Special Issue

Numerical Simulation Methods for Analyzing Fatigue and Fracture Behavior in Metallic Materials

Message from the Guest Editors

With the recent improvement of immense computing power, research has been increasing on the use of different numerical modeling and data-driven machine-learning-based methods to analyze fatigue and fracture behavior of metallic materials at all length scales. This is an important research trend. In this regard, research is carried out at various levels of general and micro/nanoscales. The selection of tools based on artificial intelligence is also a real challenge. The goal of this Special Issue is to publish and highlight the most recent research on this topic in order to advance our understanding of the mechanical and fatigue-life behavior of single- and multiphase metallic materials. Accepted research will focus on new advanced methods or techniques to test, analyze, and monitor the behavior of a material or component during fatigue or fracture mechanics loads. Research based on different numerical models and data-driven approaches for predicting the fatigue life of metallic materials at all scales will be highly prioritized.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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