



On the importance of the accurate measurement of Laminar Burning Velocity, and its implication for kinetics validation and turbulent combustion simulations

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Objectives

- 1) How adequately experimentalists interpret the direct measurements using the underlying physics of a particular configuration? Which numbers are published? Are they comparable?
- 2) How confident are we regarding the validation of kinetic models against LBV data? How do stretch, radiation, and other losses affect the comparisons between measured and computed LBV values?
- 3) Which burning velocity and Markstein lengths can be used in turbulent combustion modelling and explosions? How stretch effects are accounted for in turbulent combustion simulations?
- 4) How accuracy of transport/thermodynamic data may influence on LBV simulation?
- 5) How do we perform LBV measurements at engine-like conditions, e.g. 40-60 bar and 700-800 K that industry wants?



Organization

Invited lectures

Zheng Chen (Peking University, Beijing)

Fokion Egolfopoulos (University of South California)

Philip De Goey (University of Eindhoven)

Moshe Matalon (University of Illinois)

Arnaud Mura (Pprime Poitiers)

Kal Seshadri (University of California, San Diego)

Luc Vervisch (CORIA, Rouen)

Hai Wang (Stanford University)

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Organization

Round tables (open discussions)

RT1 : Turbulent combustion: which data are needed for modeling?

RT2 : 1D Computations, next steps?

RT3 : Elaboration of consistent theories for extrapolation procedure for heavy and light fuels for different LBVs.

RT4 : Uncertainty quantification: how confident are we about the reported data?

RT5 : Which elementary reactions mainly control LBV and should be subjected to deeper analysis/measurements?

Work In Progress posters

Dedicated time for work in progress posters sessions can be proposed during the lunch or coffee break times.



Organization

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