Special Issue

Internal Combustion Engine Emissions: Formation, Reduction and Measurement

Message from the Guest Editor

Market intelligence has recently predicted a global increase of about 31 million in the number of internal combustion engines (ICE)-powered units by 2030 as technological advancements boost demand. Thus, addressing this requires significant insight into pollutant formation and the destruction processes occurring inside combustion chambers/flames and during after treatments. To this end, *Atmosphere* is motivated to launch this Special Issue, advancing the knowledge of engine emissions in terms of the formation mechanisms, mitigation methods, approaches to observe and quantify the pollutants, and models to depict and predict emission behaviours. The scope of this Special Issue is broad, catering for wider interests in engine emissions. Suggested topics include but are not limited to:

- Pollutant formation and destruction/oxidation processes
- Engine emission and performance trade-off
- Biofuel/synthetic fuel effects on engine emissions
- Aftertreatment systems, filtration and catalytic conversion
- Clean combustion/engine operating regimes
- Models of detailed chemistry or engine emission behaviour
- Techniques to observe and measure pollutants

Guest Editor

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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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