metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.5

CITESCORE 5.3

Heat Treatment of Iron- and Aluminum-Based Alloys

Guest Editor:

Dr. Silvia Barella
Department of Mechanics, Politecnico di Milano, Milan, Italy

Deadline for manuscript submissions:
closed (31 March 2021)

Message from the Guest Editor

Dear Colleagues,

Despite three thousand years of experience, the heat treatments of metals continue to be studied and improved. New alloys and production process developments are released in the need of new and more efficient heat treatments. Furthermore, cost reduction and environmental sustainability play a role in the development of innovative techniques in this field. In particular, the knowledge about the principles at the base of the hardening mechanisms are also fundamental to the insightful design of different heat treatments able to bring components to market more quickly. This Special Issue aims to present the latest research related to advanced treatment techniques for the new generation of iron-based (i.e., light steel, Q&P) and aluminum-based alloys, also related to innovative production processes such as additive manufacturing and semisolid casting. Research reports associated with the development of a sustainable system for the reduction in the use of polluting elements and increasing the energy efficiency of the heat treatments are also welcome.

metals

IMPACT FACTOR 2.5

CITESCORE 5.3

an Open Access Journal by MDPI

Editor-in-Chief

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 Editor-in-Chief

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

Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

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