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Fatigue and Fracture Behavior of Traditional and Advanced Metallic Materials in Low-Cycle Regimes

Guest Editors:

Prof. Dr. Denis Benasciutti
Polytechnic Department of Engineering and Architecture (DPIA), University of Udine, via delle Scienze 206, 33100 Udine, Italy

Prof. Dr. Martin Leitner
Institute of Structural Durability and Railway Technology, CD Laboratory for Structural Integrity in Rail Vehicle Design, Graz University of Technology, 8010 Graz, Austria

Deadline for manuscript submissions:
closed (31 October 2021)

Message from the Guest Editors

Dear Colleagues,

This Special Issue aims at collecting a series of articles devoted to the study of the fatigue strength and fracture behavior of structural metallic materials. The interest encompasses traditional structural alloys, innovative metallic materials as well as advanced manufacturing processes able to improve the fatigue strength and fracture behavior. The focus is laid on metallic materials performing in the low-cycle-fatigue regime, as in those engineering applications characterized by high loading levels and elasto-plastic strains, including constant amplitude, variable amplitude, and spectrum loading.

The Special Issue is open to research and review papers. Emphasis will be given to experimental results, numerical approaches, and analytical design concepts. Researchers are encouraged to submit papers focusing on specific aspects of the low-cycle fatigue and fracture behavior of metallic materials or describing applications and engineering case studies in the field of structural integrity.

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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.

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Contact Us

Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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