

Special Issue

Advances in Ionic Liquids as New Lubricant Materials

Message from the Guest Editors

Advances have been made in the use of ionic liquids (ILs) as new lubricants, which have revolutionized the field of tribology by offering unique properties such as low volatility, high thermal stability, and tunable viscosity. ILs exhibit excellent lubrication performance under extreme conditions, reducing friction and wear more effectively than traditional lubricants. Their customizable chemical structures allow for the design of specific ILs tailored to particular applications, enhancing their efficiency. Additionally, the environmentally friendly nature of many ILs positions them as sustainable alternatives to conventional lubricants. Ongoing research focuses on understanding the fundamental mechanisms of lubrication by ILs and on overcoming challenges related to cost and large-scale production, aiming to fully integrate these advanced materials into industrial applications.

Guest Editors

Dr. Luís Vilhena

Centre for Mechanical Engineering, Materials and Processes,
Department of Mechanical Engineering, University of Coimbra, Rua Luis Reis Santos, 3030-788 Coimbra, Portugal

Dr. Fábio Ferreira

Centre for Mechanical Engineering, Materials and Processes,
Department of Mechanical Engineering, University of Coimbra, Rua Luis Reis Santos, 3030-788 Coimbra, Portugal

Deadline for manuscript submissions

closed (30 January 2026)



Lubricants

an Open Access Journal
by MDPI

Impact Factor 2.9
CiteScore 5.6



mdpi.com/si/208192

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

[mdpi.com/journal/
lubricants](https://mdpi.com/journal/lubricants)





Lubricants

an Open Access Journal
by MDPI

Impact Factor 2.9
CiteScore 5.6



[mdpi.com/journal/
lubricants](https://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 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 15.6 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).