Special Issue

Sustainable Combustion: From Fundamental Research to Low-Carbon Applications

Message from the Guest Editors

As the world pushes for carbon neutrality and sustainable energy, combustion science is transforming dramatically. Though combustion will remain key to global energy conversion, curbing CO_2 and pollutants demands a shift from fossil fuels to cleaner, more efficient alternatives. This transition depends on breakthroughs in understanding combustion to enable next-generation low-carbon technologies. This Special Issue aims to gather and showcase the latest state-of-the-art advancements that bridge fundamental science with practical, low-carbon solutions, enabling the design and optimization of sustainable energy systems. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Combustion chemical kinetics;
- Combustion of low-carbon or zero-carbon fuels;
- Advanced or novel combustion technologies;
- Flame instability and burner design;
- Radiative heat transfer;
- Combustion pollutant control technologies;
- Carbon capture technologies;
- Multiple pool fires;
- Computational fluid dynamics;
- Experimental study.

Guest Editors

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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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