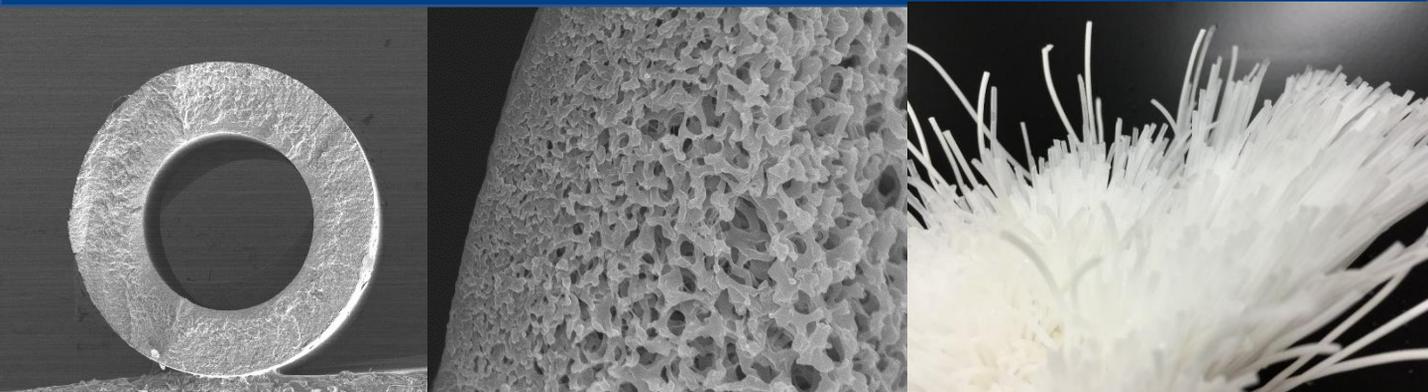




ORGANIC SOLVENT RESISTANT HOLLOW FIBER MEMBRANE

Innovative green process



www.membrare.com



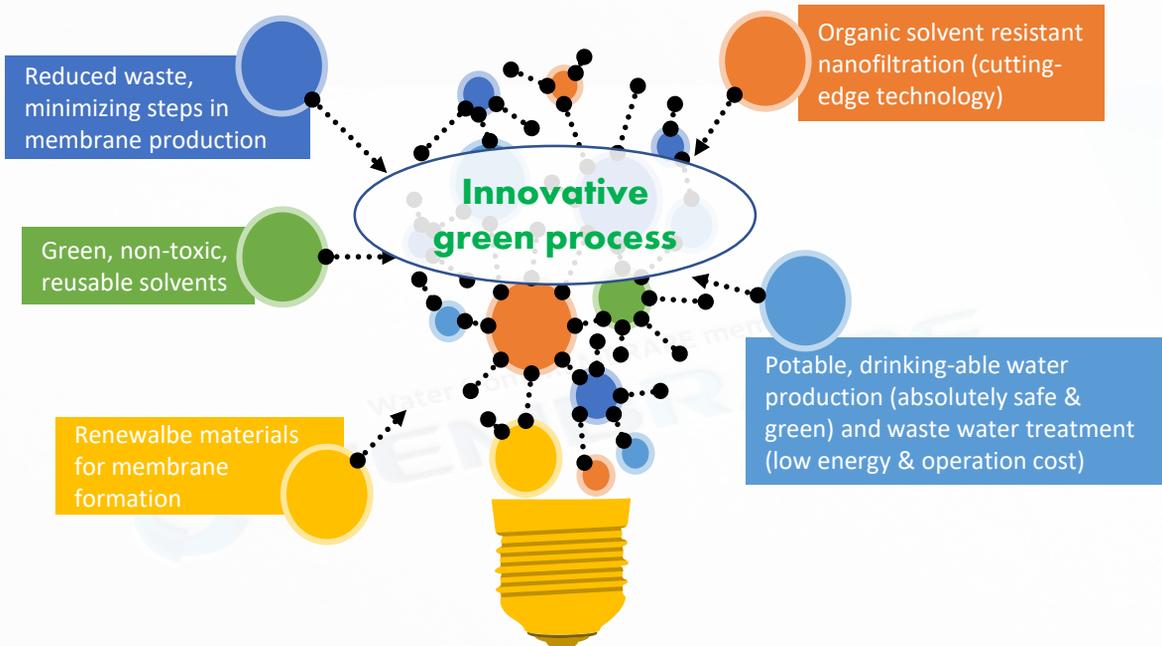
Water from MEMBRARE membrane

MEMBRARE

MEMBRARE PLATFORM

MEMBRARE aims to be high-technology manufacturer of next generation green membrane systems for water treatment and organic solvent-related separation processes. Our unique economical and eco-friendly membrane manufacturing technique overcomes the high pollution and high cost associated with conventional membrane production processes. Reliable, affordable and high-end membrane products can be delivered to our customers and partners in water sector at first.

Based on the existing manufacturing facilities, we further provide high value-added specific “organic solvent resistant