Special Issue

Challenges and Advances in Internal Combustion Engines Lubrication

Message from the Guest Editors

This Special Issue will focus on the lubrication of Internal Combustion Engines, where there are many novel challenges nowadays. Topics of interest include lubricant formulation, specific formulations for new fuels (hydrogen, ammonia, HVO, biofuels), tribological behavior under extreme conditions, additive technologies, wear and friction reduction strategies, fuel economy improvements, real-time monitoring systems, classical condition monitoring, and the impact of electrification on hybrid powertrains. Contributions that bridge the gap between fundamental research and industrial application are particularly encouraged. [...] As global demands for cleaner energy, improved fuel efficiency, and longer service intervals continue to rise, the field of engine lubrication faces both significant challenges and unprecedented opportunities for innovation, such as evolving environmental regulations, the integration of alternative fuels, and advanced engine architectures that require new lubrication strategies. This Special Issue aims to explore the latest research, technological developments, and practical solutions related to engine and advanced powertrain lubrication.

Guest Editors

Dr. Eduardo Tomanik

Polytechnic School, Mechanical Engineering, University of São Paulo, Sao Paulo 05508-010, Brazil

Prof. Dr. Bernardo Tormos

CMT-Motores Térmicos, Universitat Politècnica de València, Camino de Vera, s/n, 46022 Valencia, Spain

Deadline for manuscript submissions

28 February 2026

Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 4.5

mdpi.com/si/244328

Lubricants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
lubricants@mdpi.com

mdpi.com/journal/lubricants

Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 4.5

mdpi.com/journal/lubricants

About the Journal

Message from the Editor-in-Chief

Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. *Lubricants* invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in *Lubricants.*

Editor-in-Chief

Prof. Dr. Homer Rahnejat
School of Engineering, University of Central Lancashire, Preston PR1 2HE, UK

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q2 (Mechanical Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).

MDPI