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Review Article

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Bio.Electronics New Methods in Glance

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Abstract

In this paper, I have reviewed the technology of Bio.lectronics. This science nowadays in many branches of technology has influenced specially in Medicine and electronics technology that in continue I illustrate. For this paper from article has been helped that in references has come.

Keywords Nano.Bio.Electronics, Bio.Sensors, Enzymatic, Molecular Magnetism, Molecular Spintronics, Gated Organic Field Effect Transistor, Organic Electro Chemistry Transistors (Oect), Oleds.

1. Introduction

Some questions about NeuroScience and Cureness of some illnesses , in my Idea, by brain signaling , Machine.Learning and introduction sample patient who had cured by this subject will be solved

2. Nano.Bio.Electronics Basics and Applications

Mixture of science and technology in biology, nano and electronics a new subject in name nano.bio.electronics has created.

Applications and subjects of bio.electronics in food science, farming, medicine, image processing, biology and defence science is one of the main government invest in this area.

Bio.Electronics in medicine has results in many curenesses and also diagnosis, identification, and treatment of deases.

Applications such as detection of environmental pollution, toxic gases and poisoning related to chemical attacks in the field o national security and medical electronics have doubled the development of bio.electronics to molecular memory, artificial organs and aid robots.

3. Classification of Nano Bio.Electronics Science

1-Biosensors: a combination of biochemistry, molecular biology, chemistry, physics, electronics and computer and is based on optoelectronic components and biological material. Pan applications in environmental pollution control and identification of pollutant gases and on-chip laboratories are used to detect cancer symptoms and in aerospace industries for warning system and for automobiles for optimal fuel consumption.
2-Biosensors are enzymatic, antibody, neonucleic acid and microbial proteins.

4. Molecular Electronics

A variety of molecular bioelectronics categories based on nanowires, organic molecules, biological molecules, optical electronics, magnetic molecular electronics (spin electronic) and biological and organic molecular devices

5. Biosensors

The name is a group of sensors designed to react only with a specific substance called analyte that can react chemicals, toxins, toxic gases, etc. Biosensor technology is a combination of biochemistry, molecular biology, chemistry, physics, chemistry, physics, electronics and computers.

It is used in various medical sciences, chemical industry, food industry, environmental monitoring, pharmaceutical and health care products, etc.

The definition of the International Union of Chemistry(IUPAC) , a biosensor is a device that, by means of specific biochemical reactions or through isolated enzymes, tissues, or cellules, detects chemical elements of the material in question, usually electronically, lightly, or thermally.

The first biosensor is made to measure blood sugar. DNA-based biosensors with the aim of detecting people's DNA are useful tools to detect mutations and genetic defects as well as pathogens.

6. Materials for Molecoules Electronics and Magnetisms.

This theme hoghlights recent progress in these important areas of material science. Issue covers the chemical design and novel molecular materials science.

The boost in organicelectronics was in mid 80’s to easely 90’s with the advent of organic field effect transistors (OFETs) and

organic light emitting diodes (OLEDs) based on thin films of conjugated molecules and polymers that could be operated at low voltages. In the electronic markets, OLED displays and TVs, to a different extent and market access, organic photovoltaics and organic spintronics.

Finally, organic transistors have been coupled to Proteins, Nucleid Acids, Cells, Tissues and organic.

Giving rise to organic bio.elecronics, is a area for OFETs as ultrasensitive bio.sensors and transcucers.

7. from Molecular Magnetism to Molecular Spintronics

Over past 25 years have dominated in the field of single molecule magnetic (SMM) and multi.function magnetic matevials. MMS at low temperature Quantum effect ,such as quantum tunneling of the magnetization.

Multi.function materials create innovative molecular materials by materials like magnetic conductors and super conductors, porous magnetic or stimulies response, magnet have been discovered.

Collaborative molecules electronics and molecular magnetive emerges the field of molecular spintronics , into two large areas, organic spintronic and molecular nano.spintronics.

These result from chemical positivies is contribution from chemical positive is contribution from discrete molecules (like organic radicals, fullerence, oil-gothiophers, phtalocyanives single – molecule magnets and switching spin-crossovers complexes) to low dimensional materials such as carbon nano. tube , spin.chains, Graphens and other 2D- materials), extended materials (like covalent organicframeworks and magnetic Pression blue analougoes) and hybrid organic – inorganic materials(like hybrid nano.particles) by having properties such as molecular- scale memory, Quantum.spin properties, fero. electricity, to show molecular systems in organic electronics devices like OFETS, OLEDs, rganic spin-value and nano.scale devices are reported.

8. Physics Insight of Gated Organic Transistors as Protein Biosensors

Electricity Gated organic field effect Transistor (EGDFET) and organic electro chemistry Transistors (OECT) involved in bio. sensors.

Both Architecture involve electrolyte ions to the potential applied between the Gate and the source electrodes, the main differences between EGOFET and OECT.

Here we illustrate architecture of two EGOT architecture,are based on OECT, and another on OGOFET, both operates as bio. sensors towards the same analyte.

9. Effects of Molecular Geometry and Extended Conjugation on the Performance of Hydrogen-Bonded Semiconductors in Organic Thin. Film Field Effect Transistors.

Organic semi.conductors have gained more attention owing to their utility in the fabrication of electronic devices, such as OLEDs, organic and hybrid photovoltaic (OPV and HPV) and organic field-effect transistors (OFETs)

Competing Interest

"The author declare no competing conflict to interest."

References

1. Biscarini, F., Coronado, E., Painelle, A. (2021). Materials for molecules electronics and magnetism. Journal of Material Chemistry C.
2. Pamelo Allesio Manco Urbina, Marcello Berto,…,Physics applied from fumkin isotherm to electrolyte gated organic transistors as protein bio.sensors, Journal of Material Chemistry C, 2021.
3. Fabio Biscarini, Eugenio Coronado, Anna Painelle, …, Effects of molecular geometry and extended conjugation on the performance of hydrogen-bonded semiconductors in organic thin.film field effect TransistorsPaolo Gomez, … Effects of molecular geometry and extended conjugation on the performance of hydrogen-bonded semiconductors in organic thin.film field effect Transistors, ,Journal of Material Chemistry C, 2021