Special Issue

Heat Transfer in Nuclear Reactor Steam Generators and Heat Exchangers

Message from the Guest Editors

In response to the unprecedented surge in electricity demand driven by the expansion of data centers and artificial intelligence, enormous global efforts are being undertaken. However, securing energy sources that act as alternatives to conventional fossil fuel power plants, which emit large amounts of greenhouse gases, remains challenging. As a result, nuclear energy is receiving significant attention due to its high energy density and zero greenhouse gas emissions. This Special Issue aims to present various types of steam generators and heat exchangers applicable to both water-cooled and non-water-cooled reactors. Topics of interest for publication include, but are not limited to, the following:

- Applicability of technologies to water-cooled and non-water-cooled reactors, whether they be conventional reactors or SMRs;
- Design and manufacture;
- Thermal–hydraulic analysis;
- Single- and two-phase heat exchange;
- Severe accident condition;
- Optimization;
- Advanced modeling approaches;
- Operation and maintenance.

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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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