Special Issue

Superhydrophobic Surface and Tribology

Message from the Guest Editor

Wetting is a very important characteristic of the liquid/solid surface that has a significant influence on the lubrication of mechanics. However, in the field of traditional tribology, the effect of wetting seems to have been unstressed or even neglected for years. Superhydrophobic surfaces are generally fabricated through chemical modification and surface texturing, exhibiting significant liquid-repellent properties. Superhydrophobic surfaces may introduce liquid slippage on solid surfaces, which have friction drag reduction effects in hydrodynamic lubrication, which is beneficial for reducing energy consumption. In addition, the suitable arrangement of hydrophobic and hydrophilic surfaces may increase the load bearing capacity as well. When the lubricant is not sufficient, the hydrophobic/hydrophilic hybrid surface may generate a wetting gradient to guide the lubricant flowing toward the severely lubricated region, thus improving the starved lubrication condition. All the above implies the importance of considering superhydrophobic properties for surface design in tribology.

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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