nanofiltration (OSRN)” membrane systems to address critical needs of petrochemical and pharmaceutical industries. Backed by our high-tech and cost-effective membrane products, we are poised to be a leader in the fast growing membrane market in Korea, Republic of.

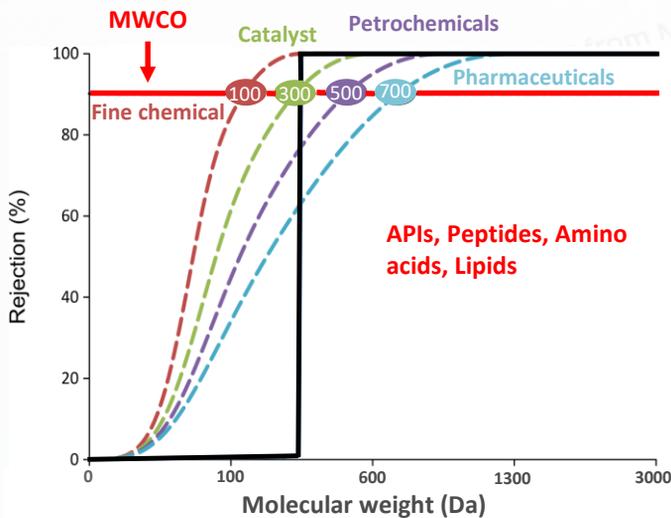


From Water Treatment Membranes To Advanced OSRN membrane

Membrane technology as a green separation process can be used in many areas. As a start-up high-tech company in Korea, Republic of, we are committed to provide reliable, affordable high-end green membrane products including both advanced OSRN membranes and conventional water treatment membranes to our industry customers and common consumers. Now, we have already developed membrane products in large scale and are ready to enter the stage of full scale production.



