Special Issue

Structural and Functional Performance of Geopolymer Materials

Message from the Guest Editors

In applications as cement and concrete materials, geopolymers can reduce energy consumption during production, emission of greenhouse gases, and environmental impacts. These characteristics, combined with high early-age strength and fast hardness characteristics, allow considering these materials as a promising green alternative to ordinary Portland cement-based materials. Geopolymer concrete can find application in building, construction, repair, restoring, marine construction, etc. Moreover, they can be used in the construction industry to produce precast materials or in the coating of cement structures for the rehabilitation of compromised structures, flame inertization, and improvement of resistance to acids and water. Special applications include the immobilization of heavy metal pollution, pH regulator materials, catalysts, conductive materials for moisture sensor applications, and thermal storage. Functional applications such as fire prevention, isolation, heat preservation, and adsorption of harmful ions, can be used for buildings in special fields, such as fire prevention buildings, insulation walls, biomaterials, and, nuclear power plants can be considered.

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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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