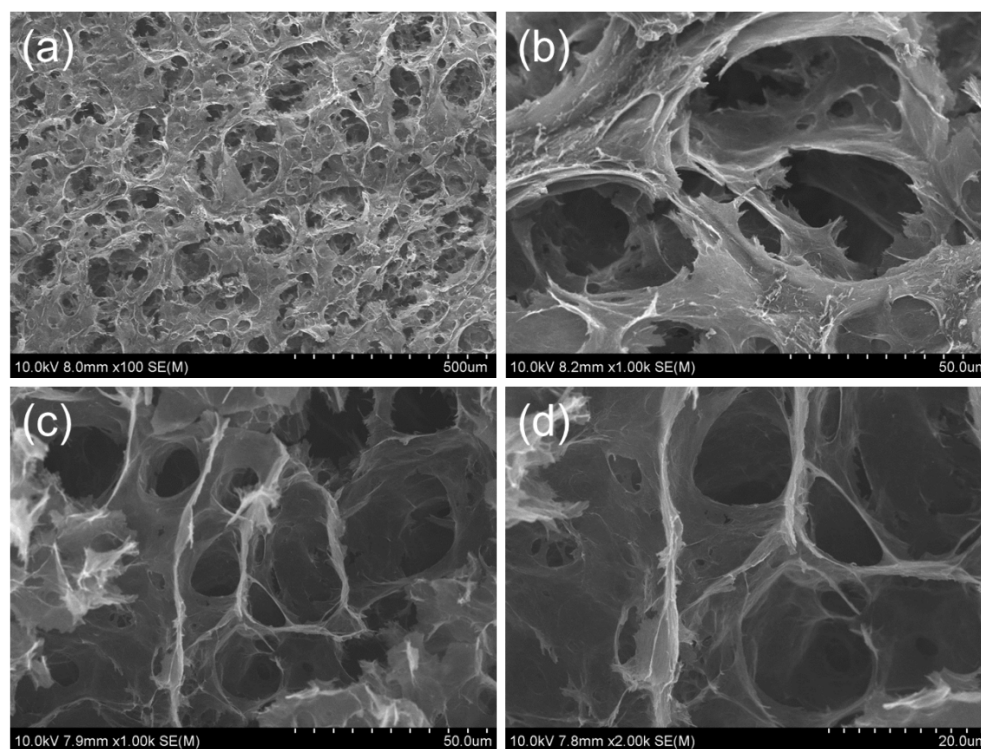
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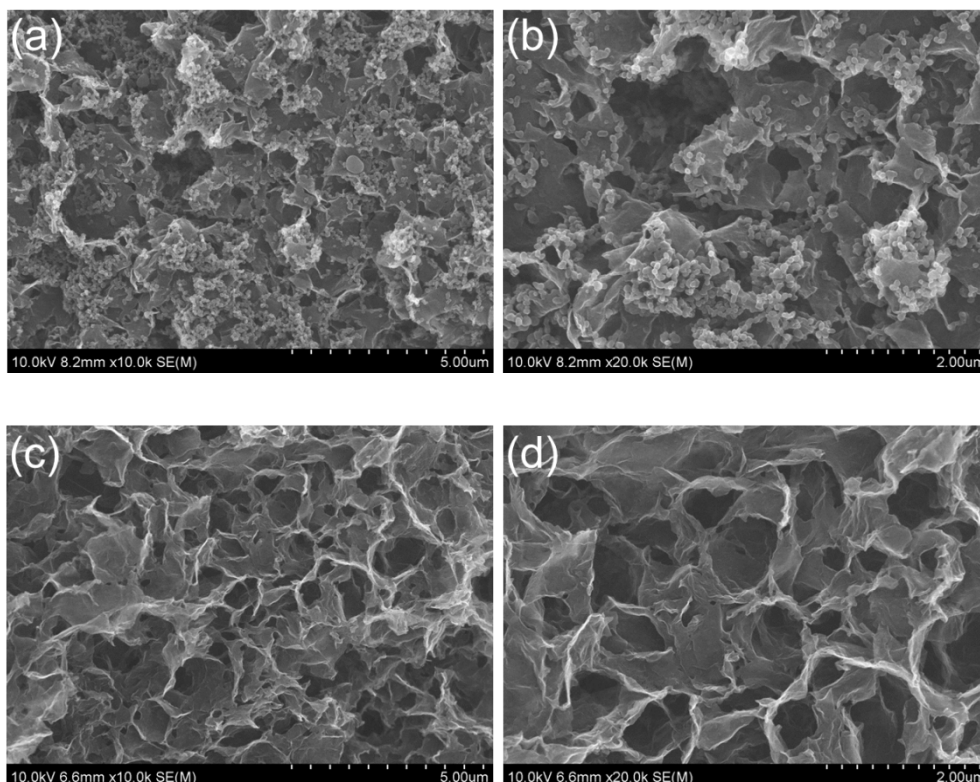
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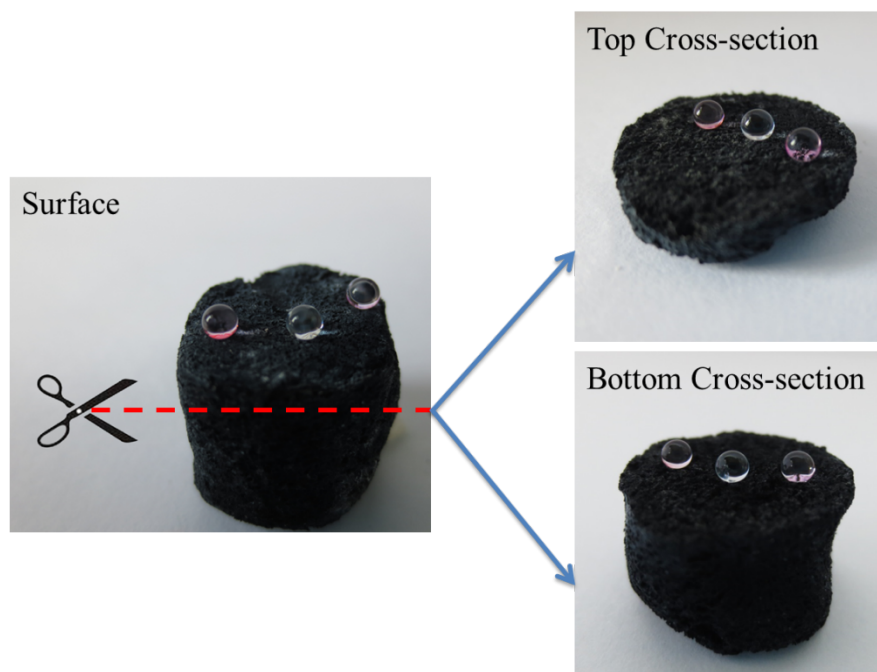
**Fig.S1.** The curve fit of C1s spectra of (a) GO and (b) rGO.



