

Review of: "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 more than the mass material of a large scale"

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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 more than the mass material of a large scale. On the other hand, the change of some properties such as conductivity in electromagnetic properties in nanowires can occur in dimensions of only a few nanometers. Self-assembly (nanoparticles) into nanostructures is a spontaneous process by which nanomolecules/nanophases are transformed into organized functions. Two important types of nanostructures conductive nanoparticles (microstructured particles, mostly semiconducting materials) and a> (tiny tubes, usually made of pure carbon). Self-assembled nanoparticles made of semiconductors change nanostructures depending on their scale size. CNT carbon nanotubes can be large amounts transfer electric current, much more than graphene nanowires and nanoribbons generally self-aggregate in nanostructures, increasing nanoelectromagnetic interaction (nanoparticles) in conductive nanomaterials and semiconductors. Nanotubes are CNTs

Conclusion :

In describing nanostructures, it is necessary to distinguish between the number of dimensions in the volume of an object that is on the nanoscale . The surfaces of nanostructures have a nano-scale dimension. Spherical nanoparticles in the nanoscale have three dimensions , that is, the magnifier of each of the spatial dimensions is between 0.1 and 100 is nanometers. The terms self-assembly in nanostructures are often used synonymously, although this function can also reach the micrometer range.

Since the structure of carbon nanotubes has different values for the production and reproduction of nanotransistors at different temperatures, it is shown as a function of temperature in the form of $T(\lambda)$. Starting from low temperatures and gradually increasing the temperature It can be seen that the value of $T(\lambda)$ reaches a maximum value of 111.3 mK/W near the temperature of 011 K (this maximum can be seen as a peak in the graph) and then decreases with increasing temperature . The maximum value $(T) \lambda$, which has been observed so far in the investigations, is related to a special nano heat pipe sample that was measured at a temperature of 010 K.

This value is equal to 00111 mk/W. Therefore, the value of $(T) \lambda$ nano The carbon tube at its maximum is comparable to the highest value $(T) \lambda$ that has been measured so far. According to the presented diagram, even at room temperature, the thermal conductivity of the carbon nanotube is very high and equal to 0011 mK/W is, in the methods of reproduction of nanotransistors and nanotubes with the synthesis of carbon nanotubes based on catalytic chemical vapor deposition (CCVD), it includes the decomposition of a carbon source on small metal particles or clusters as a catalyst. This method of reproduction of nanotransistors includes a heterogeneous process and it is homogeneous. The metals used for these reactions are transition metals, such as iron, cobalt, and nickel. Compared to electric arc discharge and laser ablation, carbon nanotubes are generally formed at a lower temperature of about 011 to 0111 degrees. Generally, the selectivity of this method is higher for the production of multi-walled carbon nanotubes. Both homogeneous and heterogeneous processes are very sensitive to the nature and structure of the catalyst used in addition to the operating conditions. Compared to the electric arc method, the carbon nanotubes produced by this method have more length (several tens to hundreds of micrometers) and defects. The major drawback of nanotubes is due to the use of lower temperatures compared to the electric arc method, which does not allow any structural rearrangement.

Conclusion :

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