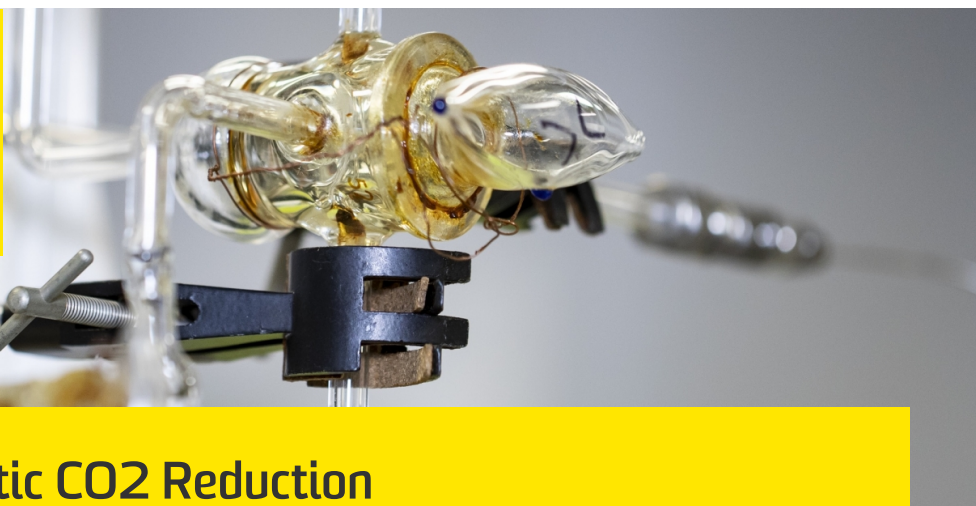




UNSW
SYDNEY



Direct Electrocatalytic CO₂ Reduction

Expertise in the direct conversion of carbon dioxide into high value liquid products, which is important for combating climate changes and energy efficiency challenges

Competitive advantage

- The electrochemical CO₂ reduction reaction (CO₂RR) can be carried out at ambient conditions by applying an external bias
- Possibility to couple with electricity generated from renewable energy resources to close the carbon loop
- Simple, scalable and cost-effective catalysts for CO₂RR in the gas phase to deliver liquid products

Impact

- Alleviate global warming by direct conversion of CO₂ into high value liquid products
- Creation of a sustainable cycle of carbon-based fuel that will promote zero net CO₂ emissions

Successful applications

- Mesoporous tin oxide (SnO₂) electrocatalyst for large scale conversion of CO₂ to formate with high selectivity and current density

Capabilities and facilities

- Access to expertise and state-of-the-art facilities for electrocatalyst fabrication, characterisation and testing of performance
- Expertise in the direct conversion of carbon dioxide into high value liquid products, which is important for combating climate changes and energy efficiency challenges.

More Information

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