

Special Issue

Assessment and Mitigation of Hydrogen-Fuelled Fire Hazards

Message from the Guest Editor

The global transition toward low-carbon energy systems has accelerated the adoption of hydrogen as a clean and versatile fuel. While hydrogen offers significant environmental benefits, its unique physicochemical properties, such as low ignition energy, wide flammability limits, high diffusivity, and invisible flames, introduce distinct fire and explosion hazards that require rigorous scientific investigation. This Special Issue aims to advance the understanding of hydrogen-fuelled fire hazards and promote the development of effective mitigation strategies. Within the scope of *Fire*, it seeks contributions that deepen knowledge of ignition mechanisms, flame behaviour, dispersion dynamics, material response, and fire suppression challenges associated with hydrogen systems. Both experimental and computational studies are encouraged, including CFD modelling, risk assessment frameworks, safety engineering approaches, and innovative detection or protection technologies.

Guest Editor

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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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