

Special Issue

Recent Advances in Solar Thermal Collectors: Design, Modeling, and Performance Optimization

Message from the Guest Editor

This Special Issue focuses on recent developments in the design, modeling, and performance optimization of solar thermal collectors—including flat-plate glass collectors, evacuated tube systems, and concentrating collectors. Particular attention is given to advancements in materials, optical and thermal simulation, dynamic orientation and tracking strategies, and integration with thermal storage. Contributions addressing performance analysis under real-world operating conditions, experimental validation, and techno-economic assessments are also encouraged. This Special Issue aims to bring together cutting-edge research and innovative engineering solutions that enhance the performance and applicability of solar thermal collectors in various climatic and usage contexts. We invite researchers and practitioners to submit original research articles, review papers, and case studies contributing to the advancement of solar thermal technologies and their integration into modern energy systems.

Guest Editor

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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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