



Electrocatalysis and Electro(catalytic)synthesis for Sustainable Processes

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Message from the Guest Editors

The world demands an independence of fossil fuel process and lower global CO₂ emissions. This is particularly important in the chemical industry, as it is one of the larger contributors to global greenhouse emissions where very energy-demanding processes are used to produce commodity and high-value chemicals. In this landscape, electrochemistry and electrosynthesis have become very attractive processes, and in fact, electrolysis might represent a total independence of fossil fuel in the production process of chemicals. The use of electrochemistry offers several advantages. Notably, the most important is the direct use of renewable electricity to enable bond formation. In addition, electrochemical processes enable operation at mild temperatures, lower pressures, and with less waste production. For all these reasons, electrochemistry and electrocatalysis are assuming a fundamental role in the development of more sustainable and environmentally-friendly industrial technologies.

