Special Issue

Wear Performance and Tribological Behavior of Steel and Cast Iron

Message from the Guest Editor

The Special Issue is focused on the effects of heat treatment, microstructure, coatings, compositions, and surface treatments on the tribological performance of steel and cast iron. Meanwhile, the continuing trend of downsizing components to achieve energy and weight savings has led to an increased likelihood of wear and even scuffing of sliding steel and cast iron components. This has resulted in a need to enhance the wear and scuff resistance of surfaces of components through surface treatments such as laser hardening or shot peening. In addition, the requirement of lowering worldwide energy use has driven a desire to lower frictional losses at sliding interfaces of components, which necessitates low-friction coatings, lubricants, and surface treatments. Original papers are invited on topics such as novel coatings and surface treatments for steel and cast iron surfaces as well as the development and optimization of heat treatment techniques to enhance wear resistance and lower the coefficient of friction of sliding interfaces. Papers and reviews dealing with fundamentals or applications are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/67664

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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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