Review of: "Internal structure and field effect transistors based on carbon nanotubes"

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The basic simple structure that plays the role of source and drain in two metallic junctions and the carbon nanotube plays the role of the transistor channel, which is separated from the silicon substrate with a high gross density by an oxide layer. In this electronic part, the silicon substrate plays the role of the gate, which is called the back gate in this structure. Then the transistor with upper gate also which were suitable for use in integrated circuits, with the addition of an upper gate by The thin oxide layer is separated from the nanotube channel, The transistors are the same as Transistors based on carbon nanotubes. Combination (upper and lower) gates. Combinations (Not; or; And; Nand) are used in making nanochips by nanotransistors. From the point of view of structure, they can have types of back and Graphene transistors also Transparent can be achieved by using this nano material. High speed in flexible electronic circuits and it is possible to make electronic components with suitable for a >13> low light absorption and band gap, high thermal conductivity, fracture resistance, Graphene’s unique properties such as electron mobility and, graphene is used in its channel. With the difference that instead of carbon nanotube

The effect of nanotransistors based on carbon nanotubes and graphene in the development of military and biological industries

In the military nanoelectronic industries, there are basically 2 very important approaches:

- Increasing capabilities
- Reducing the volume and size of nanoelectronic structures (nanochips).

design, manufacturing, development and use of products whose size ranges from nm to 1 nm 100 are called nanoelectronics. In fact, we are talking about miniaturization, which allows for more contact, more activity, and an increase in area. Nano is a new scale in technologies and a new approach in all disciplines, and it gives mankind the ability to expand its involvement in the structure of materials and design and manufacture in very small dimensions and in all technologies. That mankind has already achieved, to have an effect. And this process has been considered in the production of electronic and biological nanotechnology. Implantable nanochips in the body and military industries depend on progress in the field of carbon tube and graphene nanotransistors.

Conclusion:
Transistors are the main electronic components that act as amplifiers in analog circuits or electronic switches in circuits. They are used digitally. And their progress is the main key to nanoelectronics in the field of production and monopoly (nanochips), both in the field of military and biological industries.

References

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