Special Issue

Advanced Technologies in Proton Exchange Membrane Fuel Cells and Electrolyzers

Message from the Guest Editors

Fuel cells and electrolyzers are promising solutions to deal with the intermittency problems associated with renewable energy sources. Electrolyzers can use surplus renewable electricity to produce hydrogen, and fuel cells can use the stored hydrogen to produce electricity. Proton exchange membrane technology is particularly interesting for RES due to its great dynamic response and the ability to be operated in a reversible way. Unitized regenerative fuel cells arise from this reversibility, consisting in an electrolyzer and fuel cells in the same device that can alternatively store or generate energy. Topics of interest for publication include but are not limited to:

- Catalyst development for PEM fuel cells, electrolyzers, and URFCs;
- Developments in membrane, bipolar plates, gas diffusion and porous transport layers;
- Performance optimization of PEM fuel cells, electrolyzers, and URFCs;
- Durability of PEM fuel cells, electrolyzers, and URFCs;
- Modelling and simulation of PEM fuel cells, electrolyzers, and URFCs;
- Characterization and diagnosis methods for PEM fuel cells, electrolyzers, and URFCs;
- PEM fuel cells, electrolyzers, and URFC system integration.

Guest Editors

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Message from the Editor-in-Chief

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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