



materials



an Open Access Journal by MDPI

Advances in Duplex Stainless Steels (Second Volume)

Guest Editors:

Dr. Irene Calliari

Department of Industrial
Engineering, University of
Padova, Padova, Italy

Dr. Luca Pezzato

Department of Industrial
Engineering, University of
Padova, Via Marzolo 9, 35131
Padova, Italy

Deadline for manuscript
submissions:

closed (20 May 2025)

Message from the Guest Editors

Duplex stainless steels (DSSs) were developed in the 1930s, and gradually found an increasing number applications thanks to their high strength, good weldability, good toughness and resistance to stress corrosion cracking. Although the use of DSSs is well-established in many industrial sectors, the research and innovations in the field are always growing. In particular, the recent research has focused on the development of new high-grade DSSs (the so-called hyper-duplex steels) and on the production of components through technologies based on the additive manufacturing concept, mainly laser-based ones.

In all cases, a strong correlation between the microstructural characterization and the investigated properties was the key point of the performed research.

The purpose of this Special Issue is to correlate the microstructure of DSSs with their mechanical and corrosion properties, with special attention to novel DSS grades or novel production technologies such as AM.

I invite you to submit both original contributions and review works on this topic, with papers that deal both with the characterization and with the mechanical and corrosion resistance evaluation of different DSS grades.



mdpi.com/si/144906

Special Issue



an Open Access Journal by MDPI

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

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.

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)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)