Special Issue

Solidification Processing and Welding of Different Materials System

Message from the Guest Editor

Hybrid material systems have gained much interest in various industries in the recent past, including aerospace and automotive. Weldment behavior and vehicle weight have been major concerns in the automotive and aerospace sectors. Incorporating metal-polymer/ceramic/composite hybrid structures reduces weight without compromising structural performance. High energy density and solid-state welding techniques are beneficial for joining various dissimilar materials systems. The major problem associated with the welding of different materials systems is the formation of secondary phases, which leads to premature weldment failures. Unfortunately, there have been very few studies covering these challenges yet. This Special Issue aims to present the major challenges in the field of joining technologies for various grades of materials systems, such as metal-polymer/metal-ceramic/ metal-composite, etc.

Guest Editor

Prof. Dr. Arivazhagan Natarajan
School of Mechanical Engineering, Vellore Institute of Technology, Vellore 632014, India

Deadline for manuscript submissions

closed (20 November 2022)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/122736

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)