Special Issue

Advancements in Fuel Cell Technologies

Message from the Guest Editors

Hydrogen from renewable energy is emerging as a key clean energy carrier in the global transition to decarbonization. Among hydrogen technologies, proton exchange membrane fuel cells (PEMFCs) offer high efficiency, fast response, and zero emissions, making them promising for both automotive and stationary power applications. Despite their advantages over internal combustion engines and batteries, PEMFCs still face challenges such as limited durability, system complexity, and high costs.

This Special Issue aims to explore recent advances and ongoing challenges in PEMFC development, including system design, water and heat management, novel membrane electrode assemblies, improved bipolar plate structures, and diagnostic and control technologies. We welcome original research and reviews that contribute to improving the performance, reliability, and commercialization potential of PEMFC systems.

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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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