Special Issue

Recent Advances in Electric Tribology

Message from the Guest Editor

With the advancement of high-level instruments and computational resources, there has been a surge in research focusing on tribology at the molecular level. Researchers are now able to investigate the atomic structures of friction pairs and track their evolution during sliding using a combination of experimental techniques and computational simulations. However, our understanding of tribology at the quantum level, particularly concerning electronic structures and electric dissipation during interfacial sliding, has continued to grow. Exploring the electronic properties and electric dissipation mechanisms during frictional interactions holds significant promise, especially in areas such as polar lubricants on metals/semiconductors and friction between solid surfaces. The ability to adjust the electric properties of friction pairs using electric fields can lead to dramatic changes in tribological processes, presenting exciting opportunities for controlling friction and lubrication.

Guest Editor

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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.*

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