



Frontier Research in Nano Reinforced Cement and Concrete Composites

Guest Editor:

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Message from the Guest Editor

At present, the use of nanomaterials (NM) to improve the performance of cement and concrete matrixes appears as a potential alternative to the exclusive use of Portland cement (PC).

The NM evolution has allowed the production of new cement-based nanocomposites with previously unimaginable properties. In general, NM can be grouped into three main types: zero-dimensional (0D) nanoparticles, such as nanosilica; one-dimensional (1D) nanofibers, such as carbon nanotubes; and lastly, the most recent two-dimensional (2D) nanosheet, i.e., graphene oxide (GO). These materials, especially 1D and 2D NM, have the ability to, in very small dosages, strengthen the cement and concrete matrix through reinforcement and pore refinement. This allows for conventional cement composites to achieve higher performance levels or to maintain the same performance levels with decreasing PC consumption.

The SI Link:

[journal/applsci/special_issues/Nano_Reinforced_Cement](https://www.mdpi.com/journal/applsci/special_issues/Nano_Reinforced_Cement)

The aim of this Special Issue is to explore the potential of use of nanomaterials in the production of mortar and concrete composites and to discuss new opportunities in this field.

