

Special Issue

Preparation and Mechanical Properties of Graphene Oxide Cement Composites

Message from the Guest Editor

Over the past decade, carbon-based nanomaterials (e.g., graphite, graphene, carbon nanotube) have been extensively studied in cement composites to utilize their superior mechanical properties. Graphene oxide (GO) in particular has received a great amount of attention as a new type of cement admixture due to its large surface area and dissolution ability into water. GO is a chemically modified graphene, and surface functionalization enables oxygen groups to be added onto the surface of graphene. These oxygen groups are thought to coordinate ions to initiate the nucleation of cement hydrates, allowing GOs to play a positive role for nanoseeding materials during cement hydration. The goal of this Special Issue is to disseminate original research (experimental, theoretical, computational) and review studies that address but are not limited to the following topics on GO cement composites: (1) trends, challenges, and future, (2) high-performing and cost-effective GOs (3) materials preparation and characterization, (4) mechanical properties and behaviors, and (5) multiscale applications and implementations.

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2021)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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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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