Special Issue

Tribology in Railway Engineering

Message from the Guest Editors

This issue covers a broad range of topics, including the mechanics and dynamics of wheel–rail contact, where managing friction and wear is essential for reducing maintenance costs and improving ride comfort. The advancements discussed in this issue include new surface treatments and lubrication strategies designed to mitigate wear and extend the life of railway components, particularly in high-speed and heavy-haul contexts. Contributions also examine the tribological challenges in braking systems, rail vehicle bearings, and other crucial components, where innovations in materials, surface treatments, and lubrication technologies are driving improvements in efficiency and durability. Additionally, this issue addresses the environmental and economic implications of tribological practices, such as reducing noise, minimizing energy consumption, and enhancing the overall system sustainability. By presenting cutting-edge research and practical solutions, this Special Issue aims to advance the understanding and application of tribology in railway engineering, ultimately contributing to more reliable, efficient, and sustainable rail transportation systems.

Guest Editors

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Prof. Dr. Zili Li

Prof. Dr. Roger Lewis

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About the Journal

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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