





an Open Access Journal by MDPI

Nanotechnology Enhanced Smart Cementitious Materials for Green Buildings

Guest Editors:

Prof. Dr. Yan Zhuge

UniSA STEM, University of South Australia, Adelaide, SA 5095, Australia

Dr. Zhenhua Duan

Department of Structural Engineering, College of Civil Engineering, Tongji University, Shanghai 200092, China

Dr. Wahid Ferdous

Centre for Future Materials (CFM), University of Southern Queensland, Toowoomba, QLD 4350, Australia

Deadline for manuscript submissions:

closed (31 July 2022)

Message from the Guest Editors

Concrete is the most widely used construction material in the world. As one of the key ingredients in concrete, the total amount of cement produced worldwide in the last decade has increased by more than 20% from 3.3 to 4.1 billion tons. In addition to the heavy exploitation of natural resources as the raw materials and aggregates in concrete, another environmental cost is the energy consumed and the greenhouse gases (GHGs) released during cement production. With increasing demand and tightening environmental restrictions, the concrete industry is under pressure to consider its greenhouse gas emissions and reduce energy consumption.

This Special Issue will address the abovementioned points in relation to nanotechnology, modification, characterisation, and properties of smart cementitious materials to offer insight into this new green concrete in order to eventually achieve the sustainability of green buildings. This Issue also accepts state-of-the-art reviews on alternative binders and technology to enhance the properties of cementitious materials.



