



High and Ultra-High Performance Concrete for Sustainable Construction

Guest Editor:

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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.





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Message from the Editor-in-Chief

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