

Special Issue

Synthesis, Sintering and Application of Ceramic Materials

Message from the Guest Editors

The aim of this Special Issue lies on three fundamental features of ceramic processing and its property measurements:

- New route of materials synthesis for achieving high-quality green powders suitable for subsequent processing. Innovative aspects of chemical and physical reactions are expected to lead to obtaining powders having a controlled phase and chemical composition. Green materials in the form of micro or nano powder may be used for sintering or other types of processing;
- Manufacturing of dense or porous ceramic polycrystals by solid or liquid state sintering. Characterization of mass transfer by pressureless sintering, hot-pressing (HP) or spark plasma sintering (SPS). Microstructure depiction related to heat treatment and other sintering conditions. Specific behavior of ceramic powder densification;
- Functional and structural properties of advanced ceramic for use both at room and elevated temperature to support manufacturing within sectors such as chemical, mechanical, electronical, and energy production.

The Special Issue welcomes high-quality research articles from the rapidly developing ceramic fields.

Guest Editors

Prof. Dr. Dariusz Kata

Department of Ceramics and Refractories, Faculty of Materials Science and Ceramics, AGH University of Science and Technology, 30-059 Krakow, Poland

Dr. Jan Huebner

Department of Ceramics and Refractories, Faculty of Materials Science and Ceramics, AGH University of Science and Technology, 30-059 Krakow, Poland

Deadline for manuscript submissions

closed (31 December 2021)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed



mdpi.com/si/56310

Materials

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

[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)





Materials

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed



[mdpi.com/journal/
materials](https://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 - Q1 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q2 (Condensed Matter Physics)