Special Issue

Emerging Technologies and Materials for Smart, Durable and Sustainable Construction

Message from the Guest Editors

The construction industry is undergoing an era of transformation driven by the need for sustainability, durability, and adaptability to modern challenges. Some of these emerging technologies in construction materials include the development of cementitious materials with self-healing capabilities and the incorporation of sustainable, eco-friendly materials in concrete, which offer promising solutions for reducing waste, enhancing material performance, and improving the long-term resilience of infrastructure. Additionally, advances in 3D printing, nanotechnology, and self-sensing materials are transforming how we approach construction and monitoring. Finally, the development of alternatives to traditional steel reinforcements that exhibit excellent strength, durability, and resistance to corrosion is opening new avenues for more sustainable and efficient construction. This Special Issue highlights cutting-edge research, innovative findings, and practical applications in these emerging fields, fostering collaboration and knowledge sharing to address critical challenges in the construction sector.

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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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