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Forging of Metals and Alloys

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Deadline for manuscript submissions:
closed (10 October 2024)

Message from the Guest Editors

Dear Colleagues,

Known to be amongst the oldest known metalworking processes, forging is a manufacturing process which involves the shaping of metal using localized compressive forces. As the metallic billet is shaped plastically during the forging process, microstructural evolution behaviors including grain refinement, texture variation, and compound discretization occur simultaneously. As a result, forged components exhibit better mechanical properties than the components manufactured by equivalent casting or machining.

The scope of the current Special Issue embraces interdisciplinary works aimed at understanding and deploying plastic deformation mechanisms of metals, multi-scale behaviors of metals during forging, advancing experimental and theoretical forging analysis, the innovative structural design and fabrication of forging die, and the application of improved forging equipment. Manuscripts will be welcomed from both fundamental scientific researchers and authors belonging to industrial companies involved in the field.

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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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Journal Rank: JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Metals and Alloys)

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