

Special Issue

Advanced Research Progress of Concrete

Message from the Guest Editor

Concrete is the most widely used construction material. It is characterised by a high compressive strength, availability, durability, as well as a compatible behaviour with reinforcement bars, low price, simple preparation, and possibility of casting into desired shapes and sizes.

Smart concrete is a very broad category of materials that includes self-sensing concrete and self-adjusting concrete, which both have excellent mechanical properties and durability, a long service life, and easy installation and maintenance.

Self-healing and/or self-curing concretes can be described as concrete elements that can achieve self-repair and return to their original condition by reducing cracks, and at the same time, reducing maintenance expenses and increasing strength and durability.

Ultra-high-performance concrete is a cementitious Portland cement-based concrete with supplementary cementitious materials. It has a superb strength, durability, ductility and toughness. Sustainable concretes include reinforcing fibres, recycled materials, as well as organic and inorganic elements, such as concrete aggregates and reinforcement elements.

Guest Editor

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Message from the Editorial Board

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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