

Special Issue

Environmental Effect on Metal Joining

Message from the Guest Editor

Recent years, industries play an essential role in decarbonizing and building a greener future. This can involve the introduction of new materials, which must be characterized by a combination of high performances and lightness. This fact results in new manufacturing techniques, and especially, in new alternative joining technologies. Experimental and numerical approaches allow for directing the choice towards one technology rather than another. Among the most promising technologies, are friction stir welding, self-piercing riveting, orbital riveting, adhesive bonding, clinching, etc. These technologies can be used to connect not only similar metals but also different materials. Moreover, they can be combined in a hybrid joining. These combinations of materials and joining technologies require particular attention to be focused on durability and corrosion resistance within aggressive environments. For this Special Issue of Metals, we welcome reviews and articles in the areas of technologies of joining, joint configurations, mechanical testing, failure modes, similar or dissimilar materials, finite element analysis, durability, and corrosion resistance.

Guest Editor

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About the Journal

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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