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Solid-State Electrochemical Devices: Materials, Technologies and Applications

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Message from the Guest Editors

These programs include the development of new materials, technologies and devices, such as solid oxide fuel cells and electrolytic cells, for the effective usage of hydrogen as a key energy carrier, as well as for pure hydrogen production by high-temperature water electrolysis. Experience shows that the hydrogen energy technologies, particularly solid oxide fuel cells and electrolytic cells, are efficient with alternative types of fuel (alkanes, alcohol, etc.); these devices may be used for the production of syngas using high-temperature electrolysis.

This Special Issue intends to cover the most recent advances in the development, production and application of solid oxide fuel elements, electrolytic cells and SOFC-based devices.

Topics may include, but are not limited to:

- Electrode and electrolyte materials;
- Interconnect materials;
- Sealants;
- SOFC and SOEC design;
- Technologies for material manufacturing and processing;
- Characteristics of SOFCs and SOECs, including long-term tests;
- Successes in the application of SOFCs and SOECs.

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Message from the Editor-in-Chief

Processes (ISSN 2227-9717) provides an advanced forum for process/system-related research in chemistry, biology, material, energy, environment, food, pharmaceutical, manufacturing and allied engineering fields. The journal publishes regular research papers, communications, letters, short notes and reviews. Our aim is to encourage researchers to publish their experimental, theoretical and computational results in as much detail as necessary. There is no restriction on paper length or number of figures and tables.

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