

### Simple preparation of a durable and low-cost load-bearing three-dimensional porous material for emulsion separation

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SA=3.4°

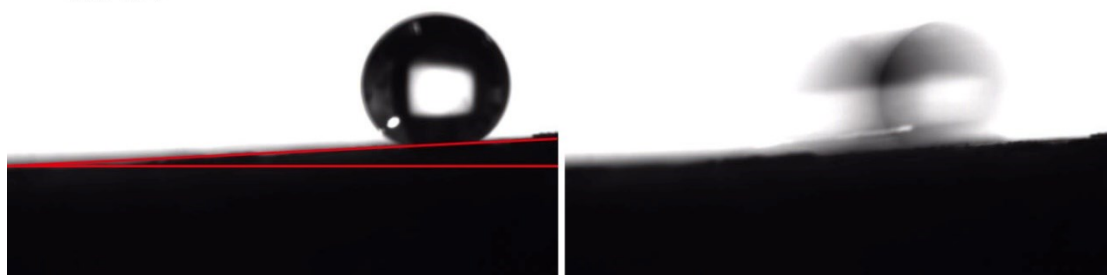


Fig.S1. Rolling angle of MR-C

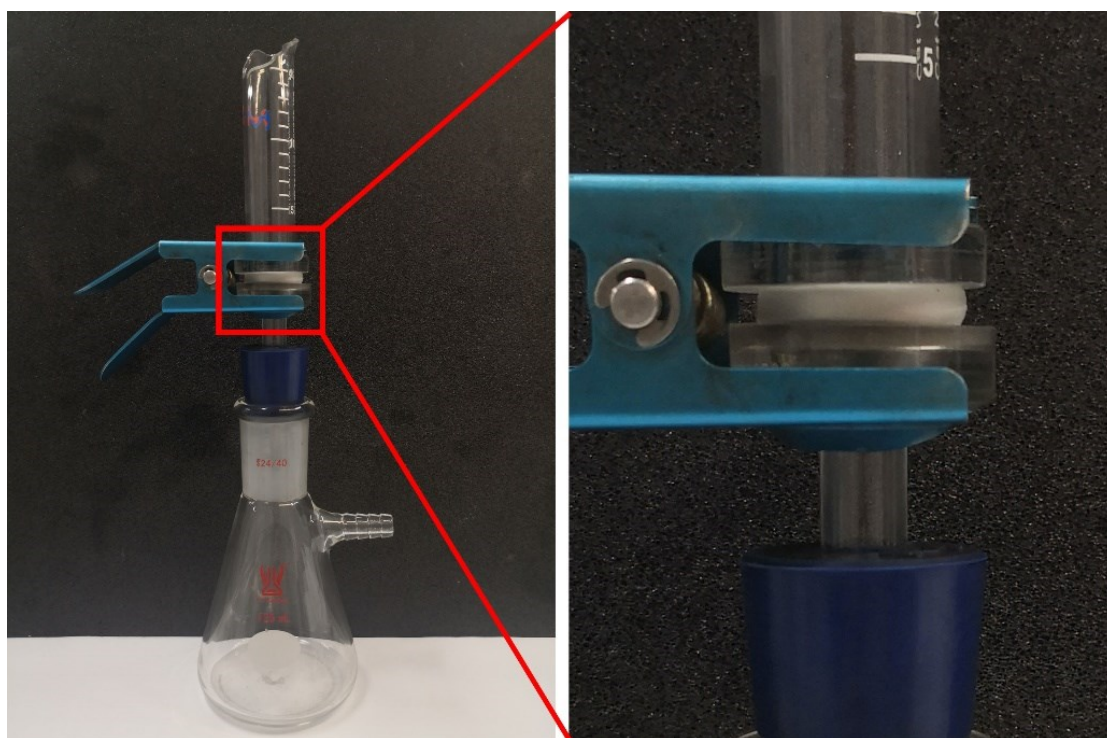
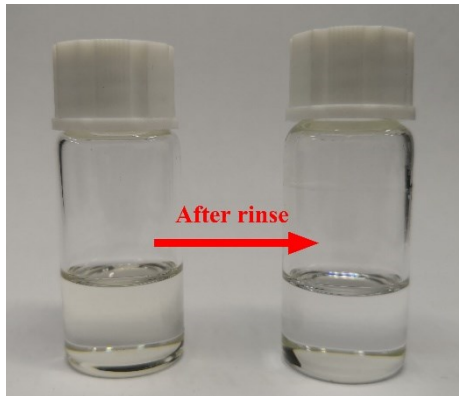
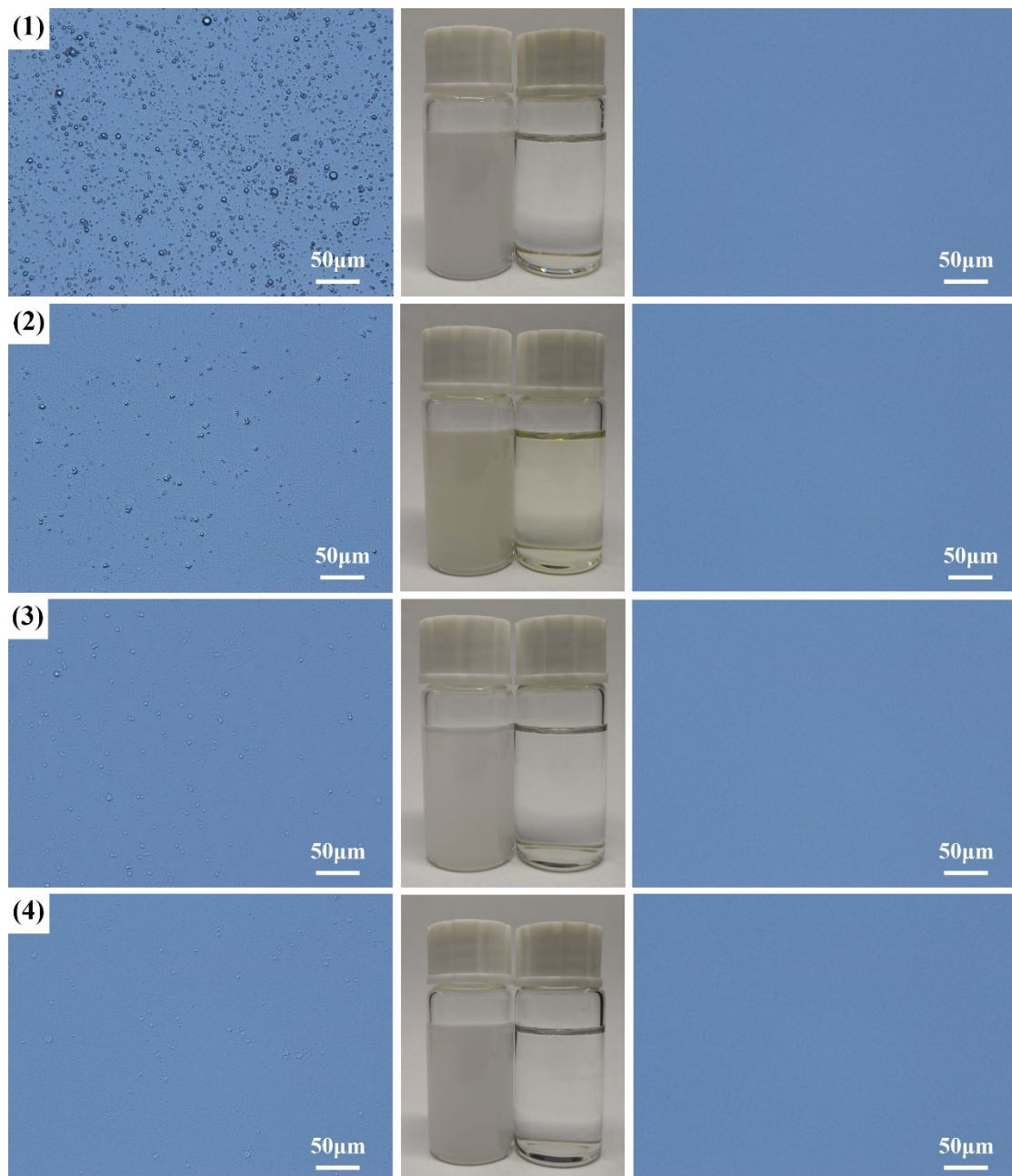


