

Review of: "nanostructures with one or more external dimensions less than 1 nm should be considered as vital tools in nanoelectronics."

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Inferring from the above, nanostructures with one or more external dimensions less than 1 nm should be considered vital tools in nanoelectronics. (endohedral nanostructures) that react naturally or are produced as a by-product of combustion (unintentional) from combustion processes. They are usually physically and chemically heterogeneous and are often called porous particles.

On the other hand, (endohedral nanostructures) which are produced and designed from multiple structures with physical and electronic purposes for a specific purpose or function. The important feature of all (endohedral nanostructures) is summarized in the fact that the number of atoms (surface) in them is more than the number of atoms (volume). This ratio increases with decreasing size (nanoparticle). Therefore, the size of the nanoparticle is considered its most important feature. The shapes and sizes (endohedral nanostructures) are naturally determined based on the composition and conditions of their formation. The characteristics of (endohedral nanostructures) in turn determine the originality of the nanostructure characteristics and their possible fields of operation. The range from 1 to 1000 nm is introduced as the range of (endohedral nanostructures). The important feature (endohedral nanostructures) is the control of self-organization processes. The range of nanostructure activity change depends on the nature and shape of the nanostructure. However, if the energy of the nanoparticle field is comparable to the energy of electromagnetic radiation and if significant changes are made in a certain wavelength range with the occurrence of chemical reactions in the irradiated materials, the activity of nanoparticles up to 100nm will be significant. This increase in strength does not happen only in the range of a few nanometers, and the strength of materials of several tens or even hundreds of nanometers may be much higher than that of large-scale mass materials. On the other hand, the change of some properties, such as color and magnetic properties, may occur in dimensions of only a few nanometers. In electronic science, the topic of nano revolves around (nano memories, nano chips, fast nano chips, and nano electronic components) with less weight and more efficiency. Nanotechnology, knowledge, engineering, and technology on a nanoscale, or in other words, the study of the application of very small objects and their use in all fields of science such as chemistry, biology, electronics, materials science, and engineering.

The history of nanotechnology describes the development of concepts and experimental work done in the field of nanotechnology. Although nanotechnology is one of the recent advances in scientific research, the development of its fundamental concepts has taken place over a long period of time.

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References

1. ^ Afshin Rashid. (2024). Structure and Types of Nano Reactors in the Catalytic Process of Electrical Porous Materials. doi:10.22541/au.172479402.23796983/v1.
2. ^ Afshin Rashid. (2024). Application of Single-Walled and Multi-Walled CNT and CNTs Carbon Nanotubes in Aerospace industries . doi:10.22541/au.172479395.56370423/v1.
3. ^ Afshin Rashid. (2024). Self-organized Electrical Nanostructure Electronic DND Means a Naturally Made Material Containing. doi:10.22541/au.172495426.63457110/v1.
4. ^ Afshin Rashid. (2024). Self-organized Electric Nanostructure, a Combination Of (Metal Nanotube) and Reaction With Hydrogen and Fluorine Gas . doi:10.22541/au.172495426.65931863/v1.
5. ^ Afshin Rashid. (2024). Self-organized Electrical Nanostructure of DND in Multi -Layered Nanostructures Espatterning. doi:10.22541/au.172538453.38694861/v1.
6. ^ Afshin Rashid. (2024). Explaining The Relationship Between Electronics and Nano Photonics / Nano Electronics . doi:10.22541/au.172538597.75910376/v1.
7. ^ Afshin Rashid. (2024). Nanoantennas Distribution of Alternating Current (With a Wavelength That Is 100 Times Smaller Than the Wavelength of Free Space). SSRN Journal. doi:10.2139/ssrn.4913072.
8. ^ Afshin Rashid. (2024). Self-organized electrical nanostructure of DND in mesoscopic nanostructures and improvement of thermal stability of Si/Cu sputtering layer . doi:10.22541/au.172538597.79544597/v1.
9. ^ Afshin Rashid. (2024). Nano Supercapacitor Called (Electrostatic) -- The Total Thickness of Each Electrostatic Nanocapacitor is Only 25 nm. doi:10.22541/au.172357749.98746652/v1.
10. ^ Afshin Rashid. (2024). Nano-optical wafers are produced using the nano-lithography process on wafers with a diameter of 100 or 150 mm. Nano-optical chips are created from small wafers . doi:10.22541/au.172557085.51493286/v1.
11. ^ Afshin Rashid. (2024). Multiplication of Nano Memories (Quantum electricity) By the Method Combined Nanolithography . doi:10.22541/au.172557085.56866919/v1.
12. ^ Afshin Rashid. (2024). Interferential Nanolithography (IL) and Nano-Opto-Electronics . doi:10.22541/au.172557086.61154993/v1.
13. ^ Afshin Rashid. (2024). Nano Cloud Capacitor Section Nano Supercapacitors and (LSPR energy) Dielectric Nano Carbon (Active Piezoelectric Material). doi:10.22541/au.172357736.63195078/v1.

