Special Issue

Low Viscosity Medium-Lubricated Bearing

Message from the Guest Editor

Novel low-viscosity medium-lubricated bearings possess plenty of advantages, such as high cleanliness, high reliability, high specific heat capacity, high efficiency, and high vibration resistance. At present, novel low-viscosity medium-lubricated bearings are widely employed in ships, submarines, pumps, and other fields. As the crucial support component of power systems, the performances and service life of bearings directly determine the efficiency and safety of ships in navigating. When the ship works on the sea, the shaft is at a high-speed condition. After being disturbed by the stern shaft and bearing's weight, the problems of poor lubrication, load capacity reduction, poor stability, and serious friction still exist.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

lubrication mechanism, structural design, fluid–structure coupling, friction and wear, optimization analysis, dynamic characteristics, surface texture treatment, groove design, lubrication regime, dynamic behaviros, tribological performances, and bionic application.

Guest Editor

Prof. Dr. Zhongliang Xie

Department of Mechanics, Northwestern Polytechnical University, Xi'an 710072, China

Deadline for manuscript submissions

31 December 2025

Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 4.5

mdpi.com/si/222190

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 Lancahire, 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).