Special Issue

Advances in Pool Fire Dynamics

Message from the Guest Editors

The understanding of pool fire dynamics presents problems of both fundamental and practical significance. Pool fires represent a significant element of the risk associated with major accidents in industrial applications, particularly for oil extraction and refining that may have large liquid hydrocarbon inventories. However, further efforts are needed to accurately assess the thermal hazards of pool fire for practical situations as well as safety in energy utilization. This Special Issue aims to present state-of-the-art research findings in the field of pool fire dynamics. Research areas may include but are not limited to the following:

- Burning rate and heat feedback mechanisms
- The structure of pool fires, addressing aspects of the thermal, velocity and chemical species fields
- Heat and mass transfer processes
- Radiative exchange and optical properties
- Wind effects on pool fires
- Ambient condition effects
- Pool fire dynamics in specialized spaces
- Risk assessment of pool fires under various conditions
- In situ burning
- Boilover phenomena
- Numerical simulations of pool fires
- Prediction of pool fire burning with AI technology

Look forward to receiving your contributions.

Guest Editors

Prof. Dr. Depeng Kong

Dr. Anthony Hamins

Dr. Chen Jian

Deadline for manuscript submissions

closed (28 February 2025)

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

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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
School of Biological Sciences, University of Tasmania, Private Bag 55, Hobart, TAS 7001, Australia

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