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NANOMATERIALS IN CONSTRUCTION AND THEIR POTENTIAL IMPACTS ON HUMAN HEALTH AND THE ENVIRONMENT

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Abstract

Over the last few years, the use of nanomaterials in the construction industry has grown markedly. Nanomaterials can considerably modify the properties of construction materials and even improve their performance. Despite their merits, considerable research has reported that nanomaterials pose a potential risk to human health. For this reason, it is important to fully comprehend the effects of nanomaterials on human health and the environment throughout all phases of their life cycle, including manufacturing, construction use, and recycling, in order to ensure their responsible usage. This research reviews the use of nanomaterials to enhance the properties of conventional construction materials as well as the possible adverse exposure scenarios for humans and the environment. Moreover, the potential risks and negative biological effects of these materials on human health are debated. This study serves to raise awareness of the potential hazards of nanomaterials, especially on human health and the environment.

Key words: construction industry, environment, human health, nanomaterials, toxic effects

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