Sources of Nanoparticles

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Environmental Nanotoxicology

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Abstract

Nanoscience has become a worldwide multidisciplinary area on the basis of its unique physical and chemical traits, which have improved over the last few years. The atypical traits have given rise to diverse application in various domains of life. Solid particles are nanoparticles that have a dimension limit of 1–100 nm. Different sources are used to obtain nanoparticles via artificial synthesis using top-down and bottom-up processes and the environment via dust storms, anthropogenic, volcanic ash, and other natural processes. Lately, natural biogenic nanoparticles have become a popular subject matter due to their environmental and health gain. Nanomaterials can be created in natural world by employing a range of microorganisms, aquatic sources, and plants and can be produced in the laboratory. Biosynthesis of nanoparticles via plant- and microbe-mediated processes is an ecofriendly substitute to the high-cost, laborious, and probably toxic chemical and physical production method. This section discusses the different types of nanoparticles and their artificial and natural origins as well as categorization and biological synthesis using microbes, plants, and artificial procedures.

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