

## عنوان مقاله:

Investigating the effect of nanotechnology on monitoring and control of urban air pollution

## محل انتشار:

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## خلاصه مقاله:

Abstract Today, one of the biggest problems of industrial and urban life is the increase of pollutants and air pollution. In many cases, despite the advancement of technology, it can have positive effects, but its negative effects on nature and the environment are undeniable. Inhalation of airborne particles has devastating effects on human health and causes diseases such as asthma, lung cancer, cardiovascular disease, respiratory disease and premature death. Therefore, controlling and monitoring the amount of urban air pollution is of special importance. In recent years, many advances have been made in the field of air pollution control, one of the most important of which is the use of nanotechnology. One way to control air pollution is to constantly monitor it. The use of nanosensors that stay in the air for hours causes the particles to send the information they collect to the database at high speed. On the other hand, the existence of nanofilters for the purification of pollutant gases from cars and industrial units has been proven. In this article, the relevant information has been collected through a library method, which while explaining the benefits of nanotechnology, has provided the practical fields of this technology and mainly theoretical issues and the effect of nanotechnology on reducing urban air pollution. And review the development of nanotechnology applications to achieve environmental goals and improve the quality of human life Does. Finally, it suggests that researchers, governments, and industries, while exploiting the potential of nonmaterial in advanced monitoring and purification systems, improve new technologies in refining, nonmaterial, adsorption, catalysts, and sensors. Provide a way to optimize life cycle assessment in support of decision making and information transfer for the development of nanotechnology in products. In this regard, regulations should be prepared and developed for safe and healthy use of .nano-products, based on which control and monitoring of all nanotechnology activities can be applied

## کلمات کلیدی:

Keywords: Nanotechnology, Environmental pollution, Urban air pollutants, Nanosensor, Catalyst

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