Special Issue

New Perspectives in Welding and Joining Processes of Metallic Materials

Message from the Guest Editors

In all fields of main engineering applications, welding and joining techniques for metallic components play a key role in ensuring the required performance, quality and safety in service. Given the vast and diverse range of requirements and functions to be satisfied, investigations into the compatibility and weldability of materials, and in the metallurgical effects of joining processes parameters on their final microstructure and properties, are an essential phase in selecting and setting the most efficient joining processes. The Special Issue aims to provide an overview on recent advances in welding and joining processes of metallic materials. Topics of interest include, but are not limited to:

- Modelling and simulation of welding and joining processes;
- Metallurgical phenomena in joining processes;
- Heat source–material interaction mechanism;
- Weldability and metallurgical compatibility of materials;
- Microstructure, properties and behaviour of metal alloys;
- Welding and joining parameters and optimization;
- Post-weld treatments;
- Developments of advanced welding and joining processes;
- Environmental impact and sustainability of welding and joining processes;

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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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