

عنوان مقاله:

Enhancing NF membrane performance by blending Fe₂NiO₄ nanoparticles in PEES

محل انتشار:

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خلاصه مقاله:

in this study, PVP as pore former, N- methylpyrrolidone (NMP) as solvent and deionized water as non-solvent were used for preparation of the Nanocomposite membranes. The effects of iron-nickel oxide (Fe₂NiO₄) nanoparticles as inorganic modifier on the preparation of underused Poly phenylene ether ether sulfone (PEES) nanofiltration membranes were investigated. Pure water flux (PWF) carried out in membrane characterization. Moreover, retention performance in separation MgSO₄ (2000 mg/Lit) from aqueous solution were analyzed for fabricating membranes. PWF and rejection of pristine PEES membrane increased from 9.66 to 14.78 (lit/m².h) and 80 to 93%, respectively by blending 0.02 wt% Fe₂NiO₄ nanoparticles and 5 wt% ethanol.

کلمات کلیدی:

hybrid membranes; Magnetic iron-nickel oxide nanoparticles; nanocomposite; nanofiltration

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