Electronic Supplementary Information (ESI)

Candle Soot Coated Nickel Foam for Facile Water and Oil Mixture Separation

Feng Zhao ,Leilei Liu, Fengji Ma, Lin Liu*

College of Chemistry and Chemical Engineering, Anyang Normal University,

Anyang, Henan 455000,People's Republic of China

email：zhaofeng327@163.com

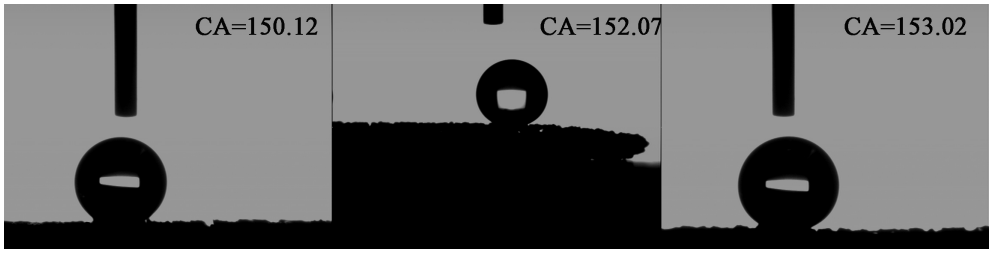

Fig. S1 Optical images of a water droplet on the surface of the as-prepared superhydrophobic and superoleophilic nickel foam on different samples prepared with the same conditions.

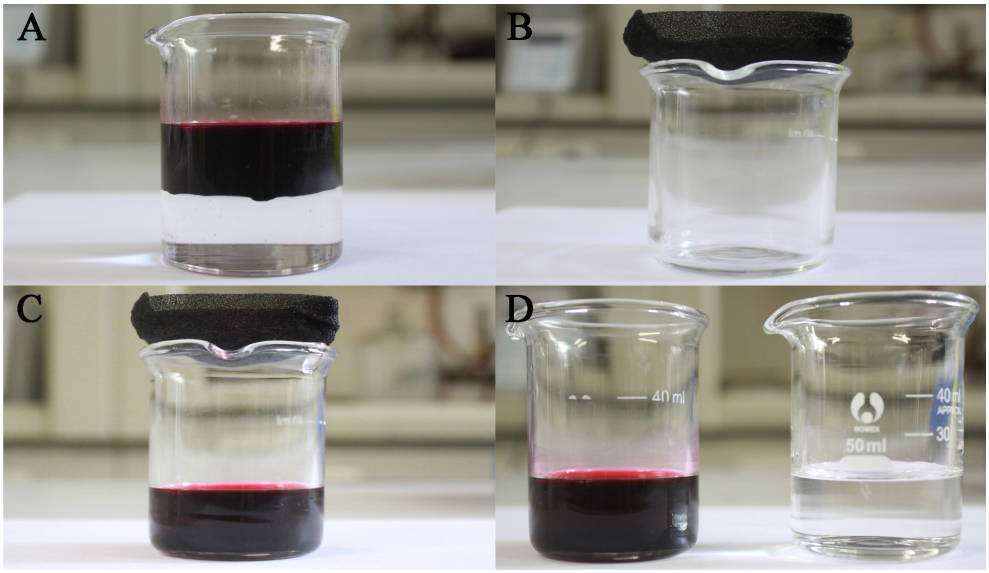

Fig. S2 Experiment process images of the water purification using superhydrophobic and superoleophilic nickel foam: (A) Oil Red O benzene solution and water before separation; (B) Simple instrument fabricated by ourselves; (C) Only the Oil Red O benzene solution stay in beaker after passing through the nickel foam box; (D) Oil Red O benzene solution and water in two separate beakers.

