Special Issue

Fracture and Fatigue of Advanced Metallic Materials

Message from the Guest Editors

This Special Issue aims to collate original research articles and reviews on the field of fatigue and fracture of metallic materials. Fatigue and fracture are important forms of failure in structural materials. Research into them plays an important role in evaluating the integrity and safety of engineering structures. This Special Issue mainly focuses on, but is not limited to, the following areas: the fatigue mechanism of metal materials, fatigue behavior in specific environments, ultra-high-cycle fatigue, multi-axis fatigue, fatigue crack propagation, fatigue statistical methods, fracture and crack arrest behavior of materials, microscopic mechanisms of fracture, etc. The fatigue and fracture of advanced metallic materials will receive special attention. Advanced materials mainly include additive manufacturing alloys, high-entropy alloys, coated metals, high-performance steel and environmentally friendly alloys, etc.

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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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