Electronic Supplementary Information

A novel prewetted induced underwater superoleophobic or underoil (super) hydrophobic waste potato residue coated mesh for selectively efficient oil/water separation

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Supplementary figure and movie captions:

Figure S1. FT-IR spectra of potato residue powders (PRP).

Movie S1. The separation process of kerosene/1M HCl solution mixture based on the underwater superoleophobic potato residue coated mesh (PRCM).

Movie S2. The separation process of kerosene/1M NaOH solution mixture based on the underwater superoleophobic potato residue coated mesh (PRCM).

Movie S3. The separation process of kerosene/1M NaCl solution mixture based on the underwater superoleophobic potato residue coated mesh (PRCM)

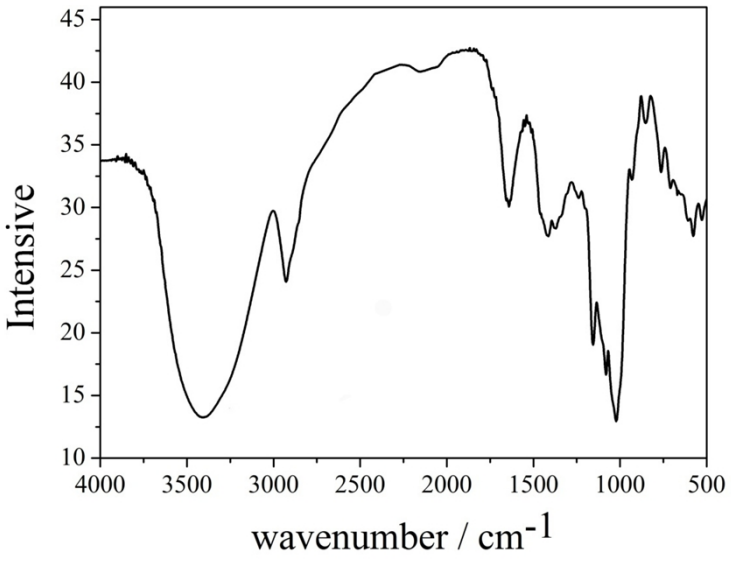

Figure S1. FT-IR spectra of potato residue powders (PRP).

The broad band observed at 3500−3200 cm^{-1} for PRP matches the O−H stretching frequency. The sharp peaks observed at 2927 cm^{-1} in the spectra for PRP correspond to the C−H stretching frequency. The peaks in the range of 1680−1610 cm^{-1} correspond to the stretching of the C=C bonds in the aromatic rings. The absorption peaks observed in the range of 1300−1000 cm^{-1} could be accounted to angular deformation in the plane of the C−H bonds of aromatic rings and in the range of 1200−1000 cm^{-1} corresponds to the axial C−O bond in phenols.[1]

Reference

1 R. Mallampati, X. Li, A. Adin and S. Valiyaveettil, *ACS Sustainable Chem. Eng.*, 2015, **3**, 1117.