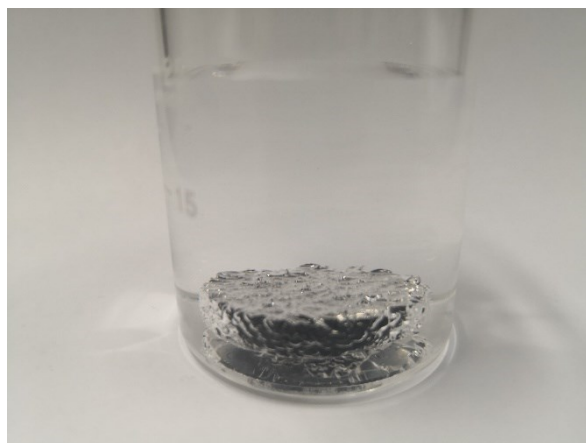
Fig.S2. Filter device and local magnification



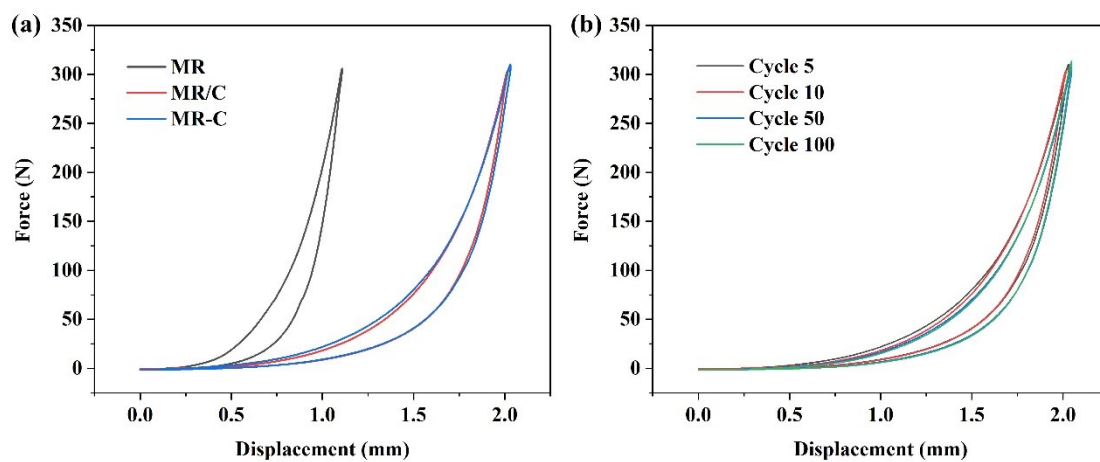
**Fig. S3.** Photograph before and after rinse



**Fig. S4.** Microscopic images of droplet distribution of water-in-oil emulsions [(1) xylene, (2) gasoline, (3) n-heptane and (4) n-hexane] before and after filtration



**Fig. S5.** Silver Mirror phenomenon of MR-C in 3.5wt%NaCl



**Fig. S6.** Compression resilience of MR-C (a) hysteresis curves of different samples, (b) hysteresis curves of MR-C for different numbers of compression cycles. MR/C does not wrap PDMS.