



Special Issue in High Temperature Materials and Processes: IGNITING THE SUSTAINABLE FUTURE WITH CUTTING- EDGE HIGH-TEMPERATURE MATERIALS

GUEST EDITORS

Dr. Abhijit Bhowmik

Assistant Professor
Dream Institute of Technology
Kolkata, India
abhijit.bhowmik@dreaminstituteonline.com

Dr. Chander Prakash

Professor and Pro-Vice Chancellor
Chitkara University
Punjab, India
chander.mechengg@gmail.com

To foster the development of transformational high-temperature materials for a future that is sustainable in terms of energy, this special issue offers a platform that may motivate the collective imagination.

AIMS AND SCOPE

A dramatic change to a more sustainable energy future is necessary for this century. The creation of new high-temperature materials that can endure the harsh environments of next-generation energy systems is key to this transition. The purpose of this special issue is to bring attention to the revolutionary possibilities of these materials by presenting the most recent developments and outlining the way towards innovations in clean energy.

SUBTOPICS

Emergent Material for Sustainable Energy:

Explore the creation of innovative materials that go beyond typical alloys. These materials include ultra-high-temperature ceramics, refractory composites, and metastable phases. These materials provide higher thermal stability, resistance to oxidation, and efficiency in energy conversion.

High-Temperature Materials for Enhanced Safety and Efficiency:

Explore the important part that accident-tolerant fuels play in lowering the risk of core damage, improved covering materials that fight rust better to make reactors last longer, and high-temperature materials that make heat transfer systems work better. The effect on safety, security, and energy economy as a whole is important to stress. It is a key step towards changing the future of nuclear power.

High Temperature Ceramics Material:

Delve into the remarkable characteristics and many uses of High-Temperature Ceramics, providing an in-depth analysis that highlights their game-changing impact on technological progress. High-Temperature Ceramics are in the vanguard of innovation, with the potential to change the course of many different sectors, from the aerospace industry to energy systems.

High-Temperature Materials for Storage and Transport:

To meet the essential infrastructure requirements of a hydrogen-powered economy, it is necessary to research several materials that may be used for the safe and effective storage and transportation of hydrogen. These materials include metal hydrides, organic liquid carriers, and high-pressure pipes.

HOW TO SUBMIT

Deadline: 10th of December 2024

Before submission authors should carefully read the [Instruction for Authors](#). In order to make the preparation of manuscript easier, you are advised to use the [Manuscript Template](#).

All submissions to the Special Issue must be made electronically via the [Editorial Manager submission and tracking review system](#).

All manuscripts will undergo the standard peer-review process (single-blind, at least two independent reviewers). When entering your submission via online submission system please choose "Special Issue: IGNITING THE SUSTAINABLE FUTURE WITH CUTTING-EDGE HIGH-TEMPERATURE MATERIALS".

The deadline for submissions is December 10th, 2024, but individual papers will be reviewed and published online on an ongoing basis.

In case of any question please contact Ms. Joanna Kosińska, Managing Editor of High Temperature Materials and Processes, Joanna.Kosinska@degruyter.com