

Review of: "Nano network is a communication network at nano scale between nano devices"

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Nano network is a communication network at nano scale between nano devices. Nano devices face certain challenges in performance due to limitations in power management processing ability . Therefore, these devices are expected to perform simple tasks that require different and new approaches.

In the molecular communication system, the transmitter Information is sent by chemical molecules called information molecules, and after being released into the environment, it is received and decoded by the telecommunication receiver. In general, in order to receive electromagnetic waves in space, the dimensions of the antenna must be in the order of be the size of the input wavelength to its surface. Due to the very small dimensions of nano sensors, nano antennas need to have a very high working frequency to be usable. The use of graphene helps to solve this problem to a great extent.can meet this need. In addition, there are several nano-telecommunication technologies that require the use of external stimulation and measurement to operate. Wireless communication between the nano-network and the device. and micro and macro equipment can cover a wider area and perform more network processing.

The speed of propagation of waves in CNTs and GNRs can be up to 100 times lower than its speed in vacuum, and this is related to the physical structure, temperature and energy. Based on this, the resonance frequency of graphene-based nano-antennas can be two orders of magnitude lower than nano-antennas based on nano-carbon materials.

It has been mathematically and theoretically proven that a quasi-metallic carbon nanotube can emit terahertz radiation when a time-varying voltage is applied to its sides. With the possibility of making nanotubes with a length of several centimeters, the possibility of making electrical conductors with a length-to-width ratio of the order of 7^{10} exists. > that the Dipole radius is larger than the skin depth and also The resistance loss is so low that it can be ignored. In the main theory of Dipole antennas to determine the current distribution on the antenna, has. At first glance, nanotube antennas give us the impression that they are similar to Dipole antennas designed in small dimensions. But in fact it is not the case.

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