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Advances in Semi-solid Forming

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Deadline for manuscript submissions:
closed (30 June 2023)

Message from the Guest Editors

Semi-solid metal forming has developed since the 1970s. Thixoforming has been widely used in Europe, America, Japan and other countries to manufacture high-performance automobile, aircraft and other parts. Rheological forming technology has more advantages in energy saving and cost reduction. With the development and maturity of semi-solid slurry preparation technology, rheological forming is developing more and more rapidly. Rheological forming technology has been widely used in 5G communication filter boxes, new energy vehicle battery packs and other complex and thin-walled radiator parts. The large-scale complex thin-walled aluminum alloy devices made of special semi-solid die-casting aluminum alloy with high thermal conductivity have broad application prospects that can be utilized in the future. This issue provides some representative achievements in this field to exchange.

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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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