Special Issue

Fatigue Behaviour of Aluminum Alloys

Message from the Guest Editors

The fatigue behaviour of aluminium alloys is observed when aluminium alloys are damaged under the action of alternating stresses. Under the action of alternating pressure over time, micro-cracks are formed in local high-stress areas, and then the micro-cracks are gradually expanded to fractures. Topics of interest for this Special Issue include: novel fatigue testing and characterization methods for aluminium alloys; multiaxial fatigue and complex loading effects of aluminium alloys and structures; fatigue in the very high cycle regime; modelling; applications of technologies associated with fatigue; fatigue analysis of aluminium alloys; and structures based on data science.

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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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