Special Issue

Artificial Intelligence (AI)-Driven Full Lifecycle Management of Infrastructures: From Advanced Cementitious Materials to Durable Structures

Message from the Guest Editors

In order to alleviate the resource crisis and accelerate the realization of carbon neutrality, advanced cementitious materials for durable structures have been applied in infrastructure. Driven by the tremendous progress of AI, construction is gradually transitioning from traditional manufacturing to intelligent manufacturing. However, how to organically integrate AI with the entire chain of "design–construction–operation–maintenance" to achieve intelligent construction of the entire lifecycle of infrastructure needs further exploration. This Special Issue aims to explore how to achieve intelligent infrastructure construction based on AI through advanced cementitious materials for long-lifespan structures. The subtopics for submissions include, but are not limited to, the following:

- Intelligent construction and operation of infrastructure.
- Structural intelligence health inspection/monitoring and evaluation.
- Dual carbon and intelligent, healthy infrastructures.
- High-performance new cementitious materials.
- Key technologies and applications, such as BIM and digital twins.
- Structural intelligence for disaster prevention and mitigation.

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Deadline for manuscript submissions

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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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