

Supporting Information

# MXene ( $\text{Ti}_3\text{C}_2\text{T}_x$ )/ cellulose acetate mixed-matrix membrane enhances the fouling resistance and rejection in the crossflow filtration process

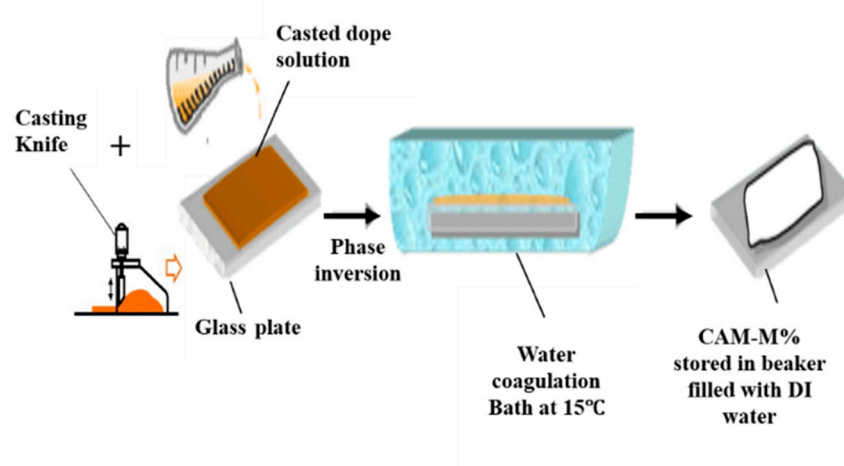
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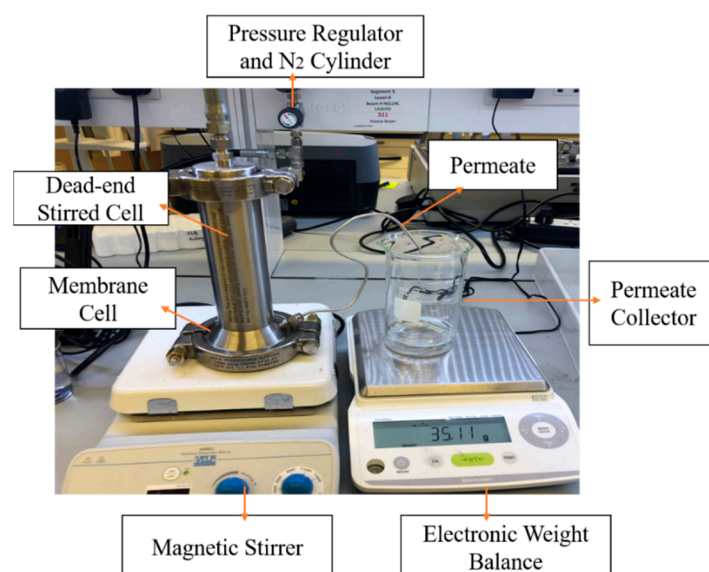
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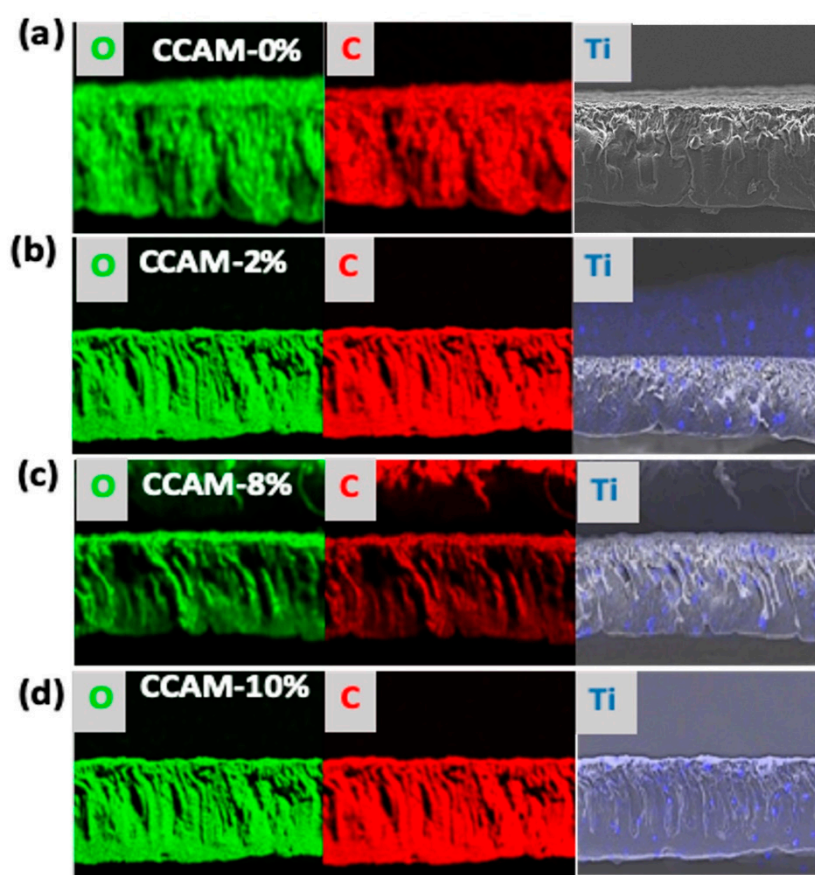
