Special Issue

Tribology in Advanced Materials

Message from the Guest Editors

The Special Issue explores the intersection of materials science and tribology, focusing on how surface interactions affect manufacturing efficiency, durability, and performance.
The following key topics are covered in this Special Issue:
• Surface Engineering and Coatings: Investigating novel coatings and surface treatments to enhance wear resistance and reduce friction in manufacturing components.
• Lubrication Strategies: Analyzing lubricant formulations and their impact on machinery performance.
• Materials Selection and Design: Evaluating material properties, such as hardness, toughness, and thermal stability, in the context of tribological behavior. This Special Issue will explore how material selection influences wear rates and maintenance costs.
• Frictional Behavior in Machining and Forming: Understanding the role of friction during cutting, grinding, and forming operations. This Special Issue will provide strategies to minimize tool wear and improve the surface finish.
• Wear Mechanisms and Failure Analysis: Investigating wear modes (abrasive, adhesive, fatigue, etc.) in manufacturing components.

Guest Editors

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Prof. Dr. Steven Schmid

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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