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

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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 °C 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.

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Prof. Dr. Zhaoke Chen
Guest Editors

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Message from the Editor-in-Chief

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