Special Issue

Progress in Solid-Oxide Fuel Cell Technology

Message from the Guest Editor

Alternative methods to generate electricity with high efficiency, minimum greenhouse gases and less reliance on fossil fuels need to be sought to sustain a growing society. Fuel cells have been shown as a potential candidate for various applications, such as stationary and portable devices. This Special Issue discusses the development of solid oxide fuel cell (SOFC) technology, one of many types of fuel cells found in the market. SOFC offers many practical advantages despite the lower open circuit voltage as the expensive precious metals can be replaced by more earth-abundant oxides and it is more tolerant towards carbon monoxide. In addition, fuel cell-combined heat and power applications can achieve even higher efficiency. We invite scientists working in the area of to contribute:

- Material selection and design (cathode, electrolyte, anode, interconnect, sealant)
- Electrochemical, material and mechanical characterization
- Stack configuration and design
- Transport (ion, electron, mass transport)
- Reliability and degradation
- Modelling
- Application of solid oxide fuel cells

Keyword: solid oxide fuel cell, electrochemistry, ion and electron transport

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Deadline for manuscript submissions

closed (31 December 2018)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/15982

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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