metals

an Open Access Journal by MDPI

IMPACT FACTOR 2.6

CITESCORE 4.9

Neutron Diffraction Research on Metallic Materials

Guest Editor:

Prof. Dr. Dimitry Sediako
Faculty of Applied Science, School of Engineering, The University of British Columbia, Okanagan Campus, Kelowna, BC V1V 1V7, Canada

Deadline for manuscript submissions:
closed (31 December 2019)

Message from the Guest Editor

Development of new advanced metal alloys and composites for many applications is frequently based on the application of neutron beams to probe the materials on an atomic level. While neutron beams are better known for fundamental scientific exploration, they are also frequently employed by industry to study metallic components with low tolerance for failure. In these cases, neutron diffraction can be a vital step both in failure analysis and in qualification of parts before they used.

The gentle, yet penetrating power of neutron beams allows one to non-destructively determine stress anywhere inside metallic components while the component is subjected to realistic conditions of pressure, temperature, applied stress, and even corrosive environments. Since this method is non-destructive, measurements can be taken on the same component before, after, and sometimes during a manufacturing process.

In this issue, we solicit contributions from the leading researchers is stress, solidification, metal phase analysis, aluminum heat treatment technologies, hydrogen in metals and alloys, and studies of hydrogen mobility in thin films.

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, Grosspeteranlage 5
4052 Basel, Switzerland

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

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