Special Issue

Innovative and Modern Technologies of Material Machining in Cutting and Abrasive Processes

Message from the Guest Editors

Machining accuracy and efficiency are crucial in many areas of the aviation and automotive industry. There is also growing interest in the machining of difficult-to-cut, advanced engineering materials such as titanium- and nickel-based alloys, tool steels, stainless steels, hardened steels, composites, shape memory alloys, cobalt–chromium alloys, magnesium-based alloys, etc. The development of tool materials and coatings applied to cutting edges is of vital importance in this area. These materials are the most widely used in the aerospace, biomedical, and automotive industries. It must, however, be remembered that these new, difficult-to-cut materials are characterized by poor machinability, and their use implies high processing costs. Here, optimization of machining operations and their modeling as well as ecological aspects of cutting play a very important role. Therefore, the objective of this Special Issue is to publish original research and review papers in the field of machinability of modern, difficult-to-cut engineering materials, especially those utilized in the aerospace, automotive, and biomedical industry as well as in other sectors.

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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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