



Calibration and Validation of Multi-phase Models for Cementitious and Geological Materials

Guest Editors:

Prof. Dr. Günter Hofstetter

Department of Basic Sciences in
Engineering Sciences, Universität
Innsbruck, Innsbruck, Austria

Prof. Dr. Günther Meschke

Institute for Structural
Mechanics, Ruhr-Universität
Bochum, Bochum, Germany

Deadline for manuscript
submissions:

closed (22 May 2020)

Message from the Guest Editors

The consideration of interactions between solids and fluids and/or between different physical phenomena, such as thermal, hygral, mechanical, and chemical processes, is essential for an appropriate mathematical description of several problems in civil engineering involving cementitious and geological materials. The latter materials have a certain degree of permeability, allowing liquid or gaseous phases to enter the pore space and to interact with the surrounding solid phase. Since those interactions between different phases may strongly influence the structural behaviour, they have to be taken into account in numerical models. On the one hand, multi-phase models are a powerful approach for considering different interacting physical phenomena. On the other hand, they require the determination of a large number of material parameters from a broad range of different, and often elaborate, experiments. Hence, the calibration and validation of multi-phase models are challenging tasks... [For more details, please visit our [Special Issue Website](#)]





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)