Special Issue

Advanced Fire Extinguishing: Integrating Ultrafine Powders, Flame Retardants and System Design

Message from the Guest Editors

Fire hazards remain a critical challenge across various industries. Effective fire extinguishing requires a comprehensive understanding of material science, combustion dynamics, and engineering system integration. Combining cutting-edge ultrafine powders with novel flame-retardant formulations and intelligent system designs can significantly improve fire suppression performance while minimizing environmental impact. This Special Issue aims to foster knowledge exchange and innovation in the fields of material development, fire retardant chemistry, system engineering, and practical applications. Research areas may include (but are not limited to) the following:

- Synthesis and characterization of ultrafine powders for fire suppression
- Development and evaluation of novel flame retardant materials
- Design and optimization of fire extinguishing systems integrating powders and retardants
- Mechanisms of fire suppression at the micro- and macro-scale
- Environmental and safety assessments of advanced fire extinguishing agents
- Case studies and practical applications in industry, aerospace, and urban fire safety

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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

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