

Solar Energy and Advanced Heat Transfer https://www.sciltp.com/journals/seaht



Editorial

Editorial for the First Issue of Solar Energy and Advanced Heat Transfer (SEAHT)

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1. Introduction

I welcome with high regard the first issue of *Solar Energy and Advanced Heat Transfer* (*SEAHT*), a quarterly journal by Scilight Press. The global energy landscape is passing through an unprecedented transformation spurred by compelling needs to decarbonize economies, improve energy efficiency, and ensure universal access to affordable and reliable energy. In this journey, solar energy along with advanced heat transfer technologies stand at the core, underpinning the performance, reliability, and economic viability of next-generation energy systems.

During the past ten years, research activities related to solar thermal systems, photovoltaics, thermal energy storage, nanofluids, and intelligent energy management have grown rapidly. Unfortunately, much of that work has been scattered among journals whose scope is broader or only tangentially related. *SEAHT* is being launched to offer a high-quality venue for researchers and practitioners working at the intersection of solar energy utilization and heat transfer science and engineering.

This journal is devoted to publishing not only the latest scientific breakthroughs, but also pragmatic innovations that may be translated into practical applications. The journal integrates contributions in mechanical, chemical, civil, and energy engineering with materials science, data science, and environmental science to nurture a collaborative community that develops solar-driven and thermally intensive technologies toward a sustainable future.

2. Scope of the Journal

SEAHT covers a broad spectrum of topics addressing both fundamental and applied aspects of solar energy and heat transfer. We welcome original research articles, comprehensive reviews, and case studies in areas including, but not limited to:

- Solar thermal energy systems and innovative solar collectors
- Integration, modeling, and performance analysis of photovoltaic systems
- Advanced heat transfer mechanisms: conduction, convection, radiation, and phase change
- Design, optimization, and novel configurations of heat exchangers
- Thermal energy storage materials, system design, and management strategies
- Hybrid and passive solar heating and cooling technologies for buildings and industry
- Solar desalination and solar-driven industrial processes
- Nanofluids, hybrid nanofluids, and smart working fluids in thermal systems
- Computational and experimental investigations in solar and thermal sciences
- AI, machine learning, and digital twins for design, control, and optimization of thermal systems
- Sustainability-oriented studies, including lifecycle assessment and techno-economic evaluation of solar thermal technologies

We particularly encourage submissions that demonstrate:

- Strong coupling between experimental and numerical approaches
- System-level thinking, from materials and components to devices and integrated plants



Clear links between scientific advances and potential industrial or societal impact

By bringing these strands together, *SEAHT* seeks to serve as a reference point for the community, helping to identify emerging directions and accelerate progress in both research and deployment.

3. For Authors, Reviewers, and Editors

In particular, the success of *SEAHT* relies on the active participation and engagement of its authors, reviewers, and editorial board members. As Editor-in-Chief, I pledge to pursue high scientific standards, transparency, and fairness for all editorial and peer-review processes.

What We Offer Our Authors:

- A constructive and timely peer-review process
- A platform that values both fundamental discoveries and application-oriented innovations
- Global visibility through open-access publishing

We would like to extend our deepest gratitude to our reviewers and editors. Their expertise, time, and effort are crucial in the peer-review process and in maintaining the quality of the journal, as well as encouraging authors to improve.

We also encourage proposals for Special Issues on timely and emerging topics, including but not limited to advanced solar collectors, new concepts in thermal storage, AI-assisted thermal system design, and solar-powered industrial decarbonization. These thematic collections can highlight fast-developing areas and stimulate new collaborations within the community of *SEAHT*.

4. Outlook

Looking ahead, SEAHT is a vibrant platform for the exchange of ideas, joint efforts, and the definition of novel avenues of research. As such, its aim goes beyond publishing only outstanding-quality papers but also establishing links among groups that could otherwise remain isolated, such as researchers focused on microscale heat transfer, engineers responsible for the actual design of large-scale solar power plants, and analysts carrying out lifecycle and techno-economic assessments.

I invite researchers, engineers, and practitioners from academia, industry, and research institutions to regard *SEAHT* as the venue for their best work in the subjects of *Solar Energy and Advanced Heat Transfer*. In publishing your knowledge, results, and views, you will help build a journal that reflects the diversity, ingenuity, and vision characteristic of the field at large.

On behalf of the Editorial Board and the publishing team at Scilight Press, I would like to thank all the authors and reviewers contributing to this first issue and to the continued development of *SEAHT*. I am sure that with the common effort, *SEAHT* will become one of the forefront journals in its field and will make valuable contributions toward facilitating the transition of human societies to clean and efficient energy worldwide.

We look forward to your ongoing interest and involvement with SEAHT.

Conflicts of Interest

The author declares no conflict of interest.

Use of AI and AI-Assisted Technologies

No AI tools were utilized for this paper.