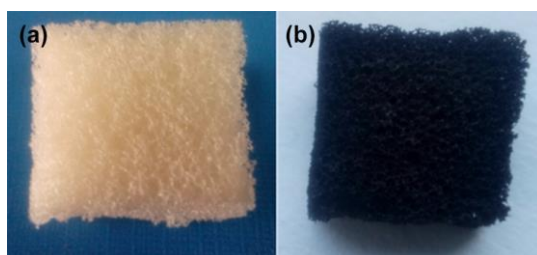


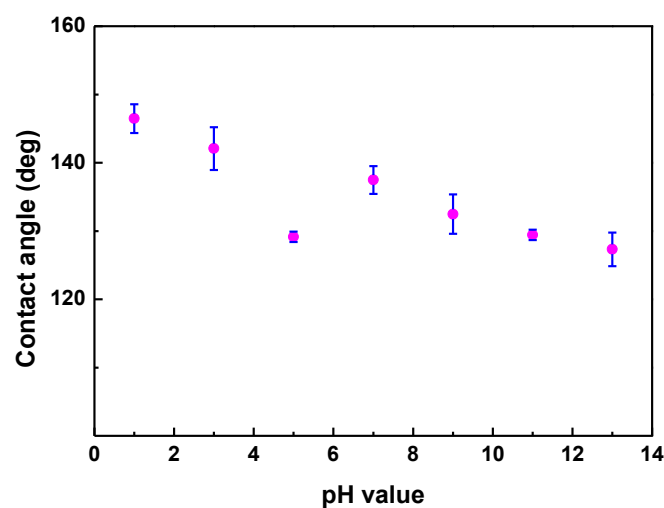
## Superhydrophobic/superoleophilic magnetic polyurethane sponge for oil/water separation

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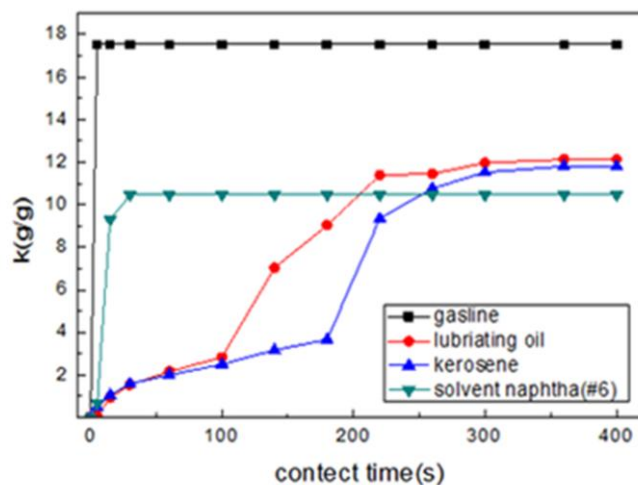
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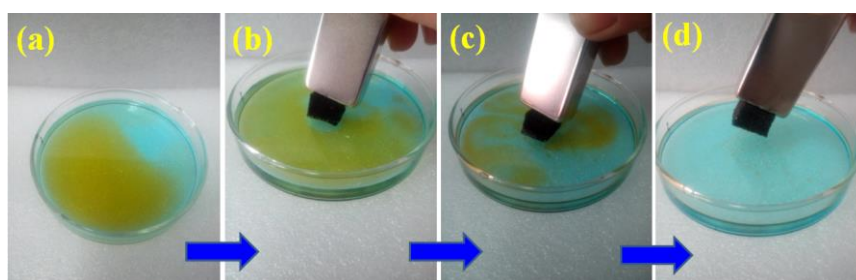
**Fig. S1** Optical images of pristine PU sponge (a) and magnetic PU sponge (b).



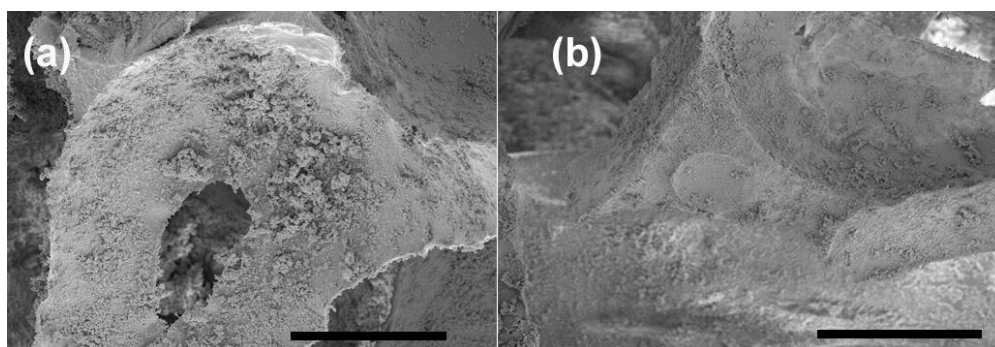
**Fig. S2** The wetting properties of the magnetic PU sponge in different pH corrosive solutions for 24h.



**Fig. S3** Absorption kinetics of the magnetic PU sponge in various oil and organic media.



**Fig. S4** Optical images of magnetic PU sponge selectively and rapidly collecting lubricating oil from the oil/water mixture by a magnet bar.



**Fig. S5** SEM image of the magnetic sponge without dopamine treatment (a) and after four times of separation cycle (b). All of the scale bars are 100  $\mu\text{m}$ .

**Table. S1** The effect of magnetic loading amount on the water contact angle.

(%)	3	7	15	23	32	50
CA	153.7±2.7	154.0±2.0°	150.0±2.9°	151.0±0.7°	152.3±3.9°	148.3±2.1°

**Movie S1** The magnetic PU sponge being moved under magnetic actuation.