Special Issue

Modeling and Simulations of Construction Materials

Message from the Guest Editors

In recent decades, the rapid development in numerical theories and computational techniques has greatly promoted the modeling and simulations of construction materials, including cementitious materials, wood, etc. Modeling methods, such as molecular dynamics simulation, multiscale modeling, thermodynamic modeling, reactive-transport modeling, deep learning, and so on, have already become powerful tools to simulate the modifications of construction materials (e.g., SCMs in cementitious systems, chemical admixtures in cement, multifunctional cementitious composites, high-performance cement-based material, functional wood scaffolds) and to investigate their performance (e.g., microstructures, mechanical properties, mass transport, chemical attack, corrosion, UV aging). Therefore, this Special Issue focuses on advances in the modeling and simulations of construction materials, and original research papers, communications, and reviews are all welcome.

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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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