

Special Issue

Hydrogen Fuel Combustion in Energy Systems

Message from the Guest Editors

This Special Issue will present and disseminate the most recent advances related to the fundamentals, design, modelling, applications, control, optimization, and emission mitigation of hydrogen fuel combustion across energy and propulsion systems. Topics of interest include the following:

- Fundamental studies of hydrogen combustion kinetics and flame dynamics
- Hydrogen combustion in gas turbines, reciprocating engines, and industrial systems
- NO_x formation, suppression, and advanced emission mitigation strategies
- Hydrogen–air mixing, ignition, and flame stabilization techniques
- Combustion modelling, CFD simulation, and digital twin approaches
- Hybrid hydrogen energy systems combining combustion and fuel cells
- Materials, durability, and compatibility in hydrogen combustion environments
- Hydrogen storage, delivery, and safety in combustion applications
- Novel burner, injector, and chamber design for hydrogen fuels
- Hydrogen combustion in aviation, marine, and heavy-duty transport
- Thermal management, efficiency optimization, and waste heat recovery
- Emerging technologies: ammonia/hydrogen blends, synthetic fuels, and co-combustion

Guest Editors

Dr. Rukshan Navaratne

College of Physical Sciences and Engineering, Cardiff University,
Cardiff CF24 3AA, UK

Dr. Mohammad Alnajideen

College of Physical Sciences and Engineering, Cardiff University,
Cardiff CF24 3AA, UK

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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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About the Journal

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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