



Journal of Energy Resources Technology

CALL FOR PAPERS Special Issue on Advanced Fuels Effects on Atomization and Sprays Stability

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Special Issue on Advanced Fuels Effects on Atomization and Sprays Stability

Several advantages of modern biofuels with nanotechnology have gained profound attention in recent years. The role of biofuels on greenhouse gas emissions has proved unexpectedly greater compared to that of fossil fuels. Properties of biofuel, such as kinematic viscosity and calorific value, affect the quality of combustion. Although the nano additives replace the cold flow properties and reduce the possibility of oxidation degradation of the fuel, there is no sign of improvement in either atomization or spray characteristics.

Fossil fuels are very advantageous compared to biodiesel on vapor phase mixing and mixing time. The atomization process is carried out by injecting fuel through the fine holes at high pressure. Optimized pressure significantly improves the quality of combustion. Superior atomization is achieved with lower fuel pressures compared with the pressure swirl atomizer. Biodiesel penetrates faster since the fuel droplet size is larger.

This Special Issue seeks submissions related to modern atomization techniques and spray intensities with their various applications and contributions. It will include original articles and reviews with outstanding quality.

Topic Areas

Topics of interest include, but are not limited to:

- High pressure vessel for turbulent flames
- Numerical modelling of flame intensity
- Premixed and turbulent flames studies
- Jet-stirred reactor design and optimization
- Fuel droplet atomization techniques: desolvation, volatilization, and dissociation
- Life cycle impact analysis and environmental impact assessment for bioplastic production
- Performance and emission characteristics of bioplastics/plastic-derived fuel (e.g. compression ignition engines, gas turbines, jet engines)
- Sustainable development goals towards waste management and handling
- Pyrolysis of plastic containing waste to bio-crude for petroleum refineries
- Pilot and semi-industrial scale case studies of technologies for commercialization
- Hydrothermal liquefaction of organic waste or algal biomass to fuel
- Bio-oil upgrading techniques, challenges, and case studies

Publication Target Dates

Paper submission deadline	June 20, 2022
Initial review completed	July 30, 2022
Special Issue publication date	January 30, 2023

Submission Instructions

Papers should be submitted electronically to the journal at journaltool.asme.org. If you already have an account, log in as author and select **Submit Paper** at the bottom of the page. If you do not have an account, select **Submissions** and follow the steps. In either case, at the **Paper Submittal** page, select the [*ASME Journal of Energy Resources Technology*](#) and then select the Special Issue **Advanced Fuels Effects on Atomization and Sprays Stability**. Papers received after the deadline or papers not selected for inclusion in the Special Issue may be accepted for publication in a regular issue.

Guest Editors

Dr. Manigandan Sekar, Assistant Professor, Department of Aeronautical Engineering, Sathyabama Institute of Science and Technology, India, manigandan.aero@sathyabama.ac.in

Dr. Sabarathinam Shanmugam, Chair of Biosystems Engineering, Institute of Technology, Estonian University of Life Sciences, Estonia, shanmugam@emu.ee

Dr. Indira Karuppusamy, Assistant Professor, Research Center for Strategic Materials, Corrosion Resistant Steel Group, National Institute for Materials Science (NIMS), Japan, karuppusamy.indira@nims.go.jp