Special Issue

Fatigue Behavior of Coated Alloys

Message from the Guest Editor

Fatigue as a failure mechanism has been investigated for over a century and still occurs continuously, indicating the complex nature of the topic. The mechanisms found in practice are associated with high cycle, low cycle, impact, fretting, corrosion, surface, and thermal fatigue. Furthermore, the synergy action between two or more mechanisms can cause even more deleterious effects than the action of a single mechanism. In addition to the type of loading, fatigue characteristics are affected by a set of variables that include operating temperature, environmental effects, microstructure, component geometry, and surface conditions.

This Special Edition intends to present advances in the interaction between coatings and metal fatigue for the scientific community. The effect of factors, such as temperature, mean stress, multiaxial stresses, surface roughness, variable amplitude loading, environment effects, is of particular relevance.

Guest Editor

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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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