



Advances in Fatigue and Fracture of Metals and Alloys and Their Applications

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Message from the Guest Editors

Dear Colleagues,

The twin disciplines of fatigue and fracture are central to a wide range of industries: aerospace, power generation, nuclear power, rail, bridge construction, and others. However, recent developments have resulted in breakthroughs in a number of areas, both in conventionally and additively manufactured metallic metals. Furthermore, with the move to digital twins, 3D printing, and the ability to build materials with properties that are tailored to specific applications, these developments have the potential to transform the disciplines of fatigue and fracture as well as national economies. The aim of this Special Issue is therefore to create a focal point whereby practitioners, engineers, and researchers can access these numerous exciting developments.





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Message from the Editor-in-Chief

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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