

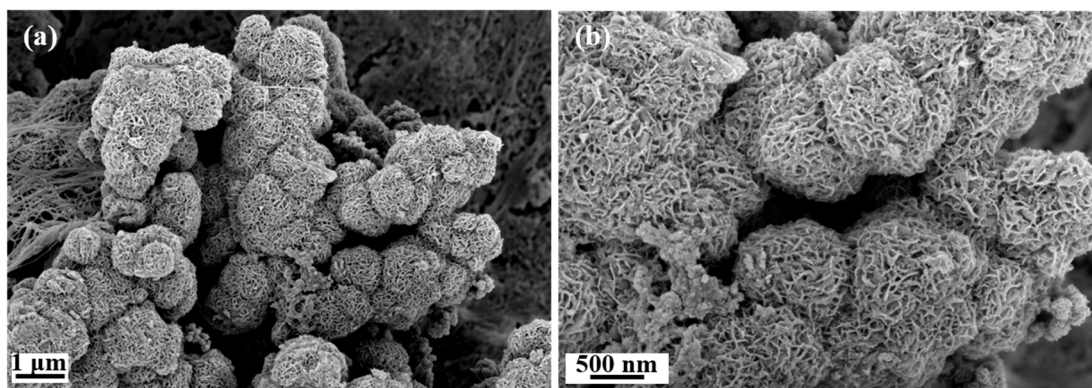


Figure S1. SEM images of of BC-MTP.

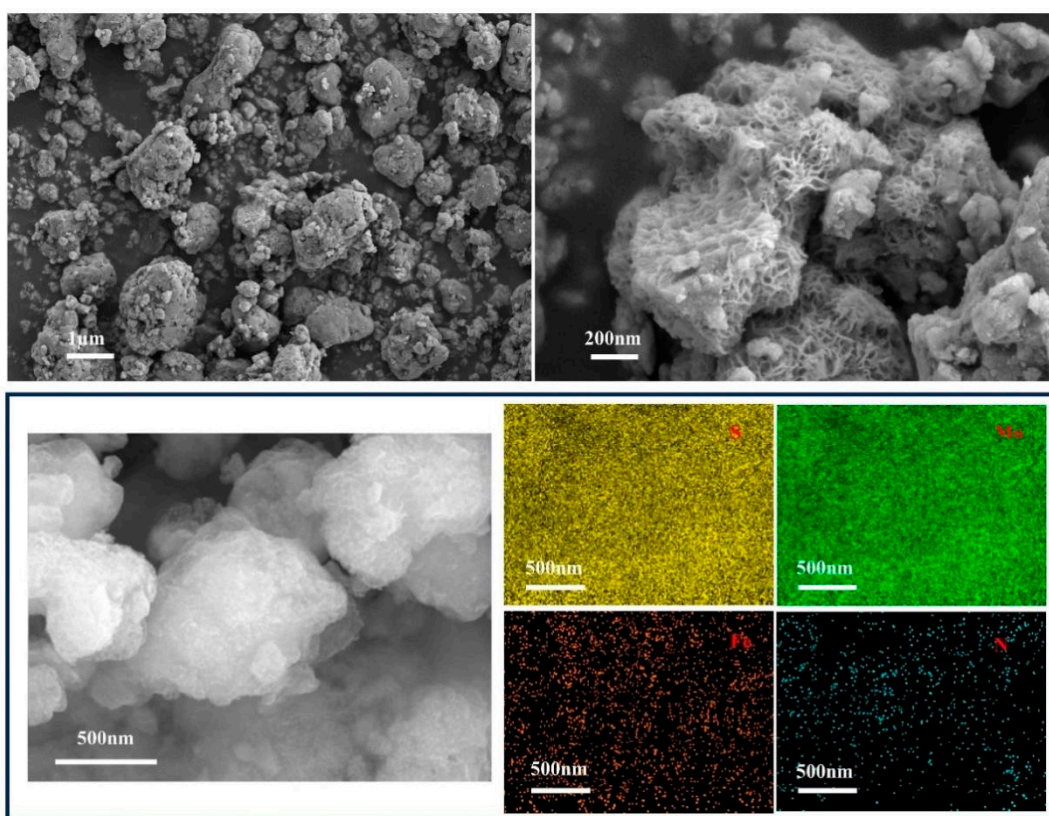


Figure S2. SEM images and energy dispersive spectroscopy (EDS) mappings of MTP after suction-desorption in solution at pH=12 for 30 min.