**Fig. S2.** SEM images of net 3D rGO aerogel surface(a, b) and (c, d) cross-sectional morphology at different magnifications.



**Fig. S3.** SEM images of rGO/PS monoliths surface (a, b) and (c, d) cross-sectional morphology at different magnifications.



**Fig. S4.** Optical image of aqueous hydrochloric acid (left, pH = 1), NaCl (middle, pH = 7), and NaOH (right, pH = 14) solution droplets with spherical shapes on the surface (left) and cross-section (upper right and lower right) of the monoliths, verifying stable superhydrophobicity towards different corrosive solutions.

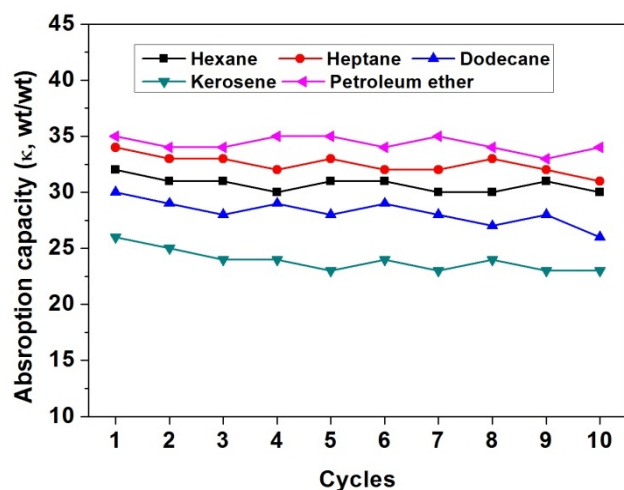


Fig. S5. Absorption recyclability of the monoliths for oil and organic solvents.

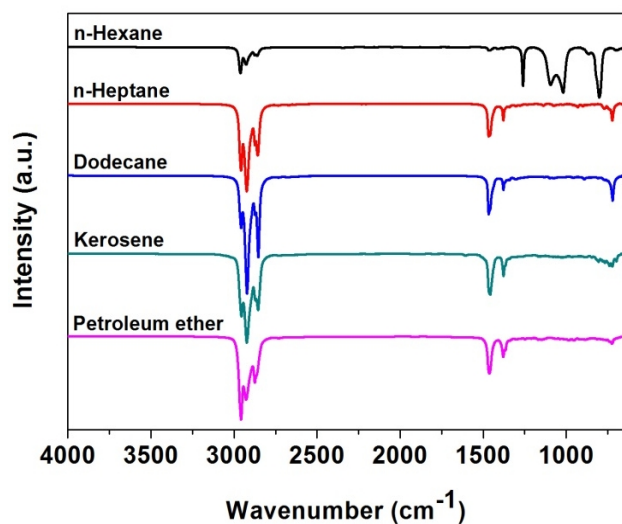


Fig. S6. ATR-FTIR spectra of the oil and organic solvents collected from the monoliths after the tenth oil-water separation cycles.

**Table S1.** Comparison of the absorption capacities of various absorbing materials

Materials	Adsorption capacity for different oils (g g <sup>-1</sup> )	Reference
Corn stalk	8	1
Cotton fiber	20	2
Pith bagasse	25	3
Exfoliated graphite	14.4	4
Zeolite	0.17–0.19	5
Organo-clays	2.1–7.2	6
Expanded perlite	3.2–7.5	7
Natural wool fibers	33–43	5
Polypropylene	9.9–15.7	8
Butyl rubber	7.9–23	8
Spongy graphene	20–86	9
Graphene-CNT hybrid foam	80–130	10
Macroporous rGO film	8–45	11
Graphene/Polypyrrole foam	37–108	12
Carbon nanofibre aerogel	40–115	13
Conjugated microporous polymer	6–23	14
Modified polyurethane sponge	15–25	15
Present work	32–50	–

## References

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