

Abstract

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The Impact of Nanotechnology on the Environmental Design Process

Nanoscience is rapidly developing, and many diverse nano-enhanced applications are emerging with a wide range effect on the different fields of technology. Building technology has been one of those fields affected by several of the enhancements in Nanotechnology in the past decade. This Paper is a study of the relationship between the development of technology and the evolution of the environmental design process in architecture, through specifically studying the influence of Nanotechnology on specific applications in building technology, that in turn affect the environmental design decisions. It is hence the objective of this paper to clarify how the factors and attributes contributing to the design of space and building are being affected by the emergence of these environmental nano-enhanced applications. Therefore the paper will explore the impact of those newly developed nano-enhanced applications on several projects around the world, affecting the internal and external air-quality, thermal comfort and other environmental aspects of design. The paper will also shed light on how those same nano-enhanced applications could affect the design process itself, hence allowing the design of space to be further developed in the future as to be more efficient and to fulfill the increasing demand for sustainable design.