Special Issue

Superalloys and Ceramic Matrix Composites Behaviors under Extreme Conditions

Message from the Guest Editors

This Special Issue seeks contributions that address the behavior of super alloys and CMCs under extreme conditions. We encourage original research articles, reviews, and case studies that encompass a wide range of topics, including but not limited to the following:

- Experimental investigations and observations of behavior in super alloys and CMCs;
- Analytical modeling and simulation techniques to assess fatigue life and predict failure;
- Applications and case studies in aerospace, defense, automotive, energy and power, and electrical and electronics industries;
- Advanced non-destructive evaluation (NDE) techniques for fault identification and characterization;
- Comparative studies on the performance and durability of super alloys and CMCs under extreme conditions.

Contributions should provide valuable insights into the behaviors of superalloys and CMCs, supporting the broader understanding of material performances in extreme environments. Moreover, this collaborative effort will facilitate knowledge exchange, foster advancements in analytical modeling, and aid in the development of more reliable fatigue life prediction techniques.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

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