

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

Dr. Ali Abdul-Aziz

College of Aeronautics and Engineering, Kent State University, Kent, OH, USA

Dr. Theodore E. Matikas

Mechanics, Smart Sensors and Nondestructive Evaluation (MSS-NDE) Laboratory, Department of Materials Science and Engineering, University of Ioannina, Ioannina, Greece

Deadline for manuscript submissions

closed (30 November 2024)



Metals

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Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/198982

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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About the Journal

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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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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).