

High Performance Nanomaterials for Sustainable and Modern Façade Application

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Abstract : The concept of enhancing mechanical /thermal/physical properties of architectural materials is being practiced for over five decades. In comparison with other approaches, the current nanotechnology era equally attracted the structural scientists, engineers, and industries. It simply promises that using building blocks with dimensions in the nano size range makes it possible to design and develop new multi-functional materials. This research focuses on understanding the effects of nanotechnology on the building facade and new facade concepts based on the new possibilities of nanotechnology. Mentioned factors are very prosperous for the comfort as well as sustainability of the building itself. Furthermore, the study suggests that the potential for energy conservation and reduced waste, toxicity, non-renewable resource consumption, and carbon emissions through the architectural applications of nanotechnologies significant. More clearly, it provides us the information about what does the future hold for surface structures.

Keywords : sustainable, nano materials, façade, energy efficiency

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