

Special Issue

Advances in Thin Film Tribology

Message from the Guest Editors

Thin-film tribology is crucial for enhancing the performance, reliability, and lifespan of modern mechanical components operating under demanding conditions. This Special Issue focuses on a systematic study of ceramic thin films—carbides, nitrides, and oxides—along with diamond-like carbon (DLC) films, aiming to elucidate their friction, wear, and lubrication mechanisms across varying contact stresses, temperatures, and environments. Ceramic coatings, such as TiN, CrN, and Al₂O₃, provide exceptional hardness, thermal stability, and oxidation resistance, but can exhibit brittleness and tribochemical instability under severe sliding conditions. DLC films, on the other hand, offer ultra-low friction and excellent wear resistance due to their amorphous carbon structure, though their performance is highly sensitive to temperature, humidity, and interfacial chemistry.

Guest Editors

Dr. Nay Win Khun

Institute of Microelectronics and Optoelectronics, Faculty of Electronics and Information Technology, Warsaw University of Technology, Warsaw, Poland

Dr. Krzysztof Kulikowski

Department of Surface Engineering, Faculty of Materials Science and Engineering, Warsaw University of Technology, Nowowiejska 15/19, 00-665 Warszawa, Poland

Deadline for manuscript submissions

31 January 2027



Lubricants

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 5.6



mdpi.com/si/267497

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 3.6
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 13 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2026).