**Current and Future Prospects of Organic Chemistry in Synthesis of Nanoparticles**

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**Abstract:**

In a wide range of application fields, nanomaterials and nanoparticles represent an emerging area of research and a quickly growing technology sector. Organic chemistry plays a significant role in nanomedicine and nanotechnology, Enabling the design, synthesis and functionalization of nanoscale materials and structures that are used in various biomedical applications. Organic NPs have been extensively studied for decades and contain a wide variety of components. Materials with a nanoscale range are used to deliver precise medications to specific targeted sites in a controlled way as well as to serve as diagnostic equipment. Similarly, metal nanoparticles have great attention in modern chemistry and nanomaterials research due to their applications in various areas such as photochemistry, nanoelectronics, optics, and catalysis. Organic chemistry delivered abundant nanostructured materials moreover synthetic or isolated from natural resources gives opportunities and challenges in drug delivery and is very commonly used in biomedical imaging, biosensing, diagnostic, and therapy.

P.S. - Final chapter will be submitted within 30 days.