Special Issue

Innovations in Solar Energy Utilization: The Promise of Nanofluid Applications

Message from the Guest Editor

This Special Issue explores innovative research and advancements in the use of nanofluids to enhance the efficiency and performance of solar energy technologies. This Special Issue focuses on the development and optimization of nanofluids as heat transfer fluids, aiming to improve thermal conductivity, energy absorption, and overall system efficiency in concentrating solar power (CSP) plants, photovoltaic (PV) systems, and hybrid solar–thermal systems. Topics include the synthesis and characterization of advanced nanofluids, stability enhancement techniques, and their impact on thermal and optical properties. The integration of nanotechnology in solar energy systems is discussed, with particular emphasis on overcoming current limitations in scalability, cost-effectiveness, and environmental impact. Contributions also highlight experimental and computational approaches for evaluating nanofluids' performance, as well as their real-world applications in renewable energy systems. By addressing key challenges and exploring new opportunities, this Special Issue aims to foster interdisciplinary collaboration and accelerate the adoption of nanofluids in sustainable energy solutions.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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