

Innovations in Nanotechnology

Ms. A. S. Sawalkar¹, Ms. T. R. Shinde², Ms. M. M. Mali³,
Mrs. M. A. Parlikar⁴, Mrs. S. L. Mortale⁵

Lecturer, Department of Information Technology^{1,2,3,4}

I/C Head, Department of Information Technology⁵

Pimpri Chinchwad Polytechnic College, Pune, Maharashtra, India

Abstract: "Nano" is something which is smaller than the atomic level of anything. Nanotechnology is the study of matter manipulating scales. It is the construction of any functional level or ways level. Very can say atomic. A Nano is one billionth of a meter. In nanotechnology, products are created with building blocks at length scale less than hundred nanometres. Nanoscience is the most fundamental aspect of phenomenological study at length scale less than hundred nano meter. Nanoelectronics is the most commercial manifestation of nano science and nanotechnology.

Keywords: Nanotechnology, Nano, Transistors, Electronics, etc.

I. INTRODUCTION

This document is a template. An electronic copy can be downloaded from the conference website. For questions on paper guidelines, please contact the conference publications committee as indicated on the conference website. Information about final paper submission is available from the conference website.

Need of Nanotechnology in Electronics

Today microelectronics is used, and they solve our most of the problems. The two exceptional disadvantages of microelectronics are:

- Physical size
- Increasing cost of fabrication of integrated circuits.

To overcome these disadvantages nanotechnology can be used.

II. NANOTECHNOLOGY

Atoms are really small-more than a million times smaller than the tip of your finger and that means they are not easy to work with, but over the past few years, scientists and engineers have become increasingly good at designing and engineering materials down at the levels of atom, and because of this, new technology involves doing things at such a minute scale, called Nanotechnology.

Using their new skills, nanotechnologist is beginning to develop new stuffs like creating materials that are really good at turning sunlight into energy or using monoscopically small particles to deliver anti-cancer drugs.

III. INNOVATIONS IN NANOTECHNOLOGY

3.1 Ultra-Ever Dry

Ultra-ever dry is an amazing invention that completely repels almost any liquid. It uses proprietary nanotechnology to coat an object & create a secure wall of air on its surface. The Secure wall Repels water, refined oil, wet concrete & other liquids, unlike any other coating we can extend the life of work gloves, Electric motors, and coat nuts and bolts to protect corrosion.

3.2 Self-Energy Converting Sunglasses

We have already seen the solar chargers that convert sunlight into electricity to charge your mobile phones, mp3, ipad & more. These are the self-energy converting sunglasses. They come with dye solar cells & nanotechnology in the lenses that turn sun rays into "Electrical energy" It collects the sunlight & converts it into electricity to power up different gadgets.

3.3 Smartphone Screen Protector

Utilizing nano-coating tech. This glass screen protector is the thinnest screen protector in the market & perhaps one of the few products that have antibacterial properties.

3.4 A Fish Finder

So, here you don't have to spend hours of time looking for the right spot. The fish finding locator is a helpful gadget it sends sound wave signals to the device giving exact location, structure details, composition as well as its depth below.

3.5 Smartphone Projector

Phones have been commonly used to record videos and photographs. Now you can enjoy all those viral moments without crowding around your tiny smartphone. This smartphone projector lets you display the footage on any surface. It has a magnifying lens ten times larger to increase the video size and to give a much better viewing experience.

IV. ADVANTAGES

Small tech size is the new trend. These new technology devices are as efficient as they don't occupy much space likewise, they reduced size they are more ecofriendly. Nanotechnology has been hailed as the next big thing for decades and will increase the efficiency of energy of energy consumption, help clean environment and solve major health problems. It is said that Nanotech inventions will be able to massively increase manufacturing productions and significantly reducing the cost.

Products of Nanotechnology will be smaller, cheaper and lighter, get more functional and require less energy and fewer raw material to manufacture.

Future Scope in Nanotechnology

- Nanotechnology for Flexible Electronics
- Nanotechnology for Wireless Technology
- Nanotechnology for Molecular Technology

V. CONCLUSION

So, whatever you see, it's because of different atoms that can be put together and if we arrange atoms in a smarter way, we could actually create a new material in an innovative way. This is really a powerful technology. It's helping us to do stuffs we couldn't even dream of just few years ago. But because, Nanotechnology is so powerful, we need to be very careful how to use it.

REFERENCES

- [1] https://www.researchgate.net/publication/339069917_Nanotechnology_An_innovation_in_scientific_research_and_technology.
- [2] https://www.researchgate.net/publication/315641209_Nanotechnology_innovations_industrial_applications_and_patents.
- [3] <https://www.sciencedirect.com/science/article/abs/pii/S0166497207000697>
- [4] M. Wegmuller, J. P. von der Weid, P. Oberson, and N. Gisin, "High resolution fiber distributed measurements with coherent OFDR," in Proc. ECOC'00, 2000, paper 11.3.4, p. 109.
- [5] <https://in-part.com/blog/new-nanotechnology-innovations-top-10/>