Special Issue

The Abrasive Wear Processes of Modern Materials Used in Working Elements

Message from the Guest Editors

A phenomenon accompanying the exploitations of working elements under abrasion conditions is their intense wear, which is a process of physico-chemical qualitative and quantitative changes taking place on the friction surface. The selection of the constructional and technological of these elements and planning the course of exploitations is possible when the course of the depletion of their usable resource is known in the set time and conditions. Currently, the limits of the strength of working elements have been pushed, but their durability is still one of the main problems. Therefore, the cognitive process requires the identification of the wear relationship of working elements by describing the quantities characterizing the course of friction processes and modeling the wear of surface layers under various environmental conditions. This Special Issue will explore and describe relationships between the properties of the surface layer made of the modern materials to conditions of exploitations, and of the wear processes.

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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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