

Special Issue

Advances in Combustion Science for Future IC Engines

Message from the Guest Editors

The internal combustion (IC) engine is a mechanical power source machine that burns a fuel-air mixture in the combustion chamber. It has been the primary power unit for most automobiles, ships, airplanes, construction machinery, and others in existence since its invention, having immediately grown vastly in popularity. The main goal of this Special Issue is to provide the fundamentals and applications of advanced combustion for future high efficiency and low carbon engines. This Special Issue invites original and unpublished research work with emphasis on the innovations of engine combustion techniques, including combustion concepts, strategies, and control methods, flexible fuel injection, advanced intake systems, spray and mixture formation, flow and combustion diagnostics and numerical simulations, etc. Topics of primary interest include but are not limited to:

- New combustion concepts, strategies, and control;
- New and alternative fuels;
- Advanced spray and mixture formation in engines.

Guest Editors

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Prof. Dr. Keiya Nishida

Deadline for manuscript submissions

closed (31 March 2025)



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About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.

Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.

There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso

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Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).

