



Self-Healing Concretes

Guest Editor:

Dr. Marjan Marinšek

Faculty of Chemistry and
Chemical Technology, University
of Ljubljana, Ljubljana, Slovenia

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Message from the Guest Editor

The most efficient ways to treat cracks in concrete are the so-called active treatments. Active treatment techniques, which are also known as self-healing techniques, can be implemented through three main strategies: (i) autogenous healing; (ii) encapsulation of polymeric material; (iii) microbial production of minerals (i.e., calcium carbonate).

In autogenous healing, which is considered as a natural repair process, concrete cracks are filled through the hydration of un-hydrated cement particles or the carbonation of dissolved calcium hydroxide in the presence of moisture or water. Additionally, as a mechanism of self-healing in concrete one must also consider the so-called alkali-carbonate reaction (ACR) in concretes with dolomite aggregate, which also results in calcium carbonate precipitation.

In this Special Issue, modern trends in self-healing concretes preparation, including the healing fundamentals and mechanisms as well as the properties of healed concrete, are highlighted and discussed.

It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.





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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

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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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