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Cutting Tools and Their Applications in Processing Metallic Materials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Cutting tools represent the key factor and executor to support and promote technological progress in machining metallic parts. This Special Issue aims to invite all researchers interested in widely understood cutting tools and their machining process research of metallic materials, with the hope to present their results in papers related to experimental, simulation, and theoretical studies. The high-efficiency cutting mechanisms of various metallic materials; the preparation, optimization, manufacturing and performance of new developed tool materials; the optimization of geometric parameters of the tool structure; the design and development of tool coating materials and the improvement of the coating process; the design and optimization of green machining tools and clean/sustainable cutting processes; the development of special-structure tool systems; and intelligent tools will improve the cutting efficiency of metallic materials and the machined surface quality. Intelligent tool systems have the functions of automatic sensing cutting force, cutting heat, cutting vibration, and other state parameters in the machining process.

Dr. Anhai Li
Guest Editor



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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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