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# Creep and Fatigue Behavior of Alloys

Guest Editor:

**Prof. Dr. A. Toshimitsu Yokobori, Jr.**
Advanced Comprehensive Research Organization, Teikyo University, Tokyo, Japan

Deadline for manuscript submissions:
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## Message from the Guest Editor

Dear Colleagues,

To achieve the goal of reducing carbon dioxide emissions and using fossil fuel effectively, high-efficiency electric power plants with a higher steam temperature have been developed. Because the operating conditions of these power plants are exposed to more severe conditions than conventional systems, such as high temperature, high pressure, start–stop, and multi-axial stress, it is required to develop a highly accurate life prediction technique. Therefore, it is essential to standardize the testing and estimation methods of crack initiation and growth lives under high temperature creep-fatigue conditions accompanied with studies on the clarification of the deteriorated mechanism based on material science, which is useful to clarify the mechanism of damage formation under creep and fatigue conditions. The scope of this Special Issue includes research fields focusing on the clarification of the mechanism of damage formation and crack growth, the prediction of fracture life, and the establishment of testing methods under both stress- and strain-controlled creep and fatigue conditions.

Prof. Dr. A. Toshimitsu Yokobori, Jr.

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## Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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## Contact Us

*Metals* Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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mdpi.com/journal/metals
metals@mdpi.com
𝕏@Metals_MDPI