Special Issue

Fatigue Testing and Analysis of Metallic Materials

Message from the Guest Editor

Fatigue is a complex phenomenon and the resistance to crack initiation and propagation can be substantially affected by differences in composition, processing, heat treatment, surface condition and operating environment. The continuous improvements in testing techniques and accuracy of life prediction methods are effective tools to promote weight reduction and increased safety of metallic structures and components. This Special Issue focuses on recent progress in the experimental characterization of fatigue behavior of metals and alloys, as well as on improved life prediction methods. The assessment of advanced alloys with optimized fatigue resistance, surface treatments aimed at enhanced fatigue life, fatigue resistance of additive manufactured materials, and fatigue failure analyses will also be considered in this Special Issue.

Guest Editor

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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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