

Special Issue

Hydrogen and Fuel Cell Technology, Modelling and Simulation

Message from the Guest Editor

Nowadays, fuel cell devices are receiving increased attention as clean energy sources for various practical applications—from small electronic devices to vehicles. Effective design and development of the various components of a fuel cell require an in-depth understanding of the influence of different design variables on the performance of these components. Fuel cell operation involves simultaneous and multiphysics complex processes, and due to the highly reactive, compact nature of the fuel cell, it is challenging to conduct in-situ measurements of critical parameters, such as temperature, pressure and potential gradients, or species concentration. Various computational and modelling techniques, which allow systematic simulation, design, and optimization of fuel cell systems, are valuable tools that provide insight into the phenomena occurring within the cell, reducing the development cycles, and enabling to build the next generation of fuel cells.

Thus, this Special Issue focuses on the recent developments and applications of modelling, simulation, and optimisation tools for the design and development of different types of fuel cell devices.

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2021)



Energies

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Impact Factor 3.2
CiteScore 7.3



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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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