Special Issue

Advances in Metal Combustion

Message from the Guest Editor

Recent advances in diagnostics, novel experimentation, and modeling are shedding new light on ignition kinetics, flame propagation, and particle-scale phenomena in metal combustion. Understanding these complex processes is essential for enabling the safe and efficient utilization of metal-based energy systems across diverse applications—from aerospace propulsion to clean energy storage and delivery.

Both experimental and theoretical studies are encouraged, particularly those that contribute to a fundamental understanding of metal combustion or propose innovative technologies for their application in energy and propulsion systems. It includes but is not limited to the following:

Ignition and burning dynamics of metal & alloy particles;
Condensed-phase & vapor-phase combustion kinetics of metals;
Optical diagnostics & experimental techniques for metal combustion;
Modeling & simulation of metal particle ignition & combustion;
Flame propagation & explosion of dispersed metal particle clouds;
Novel concepts of metal combustion;
Applications in propulsion, pyrotechnics, and metal-based energy carriers;
Recycling & regeneration of metal fuels in energy cycles.

Guest Editor

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Deadline for manuscript submissions

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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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