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Fatigue and Fracture Behavior of Composite Materials

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Message from the Guest Editors

Nowadays, composites are the best alternative to metals alloys in those applications where higher mechanical properties and lower weights are required.

In the scientific context, thermal methods have been developing in terms of more in-depth processing procedure and analysis but there are some even opened points that require a careful discussion, for instance, how thermal methods are capable of describing the level of energy-to-heat conversion during fatigue or the energy released during fracture mechanics processes. Moreover, the meaning of the endurance limit found by performing accelerated fatigue tests with thermal methods is debatable.

The goal of the present Special Issue is to examine the recent contributions on this topic in order to show the capability of thermal methods to study fatigue processes and the fracture mechanics of composites. The advantage of such an approach lies not only in the possibility to reduce the testing time but also to gather more information on the status of composite materials, which can be exploited during their operating life for predicting the fatigue behavior of components.

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Message from the Editor-in-Chief

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