Special Issue

Intelligent Construction in Civil Engineering: Additive Manufacturing of Cementitious Materials and Concrete

Message from the Guest Editors

Intelligent construction serves as the core engine driving the transformation and upgrading of civil engineering, with cement-based materials and additive manufacturing (3D printing) of concrete being key supporting technologies. This Special Issue will focus on this cutting-edge field, publishing the latest advancements in the research and development of printable cement-based materials, rheological property regulation, printing process optimization, integrated structural performance design, numerical simulation, and engineering applications. It will center on core issues such as printability, interlayer interface performance, long-term durability, and intelligent equipment, aiming to gather innovative research from domestic and international universities, research institutes, and enterprises. Our goal is to foster interdisciplinary integration and advance the transition of concrete 3D printing from experimental research to industrial application. This Special Issue provides a platform for research on the additive manufacturing of civil engineering materials, contributing to the intelligent, green, low-carbon, and high-quality development of the construction industry.

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Message from the Editorial Board

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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