

**The study for biofouling decrease by the ultrafine photocatalyst TiO<sub>2</sub> adhered to NF composite membrane**

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Nanofiltration (NF) membrane is a kind of pressure driven membrane between reverse osmosis and ultrafiltration membrane. Composite membrane is one of the effective methods to prepare NF membrane. NF membrane has advantages such as low operation pressure, high flux, low operation and maintenance cost.

TiO<sub>2</sub> is used most for catalyst which absorbs UV and also it can decompose into non-biodegradable organic materials.

Usually, photocatalyst that is applied in environment industry, is used for powder mainly. That has the problems of withdrawal and light shield by particles. Therefore the manufactured NF membrane can achieve photocatalytic reaction and separation at the same time by means of the photocatalyst TiO<sub>2</sub> adhered to NF membrane surface. NF membrane included TiO<sub>2</sub> is longer lifetime than neat NF membrane.