Special Issue

Bionic Design of Cutting Tools

Message from the Guest Editor

In this Special Issue, the term 'cutting tools' is broadly defined, encompassing not only metal-cutting tools used in manufacturing, but also implements designed for cutting materials such as soil, wood, coal, rock, and other substances. Consequently, this concept extends to multiple disciplines including but not limited to mechanical engineering, agricultural engineering, forestry engineering, mining engineering, and geological engineering. Low efficiency, poor quality, or high energy consumption in cutting are mainly caused by the adhesion and abrasion/friction on the surface of cutting tools. According to the existing research, bionic design serves as an innovative and highly efficient solution to address the aforementioned challenges.

We are seeking comprehensive reviews and original research articles on bionic cutting tools from scholars across diverse disciplines and domains. The research scope encompasses, but is not limited to, bionic prototype investigations; macro-/micro-scale generative studies; cutting mechanism analysis for bionic tools; and investigations into wear resistance, friction reduction, and anti-adhesion properties of bionic cutting tools.

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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