Special Issue

Corrosion Fatigue and Fracture Behaviour of Metals in High Temperature Environments

Message from the Guest Editors

High temperature corrosion-fatigue and fracture encapsulates the life limiting mechanisms that are present when a material is exposed to the combination of an aggressive environment, high temperature and static or dynamic loading. Recent advances in experimentation, characterisation and simulation has allowed for interactions between stress, environment and microstructure to be explored, which is key to the lifing and damage tolerance of in-service materials, and to the development of novel technologies and new alloy systems.

This special issue aims to collate the current state of the art in understanding and methologies, providing the nessacary tools to perform structural integrity and lifetime prediction for metals experiencing high temperature corrosion and/or oxidation under any loading type. Researchers are therefore invited to provide original contributions in this field, highlighting the influence of factors such as environmental variables, temperature and loading condition, as well as observations and improvements offered by microstructure, composition and surface state.

Guest Editors

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Deadline for manuscript submissions

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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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