

Special Issue

Microstructure and Properties of Metallic Heat-Affected Zones

Message from the Guest Editor

Welding is one of the most important joining techniques for metal constructions and various mechanical applications. Since the microstructure and properties of the heat-affected zone (HAZ) determine the quality of the joint, they have been a matter of interest to material scientists, metallurgists, and mechanical engineers for many decades already, resulting in a comprehensive knowledge base on this topic. As with the development of new materials and welding techniques, novel possibilities have arisen, and at the same time advanced analytical tools have enabled deeper insights into these structures; the study of their properties is today as relevant as ever. This Special Issue intends to collect the last developments in the field, written by researchers who have contributed significantly to development and characterization of the microstructure and the properties of metallic heat-affected zones. Topics addressed in this Special Issue may include but are not limited to: Material properties; Microstructure properties; Metallurgical characterization; Mechanical testing; Numerical simulations; Industrial applications.

Guest Editor

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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

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