Special Issue

Fatigue Assessment of Metals

Message from the Guest Editor

Fatigue damage is a typical form of metal component damage, and the fatigue damage of structural components often brings disastrous consequences. Preventing the accidental failure of structural components is one of the design objectives of any engineering structure. Based on fatigue tests and the simulation of metal components, the theory and method of fatigue damage assessments of metal materials or components are proposed. These methods promise to provides a bases for structural safety, as well as for the design, material selection, and process selection of metal components, so as to further improve the fatigue resistance of structures and delay or avoid fatigue failure. This work requires the participation of multidisciplinary expertise, including material science, structural analysis, detection technology, structural design, manufacturing technology, computer technology, quality assessment, physics, reliability, etc. In order to solve the complex engineering fatigue problem, it is necessary to involve both micro- and macro-scale theory and experimental methods. We look forward to your contributions to this Special Issue.

Guest Editor

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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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