Review of: "The degree of ionization in nanotubes to produce nanotransistors - nanochips"

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The degree of ionization in nanotubes to produce nanotransistors - nanochips

Various mechanisms, such as the separation process of carbon molecules and the recombination of atoms, etc., are involved in these high temperature methods. The main mechanism of these methods is the transfer of energy from the external radiation source of a laser beam or solar radiation to the target material. This leads to the erosion of the target material and subsequently the formation of plasma. The degree of plasma ionization highlights the importance of energy transfer between the plasma and the target material. The characteristic of plasma and especially the temperature range and concentration of different species in plasma depends not only on the nature and composition of the target substance but also on the amount of transferred energy.

> *For the production of nanotransistors and nanochips, one of the advantages of these methods is the ease of changing the process parameters and achieving optimal conditions for the production of carbon nanotubes. A major challenge of these methods is the impurities in the products. Carbon nanotubes are produced together with other carbon phases and the remaining catalyst. Most of the available purification methods are based on oxidation, like acid-based methods, which will affect the structure of single-walled nanotubes. A desirable approach for purification is to heat the material at 0011° under a neutral atmosphere.*

Methods of producing nano-transistor and nano-chips with laser abrasion

The graphite plate containing the catalyst is placed in the middle of the quartz tube containing neutral gas (such as helium and argon). Then this system is placed in the oven with a temperature of 0.11 degrees. The laser beam is focused on the graphite plate and leads to uniform surface evaporation. The carbon vapor is swept by the neutral gas stream and deposited like soot on various surfaces, including the water-cooled copper collector, the quartz tube wall, and the end of the graphite plate. This process depends on many parameters, such as the characteristics of the laser beam, density The applied power depends on the nature of the target and the surrounding environment. For example, the solid target can be simply heated, melted, or vaporized depending on the applied power. So far, several approaches have been made to improve the production efficiency of carbon nanotubes and nanotransistors with laser wear.

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