Special Issue

Advances in Solid Oxide Fuel Cells 2022

Message from the Guest Editors

Solid oxide fuel cells (SOFCs) have gained increasing interest in recent years due to their capability of achieving high-efficiency and clean power production. Significant progress has been made in recent decades, bringing SOFCs into their early stage of commercialization. However, the promotion of this technology is still hindered by its high overall cost and quick degradation. The advancements in SOFCs are wide spread, and can be roughly categorized into three aspects: first, advancements in material optimization, including improvements in cathodes, anodes, electrolytes and interconnect materials, with enhanced performance and stability. Second, advancements in studies on the related mechanisms, including both theoretical and experimental investigations into the electrochemical processes related to SOFCs and related research on conduction mechanisms, mainly on newly evolved proton-conducting SOFCs that provide guidance for the first category. Third, manufacturing and processing development concerning the material synthesis methods, fabrication of cells, stack build-up and system configurations that helps bring SOFCs to practical application.

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Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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