Special Issue

Welding, Joining and Additive Manufacturing: Experiments, Materials and Modelling

Message from the Guest Editors

The welding and joining of materials from the perspective of newly developed materials, dissimilar and/or different geometric configurations, the use of third materials and at a reduced scale compared to conventional joining technology is always challenging task. The principle of material deposition in welding technology, extending to layer-by-layer deposition in additive manufacturing by a controlled laser source, is being explored in new manufacturing sectors. Although there are huge challenges for the development of joining technologies for newly developed materials or the precision manufacturing of complex components in single manufacturing cycles, the industry is growing towards the miniaturization of the components. Hence, the joining or manufacturing of components without any metallurgical issues, process defects and adequate surface finish are critically important for product development. The development of competitive manufacturing technologies enforcing ecofriendliness in laser-based joining and additive manufacturing processes is one of the main foci of this Special Issue.

Guest Editors

Prof. Dr. Swarup Bag

Department of Mechanical Engineering, Indian Institute of Technology Guwahati, Guwahati 781039, Assam, India

Dr. Christ Prakash Paul

Head Laser Additive Manufacturing Lab, Raja Ramanna Centre for Advanced Technology, Indore, India

Deadline for manuscript submissions

closed (20 December 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/130942

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

MDPI

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)