

Special Issue

Advances in Wear-Resistant Fe-Based Materials

Message from the Guest Editor

Fe-based materials are widely utilized in various fields, including engineering machinery, mining and crushing, thermal power generation, cement building materials, and railways. In these applications, wear failure is frequently observed, highlighting the importance of enhancing wear resistance due to its significant economic and industrial value. Wear-resistant iron-based materials are currently being developed by increasing hardness, introducing hard particles or carbides, and reducing friction coefficients through the incorporation of lubricating materials or external lubrication. Utilizing high-resistance iron-based materials in mechanical components can significantly extend their service life. This Special Issue focuses on enhancing the wear performance of iron-based materials through composition optimization, advanced preparation techniques, and lubricating phase incorporation. A thorough investigation of Fe-based materials' tribological behavior under diverse wear conditions is essential for improving wear resistance. This Special Issue aims to provide practical insights for engineers developing high-performance, wear-resistant iron-based materials.

Guest Editor

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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*.

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