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Advanced Research in Combustion Energy: Optimization, Applications, and Analysis

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Message from the Guest Editor

Dear Colleagues,

Advanced research on combustion energy is vital for taking full advantage of recent breakthroughs in electrification, including advanced energy storage technologies and renewable electricity generation, and advanced fuels, including hydrogen, ammonia, and biofuels. This Special Issue presents state-of-the-art research and innovation in combustion energy, from fundamental analysis and optimization to practical applications.

One focus of this Special Issue is zero- and low-carbon fuels and related carbon-neutral combustion technologies. This includes analysis and optimization of the performance of combustion devices that are designed to be either on 100% non-conventional renewable fuels or to be fuel-flexible, which means they use up to 100% renewable fuels. The other aspect this Special Issue is focused on is the co-optimization and applications of combustion engines in electrified or hybrid systems. The electrification and hybridization of energy systems enable combustion devices for new applications and/or better optimizations.

Keywords: *advanced fuels; carbon-neutral combustion; co-optimization; fuel flexibility; electrification; hybridization*



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Special Issue



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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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