



metals

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Failure Analysis in Metallic Materials

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Message from the Guest Editor

The structural behavior of a mechanical component is essentially the result of the interaction of acting structural loads, geometry, and material properties. However, these general considerations neglect several aspects that in certain cases are crucial for the safety of the component, such as residual stress, the variability of applied loads, the variability of mechanical properties, the reliability of the manufacturing process, and the corrosion and degradation of materials.

The aim of this Special Issue is to compile article that focus on determining the aspects that contribute to the failure of metallic materials. Contributions concerning the interaction of the stress/strain state and mechanical properties in determining the failure of metallic materials are welcome. Presentations of industrial cases illustrating the use of analytical, numerical, and experimental techniques for the study of the failure of metallic components in the automotive, aeronautical, and mechanical sectors are also welcome.



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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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