

Nanostructured High Performance Desalination Reverse Osmosis Membranes

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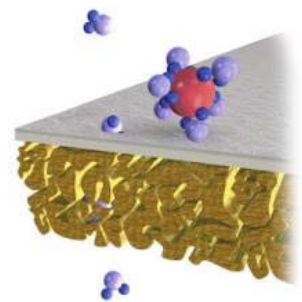
Nature of work: Laboratory based experiments

Area: Advanced Materials.

Potential implications: High performance RO membranes for desalination.

Funding: *Via* the various University scholarship schemes (see separate information for these).

Brief description: Water-shortage is a global changing topic. Although there is plenty of water in oceans, the high salt content blocks the direct application of seawater. Reverse osmosis (RO) is one of the most effective approach for seawater desalination, but the high energy consumption and high operation costs is keeping on being the bottle necks in desalination industry. This project aims to develop a new generation of RO membranes by combining the knowledge of membrane science and nanotechnology. The resulting RO membranes not only improve water flux but also reduce the biofouling. As such, it is able to provide a platform of energy-saving desalination.



This is a laboratory-based research project. The candidate should have interests in water-treatment, polymer science, and nanomaterials. More details on this project or other advanced research topics can be referred to the website of www.adelaide.edu.au/bio-nano-tech or visit my office.

