



an Open Access Journal by MDPI

# Advancements in Thermodynamics and Type-B Energy Processes: Applications and Implications

Guest Editors:

### Prof. Dr. James Weifu Lee

Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA 23529, USA

#### Prof. Dr. Daniel P. Sheehan

Department of Physics, University of San Diego, Alcala Park, San Diego, CA 5998, USA

Deadline for manuscript submissions: **24 October 2024** 

### **Message from the Guest Editors**

A promising vein of advanced energy research involves what are called Type-B energy processes. Type-B processes, in contrast, offer radically new possibilities by extending standard thermodynamics in new ways, particularly with respect to the second law. Type-B processes can convert ambient thermal energy into useful work. They are inherent in such studied systems as protonic thermotrophic biochemistry, epicatalysis, and supradegeneracy. All known Type-B systems involve a thermodynamic asymmetry by which energy accumulates at system boundaries (superseding the traditional thermodynamic limit) and which is then harvested by an independent process. The possibilities for Type-B processes may extend far beyond those currently under study.

With this in mind, we are pleased to solicit full-length articles, short communications, perspectives, and review articles pertaining to frontline energy research involving Type-B processes. Theory, experiment, and numerical simulations are also welcome.

**Special**sue



mdpi.com/si/203090





an Open Access Journal by MDPI

# **Editor-in-Chief**

#### Prof. Dr. Enrico Sciubba

Department of Mechanical and Aerospace Engineering, University of Roma Sapienza, Via Eudossiana 18, 00184 Roma, Italy

### 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.

# **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions. **High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Engineering (miscellaneous))

## **Contact Us**

*Energies* Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/energies energies@mdpi.com X@energies\_mdpi