Special Issue

Buoyancy Controlled Fire Behaviors Under Special Environments

Message from the Guest Editors

We are delighted to extend an invitation for submissions to this Special Issue of Fire, aiming to attract a range of topics relating to fire and combustion. Fire behavior is dominated by buoyant flow. In real scenarios, fires may face strong outdoor winds, low pressure on plateaus, or even special gravity environments in spacecraft. In these special environments, the buoyancy effect is substantially affected, resulting in changes in the processes of thermal mass transport, fluid mechanics, chemical reaction, etc., posing challenges to the prediction, prevention, and control of fires. Consequently, systematic further research on buoyancy-controlled fires under special environments is vital.

This Special Issue serves as a valuable platform for advancing understanding of the fundamentals of buoyancy-controlled fire behaviors under special environments. Original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Combustion behaviors of pool fires
- Flame spread of cable/wire fires
- Characteristics of spill fires
- Ignition characteristics and flame extinction boundaries

We look forward to receiving your contributions.

Guest Editors

Dr. Yuhang Chen

Dr. Yuxuan Ma

Dr. Tong Xu

Dr. Shangqing Tao

Deadline for manuscript submissions

closed (31 January 2026)

Fire

an Open Access Journal by MDPI

Impact Factor 2.7
CiteScore 3.9

mdpi.com/si/242483

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