# **Special Issue**

# Progress in Advanced Combustion and Reactive Flows Related to Clean Technologies and Alternative Fuels

## Message from the Guest Editors

With increasing environmental concerns and the need to reduce emissions, the field of combustion science is evolving rapidly. However, to fully realize the potential of these fuels, a deeper understanding of their combustion kinetics and mechanisms is required. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Clean combustion technologies (chemical looping combustion, oxy-fuel combustion, flameless combustion, and other low-emission combustion techniques);
- Combustor design and optimization (burner configurations, thermal management strategies, and optimization for various fuel types, from conventional to alternative fuels);
- Computational fluid dynamics (CFD) simulations to model turbulent combustion and improve the design of clean combustion systems (large eddy simulation, direct numerical simulation, and Reynolds-averaged Navier-Stokes approaches, etc.);
- Biofuels and alternative fuel combustion (biofuels, hydrogen, ammonia, and other renewable energy carriers);
- Combustion kinetic and mechanisms in clean combustion and alternative fuel systems.

## **Guest Editors**

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#### Deadline for manuscript submissions

30 September 2026



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# 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

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