



UNSW
SYDNEY



Waste Biomass to Renewable Hydrogen

The production of renewable hydrogen from preconditioned biomass is an important source of energy and a key component of Australia's future energy offerings for the generation and exporting of hydrogen. It is economically viable and environmentally friendly, with zero carbon dioxide emissions.

Competitive advantage

- Preconditioned biomass (from raw biomass stream) can be obtained at very low cost
- Electrocatalytic hydrogen extraction from pre-conditioned biomass is generally easier than water electrolysis
- It is selective, delivers zero carbon dioxide emissions and can produce value-added organic products with potential to be used as precursors for plastic fabrication

Impact

- Competitive energy production by utilising waste to produce renewable hydrogen
- Alleviate global warming by reducing the carbon footprint
- Resource recovery and new materials

Successful applications

- A zero-emission tandem array for transforming biomass into renewable hydrogen

Capabilities and facilities

- Access to technical expertise and facilities dedicated to sustainable technology development

Our partners

- Origin Water International Pty Ltd
- Apricus Energy Pty Ltd

More Information

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