Special Issue

Evaluation of Fatigue and Creep-Fatigue Damage of Steel

Message from the Guest Editor

Fatigue is the gradual process of crack initiation and propagation in materials subjected to repetitive loading, while creep-fatigue combines the creep characteristics of materials with loading at elevated temperatures. Steel is widely used in engineering applications, and thus the evaluation of its fatigue and creep-fatigue properties is crucial. The fatigue and creep-fatigue damage of steel in usage environments is one of the most common failure modes for steels. The purpose of this Special Issue on "Evaluation of Fatigue and Creep-Fatigue Damage of Steel" is to explore the complex relationship between performance, processing, microstructure, and environmental degradation in steels and various environments. This Special Issue delves into the assessment of fatigue and creep-fatigue damage in steel over prolonged usage periods. Encompassing various aspects, including fundamental principles, testing methodologies, numerical simulations, and practical engineering applications, articles within this Special Issue can focus on the fatigue life of steel under different loads and temperature conditions, as well as theoretical analyses of creep-fatigue damage mechanisms [...]

Guest Editor

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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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