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## **Investigation and analysis of the application of nanotechnology in environmental protection and pollution reduction**

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### **Abstract**

Nanotechnology has made great strides in the technology of equipment and materials on a very small scale in the last two decades, and will lead to an extraordinary transformation that will transform human civilization by the end of this century. In short, nanotechnology is a process of molecular production as well as general knowledge, in many technologies, including environmental engineering and the manufacture of preventive and environmental protection equipment against a variety of environmental pollutants (water, soil, Air and sound) is very useful. One of the most important environmental applications of nanotechnology is the manufacture of nanosensors, nanofilters, environmental catalysts, nanopolymers, nanoparticles, nanotechnology, optimization of new energies, as well as its application in the treatment of biopollutants. Environmental and ... pointed out. The use of this technology (green technology) will save a lot of money, energy, protect all environmental resources and prevent environmental pollution, and ultimately pave the way for sustainable development. This study was conducted by library and field studies with the aim of investigating the role of nanotechnology in the manufacture of environmental protection equipment.

**Keywords:** Nanotechnology, protection, environment, pollution.