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Entropy and Exergy Analysis in Hydrogen Energy and Fuel Cell Systems

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Deadline for manuscript
submissions:

closed (31 March 2024)

Message from the Guest Editor

This Special Issue focuses on the theoretical aspects of entropy generation, exergy analysis, thermodynamics, and heat transfer analysis in relation to hydrogen energy and fuel cell systems. The study of hydrogen energy mainly includes hydrogen production, storage, transmission, utilization, enabling technologies, environmental impact, and the economic and international aspects of hydrogen and hydrogen carriers. The utilization of hydrogen energy includes combustion, photochemical, fuel cells and nuclear conversion of hydrogen, hydrogen isotopes and hydrogen carriers to thermal, mechanical and electrical energies, and its applications. Research on fuel cell systems, especially solid oxide fuel cells (SOFCs) and proton exchange membrane fuel cells (PEMFCs), is also welcome in this Special Issue.

The relationship between the properties of working fluids, operation conditions, performance and relevant phase transition, heat and mass transfer, flow field, system control, isentropic efficiency, and thermodynamic entropy and exergy analysis of systems all fall within the scope of this Special Issue.



mdpi.com/si/174941

Special Issue



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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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