

Special Issue

Fatigue, Fracture and Hydrogen Embrittlement Behavior of Metallic Materials

Message from the Guest Editor

The use life of structural materials is to a large extent influenced by their service conditions, particularly in the coupled effect of cyclic load and corrosion environment. In the last several decades, there has emerged a huge number of new studies on fatigue and environmental fracture of metallic materials based on the development of new theories, testing techniques, and experimental phenomena. For example, multi-mechanical behaviors of various structural materials were explored in hydrogen-related engineering because of hydrogen as a potential clean energy carrier in the future. Advanced materials such as high-entropy alloy also inspired the interest of metallurgists in the world, focusing on their failure behavior as well as service properties. With a new view on this aspect, our Special Issue aims to seek a wide set of articles on the topic of fatigue, fracture, and hydrogen embrittlement of metallic materials, and we hope this issue can offer an excellent platform for metallurgists and material/mechanical scientists to discuss the latest progress in this field.

Guest Editor

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About the Journal

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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