Special Issue

Damage and Failure of Ceramic Matrix Composites (CMCs)

Message from the Guest Editor

The mechanical behavior of ceramic matrix composites (CMCs) is damageable, nonlinear, anisotropic and tension–compression unsymmetric. A damage evolution mechanism is of great importance for the characterization of the property degradation of CMCs at elevated temperatures. Many efforts have been devoted to investigate the basic mechanical behaviors of CMCs. However, advanced methods and theories are still necessary to reveal and characterize complex damage evolution laws, constitutive relationships and failure mechanisms. This Special Issue mainly focuses on the damage characterization and failure prediction of CMCs under either single stress or multiple stresses. The loading modes concerned include static and dynamic loadings, monotonic and cyclic loadings, creep, or even their combinations. Experimental and theoretical research works are both acceptable for submission. Topics of interest are not limited to damage evolution, constitutive relationships and failure simulations, but also include fatigue and creep lifetime determination.

Guest Editor

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