

Special Issue

Catalysis in an Electrochemical Cell: Solid Oxide Fuel Cells, Electrolyzers and Electrochemical Sensors

Message from the Guest Editor

This Special Issue deals with a rapid dissemination of the most recent results concerning catalysis for solid oxide electrochemical cells operating at intermediate temperatures. These electrochemical cells have the potentiality to solve several issues in various sectors, such as monitoring of gases (i.e., industries, automobiles, etc.), the production of energy (a combination of thermal and electrical energy), storage and production of fuels from wastes. The topics of this Special Issue will address the most recent achievements in electrode materials for future applications of these technologies, able to mitigate the environmental impact and the existing hurdles of conventional technologies. Therefore, the topics of this Special Issue include, but are not limited to, the following aspects:

- Detailed thermodynamics;
- Detailed physical–chemical, electrochemical, and/or mechanical properties;
- Fundamental analysis and modelling;
- Analysis of requirements and cost estimate for large-scale production and operation;
- Analysis of the environment impact.

Guest Editor

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closed (31 July 2023)



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Editor-in-Chief

Prof. Dr. Keith Hohn
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Environmental Science)

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provided to authors approximately 12.9 days after
submission; acceptance to publication is undertaken in 2.8
days (median values for papers published in this journal in
the first half of 2024).