Special Issue

Evaluation of Regenerative Fuel Cells and Redox Flow Batteries

Message from the Guest Editor

In the current digital age, the demand for electricity is often instantaneous and unpredictable. On the other hand, our supply of electricity comes from thermo-chemical-mechanical processes that have long response times. This mismatch results in a poor quality electricity supply with significant voltage variations and surges. Renewable energy sources like wind and solar could supply a significant amount of electrical energy, and their costs are economically competitive with those from carbon-based sources. However, wind and solar are intermittent sources with high variability and unpredictable availability. Regenerative fuel cells and redox flow batteries could be an important component of the energy storage technology portfolio. Single-phase gas systems offer design simplicity while two-phase gas-liquid systems allow ease of separation of cross-over species. The objective of this special issue is to identify the challenges, opportunities, and progress in regenerative fuel cells and to create a collection of the latest work in this area.

Guest Editor

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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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