

Address:

Third unit, No51, Sadaf No.5, Vakil Abad Blv. Mashhad
City, Khorasan Province, Iran

Sales:

0511-8688890, 09158298890, 09397973968

Fax: 0511-8688890

Website: iranNanotech.com

E-mail: nanosany@gmail.com



Single-Walled Carbon Nanotubes, -COOH Functionalized (SWNTs, >90%, -COOH)

Single-walled carbon nanotubes (SWNTs, SWCNTs), -COOH functionalized

Purity: Carbon nanotubes > 95 wt%

Single-walled nanotubes > 90 wt% (from TGA & TEM)

Content of -COOH: 2.73 wt% (XPS & Titration)

OD: 1-2 nm (from HRTEM, Raman)

ID: 0.8-1.6 nm

Average diameter: 1.1 nm (from Raman spectra)

Length: 5-30 μm (TEM)

SSA: > 380 m^2/g (BET)

Ash: < 1.5 wt% (HRTEM, TGA)

Tap density: 0.14 g/cm^3

True density: $\sim 2.1 \text{ g}/\text{cm}^3$

Electric Conductivity: > 100 S/cm

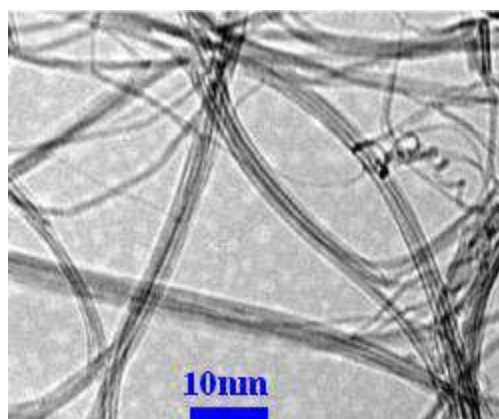
Thermal Conductivity: 50-200 W/m.K

Color: black

$I_g/I_d > 9$ (Raman)

Single-walled Carbon Nanotubes (SWNTs,

SWCNTs) Manufacturing Method: CVD



Application

Potential applications of carbon nanotubes are: (1) additives in polymers; (2) catalysts; (3) electron field emitters for cathode ray lighting elements; (4) flat panel display; (5) gas-discharge tubes in telecom networks; (6) electromagnetic-wave absorption and shielding; (7) energy conversion; (8) lithium-battery anodes; (9) hydrogen storage; (10) nanotube composites (by filling or coating); (11) Nano probes for STM, AFM, and EFM tips; (12) nanolithography; (13) Nano electrodes; (14) drug delivery; (15) sensors; (16) reinforcements in composites; (17) super capacitor.

Some of activities of Iranian Nanomaterials Pioneers under the Academic Department - Business Sany are as follows:

Sale of Nanotechnology devices such as AFM, TEM Microscope, X-Ray Analysis, Ultrasonic, Sonicator, etc.

Synthesis of nano-structured materials

Advanced ultra-high strength concrete nanotechnology

Nano-composites

Smart nano drug delivery