Special Issue

Research on Fatigue and Fracture Behavior of Polymers and Composites

Message from the Guest Editor

This Special Issue aims to showcase the latest advancements in polymer composites, with a particular focus on fatigue and fracture behavior. The topics on thermoplastic composites and the integration of machine learning techniques to address sustainability challenges are highly encouraged. Polymer composites are key in various industries due to their lightweight, high strength, and excellent mechanical properties. This Special Issue aims to present cutting-edge research on fatigue and fracture mechanisms, characterization techniques, and predictive modeling approaches, shedding light on the intricate nature of polymer composites under dynamic loading conditions. In recent years, thermoplastic composites have emerged as promising alternatives to traditional thermoset composites due to their recyclability, reprocessability, and superior mechanical performance. This Special Issue features studies on fatigue and fracture of polymer composites considering novel processing techniques, property enhancements, and multifunctional applications of thermoplastic composites, providing insights into their potential for sustainable manufacturing and end-of-life options.

Guest Editor

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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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