



fuels



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Chemical Kinetics of Biofuel Combustion

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Message from the Guest Editor

Biofuel combustion will be an important source of energy in the foreseeable future, both for transportation and stationary energy production. To further develop devices for efficient and clean combustion, a thorough understanding of the fuel chemistry is needed. The chemical kinetics governing ignition, propagation, and extinction of flames can be studied using dedicated experiments and computer simulations. The term “biofuel” includes a range of compounds, from biogas and small alcohols to complex mixtures of heavy hydrocarbon.

In this Special Issue, we will present research on the experimental and computational chemical kinetics of gaseous and liquid biofuels. We welcome contributions presenting chemical kinetics of novel combustion concepts like metal combustion and plasma-assisted combustion. We include studies from the very detailed level to the applications: fundamental experimental and computational studies of chemical reactivity; laboratory studies of combustion systems to further elucidate chemical reaction mechanisms; simulation studies of zero- and one-dimensional systems; and computational fluid dynamics simulations of real including chemical kinetics.



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Special Issue