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Editorial

The Importance of Thermal Science and Applications

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It is my honor and pleasure, as founding Editor-in-Chief, to introduce the journal *Thermal Science and Applications*. This journal intends to become a world-leading publication dedicated to impactful, high-quality, original papers that contribute to the theory, methodology, practice and application of thermal science. This is an important field that underpins many areas of science and engineering.

Recent advances in thermal science have contributed greatly to the successful development, design and implementation of numerous complex scientific and engineering systems, including many in industries of all types, transportation devices, energy utilities, and residential, commercial and institutional facilities.

Thermal Science and Applications aims to deepen fundamental understanding of thermal sciences and related phenomena across all scales while driving technological innovation in thermal engineering applications. This includes pioneering research to deepen understanding of heat transfer, thermal management, thermal energy conversion and storage, and sustainable thermal systems with low environmental impact. Beyond fundamental research, this journal actively promotes the translation of scientific discoveries into practical engineering applications, serving as a nexus for collaboration between academic researchers and industry practitioners.

The scope of *Thermal Science and Applications* is by nature of the field broad. It encompasses core theories of thermal science and their innovative applications across such domains as fundamental thermal science, energy technologies, environmental and urban thermal engineering, thermal properties of materials, industrial and electronic thermal management, biomedical and aerospace thermal applications, and emerging technologies.

The fundamental topics covered by the journal include heat and mass transfer, thermal management, thermodynamics, combustion, energy conversion, and thermofluids science and engineering, thus often necessitating an interdisciplinary view. Correspondingly, the approaches and methods of papers in *Thermal Science and Applications* include those based on experimentation, computation, modeling and simulation, technical and technoeconomic analysis, efficiency assessment, integration, design and optimization.

The related applications areas of relevance to the journal are also broad, and include conventional and novel energy systems, including renewable energy and thermal power generation; heating, ventilating, refrigeration and air conditioning devices; the thermal management of devices and systems like batteries and vehicles; industrial systems and processes, including manufacturing, production, transportation; chemical and petrochemical systems and processes; biological systems; as well as many others.

I can personally attest to the importance thermal science to the areas mentioned above through books I have co-authored. Many of these have been on technology topics such as battery energy storage [1], desalination [2], thermal energy storage [3], heating and cooling [4], district energy [5], cogeneration [5], heating, refrigerating and air conditioning [6], and energy conversion [2,4]. I can further attest to the importance of thermal science by way of books I have co-authored on methodology-related topics. These include books on exergy analysis [7], process intensification [8], optimization [5,9] and energy sustainability [2,4,7,8].

Overall, the journal seeks to provide a resource to bring together and disseminate recent and innovative knowledge and significant advances on thermal science, allowing for progress in the understanding and application of thermal science across a broad range of scientific and engineering disciplines.

To help in its mission, the journal has implemented a rigorous review process, and established an Editorial Board of noteworthy researchers, to ensure high standards are met.

With sincere thanks, I acknowledge the tremendous efforts of authors in preparing impactful and high-quality articles, and of reviewers and Editorial Board members for their noteworthy and important contributions. The highly supportive assistance of the publisher Scilight Press and its staff, in establishing a foundation that supports the success of the journal, is gratefully noted.

This inaugural issue of *Thermal Science and Applications* provides an indication of the important research and progress being made in the area of thermal science and of relevant applications. Much more will certainly be forthcoming in future issues, allowing the journal to have a significant impact in developing and implementing innovative ideas in thermal science and its applications that benefit society and humanity.

Conflicts of Interest

The author declares no conflict of interest.

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