



Fracture, Fatigue and Creep of Advanced Materials

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Message from the Guest Editor

Fatigue and creep are major damage mechanisms/modes leading to material fracture, which are responsible for the failure of more than 90% of engineering components. Both subjects have been studied for more than 100 years. Today, more and more advanced materials are being developed, such as additively manufactured materials, nanocrystalline materials, functional materials, and high-entropy alloys. For demanding engineering applications to fulfil energy saving, environmental friendliness, and sustainable development requirements, all need good fatigue and creep resistances. This Special Issue “Fracture, Fatigue and Creep of Advanced Materials” is a collection of the most recent studies addressing various aspects of the subject problems, which may include, but are not limited to:

- Fatigue crack nucleation in advanced materials;
- Fatigue crack growth in advanced materials;
- Creep deformation and damage in advanced materials;
- Creep crack growth;
- Creep-fatigue interaction in advanced materials;
- Prediction of total fatigue life.





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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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