OSRN membrane

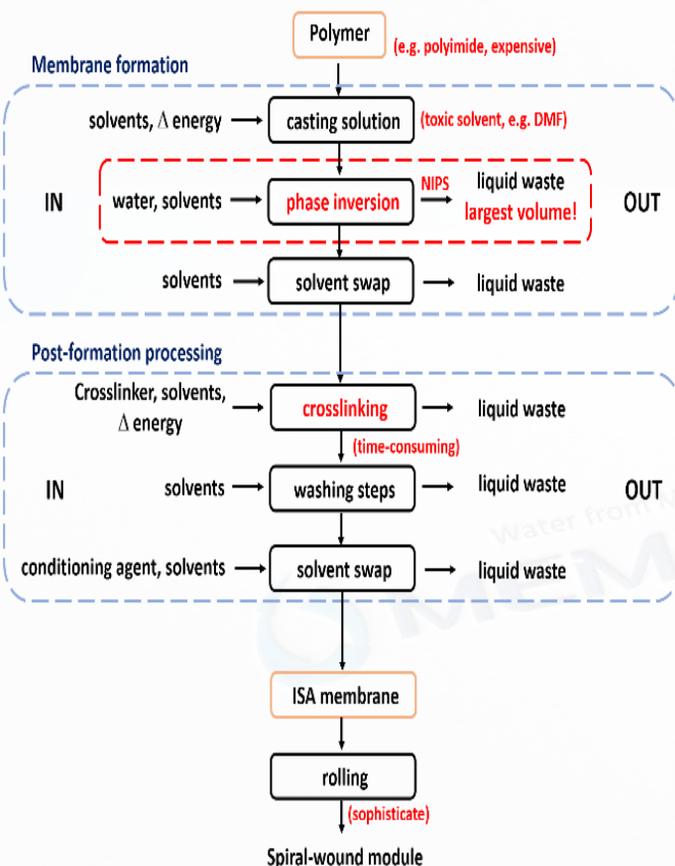


Chem. Rev. 2014, 114, 10735

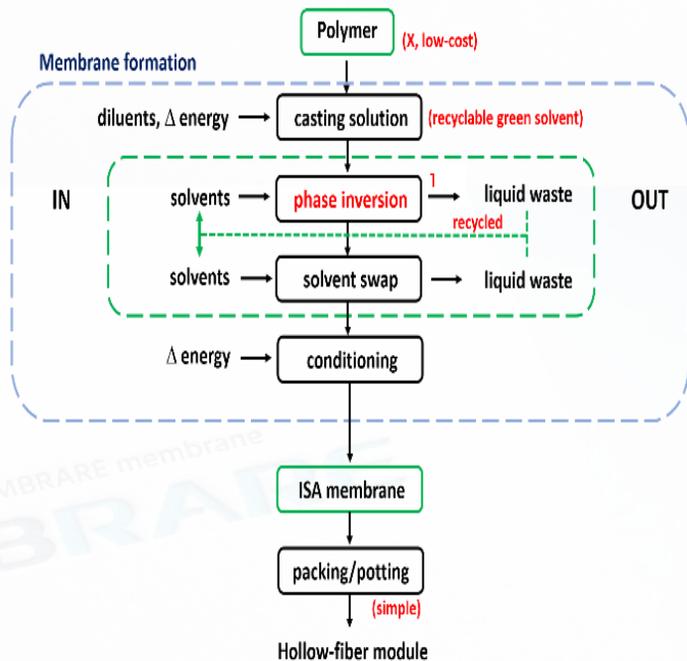
OSRN membranes typically show MWCOs in the 100-3000 Da range. The OSRN process has low energy consumption and low operation costs compared with conventional separation processes such as evaporation, distillation, and adsorption.

Despite these benefits, however, OSRN membranes are rarely applied in many chemical processes, because unlike the membranes used in water or wastewater treatment, the durability and permeability of OSRN membranes have to be reliably assured in a variety of strong organic solvents such as ethanol, methanol, toluene, acetone, dimethylacetamide (DMAc), and dimethyl sulfoxide (DMSO). One method to overcome this problem is a cross-linking method. Use of cross-linkage is the most representative method to obtain OSRN membranes with better stability. However, additional step for the cross-linking is necessary in the membrane preparation. And this method involves the use of expensive polymeric materials such as polyimide (PI) and polybenzimidazole (PBI) as the support membrane to ensure the durability of the membranes in the presence of strong solvents. Herein, we developed new polymer and a new fabrication method for OSRN through a conceptual change in membrane technology.

Conventional ISA OSRN membrane fabrication process



Novel ISA OSRN membrane fabrication via green process technique



Much simple and cost-effective !!!

Through our green and one-step membrane manufacturing technique using recyclable green solvent and low-cost polymer materials, we can bring the advanced OSRN membrane separation systems in an affordable price to the industry customers from petroleum to pharmaceutical for economical and eco-friendly production of high-end-value goods. This is going to be the tipping point that largely expands the membrane business in various industries producing high value-added products such as medicines and fine chemicals.

Contact us to find out how MEMBRARE membranes can change innovatively your membrane system

Corporate Headquarters: 60, Secheon-ro 2-gil, Secheon-ri, Dasa-eup, Dalseong-gun,
Daegu 42930, Republic of Korea
Phone: +82 53.262.2142
Email: sijeon2142@gmail.com

www.membrare.com

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