



## State-of-the-Art of Tribology in North America

Guest Editors:

### **Dr. Jun Qu**

Materials Science and  
Technology Division, Oak Ridge  
National Laboratory, 1 Bethel  
Valley Road, Oak Ridge, TN  
37831-6063, USA

### **Dr. Xin He**

Solvay USA Inc., 350 George  
Patterson Blvd, Bristol, PA 19007,  
USA

Deadline for manuscript  
submissions:

**closed (30 June 2024)**

### **Message from the Guest Editors**

Dear Colleagues,

In 1493, Leonardo da Vinci noted the laws of friction, marking the beginning of the modern age of tribology. Tribology has seen great advances in the 20<sup>th</sup> century and had a significant impact on our lives, from transportation to industrial machinery with improved mobility and durability. The recent development of numerous new lubricants and materials as well as modeling capabilities provides new opportunities for energy savings and environmental impact reductions. Tribology R&D is estimated to save 1 quad of energy annually. The field of tribology is continually evolving, and because of its interdisciplinary nature, current research takes advantage of advanced technologies in materials and surface characterization, nanostructured materials, molecular dynamics simulation, and AI/ML approaches. With the fast-growing field of electric vehicles and additive manufacturing, tribology is facing unprecedented challenges and opportunities.





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Homer Rahnejat**

School of Engineering, University  
of Lancashire, Preston PR1 2HE,  
UK

## 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*.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**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)

## Contact Us

---

*Lubricants* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/lubricants  
lubricants@mdpi.com  
X@Lubricants\_MDPI