Special Issue

Tribological Research on Transmission Systems

Message from the Guest Editors

Gears, bearings, splines and many other mechanical transmission components accomplish their functions through the contact between tribological pairs, which inevitably brings damage to their surfaces and likely causes the premature failure of systems. On the one hand, some local areas may be extremely pressurized, especially when the curvatures are not well-matched with improperly machined roughness. The topography, however, is constantly reshaped during the wear process with the initially concentrated stress released. On the other hand, damage accumulates as a result of cyclic stress, and micro-cracking is possibly nucleated if the material cannot resist any more damage and then rapidly propagates to fracture the structure. There exists comprehensive competition among different failure modes, and some specific methods have been proposed to locate the faults and describe the interactions between the dominant ones and the other. Still, further efforts are encouraged in this special field to improve the tribological behaviors of transmission systems. All relevant articles are welcomed to enrich the community.

Guest Editors

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Deadline for manuscript submissions

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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.*

Editor-in-Chief

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