Special Issue

Wear-Resistant Coatings and Film Materials

Message from the Guest Editors

Wear-resistant coatings and film materials are essential in many industries, such as manufacturing and aerospace. These coatings and materials provide protection against wear and tear, extending the lifespan and durability of various products. One of the key benefits of wear-resistant coatings, such as nanomaterials and polyurethane, is their ability to reduce friction. These coatings are commonly used in applications such as bearings. Another advantage of wear-resistant coatings is their ability to resist chemical and environmental degradation. This extends their lifespan and reduces the maintenance costs in harsh environments. Moreover, wear-resistant coatings can also enhance the aesthetic appeal of products with different colors or textures. This is particularly important in automotive and consumer electronics, where design plays a crucial role in customers' perception. Despite the numerous benefits of wear-resistant coatings, there are also challenges and limitations.

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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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