Special Issue

Mechanical Structure Damage of Metallic Materials

Message from the Guest Editor

With the rapid development of materials science, computational mechanics, and intelligent monitoring technology, how to accurately diagnose structural damage, reveal failure mechanisms, and improve performance through multi-scale optimization design have become the focuses of common concerns in both the academic and engineering fields. We focus on theoretical methods and technologies related to the damage mechanism of mechanical structures, life prediction methods, and structural performance optimization and encourage interdisciplinary exchanges of recent achievements. Our goal is to provide theoretical support and technical solutions for mechanical equipment in fields such as aerospace, energy equipment, and rail transportation. This Special Issue aims to compile articles focused on theoretical and experimental research progress in the static and fatigue damage of metallic materials and mechanical structures, with potential topics ranging from the damage evolution to performance optimization of metallic materials and mechanical structures.

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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