

Review on Nanotechnology Applications in Engineering

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ABSTRACT: *Nanotechnology helps to change many technologies dramatically and even to revolutionize them Industries: IT, electricity, environmental science, medicine and home security; Protection of food, and travel, among many others. Latest development in nanotechnology is exploited today the development of new materials with unique feature in chemistry, physics, materials science and biotechnology properties since nanometer scale decides their structures. The article sums up the following different nanotechnology applications in recent decades.*

KEY WORDS: *Nanotechnology, Environmental Science, Agriculture, Food safety, Engineering.*

INTRODUCTION

Sustainable Energy Application:

The trouble of reaching the energy of the earth the increasing need to preserve demand is intensified our world. Our environment. Many researchers are finding ways Clean affordable and renewable energy production Sources and energy consumption reduction and to reduce environmental toxicity burdens. Prototype solar panels incorporating nanotechnology are more efficient than standard designs in converting sunlight to electricity, promising inexpensive solar power in the future[1].

Solar nanostructured cells are less costly to produce and easier to install, because they should use and use printed production processes be made rather than separate panels in flexible rolls. Nanotechnology improves fuel efficiency standard and low quality crude petroleum production better catalysis materials and fuel materials vehicle and power plant consumption efficiency by increased combustion efficiency and decreased rubbing. Nanotechnology is already being used in numerous new kinds of batteries that are less flammable, quicker charging, more efficient, lighter weight, and that have a higher power density and hold electrical charge longer (Jalaja et al., 2016; Najim et al., 2015; Maine et al., 2014). One new lithium-ion battery type uses a common, nontoxic virus in an environmentally benign production process. Materials that are nanostructured to improve the membrane and storage of the hydrogen significantly[2].

Materials and catalysts required for the manufacture of fuel cells Low cost alternative transport systems. Researchers also strive to create a healthy, safe community the hydrogen fuel tank is lightweight. Different scientific options for waste heat conversion in nano are being followed Computers, vehicles, houses, power stations, for use power electricity[3].

