Topical Collection

Catalytic Conversion and Utilization of Carbon-Based Energy

Message from the Collection Editor

Currently, energy consumption and environmental pollution are becoming increasingly serious, posing severe challenges to the global energy structure and environmental protection. The carbon dioxide emissions generated during the utilization of carbon-based energy sources exacerbate the greenhouse effect and have a profound impact on the global climate. Therefore, the development of efficient and low-pollution new energy conversion technologies, especially catalytic conversion technologies for carbon-based energy, has become a current research hotspot and focus. Research related to the catalytic conversion of carbon-based energy not only involves traditional thermal catalysis, but also covers emerging technologies such as photocatalysis and electrocatalysis. These technologies provide important pathways for achieving sustainable development and carbon neutrality goals by optimizing catalytic processes, improving energy conversion efficiency, and reducing pollutant emissions.

Collection Editor

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