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Fracture and Fatigue of Metals and Alloys

Guest Editors:

Prof. Dr. Dariusz Rozumek
Department of Mechanics and Machine Design, Opole University of Technology, 45-271 Opole, Poland

Dr. Grzegorz Lesiuk
Department of Mechanics, Material Science and Engineering, Faculty of Mechanical Engineering, Wrocław University of Science and Technology, Smoluchowskiego 25, 50-370 Wrocław, Poland

Deadline for manuscript submissions:
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Message from the Guest Editors

The accumulation of damage and fatigue crack growth under the influence of loads is a common phenomenon that occurs in metals and alloys. To slow down the crack growth and ensure an adequate level of safety and optimal durability of structural elements, experimental tests and simulations are required to determine the influence of various factors. Research carried out in this field and the results obtained are necessary to guide the development towards the receipt of new and advanced materials that meet the requirements of the designers. This Special Issue will aims to provide the data, models, and tools necessary to perform structural integrity and lifetime prediction based on the stress (strain) state and, finally, the increase in fatigue cracks in the material, which would result in the application of advanced mathematical, numerical, and experimental techniques.

Therefore, researchers are invited to provide works with original research and solutions that are designed to extend work without failure of the structure.

The aim of this Special Issue is to gather the most recent research advancements regarding crack growth and fatigue in metals and alloys.

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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.

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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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