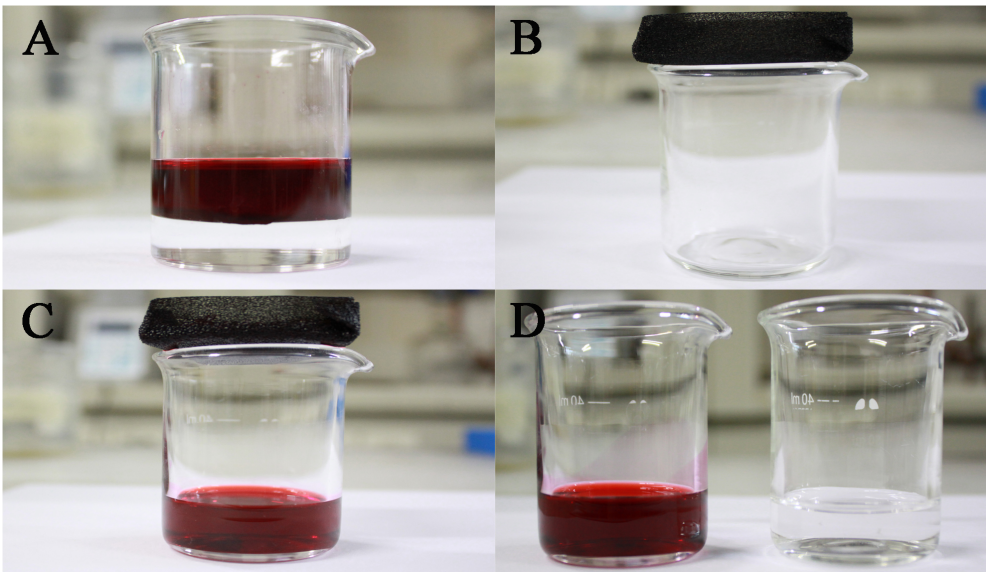

Fig. S3 Experiment process images of the NaCl solution purification using superhydrophobic and superoleophilic nickel foam: (A) Oil Red O hexane solution and NaCl solution (3.5 wt%) before separation; (B) Simple instrument fabricated by ourselves; (C) Only the Oil Red O hexane solution stay in beaker after passing through the nickel foam box; (D) Oil Red O hexane solution and NaCl solution (3.5 wt%) in two separate beakers.

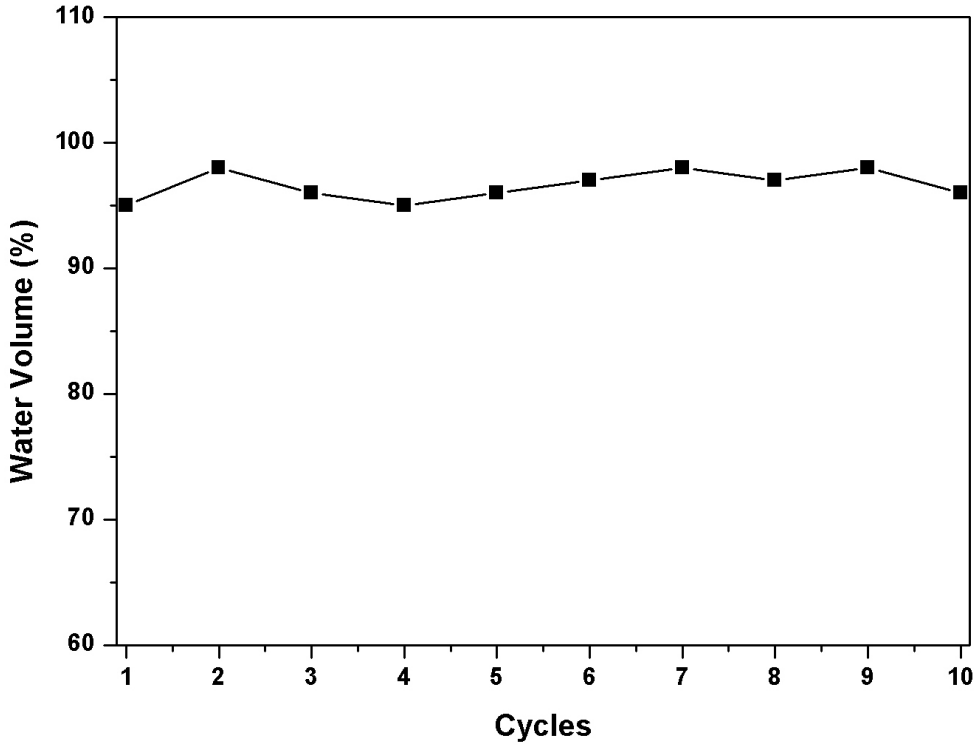

Fig. S4 Recycled experiments for separating hexane from water by using the as-prepared device.