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SYDNEY

Membrane Distillation and Concentrating Solar Thermal Systems

Developing new materials and design tools to overcome the technical challenges that have previously limited membrane distillation technology, to open up an innovative method for the co-production of water and electricity which can handle transient solar and water quality inputs.

Competitive advantage

- Wide-ranging expertise in areas from membrane materials development to CST plant optimisation
- Innovators in the design of modules and materials such as hydrophobic coatings and 3D printed parts, and skilled at determining how best to incorporate them into solar thermal systems

Impact

- Remote locations in Australia and the Middle East and North Africa are blessed with abundant solar resources and increasing levels of development but burdened by access to reliable drinking water and electricity generation facilities. Enabling the co-production of water and electricity will open up significant possibilities for these areas.

Successful applications

- Production of prototype membrane distillation modules which can utilise the exhaust from thermal power plants
- A techno-economic analysis of the potential for this technology has been conducted
- 4 research outputs have been published

Capabilities and facilities

- The facilities to produce and test new modules and materials at laboratory and pilot scale.

Our partners

- Vast Solar
- Origin Water

More Information

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