

## Supporting materials

S1 The cartridge filters were fouled by inorganic and organic substances

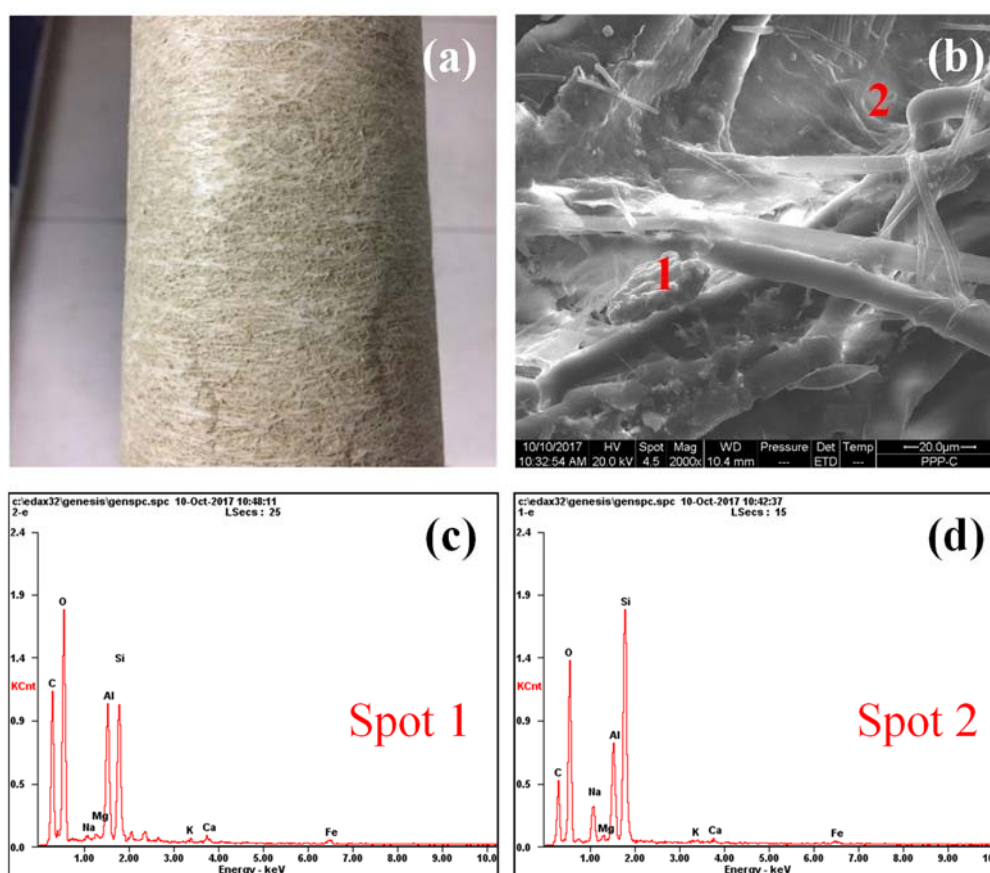


Fig. S1 (a) A photograph of the fouled cartridge filter; (b) SEM observation showed that the filter was covered by a layer of substances on the fibers; (c) and (d) Element analysis by EDS for Spot 1 and Spot 2, respectively, showing the difference in element compositions. While aluminum mainly came from coagulant residual, silicon came from clay particles, carbon and oxygen denoted that organic substances were also major component

S2 Fluorescence properties of the organic foulants detached from membrane surface were different from that of organic substances in feed water

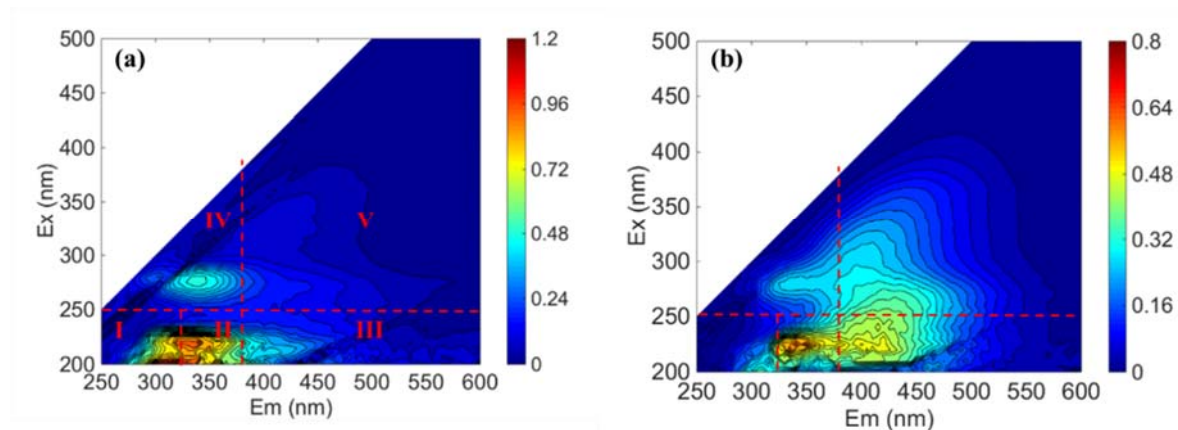


Fig. S2 Fluorescence excitation-emission matrix (FEEM) spectra for (a) the organic foulants detached from the membrane surface and (b) that in the feed water. The spectra are conventionally divided into Region I, II, III, IV and V, which are used to semiquantitatively obtain the concentrations of tryptophan-like proteins, tyrosine-like proteins, fulvic-like substances, soluble microbial products (SMP) and humic-like substances, respectively