

Special Issue

Advances in Friction Stir Welding and Processing

Message from the Guest Editor

Over the years, FSW proved itself ideal for creating good-quality butt joints and lap joints in a number of materials, especially the family of nonferrous metallic materials, including even those that are extremely difficult to weld by conventional fusion welding processes. During FSW, the frictional heat that is generated is effectively utilized to facilitate material consolidation and eventual joining with the aid of an axial pressure. The process is, therefore, a non-fusion welding process. As of today, FSW is, due to its advantages, a common industrial welding process. Friction stir processing (FSP) was derived from FSW with the aim of using severe plastic deformation to obtain a stir zone with very fine grain size and hence to improve the mechanical properties of the material. FSP is identical to FSW except that in FSP, the rotating tool does not weld the parts to one another. Thus, its operation may be referred to as a “bead on plate” process. It is my pleasure to invite you to submit a manuscript in the fields of FSW and FSP for this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

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Deadline for manuscript submissions

closed (31 July 2022)



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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Yong Zhang

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