Special Issue

Application of Absorption Cycles in Renewable Energy

Message from the Guest Editors

Cooling and air-conditioning systems are significant energy consumers, especially in regions with hot or mixed climates. Conventional systems, relying on energy-intensive compression technologies, contribute to high energy consumption and environmental degradation due to greenhouse gas emissions from refrigerants. Absorption cycles, particularly when integrated with renewable energy sources such as solar energy, present a sustainable alternative. By utilizing thermal energy instead of electricity, absorption cycles are widely used in applications providing cooling, dehumidification, and thermal energy storage, which are promising solutions to achieve carbon peaking and carbon neutrality goals in the cooling and air-conditioning field. This Special Issue will focus on the latest advancements in the application of absorption cycles for renewable energy-driven solutions. We invite submissions that explore new materials, technologies, and system designs aimed at improving the efficiency and effectiveness of absorption cycles.

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