

Special Issue

Design and Experimental Study of Organic Rankine Cycle System

Message from the Guest Editors

The global push for decarbonization has driven significant innovation across power generation systems and industrial and manufacturing processes. As the urgency of reducing greenhouse gas emissions rises, transitioning energy generation to cleaner and more sustainable practices becomes a necessity. This shift requires improving energy efficiency and integrating renewable energy sources into energy systems. Also, there has been growing research interest in the recovery and valorisation of waste heat. One promising technology in this area is the organic Rankine cycle (ORC), which thermodynamically converts low-grade heat sources (such as waste heat from industrial processes, geothermal energy, solar thermal energy, biomass, and so on) into electricity. The topics of interest for this Special Issue include, but are not limited to, the following:

- The ORC with two-phase expansion systems (TFC, PE-ORC, and OFC);
- The ORC directly and/or indirectly integrated with TES;
- The ORC for industrial applications;
- The ORC for cold energy utilization;
- ORC components: turbine/volumetric expanders, heat exchangers, and pump designs;
- Partial-evaporation heat exchangers for the ORC;

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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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