Special Issue

High Temperature Corrosion of the Structural Materials and Degradation of Coatings in Harsh Conditions

Message from the Guest Editors

The problem of high temperature corrosion has been well known for years. There is no development of society without high temperature, as high temperature means better efficiency and higher performance; however, materials based on Fe, Ni, TiAl metal matrix fabricated in a standard way or by 3D technology possesses limitations. Therefore, it is extremely important to validate steels and alloys against high temperature applications. In order to prevent corrosion degradation and oxidation processes most frequently, protective coatings are needed to serve an extended lifetime for structural materials. I am inviting you to submit the very latest work on the subject, where high temperature corrosion steels alloy is a key subject of the research. This Special Issue offers a timely and authoritative opportunity to present recent progress in the field of high temperature corrosion of the structural materials and degradation of coatings in harsh conditions. Furthermore, the Special Issue is expected to highlight exciting challenges and future applications of the new coating systems and 3D materials resistance against high temperature exposures in different atmospheres.

Guest Editors

Prof. Dr. Nigel Simms

Centre for Thermal Energy Systems and Materials, Cranfield University, Cranfield, UK

Dr. Tomasz Dudziak

Łukasiewicz–Krakow Institute of Technology, Kraków, Malopolska, Poland

Deadline for manuscript submissions

closed (15 December 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/68441

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

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)