

Special Issue

Durability and Self-Healing Properties of Concrete Materials Under Realistic Conditions

Message from the Guest Editors

Self-healing is an ability known for enhancing the long-term durability of concrete structures by enabling crack repair. Numerous self-healing technologies have been developed over the last two decades and applied to a broad range of cementitious materials, with their performance predominantly evaluated under controlled laboratory conditions. Although such idealized testing environments, often tailored to specific self-healing mechanisms, are effective in demonstrating healing potential, they do not adequately capture the complexity of real exposure conditions. For these reasons, there is a critical need to rigorously assess the robustness, reliability, and effectiveness of self-healing systems under realistic simulated environments and in full-scale practical applications prior to their adoption by the market. Topics of interest include, but are not limited to, the following:

- Self-healing mortar;
- Self-healing concrete;
- Concrete structure durability;
- Realistic simulated conditions;
- Real environmental conditions.

Guest Editors

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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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