Special Issue

Structures and Weldability of Metallic Materials

Message from the Guest Editors

The weldability of metallic materials refers to their ability to be welded under the fabrication conditions imposed into a specific, suitably designed structure and to perform satisfactorily in the intended service. The melting and resolidifying of alloys during welding eliminates the designed microstructure and reduces the performance of metallic materials. Carbon equivalent limits the weldability and, therefore, performance of the welded structure. The performance of the structure depends on the working conditions of the welded structure and the technical requirements set forth in the design. This Special Issue welcomes articles covering the weldability and performance of similar and dissimilar metals, including low carbon steels, C-Mn steels, Cr-Mo steels, creep strength enhanced ferritic steels, high strength low alloy steels, stainless steels, Ni-based alloys, high entropy alloys, etc. The latest findings regarding welding repair, weld overlays, and additive manufacturing, with the recent advancements in physical metallurgy, computational thermodynamics, and machine learning approaches, are also welcome.

Guest Editors

Dr. Nitin Saini

Prof. Dr. Dariusz Fydrych

Prof. Dr. Andrzej Kubit

Deadline for manuscript submissions

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

mdpi.com/journal/materials

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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

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