

Effect of phenol functionality on characteristic features and performance of fully aromatic polyester thin film composite nanofiltration membranes

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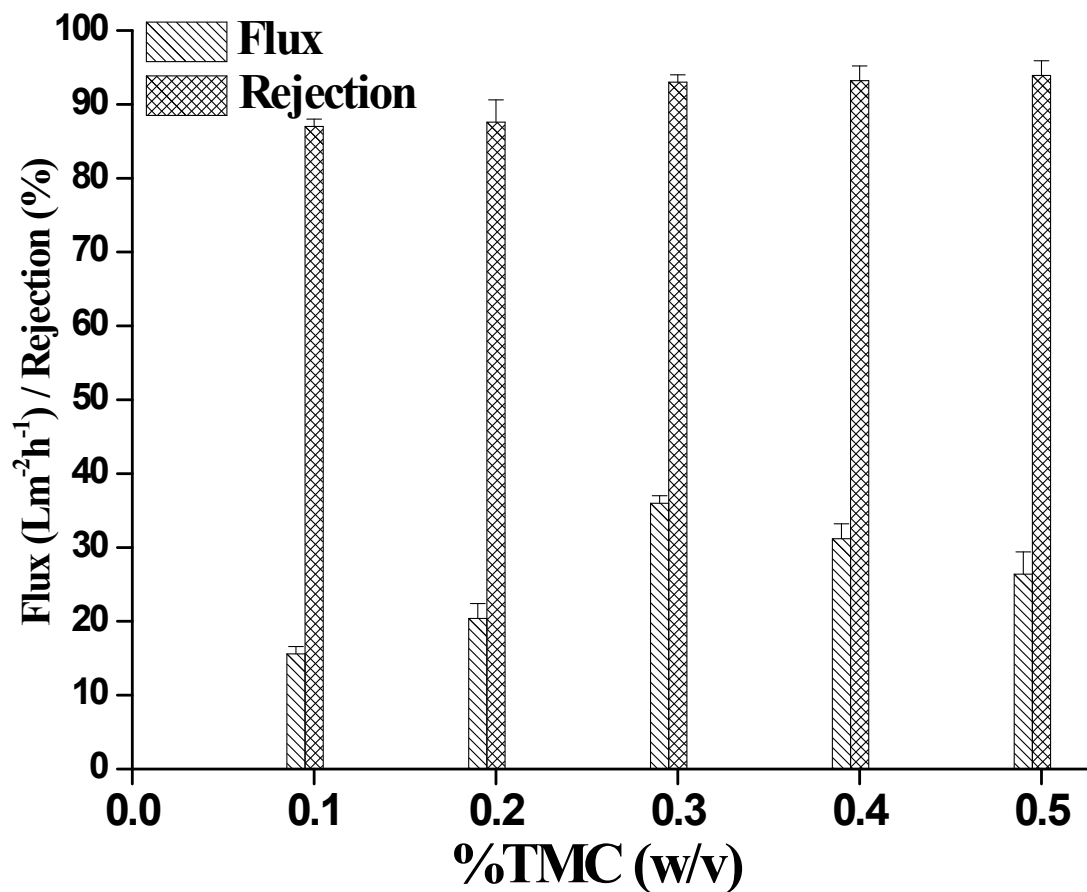


Fig. S1. Bar diagram showing Na₂SO₄ (1500 ppm in feed, pH~7) rejection efficiency and water flux of PE TFC membrane prepared from 1:2 (w/w) resorcinol:phloroglucinol (total 3 %, w/v in water) and varying concentrations of TMC. The operating pressure was 0.5 MPa.

Table S1. Ionic radii of hydrated ions

No.	Ion	Mean ion-water internuclear distances for first hydration shell (Y. Marcus)/ nm ^a	Second hydration shell (from computation)
1.	Na ⁺	0.2356 ± 0.0060	0.450-0.480 ^b
2.	K ⁺	0.2798 ± 0.0081	0.460-0.530 ^b
3.	Mg ²⁺	0.2090 ± 0.0041	0.410-0.428 ^c
4.	Ca ²⁺	0.2422 ± 0.0052	0.450-0.460 ^c
5.	Fe ³⁺	0.2031 ± 0.0019	0.409-0.480 ^c
6.	F ⁻	0.2630 ± 0.0025	-
7.	Cl ⁻	0.3187 ± 0.0067	-
8.	Br ⁻	0.3373 ± 0.0054	-
9.	SO ₄ ²⁻	0.3815 ± 0.0071	-

^a See Table XIII (reference 31); ^bTable 16 and ^cTable 17 (reference 32)

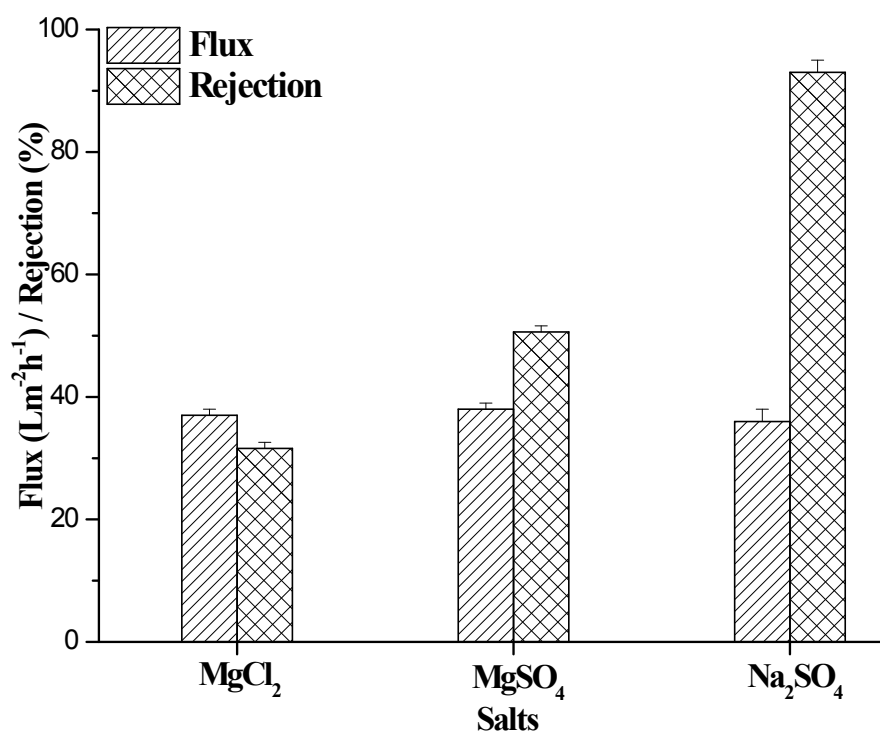


Fig. S2. Bar diagrams showing rejection and flux data for experiments conducted with aqueous solutions of MgCl₂, MgSO₄ and Na₂SO₄ on PE TFC membrane prepared from 1:2 (w/w) resorcinol:phloroglucinol (total 3 % w/v in water) and TMC (0.3 w/v). Feed concentration: 1500 ppm; pH~7; operating pressure: 0.5 MPa.