Special Issue

Diffusion Bonding and Brazing of Advanced Materials

Message from the Guest Editor

Advanced materials generally require the development of novel joining techniques, as this is crucial to integrate them into functional structures and to widen their application field. Additionally, joining constitutes a technology, which influences all the industrial sectors, playing a key role in the economic and social development of a country. Diffusion bonding and brazing are two straightforward techniques for producing sound and reliable joints since these processes are capable of joining a wide range of materials of interest in the aerospace industry, as well as in many other industrial applications, offering remarkable advantages over conventional fusion welding processes. This Special Issue aims at showcasing the recent progresses in the joining technologies of advanced materials, with a particular attention for the microstructure–mechanical properties relationships of the bonded joints. Both theoretical and experimental research, review articles, and novel results are welcome.

Guest Editor

Dr. Sónia Simões

Metallurgical and Materials Engineering Department, Faculty of Engineering, Oporto University, 4099-002 Porto, Portugal

Deadline for manuscript submissions

closed (30 September 2018)

Metals

an Open Access Journal by MDPI

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CiteScore 4.9

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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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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Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

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