Special Issue

Low Carbon Fuel Combustion and Pollutant Control

Message from the Guest Editors

The urgent need to reduce carbon emissions & mitigate air pollution has driven advancements in low-carbon fuel combustion technologies. This SI includes developing & optimizing alternative low-carbon fuels & exploring novel combustion strategies & stabilization mechanisms that improve energy conversion efficiency while minimizing emissions. Besides, pollutant formation mechanisms & advanced control technologies, the integration of pollution control devices, catalytic & non-catalytic reduction techniques & hybrid approaches that combine combustion optimization with post-treatment methods are welcomed. It includes, but is not limited to:

- Low-carbon fuels;
- Advanced combustion techniques;
- Combustion processes in its applications;
- Pollutant formation mechanisms & strategies;
- ML & AI approaches for combustion analysis & emission prediction;
- Integration of pollution control devices & hybrid combustion strategies;
- Numerical simulations & experimental studies on combustion processes;
- Thermal & chemical stability of alternative fuels;
- Low-temperature combustion & innovative ignition strategies;
- Energy system integration.

Guest Editors

Dr. Xiao Yang

School of Low-Carbon Energy and Power Engineering, China University of Mining and Technology, Xuzhou, China

Dr. Xuanqi Liu

School of Low-Carbon Energy and Power Engineering, China University of Mining and Technology, Xuzhou, China

Deadline for manuscript submissions

30 November 2025

Fire

an Open Access Journal by MDPI

Impact Factor 2.7
CiteScore 3.9

mdpi.com/si/234299

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)

MDPI