Special Issue

Effects of Concrete Degradation on Gas Transfer Properties

Message from the Guest Editor

This Special Issue, will address the crucial problem of concrete durability and its degradation due to different causes, such as mechanical, chemical, thermal, etc. From a general point of view, these loadings may lead to changes in concrete mechanical properties and/or transfer properties (gas or water permeability, porosity, diffusivity). These changes are serious issues for structures intended for confining or storage of dangerous materials, immersed tunnel, dams or every structure that must ensure sealing properties. On the other hand, transfer property evolutions (especially gas permeability) are very useful tools to evaluate concrete degradation levels and to provide additional information on mechanical damage, i.e., cracking of materials. As a result, they can help to model or to evaluate material damage. Original papers and studies are solicited on these particular topics. Experiments and modelings, mainly dealing with gas permeability at different scales (structural or material) as well as diffusivity and liquid permeability, in relation to material degradation (cracking, lixiviation, carbonation, etc.), are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (30 November 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/66773

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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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