

## Supplementary Material

**Table S1** TOC, NH<sub>4</sub><sup>+</sup>-N, TN and TP removal efficiencies and their rejection by FO membrane during the operation of OsMFC

Cycle		1	2	3	4	5	6	7	8
NH <sub>4</sub> <sup>+</sup> -N	η <sub>T</sub> (%)	64.58	69.99	85.22	86.51	80.63	85.16	81.09	76.51
	η <sub>I</sub> (%)	47.71	51.43	55.13	58.52	64.59	67.41	59.51	58.61
	R(%)	56.00	59.17	61.62	65.41	65.42	61.96	50.56	57.87
TN	η <sub>T</sub> (%)	61.49	64.14	82.20	78.39	66.20	78.66	81.16	76.22
	η <sub>I</sub> (%)	42.20	42.66	52.94	48.98	43.00	49.57	63.10	46.51
	R(%)	52.16	51.21	53.78	44.58	39.64	45.28	56.84	44.04
TP	η <sub>T</sub> (%)	84.21	80.01	88.92	88.37	89.34	94.55	91.38	90.99
	η <sub>I</sub> (%)	37.44	34.92	27.21	30.03	39.88	23.68	18.49	33.26
	R(%)	80.38	72.80	71.22	70.17	80.96	86.03	80.25	78.80
TOC	η <sub>T</sub> (%)	97.96	98.22	98.64	98.72	99.48	99.76	100.00	99.35
	η <sub>I</sub> (%)	96.57	95.65	95.69	95.36	97.49	97.83	97.35	96.94
	R(%)	97.47	97.57	96.48	96.71	99.06	99.40	98.37	98.46

**Table S2** EDX results of the virgin and fouled TFC-FO membranes in the OsMFC

Element	W <sub>t</sub> , %	
	Virgin membrane	Fouled membrane
C	68.53	43.87
O	17.66	37.60
N	-	4.60
P	-	3.25
Na	-	1.74
Al	-	1.92
S	13.81	2.24
Ca	-	1.48
Mg	-	0.64
Fe	-	1.23
Cl	-	0.69
K	-	0.66
Cu	-	0.07

**Table S3** Properties of the foulants collected from the fouled TFC-FO membrane

Index	Content
MLSS (g/m <sup>2</sup> )	52.5
MLVSS (g/m <sup>2</sup> )	40.0
MLVSS/MLSS	0.76