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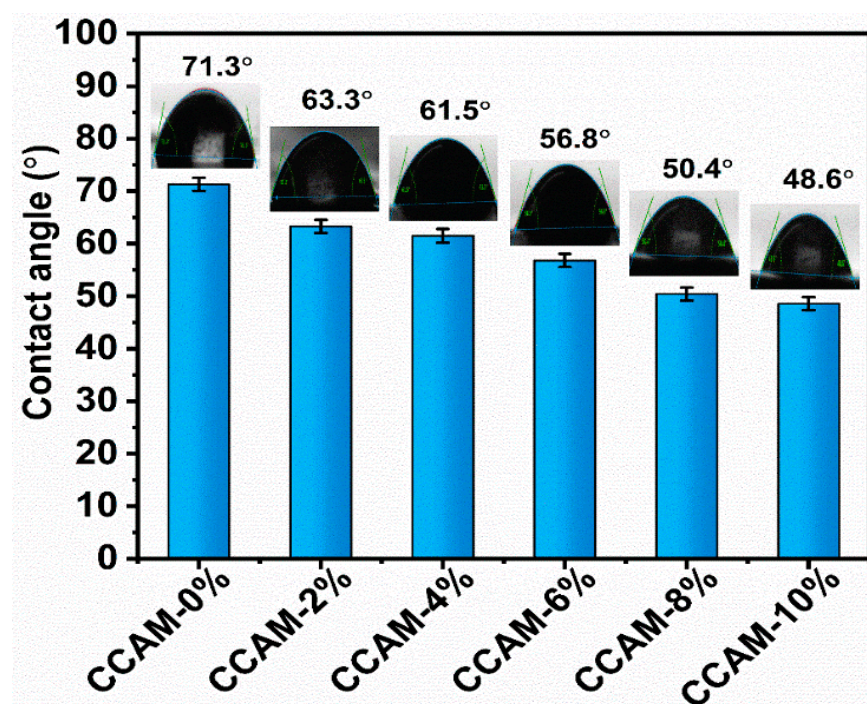
**Figure S1.** Schematic representation of the phase inversion of MXene in cellulose acetate membrane.



**Figure S2.** Dead-end filtration process setup.



**Figure S3.** EDS cross-section mapping analysis images for (a) CCAM-0%, (b) CCAM-2%, (c) CCAM-8%, and (d) CCAM-10%.



**Figure S4.** Water contact angle of cross-linked CCAM-X% with MXene contents (X) from 0% to 10%.