Special Issue

Models of Nanoscale Friction

Message from the Guest Editor

Friction is the force that opposes the slip of one body across another. From a macroscopic point of view, static friction is the reaction force that develops in response to the application of load parallel to the interface of contacting bodies, preventing relative motion. Kinetic friction, on the other hand, is the resistance force that arises during slippage. Both the critical force to initiate sliding as well as the subsequent force required to sustain sliding result from complex interactions between atoms that reside in the vicinity of the contact zone. Papers of this Special Issue are solicited that detail how static and kinetic friction forces arise from atomic-level interactions. Of particular interest are investigations that provide insight as to the factors that contribute to and/or mitigate the dissipation of mechanical energy, especially the absence of significant wear. Such studies may represent detailed molecular dynamics simulations or provide analytical and/or semi-analytical models of nanoscale friction behavior.

Guest Editor

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Deadline for manuscript submissions

closed (30 June 2020)

Lubricants

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Impact Factor 2.9
CiteScore 4.5

mdpi.com/si/26440

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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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