

The Role of Nano-Science in Construction of Civil Engineering and Environment

Authors : Mehrdad Abkenari, Naghmeh Pournayeb, Mohsen Ramezan Shirazi

Abstract : Nano-science has been widely used in different engineering sciences. Generally, materials' application can be determined through their chemical and physical properties. Nano-science has introduced as a new way in production systems that not only turns the materials into very small particles but also, gives them new and considerable properties. Like other fields of study, civil engineering has not been ignorant of benefits and characteristics of new nanotechnology and has used it in the construction industry and environmental engineering. Therefore, considering such chemical properties as elemental analysis and molecular or atomic structure, the present article is aimed at studying the effects of Nano-materials on different branches of civil engineering. Finally, by identifying new Nano-materials, this study attempts to introduce advantages of using these materials for increasing the strength of materials during construction as well as finding new approaches to prevent or reduce the entrance of chemical pollutants during or after construction to the environment.

Keywords : civil, nano-science, construction, environment

Conference Title : ICSBMCT 2015 : International Conference on Sustainable Building Materials and Construction Technologies

Conference Location : Rome, Italy

Conference Dates : December 03-04, 2015