

## Electrochemical CO<sub>2</sub> Conversion to Carbon-Neutral Fuels and Chemicals

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Carbon neutrality has become a dominant trend across the world. The world is accelerating this transition to a carbon-neutral society and economy, and a new international economic order. It is necessary to apply clean technology such as eco-friendly vehicles, batteries, energy storage systems, hydrogen energy, and CCUS to change the fossil fuel-based industrial infrastructure to be carbon-neutral. Electrochemical CO<sub>2</sub> conversion technology has recently received much attention due to its ability to convert CO<sub>2</sub> to carbon-neutral chemicals and fuels via integration with renewable energy. Many studies have been reported in the last decade, but there are still several challenges such as improvement of energy efficiency, product selectivity, and process stability that need to be addressed for the development of economically viable CO<sub>2</sub> conversion processes. Here, the recent progress and perspectives in electrochemical CO<sub>2</sub> conversion technologies are reviewed to produce carbon-neutral chemicals and fuels.