

Nanotechnology and Its Applications

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Abstract

The Post is dedicated to shed a light on quite a few wide applications of nanotechnology. The editorial intends to help the readers have a clear notion about the promising potentiality of this newly emerged tech.

Introduction

Nanotechnology is probably one of those very few market players that have started ruling the world right after its emergence. From medicines to electronics, sports accessories to consumer goods and even foods to several environmental cleaning products, the use of this newly emerged technology is quite extensive indeed.

Medicine

Nanotechnology has its greatest share of impact on medicines. Several researches are on the go to develop customized nanoparticles. The tiny sized nanoparticles infuse the medicine directly to the ailing cells and it's believed to heal the body faster. Also, this technology gives way to improved diagnostic tools that is always highly beneficial for the patients. The scientists are working on gold nanoparticles too and diseases as dreadful as cancer are also expected to be on the mend with the same. Again, nanospecks are quite helpful to treat certain medical conditions like tuberculosis, atherosclerosis etc. Researchers are also trying to utilize nanoparticle in enhancing vaccines and initiating vaccination without needles [1].

Food

Nanotechnology has spread its wings of bliss over the food industry as well. While it has improved the process of how a particular food item is grown, it has also enhanced the way how it gets packaged. Similarly, nanomaterials developed by different companies not only make the taste of the food better, but also takes care of the fact that the food is safe to be consumed. As per the food experts, nothing other than nanotechnology can ensure the health benefits of the food products better [3].

Electronics applications

The latest feature that has increased the sale of high definition televisions yet more is the usage of quantum dots in the screen. It not only produces pulsating images, but also helps in saving energy to a significant extent. Besides, the arrival of Magnetic Random Access Memory (MRAM) has been a boon in the world of technology. This new add-on will enable computers to boot almost in a jiffy! Moreover, when it comes to certain accessories like pliable displays, thumb drives, ultra-reactive hearing contraptions, cell phone cases, the smart chips in smartphones, the conductive colors in printers etc, the contribution of nanotechnology is compared to none [2].

Environmental cure

Nanotechnology is now used in dealing with the impurities in ground water. Meeting the demand for clean drinking water, this exclusive tech has started playing a major role in snuffing out environmental contaminants [1]. Again, the emergence of nano-fabric paper towel in the market has highlighted the use of nanotechnology yet more. Also, for cleaning up industrial water pollutants, nanoparticles have come up as an indispensable component. When it takes less time than the conventional procedure of filtering the water off the ground, the nanoparticles are also meant to form a better chemical reaction. The air filters in flight cabins involve nanotechnology yet again and this is how the strainers give way to mechanical filtration [2].

Transportation

The nanotechnology-enabled lightweight materials have reduced the weight of the jet aircrafts to a significant extent, thereby diminishing their fuel consumption as well. Also, according to the scientists in NASA, while the use of nanomaterials would increase the mission reliability like never before, the lightweight spacecraft would also make room for several alternative propulsion notions [1].

As per the report made by Allied Market Research, the market of nanomaterials has experienced huge growth in the last few years. The market value of \$14,741.6 million in 2015 is anticipated to outreach \$55,016 million by 2022.

Conclusion

Manipulating matter on the nanoscale, nanotechnology is meant to transform an array of sectors. Probably the day is not so far when this advanced tech will be used in almost every industry.

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