Special Issue

New Trends on Spot Welding in Metals and Alloys

Message from the Guest Editor

Welding and joining is an inevitable manufacturing method that is continuously advancing and gaining tremendous impetus in industry and academia to unravel need-driven challenges and weldability of new materials and their alloys while improving the overall quality of weldments. Advancement in technology and knowledge has been helpful in the emergence of reliable procedures and innovations for welding/joining lightweight alloys, dissimilar alloys, composites, heavy alloys, and hard metals. This Special Issue aims to bring together the new trends in spot welding and its allied joining processes with an emphasis on welding mechanism, interface formation, mechanics and analysis, and so on. Original research and review articles covering the following topics are welcomed: weldability of new materials, hybrid welding, brazing of metals and alloys, ultrasonic welding, laser or electron beam welding and micro-joining, resistance spot welding, modified friction stir spot clinching, diffusion welding and eutectic bonding, plasma arc welding, simulation of welding processes with experimental validations.

Guest Editor

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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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