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Thermal Reliability of Advanced Materials and Structures

Guest Editors:

Prof. Dr. Zengtao Chen

Department of Mechanical Engineering, University of Alberta, Edmonton, AB T6G 1H9, Canada

Prof. Dr. Keqiang Hu

School of Aeronautics, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China

Dr. Wenzhi Yang

College of Civil Engineering and Mechanics, Lanzhou University, Lanzhou, China

Deadline for manuscript submissions:
closed (20 August 2025)

Message from the Guest Editors

Advanced materials with various functionalities or structural features have been increasingly utilized in recent years to meet the sophisticated demands of modern technology. Thermal failure presents a significant concern for many advanced materials and structures across diverse thermal environments. Gaining a deeper understanding of thermal failure mechanisms is crucial for designing reliable advanced materials and structures.

This Special Issue is dedicated to exploring the thermal reliability of advanced materials and structures under various thermal disturbances. Topics range from transient heating in ultrafast laser fabrication to the quenching of advanced metal alloys, thermal cycles in electronic devices, and transient heat conduction in heterogeneous microstructures. We welcome papers that address heat conduction, thermal stress analysis, thermal fatigue and fracture of advanced materials and structures, and related subjects. By showcasing recent advancements in this critical area, we aim to enhance our understanding of the thermal reliability of advanced materials and structures.



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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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