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Preparation and antifouling property improvement of Tröger's base polymer ultrafiltration membrane

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Abstract

Tröger's base (TB) polymers have received increasing interest for different potential applications in the field of membrane techniques. In this study, a TB polymer was used for the first time to prepare ultrafiltration (UF) membrane and its antifouling property was enhanced through membrane quaternization process. The pure water flux of TB UF membrane prepared from NMP solution was $448 \text{ L m}^{-2} \text{ h}^{-1}$ with a high rejection for solute (97 % for bovine serum albumin (BSA) and 90 % for humic acid). The high permeability of TB UF membrane was related to its high overall porosity, while the high separation property was attributed to its small average pore size on

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