# **Special Issue**

# Thermal Challenges in Renewable Energy: Nanofluidic Solutions

### Message from the Guest Editors

We invite researchers from academia, industry, and research institutions to submit their original research, review articles, and perspectives on various aspects of nanofluids. Potential topics of interest for this Special Issue include, but are not limited to:

- Machine learning techniques related to potential applications of nanofluids in engineering.
- Analytical and numerical models for the applications of nanofluids.
- The application of novel nanofluids to renewable energy engineering.
- Thermo-hydraulics of nanofluids in renewable energy technologies.
- Techno-economics of nanofluids in renewable energy systems.
- Fouling and clustering of nanoparticles in renewable energy systems.

Further, we welcome contributions on micro-, meso-, and macro-scale modeling approaches to heat transfer in nanofluids and those on novel numerical, experimental, and theoretical techniques pertinent to nanofluids. We look forward to receiving your contributions. See more information in https://www.mdpi.com/si/224193. Dr. M. M. Bhatti

## **Guest Editors**

Dr. Muhammad Mubashir Bhatti

Prof. Dr. Kambiz Vafai

Dr. Sara I. Abdelsalam

#### Deadline for manuscript submissions

31 August 2025



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# About the Journal

## Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometerscale dimensions, which we call "nanomaterials". These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, Nanomaterials, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

### Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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