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High Temperature, Fatigue and Fracture Mechanics of New Materials: Experiment and Evaluation

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Message from the Guest Editor

Fatigue failure serves as a crucial issue for load-bearing components in engineering. When it serves at high temperature, the material response turns out to be quite different from that at low temperature. Mechanical responses at elevated temperatures are always accompanied with material microstructure evolutions such as dislocation nucleation, slip and elimination, as well as their interaction with secondary phases and grain boundaries. Moreover, combined fatigue, such as the creep–fatigue interaction, and thermo-mechanical fatigue will be encountered as the loading spectrum becomes more and more complex, necessitating the establishment of novel damage evaluating models and more precise experimental techniques.



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Special Issue



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Message from the Editor-in-Chief

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