Special Issue

Advances in Ultra-High Performance Concrete and Engineered Cementitious Composites

Message from the Guest Editors

Ultra-high Performance Concrete (UHPC) and Engineered Cementitious Composites (ECC) are two distinctive classes of high performance, fiber-reinforced cementitious composites. Due to their superior mechanical and durability properties, the applications of UHPC and ECC have been extensively studied, especially with respect to earthquake-resistant structures, durability, structural repairs and retrofitting, and bridge systems. Particularly, the production of UHPC and ECC members using 3D printing technology has been recently explored. The application of UHPC and ECC as a replacement for conventional concrete materials in RC elements necessitates a comprehensive understanding of the behavior of the materials under various types of loadings. This Special Issue is intended to include the studies that make significant advances in UHPC and ECC, inlcuding materials devleopment, mechanical and durability properties, structural applications, the production of materials and structures, analytical methods, computational models, experimental approaches, etc.

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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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