Special Issue

Novel Insights into Welding and Joining Technologies of Metallic Materials

Message from the Guest Editors

Welding, a crucial process in material engineering, has been widely applied across diverse industrial sectors, including aerospace, energy, and transportation. With the development of new materials and technologies, such as electronics, computers, and robotics, welding science has achieved remarkable progress. However, new materials and components pose higher demands on welding processes and materials, spurring innovation in traditional techniques for new materials, along with the development of new welding processes and connection technologies. In this Special Issue, we welcome a variety of research works on innovative welding materials, novel welding processes, additive manufacturing, and in-depth exploration of the microstructure, performance, and interface behavior of welded joints to enhance the quality and reliability of welded structures.

- welding technology
- welded joints
- new materials
- connection

Guest Editors

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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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