Special Issue

Fatigue Behavior, Lifetime Prediction and Modeling of Welding Process

Message from the Guest Editors

Material fatigue is regarded as one of the most important factors for determining the service life and safety of engineering components under cyclic loads. Thus, accurate evaluations and lifetime prediction of fatigue behavior remain a major concern, which are particularly prominent in welded joints. Furthermore, the need to join dissimilar materials to produce improvements, such as protection from corrosion, require in-depth investigations and the development of new welding techniques. However, despite these difficulties, welded joints are considered indispensable for most engineering constructions. Studies on fatigue regarding welded joints and the modeling of welding processes are becoming essential. Therefore, this Special Issue is dedicated to presenting the state-of-the-art advances in fatigue studies and lifetime predictions regarding welded joints. High-quality contributions, which present original concepts and new methodologies, with a clear indication of the progress made from existing literature, are encouraged. Research on the mathematical modeling of welding processes and the fatigue/fracture behavior of welded structures is also welcomed.

Guest Editors

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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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