

Supporting Information

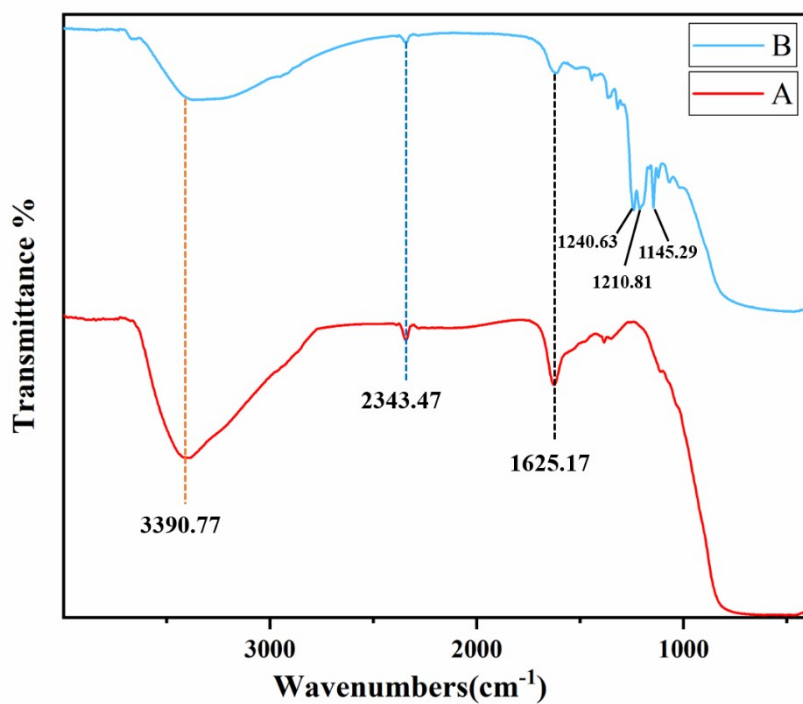


Fig S1. a) FT-IR spectra of the FOTS-TiO₂ particles.

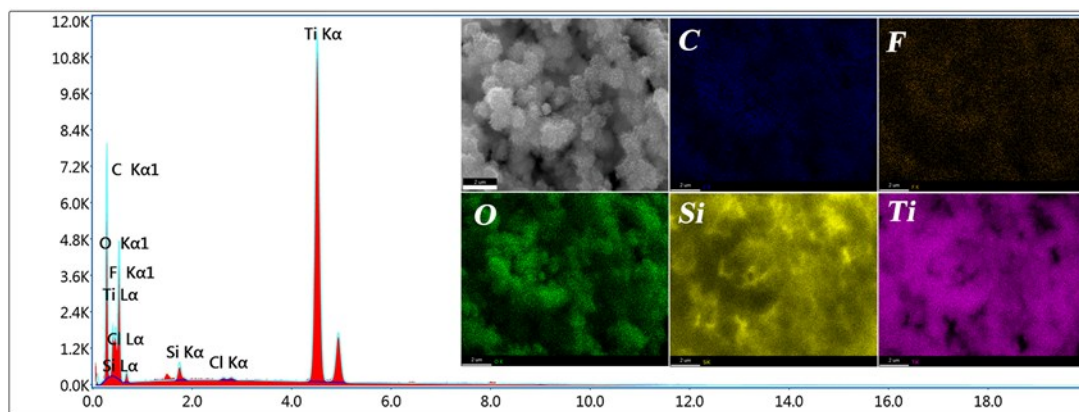


Fig S2. EDS spectra and C, F, O, Si, Ti distribution maps on the surface of SDTS.

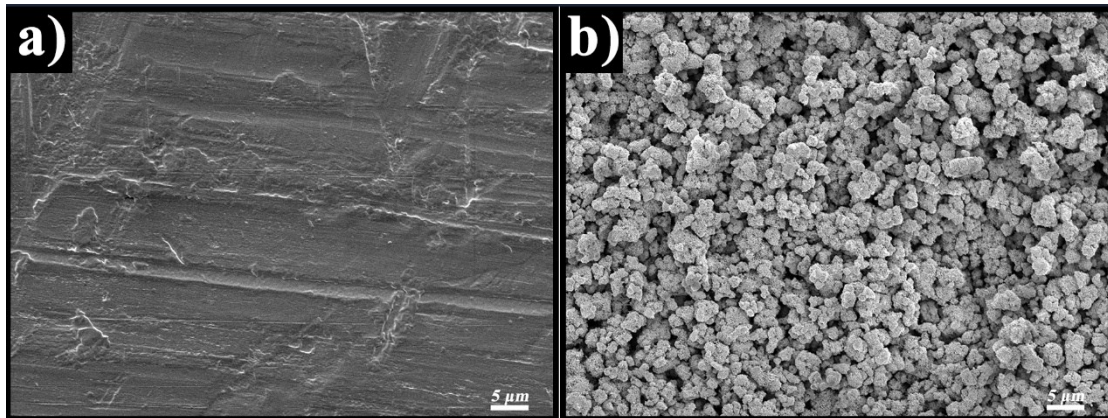


Fig S3. a) The SEM of the original copper sheet. b) The SEM of SDTS copper sheet.

Liquids	Surface energy (mN/m) (20 °C)	CAs on the surface of sample (°)
Water	72.1	161 ± 1
Rapeseed oil	35.7	158 ± 1
Glycerol	63.6	155 ± 2
n-Hexadecane	25.7	152 ± 1
Crude oil	35	150 ± 3

Table S1. The surface energy of various liquids and contact angles (CAs) on the surface of sample.

Movie S1. The process of the anti-fouling experiment.

Movie S2. The process of the anti-flipping experiment in different liquids (water, rapeseed oil, glycerol, n-hexadecane, crude oil).