

In the last few decades, carbon nanotubes (CNTs) have been extensively used to reinforce cementitious materials. Studies have been conducted on analyzing CNT addition on the mechanical, physical, chemical, rheological, and microstructural properties of cement pastes and mortars. The major challenge of CNT addition has been to provide an acceptable CNT dispersion in the cementitious matrix. Many variables affecting the dispersion such as CNTs' weight fraction, aspect ratio, functionalization, mixing procedure, and surfactant type and amount, and sonication energy have been investigated. These studies have developed an understanding about CNT amounts and types, and mixing procedures for improving the flexural, compressive, and tensile strengths of CNT composites. This talk will present an overview of the findings and challenges of these studies.