Special Issue

Lubrication of Biomimetic Surfaces

Message from the Guest Editor

Most physical processes involving energy exchange, motion, and signal transmission are achieved through surface interactions. The characteristics of the surface are often key factors determining correct actuation. For over half a century, scientists have made tremendous progress in the development of functional materials, surface coatings, lubricants, and additives to reduce/increase friction and wear. Meanwhile, people have recognized that the structures of surfaces/interfaces are important to surface interactions as well. Nobel laureate Pauli once said, "God made solids, but surfaces were the work of the devil". Therefore, potential, difficulties, and challenges coexist. After billions of years of evolution and competition, animals and plants have formed many excellent geometric structures and functionally rich surface textures, inspiring surface texture design for mechanical components. Biomimetic surface texture design could work with liquid/solid lubricants to decrease friction/wear or increase friction/adhesion. They have been successfully applied to the surface of sliding bearings, mechanical seals, etc.

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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