Special Issue

Concretes and Cement-Based Composites: Additives/Admixtures, Hydration Process and Durability Research (3rd Edition)

Message from the Guest Editors

Cement-based composites with different aggregates, natural or industrial by-products such as pozzolans, various chemical admixtures, nanosized additives, and fibres have received intense attention. These composites can provide improved performance in terms of consistency, strength, shrinkage, durability, etc. New additives/admixtures have positive effects on cement hydration and the formation of a denser material structure. Moreover, cement-based composites with industrial waste have major environmental advantages, such as lower CO2 emissions, the ability to utilize industrial by-products in the manufacture of cement-based composites, a lower cost, and creating an effective circular economy.

This Special Issue will present in-depth studies of the influence of various additives, such as pozzolans, micro-fillers, nanomaterials, chemical admixtures, and fibres, on cement-based composite (blended cements, concrete, and special concrete) properties (consistency, shrinkage, strength, durability, alkali resistance, etc.). Moreover, articles on the regulation and analysis of the hydration processes, structures, and sustainability of cement-based composites are welcome.

Guest Editors

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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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