Electronic Supplementary Information

Regenerable copper mesh based oil/water separator with switchable underwater oleophobicity

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![UV-Visible absorption spectrum](image)

**Fig S1.** UV-Visible absorption spectrum of dyed kerosene, reference water and collected water after separation.

UV-visible absorption spectra were recorded by a UV-vis spectrophotometer (Perkin-Elmer NIR-UV, USA), to determine if there was oil left in the water after “water-removing” and “oil-removing” mode separation. Oil (Kerosene) was dyed with Oil Red O (1 wt\%, Sigma-Aldrich) with typical absorption peak at around 518 nm. UV-Visible absorption spectra of water after
Separation was compared with dyed oil (Fig. S1). There was no discernible dye absorption peak observed of the water separated using both “water-removing” and “oil-removing” mode, which suggests that the separated water contains no oil. 1-3

Reference