Special Issue

Damage, Fracture and Fatigue of Ceramic Matrix Composites (CMCs)

Message from the Guest Editors

This Special Issue, “Damage, Fracture and Fatigue of Ceramic-Matrix Composites”, will address advances in material processing, material modelling and characterization, performance evaluation, and testing of ceramic–matrix composites (CMCs) for high-temperature applications. Compared with superalloy, the density of fiber-reinforced CMCs is only approximately one-third that of the superalloy, and the operating temperature can reach approximately 1350 oC for long-term use. Therefore, CMCs are considered the lightweight high-temperature material with the most potential for hot-section components in gas turbine engines. To improve the reliability and safety of CMC components during operation, it is necessary to perform investigations on damage and failure mechanisms analysis, and develop models to predict the damage, fracture and lifetime. For more information, please click the following link:
https://www.mdpi.com/journal/materials/special_issues/ceramic_matrix_compositives

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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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