

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.

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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

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