

Supporting Information

Stokes Shift and Specific Fluorescence as Potential Indicators of Organic Matter Hydrophobicity and Molecular Weight in Membrane Bioreactors

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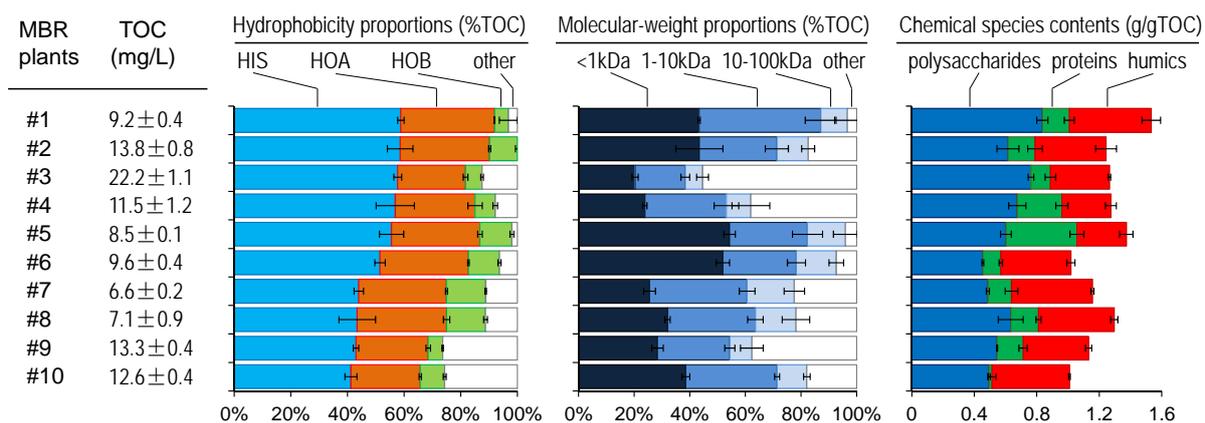


Figure S1. Hydrophobicity, molecular weight (MW) and chemical species distributions in the organic matter samples. Part of the data (total TOC concentration and hydrophobicity proportion) have been published in a previous report (Xiao, K. et al. *Environ. Sci. Technol.* **2018**, 52, 11251-11258. DOI: 10.1021/acs.est.8b02684).

Table S1. Correlations between average Stokes shift/SFI and hydrophilic/phobic proportions of organic matter.^a

Correlation terms	Correlation coefficients	Hydrophobicity components		
		HIS	HOA	HOB
Average Stokes shift vs.	Pearson's <i>r</i>	0.362	0.767**	0.271
HIS/HOA/HOB proportions	Spearman's ρ	0.503	0.879**	0.127
Specific fluorescence intensity	Pearson's <i>r</i>	-0.086	0.425	0.335
vs. HIS/HOA/HOB proportions	Spearman's ρ	-0.091	0.358	0.285

^a Numbers in **bold** with double asterisks represent highly significant ($p < 0.01$).

Table S2. Correlations between average Stokes shift/SFI and polysaccharide/protein/humic contents of organic matter. ^a

Correlation terms	Correlation coefficients	Chemical species		
		Polysaccharides	Proteins	Humics
Average Stokes shift vs.	Pearson's r	-0.111	0.123	0.238
polysaccharide/protein/humic contents	Spearman's ρ	-0.006	0.236	0.309
Specific fluorescence intensity vs.	Pearson's r	-0.559	0.074	0.210
polysaccharide/protein/humic contents	Spearman's ρ	-0.600	-0.176	0.224

^a No correlation is significant at the 0.05 level.