



**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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