Special Issue

Jet Fuel Combustion

Message from the Guest Editor

Jet fuel, also known as aviation turbine fuel or avtur, is a complex mixture of hydrocarbon compounds derived from crude oil and natural gas. The combustion process of the jet is highly efficient and emits few emissions. However, in 2022, aviation accounted for 2% of global energy-related CO2 emissions, having grown faster. It is critical to understand their combustion properties in order to evaluate the performance of jet fuels and, ultimately, to achieve clean combustion and reduce emissions. The Special Issue aims to demonstrate the combustion characteristics of jet fuels; new combustor design and development for improved engine performance; mitigating carbon emissions from gas turbine engines; diagnostic techniques for a better understanding of the combustion process; and alternative jet fuels. Including but not limited to:

- Chemical kinetic models for jet fuels;
- Ignition, extinction, and flame propagation of jet fuels;
- Combustion efficiency and exhaust emissions;
- Evaporation, combustion, and atomization of jet fuel droplets;
- Spray combustion characteristics and optical diagnostics;
- Engine performance with regard to ignition, altitude relight, and blowout limits.

Guest Editor

Prof. Dr. Wei-Cheng Wang
Department of Aeronautics and Astronautics, National Cheng Kung University, Tainan 70101, Taiwan

Deadline for manuscript submissions

28 February 2026

Fire

an Open Access Journal by MDPI

Impact Factor 2.7
CiteScore 3.9

mdpi.com/si/189768

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

mdpi.com/journal/fire

Fire

an Open Access Journal by MDPI

Impact Factor 2.7
CiteScore 3.9

mdpi.com/journal/fire

About the Journal

Message from the Editor-in-Chief

Fire is an international open-access journal about the science, policy, and technology of fires and how they interact with communities and the environment. *Fire* seeks to provide a forum to help the fire science community convey how we can live with fire in a changing world. *Fire* seeks submissions from interdisciplinary studies that take a pyrogeography perspective of fires occurring in natural, cultural, and industrial landscapes and how they interact with communities in the science-policy interface. *Fire*'s Editorial Board are widely recognized international leaders. The journal emphasizes quality and innovation and has a rigorous peer-review process. I strongly recommend *Fire* for the rapid publication of your innovative research publications and case studies.

Editor-in-Chief

Dr. Grant Williamson
School of Biological Sciences, University of Tasmania, Private Bag 55, Hobart, TAS 7001, Australia

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), AGRIS, PubAg, and other databases.

Journal Rank:

JCR - Q1 (Forestry) / CiteScore - Q1 (Forestry)