

Supplementary material for

**Bioinspired, rough, hydrostable and underwater superoleophobic
copper mesh for oily wastewater pretreatment**

Ying Xu,^a Zhiwei Zhao,^b Jiaxiang Ma,^a Zhigao Zhu,^a Fuyi Cui,^a Wei Wang,^a Yan

*Liu,^{*a}*

^a State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin 150000, China.

^b School of Urban Construction and Environmental Engineering, Chongqing University, Chongqing 400045, China.

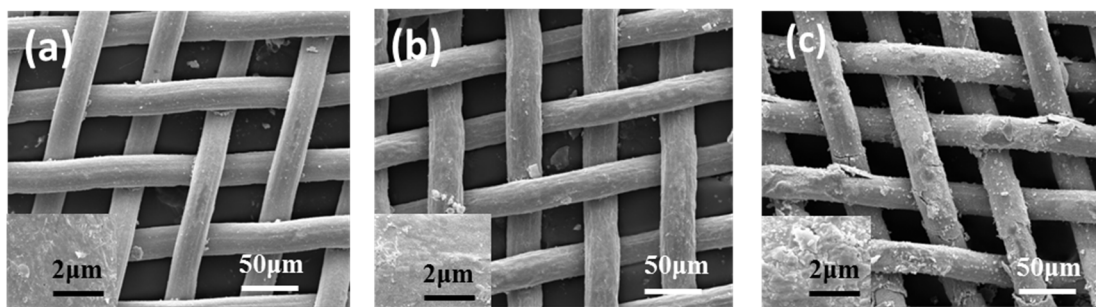


Figure S1. SEM images of copper mesh etching within 10min (a), 20min (b), 30min (c). Insets show the high resolution SEM images of the corresponding samples, respectively.

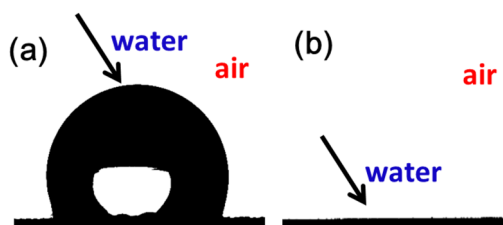


Figure S2. The water contact angles of (a) the pristine mesh, (b) the ETCu/20.

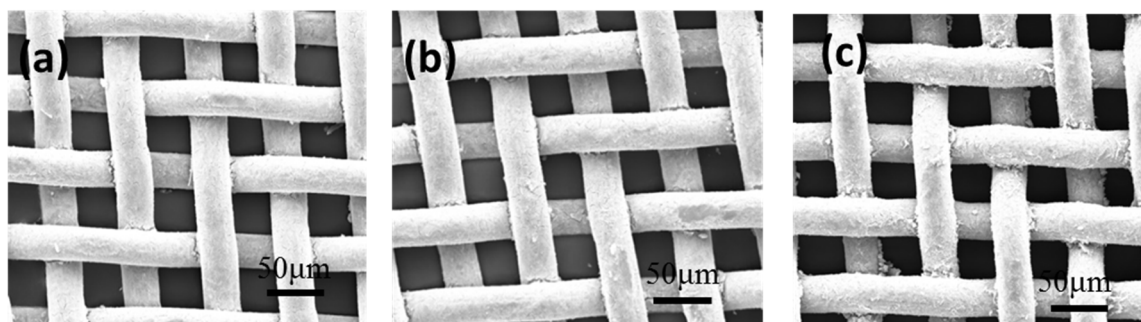


Figure S3. SEM images were copper meshes coated by PDA within 20min (a), 40min (b), 60min (c).

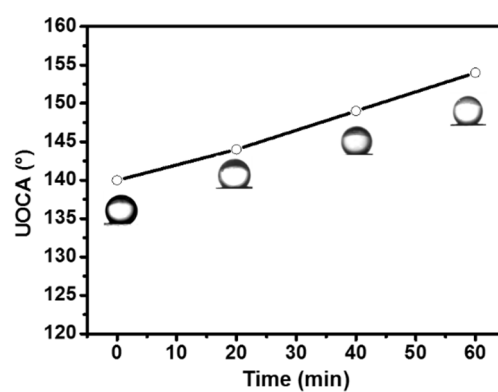


Figure S4. The UOCAs of the copper meshes coated by Fenton triggered PDA within 0min, 20min, 40min and 60min.

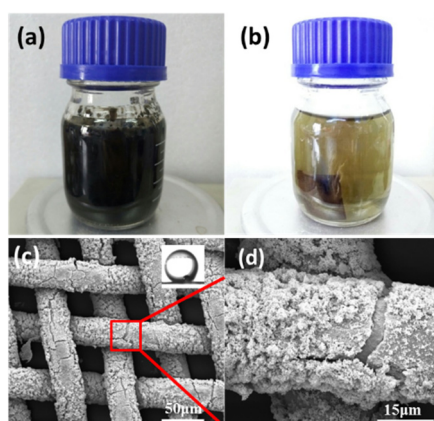


Figure S5. (a) Picture of 60min PDA solution using Fenton triggered PDA method. (b) Picture of 60min PDA solution using traditional method. (c-d) SEM images of PDA coating using traditional method within 24h.