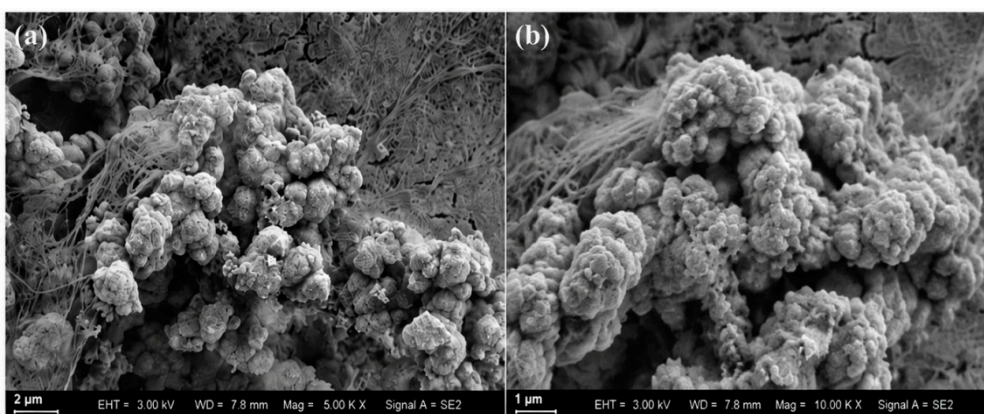


Figure S3 (a) SEM image of the BC-MTP membrane; (b) SEM image of the BC-MTP membrane after 5 washing cycles.

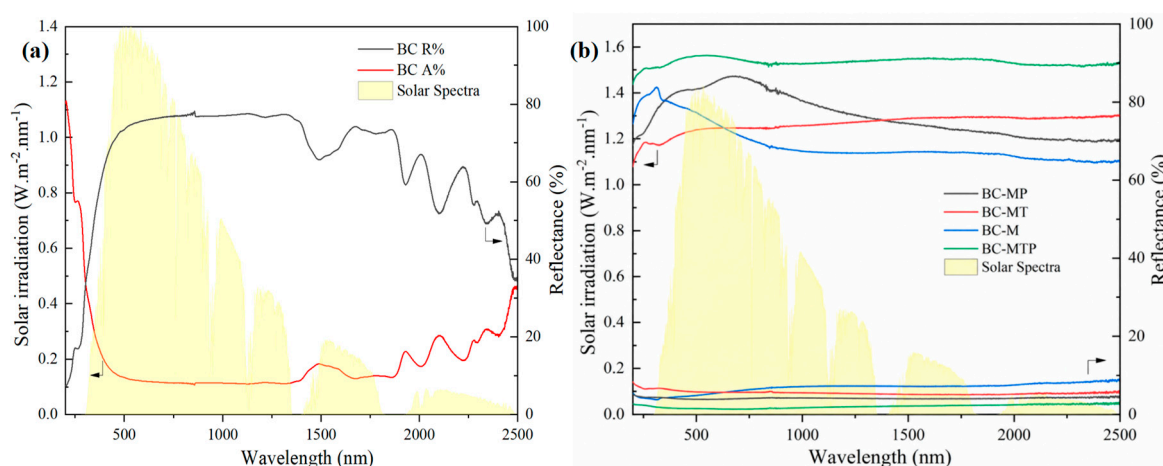


Figure S4 (a) Full-spectrum absorbance and reflectance of BC; (b) Full-spectrum absorbance and reflectance of BC-M, BC-MT, BC-MP, and BC-MTP.

Table S1 Weight percentage and atomic percentage of MTP

Element	Wt%	Percentage of atoms%
N	0.56	1.25
Mo	46.52	15.09
S	30.05	29.18
Fe	0.70	0.39

Table S2 Weight percentage and atomic percentage of MTP after suction desorption in pH=12 solution for 30 min.

Element	Wt%	Percentage of atoms%
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N	1.28	2.45
Mo	41.34	11.52
S	26.95	22.51
Fe	1.38	0.66
