Special Issue

Research on New Thermal Protection Mechanism and Materials

Message from the Guest Editors

In this Special Issue entitled “New Thermal Protection Mechanism and Materials”, achievements in experimental and computational studies of new thermal protection mechanism and materials are presented. New thermal protection materials have huge potential applications for thermal protection systems and hypersonic vehicles. They make it possible to overcome the limitations of traditional passive thermal protection materials, thereby improving the performance of thermal protection systems, which can be applied to the next generation of hypersonic vehicles. This Special Issue aims to cover recent trends and the latest research advances in the field of thermal protection mechanism, methods, characterization, models, and application to such aspects as thermal protection systems. In particular, the topics of interest include, but are not limited to, the following:

- Reusable thermal protective materials;
- Ceramic-based thermal protective materials;
- New thermal protection structure;
- Active thermal protection mechanisms, materials, and structures;
- Electronic transpiration cooling;
- Surface physicochemical reaction;
- Ultrasonically absorptive coating.

Guest Editors

Dr. Hua Jin

School of Aerospace Engineering, Xiamen University, Xiamen 361005, China

Dr. Shun Dong

Science and Technology on Advanced Composites in Special Environment Laboratory, School of Astronautics, Harbin Institute of Technology, Harbin 150001, China

Deadline for manuscript submissions

closed (20 December 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/169507

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

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

MDPI

About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)