Special Issue

Tribology across Scales

Message from the Guest Editor

Dear colleagues, Material surfaces are rough at all magnifications, ranging from atomistic to macroscopic scales. As a result, tribological phenomena including contact, friction, lubrication, and wear emerge from a wide range of chemical and physical processes at disparate length scales. The development of advanced experimental and computational techniques over past years has enabled the investigation of tribological phenomena at nanometer, micrometer, as well as macroscopic wavelengths. This Special Issue is aimed at further improving our understanding of the intertwined multiscale nature of tribological phenomena, both in the modeling and experimental domains. This includes the breakdown of continuum theories at the nano-and microscales, multiscale features for experiments, as well as analytical and computational models, relevant to applications spanning a variety of sectors, from automotive to biotribology and nanotechnology.

Guest Editor

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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.

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