Special Issue

Sustainable, Self-Healing, and Functional Building Materials

Message from the Guest Editors

Concrete is the most used building material which accounts for 5–10% of the global CO2 emissions. Due to the brittle nature of concrete, cracking and cracking-related deteriorations are usually the biggest threats to the durability of concrete structures. Self-healing, a phenomenon originating from biological systems, is a promising concept that can be adopted to treat cracks in cementitious materials. Attaching such new function to cementitious materials can extend the service life of structures, and mitigate the environmental burdens associated with concrete production and structural maintenance. It can be an important strategy toward the sustainability of modern cement and concrete industry. In this Special Issue, modern trends in self-healing concrete preparation, including the healing fundamentals and mechanisms, and the properties of healed concrete, are highlighted and discussed. Sustainable techniques and new functional materials that are related to self-healing cementitious materials will also be covered. It is my pleasure to invite you to submit a manuscript for this Special Issue.

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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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