

Special Issue

Advances in Gas Turbine Technology: Efficiency, Performance, and Sustainability

Message from the Guest Editors

The global shift toward net-zero power and propulsion has driven the development of safer, cleaner, and more efficient gas turbines. With the rapid advancement of artificial intelligence, data-driven methods now enable our community to push gas turbine performance further, achieving greater stability, efficiency, and sustainability. This Special Issue presents the most recent advancements in gas turbine technology, including the fundamental mechanisms of heat and fluid flow, design philosophies, design methods, simulation methods, control methods, and the performance optimization of gas turbine compressors, combustors, and turbines. Topics of interest for publication include, but are not limited to, the following:

- Gas turbine cycle innovation;
- Turbomachinery aerothermodynamics;
- Combustion science and technology;
- Computational Fluid Dynamics (CFD) for gas turbine and its components;
- Reduced-order simulation for gas turbine and its components;
- Data-driven methods for gas turbine and its components;
- Design optimization of gas turbine and its components;
- Measurement techniques for gas turbine and its components;
- Mechanism of heat and fluid flow in gas turbine and its components.

Guest Editors

Dr. Xiao He
Dr. Dong Yang
Dr. Shaopeng Lu

Deadline for manuscript submissions

5 October 2026



Energies

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Impact Factor 3.2
CiteScore 7.3



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Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

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