Special Issue

Concrete and Cement Matrix Composites: Microstructure, Permeability and Thermal Properties

Message from the Guest Editor

Concrete and cement matrix composites constitute a very wide group of construction materials; therefore, the topic of this issue is narrowed down to the microstructure, permeability and thermal properties. Permeability and diffusivity are understood to be used as concrete quality descriptors with respect to durability in a variety of aggressive environments. Various modifications of cement matrix and aggregate significantly affect the microstructure of concrete and cement matrix composites, and, thus, also their permeability and thermal properties that are closely related. Therefore, the topics of interest include but are not limited to the following:

- Characteristics of binders and aggregates in terms of the designed durability (transport properties).
- Microstructure formation and evaluation.
- Porosity and interfacial transition zone.
- Durability of cement based materials (resistance to liquid and gaseous media).
- Thermal and structural behavior.
- Thermo-mechanical modelling.

Guest Editor

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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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