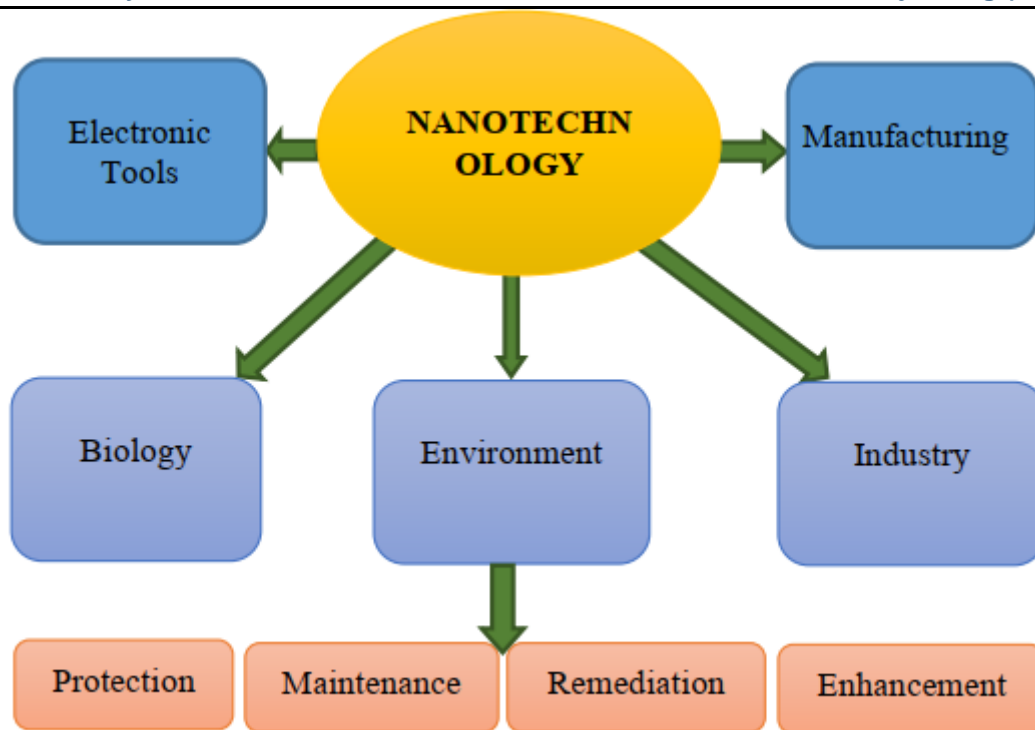


Figure 1: Application of nanotechnology in science and environmental science

Researchers are engaged in handheld electronic devices developing solar panels that can be solar thin-film computer case fitting and piezo-electric versatility clothing woven nanowires to produce usable energy light, friction and/or body heat on-the-go, The promise of nanotechnology is real revolutionize a broad variety of surgical techniques and procedures

More personalized, compact, less costly, more stable, and more efficiently handled. Quantum points are apocryphal semiconductants this will boost medical biological imaging[4].

Diagnostics. Diagnostics. Lit by ultraviolet rays, you are Issuing a wide variety of vivid colors to use to recognize and locate various cell types an organic operation. These crystals can be visually accessible one thousand times better than typical dyes in many organic testing, for example MRIs, and substantial rendering more information. - More information. Multi-functional treatments nanoart is a forum for its specialization targeting and delivering potent cancer cells minimize the risk of treatment for normal tissues[5]. Enables research including chip-based microfluidic nano laboratories that can track and treat nano scale samples to monitor the individual cells and cell motions and molecules as they pass in their surroundings move around. Study is ongoing Using nanotechnology to stimulate nerve cell formation, in damaged brain or spinal cord, e.g. In one method, a nanostructured gel fills the space between existing cells and encourages new cells to grow. There is early work on this in the optical nerves of hamsters. Another method is exploring use of Nano fibers to regenerate damaged spinal nerves in mice.

Sensors and Medicine Application:

Early detection molecular imagery nanoscale-built responsive biosensors nano-cantilevers, nanowire, and other components genetic and molecular nano-channels can recognize Events and reporting capabilities provided the possibility to detect related unusual molecular signals Malignant with Multi-functional treatments nano part is a forum for its specialization targeting and delivering potent cancer cells Minimizing the risk of treatment to normal tissue[6].

REVIEW OF LITERATURE

There have been many paper published in the field of nanotechnology among all those paper a paper titled “Review of Nanotechnology Applications in Science and Engineering” by Shariat Mobasser¹ and Ali Akbar Firoozi² discussed about the nanotechnology and its application in engineering where in The trouble of reaching the energy of the earth the increasing need to preserve demand is intensified our world. Our environment. Many researchers are finding ways Clean affordable and renewable energy production

Sources and energy consumption reduction and to reduce environmental toxicity burdens. Prototype solar panels incorporating nanotechnology are more efficient than standard designs in converting sunlight to electricity, promising inexpensive solar power in the future. Nanotechnology helps to change many technologies dramatically and even to revolutionize them Industries: IT, electricity, environmental science, medicine and home security; Protection of food, and travel, among many others. Latest development in nanotechnology is exploited today the development of new materials with unique feature in chemistry, physics, materials science and biotechnology properties since nanometer scale decides their structures. The article sums up the following different nanotechnology applications in recent decades[7].

CONCLUSION

Nanotechnology on the basis of the analysis in this paper is capable of being the key for a whole new world the areas of food and forestry, building materials, Engineering, physics, medicine and electricians. While natural systems replication is one of the most important scientists are the most promising fields of this technology they still attempt to understand their amazing complexity. Nanomaterials and nanotechnology are also a rapidly expanding study area with new features Nano-scale materials can be used to advantage there are industrial advances and a range of skills that could change the service life and life cycle infrastructure building costs to create a modern world in the future. - In future.

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