



Recent Scientific Developments in Cement-Based and Alternative Materials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

I am delighted to announce the oncoming Special Issue, entitled “Recent Scientific Developments in Cement-based and Alternative Materials”, in the *Buildings* journal. Concrete, mortars and all cement-based materials are crucial parts of modern buildings. However, the growing production of traditional binders, in combination with intensive depletion of natural aggregates resources, causes serious impacts on our environment. In this respect, it is recommended to change the approach in the composition of traditional building composites, on the one hand, with implementation of further industrial by-products serving as filling or binding components, on the other hand, in order to provide building materials with customized set properties for specific applications.

This Special Issue is focused on research of traditional cement-based and alternative composite materials on alkali-activated bases that contribute to the preservation of the environment, and thus a higher rate of sustainability in the construction industry. In this sense, original research papers, state-of-the-art reviews, communications and discussions are welcomed.

Guest Editors





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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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