Special Issue

Advances of Chemical Admixtures for Modern Concrete

Message from the Guest Editors

As an essential component of concrete, different types of chemical admixtures have been widely applied to improve properties. Chemical admixtures enable the manufacture and construction of high-performance ready-mix and precast concrete. By incorporating admixtures, the rheological property (workability), setting and hardening process, mechanical property, volume stability, and durability of concrete can be modified or improved through the modification of the micro-scale interface (e.g., particle surface, liquid–vapor interface) and microstructure of concrete. In this Special Issue, advances in both traditional chemical admixtures and "nano" admixtures are highlighted and discussed, including the design, preparation, and mechanism investigation of admixtures, as well as the performance (as mentioned above) modification and improvement of modern concrete. The keywords are as follows:

- concrete admixture
- rheology
- mechanical properties
- durability
- shrinkage reduction
- microstructure
- hydration

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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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