



Advances in Functional Ceramic Materials: Fabrication, Properties, and High-Temperature Applications

Guest Editors:

Dr. Cecilia Mortalò

Institute of Condensed Matter
Chemistry and Technologies for
Energy - National Research
Council (CNR-ICMATE), Padova,
Italy

Dr. Maria Cannio

Resoh Solutions S.r.l.s, Startup
for digital manufacturing of fuel
cells, Modena, Italy Istituto A.
Zanelli, High School, Reggio
Emilia, Italy

Deadline for manuscript
submissions:

closed (20 December 2023)

Message from the Guest Editors

Dear Colleagues,

In recent decades, functional ceramic materials have attract a significant amount of interest thanks to their thermal, mechanical, and functional properties. Many different materials possess interesting properties at high temperatures, such as metal oxides, nitrides, and their composites. The need to achieve improved properties and extend their service lives under extreme conditions has driven many efforts in these fields.

The aim of this Special Issue is to provide an overview of the latest achievements in functional ceramic materials for high-temperature applications and to highlight possible research directions to further advance the development of these materials.

Contributions are welcome on topics that include but are not limited to:

- New syntheses, sintering, and additive manufacturing of functional ceramic materials and composites;
- Deposition of advanced ceramic coatings for high temperature applications;
- Chemical and mechanical resistance at high temperatures and under operational conditions;
- In situ characterization under operational conditions;
- Applications of functional ceramic materials at high temperatures.





an Open Access Journal by MDPI

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

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.

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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)