Special Issue

Advances in Combustion Modeling and Numerical Simulations for Clean Energy

Message from the Guest Editors

Amid the global drive for energy transition and carbon neutrality, combustion science is pivotal to clean energy solutions; however, traditional combustion suffers from high pollutant emissions and low efficiency. Mathematical modeling and numerical simulation are both key to addressing these challenges, serving as core tools that decipher complex combustion mechanisms and optimize system performance. This Special Issue, focusing on mathematical modeling and numerical simulation of low-carbon fuels (e.g., hydrogen and ammonia) and combustion, including chemical kinetics, flame propagation, pollutant formation, industrial system optimization, safety, and so on, aims to gather cutting-edge research bridging theory and practice, fostering knowledge exchange to accelerate low-carbon technologies. Full computational and simulation details must be provided to ensure the reproducibility of results. We invite global researchers to submit original papers that contribute to advancing sustainable clean energy through state-of-the-art research into combustion science.

Guest Editors

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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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