metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.6

CITESCORE 4.9

Advances in Low-Temperature Nitriding and Carburizing of Stainless Steels and Metallic Materials: Formation and Properties (Volume II)

Guest Editors:

Dr. Francesca Borgioli
Department of Industrial Engineering (DIEF), Università di Firenze, via di S. Marta 3, 50139 Firenze, Italy

Dr. Shinichiro Adachi
Osaka Research Institute of Industrial Science and Technology, Osaka, Japan

Dr. Thomas Lindner
Materials and Surface Engineering Group, Institute of Materials Science and Engineering, Chemnitz University of Technology, 09107 Chemnitz, Germany

Deadline for manuscript submissions:
closed (20 May 2024)

Message from the Guest Editors

Dear Colleagues,

The formation of an expanded austenite phase (S-phase) by low-temperature thermochemical treatments using nitrogen and/or carbon (nitriding, carburizing and nitrocarburizing) of stainless steels has been studied since the 1980s. Initially, this method was applied to austenitic stainless steels, but it has proved to be suitable to produce expanded phases not only on the different grades of stainless steels (duplex, martensitic, precipitation-hardening and ferritic), but also on cobalt- and nickel-based alloys, and, recently, on high entropy alloys. In recent years, it has been combined with new processes such as thermal spray coating and additive manufacturing techniques, and it is expected to contribute to the manufacturing of the next generation.

This Special Issue on “Advances in Low-Temperature Nitriding and Carburizing of Stainless Steels and Metallic Materials: Formation and Properties” intends to cover original research and critical review articles on recent advances in all aspects of low-temperature thermochemical treatments using nitrogen and/or carbon.
Prof. Dr. Francesca Borgioli

Dr. Shinichiro Adachi
Dr. Thomas Lindner
Guest Editors

mdpi.com/si/162516

Special Issue

metals

IMPACT FACTOR 2.6

CITESCORE 4.9

an Open Access Journal by MDPI

Editors-in-Chief

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

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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.

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), Inspec, CAPlus / SciFinder, and other databases.
Journal Rank: JCR - Q2 (*Metallurgy and Metallurgical Engineering*) / CiteScore - Q1 (Metals and Alloys)

Contact Us

Metals Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/metals
metals@mdpi.com
𝕏@Metals_MDPI