

## Application of nanotechnology in smart civil structures

Mohd Imran Shah

Project Manager, SS Tech Heights LLP, Construction Division Gurugram, India.

**Abstract:** Nanotechnology has the potential to make construction faster, safer, cheaper and more varied, resulting in smart construction. Automation of nanotechnology construction can allow for the creation of structures from advanced homes to gigantic skyscrapers much more quickly and at much lower cost and higher efficiency. In the near future, Nanotechnology can be used to sense cracks in foundations of structures and can send Nanobots to repair them. It can also provide self-powered failure prediction and prewarning mechanisms for high capital structures. This paper explores the vision in making of smart and innovative infrastructure and leading a smart city with the help of application of nanotechnology in civil structures.

The study of nanoscience and various nanoparticles and their implementation in construction field is illustrated in this paper. The article further emphasizes more on the futuristic demand and application of nanotechnology in constructing smart structures. The paper is managed to be written in simple language for easy grasping.

**Key words:** Civil Engineering, Nanotechnology, Nanoparticles, Smart-Construction