Special Issue

Low Carbon Fuel Combustion and Pollutant Control

Message from the Guest Editors

The urgent need to reduce carbon emissions & mitigate air pollution has driven advancements in low-carbon fuel combustion technologies. This SI includes developing & optimizing alternative low-carbon fuels & exploring novel combustion strategies & stabilization mechanisms that improve energy conversion efficiency while minimizing emissions. Besides, pollutant formation mechanisms & advanced control technologies, the integration of pollution control devices, catalytic & non-catalytic reduction techniques & hybrid approaches that combine combustion optimization with post-treatment methods are welcomed. It includes, but is not limited to:

- Low-carbon fuels;
- Advanced combustion techniques;
- Combustion processes in its applications;
- Pollutant formation mechanisms & strategies;
- ML & AI approaches for combustion analysis & emission prediction;
- Integration of pollution control devices & hybrid combustion strategies;
- Numerical simulations & experimental studies on combustion processes;
- Thermal & chemical stability of alternative fuels;
- Low-temperature combustion & innovative ignition strategies;
- Energy system integration.

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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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