

Method for Manufacturing High Quality Carbon Nanotubes

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DESCRIPTION

This invention is related to a non-catalytic process for the production of carbon nanotubes includes supplying an electric current to a carbon anode and a carbon cathode which have been securely positioned in the open atmosphere with a gap between them. The electric current creates an electric arc between the carbon anode and the carbon cathode, which causes carbon to be vaporized from the carbon anode and a carbonaceous residue to be deposited on the carbon cathode. Inert gas is pumped into the gap to flush out oxygen, thereby preventing interference with the vaporization of carbon from the anode and preventing oxidation of the carbonaceous residue being deposited on the cathode. The anode and cathode are cooled while electric current is being supplied thereto. When the supply of electric current is terminated, the carbonaceous residue is removed from the cathode and is purified to yield carbon nanotubes.

FEATURES AND BENEFITS

- This method is a simple, inexpensive, energy-efficient method for the manufacture of high quality carbon nanotubes.
- The method does not employ a catalyst in the growth step of the procedure.

APPLICATIONS

- Nanotechnology
- Materials Science

FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-14601-1, please contact:

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