Special Issue

Semisolid Processing and Squeeze Casting of Alloys and Composites

Message from the Guest Editors

Semisolid processing (SSP) and squeeze casting (SC) are two typical near-net-shape technologies for forming of alloys and composites. They have been widely used in the automotive, motorcycle, aerospace, weapons, and 3C fields due to their low resistance to deformation, short processing time, and low cost. Semisolid processing and squeeze casting depend on the optimization of microstructure and properties, numerical simulation of processes, and the development of new materials. This Special Issue aims to cover recent progress and new developments in the relationships between the microstructures and mechanical properties of products formed by SSP or SC. All aspects related to SSP or SC, semisolid slurry fabrication, rheoforming and thixoforming, physical and numerical simulation of SSP and SC, process optimization of squeeze casting, and heat treatment of products formed by SSP and SC are of interest. Submissions of full papers, communications, and reviews are all welcome.

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Deadline for manuscript submissions

closed (20 May 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/101028

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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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