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Advances in Durability of Construction Materials

Guest Editors:

Dr. Yi Xu
College of Mechanics and Materials, Hohai University, Nanjing 211100, China

Dr. Yi Fang
College of Mechanics and Materials, Hohai University, Nanjing 211100, China

Dr. Xiang Xi
College of Mechanics and Materials, Hohai University, Nanjing 211100, China

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Message from the Guest Editors

Dear Colleagues,

Durability, defined as "the capability of a structure to maintain minimum performance under the influence of loads", is a critical aspect in the realm of materials science. Service life design plays a pivotal role in ensuring that this performance is sustained over the intended period, commonly referred to as the service life. The objective of this Special Issue is to compile recent advancements and developments in the domain of construction materials. Themes of interest include, but are not limited to, the following:

Sulfate attack and alkali-aggregate reaction;
Freeze–thaw durability;
Durability of high-performance concrete;
Alternative binders and supplementary cementitious materials;
Life-cycle assessment and sustainable practices.
Corrosion in marine construction materials;
Prediction of durability based on artificial intelligence;
Shrinkage and expansion of construction materials;
Environment-dependent creep behavior of concrete structures;
Monitoring of durability (ions attack, carbonization, freeze–thaw) of construction materials;
Microcapsule-based self-healing of concrete structures with environmental impacts.

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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.

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Contact Us

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

Tel: +41 61 683 77 34
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