Special Issue

High and Ultra-High Performance Concrete for Sustainable Construction

Message from the Guest Editor

High-strength concrete was first introduced in the 1990s. Its development was largely due to the appearance of silica fume, leading to compressive strength values exceeding 100 MPa and durability improved to levels not previously known. Concrete with a compressive strength well exceeding 200 MPa, so-called ultra-high performance concrete, were the next step of the evolution process, as the density and homogeneity of the binder matrix had been further improved, resulting in even better durability. This success stories have one drawback. Typically, high and ultra-high performance concrete contain large amounts of Portland cement leading to a substantial CO2 footprint. Worldwide research is trying to tackle this huge environmental problem. One of the recent trends is to increase the usage of alternative cementitious binders. Unfortunately, these novel ecological systems often have unknown durability and long-term performance. To close this knowledge gap, this Special Issue will deal with research leading to improved high and ultra-high performance concrete with the clear aim of sustainable construction. It is my pleasure to invite you to submit a manuscript to this Special Issue.

Guest Editor

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Deadline for manuscript submissions

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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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