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Technical data

Categories No**:** TNSH

Name**:** Purified –OH Functionalized Single-walled Carbon Nanotubes (SWCNTs-OH)

Purity:>90%

-OH Content：3.96wt%

(The rate of surface carbon atom:8-10mol%)

Diameter:1-2nm

Length：5-30um

SSA：>300m^2/g [SSA=Special Surface Area]

Color: Black

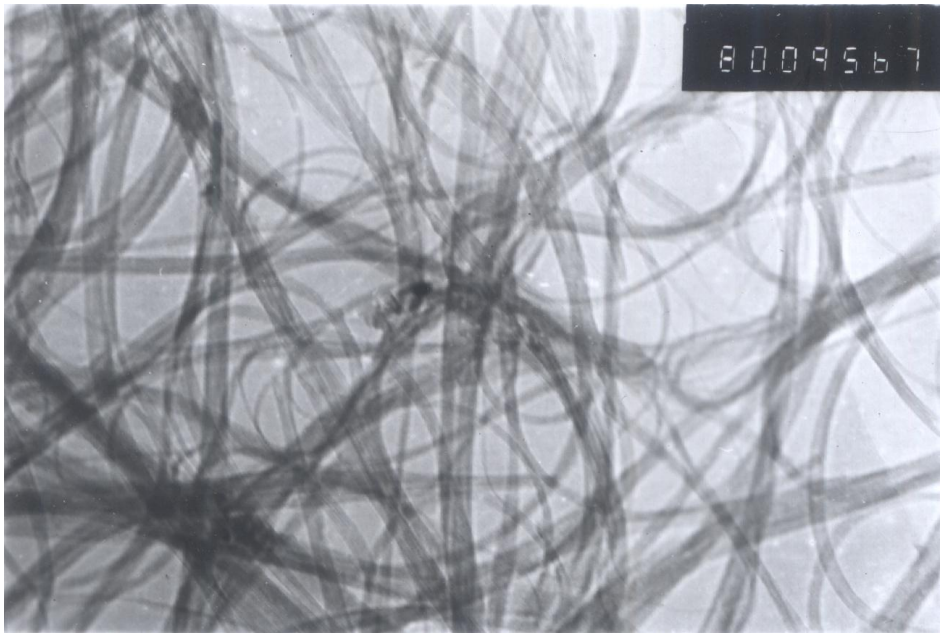
Tap density: 0.14 g/cm3

True density: ~2.1 g/cm3

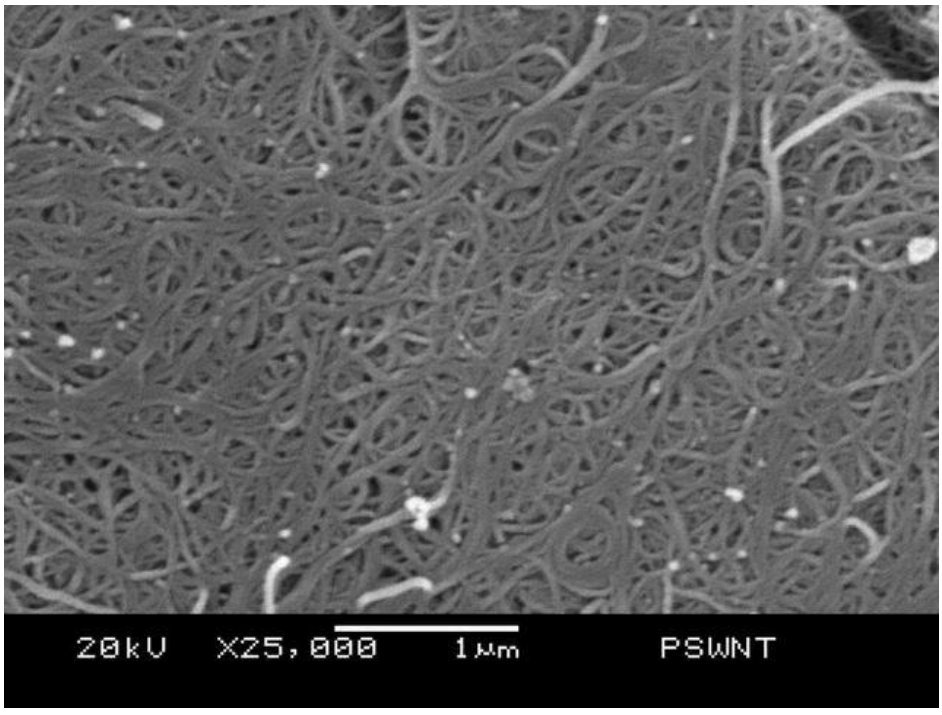
EC:>100s/cm [EC=Electric Conductivity]

Making method：CVD

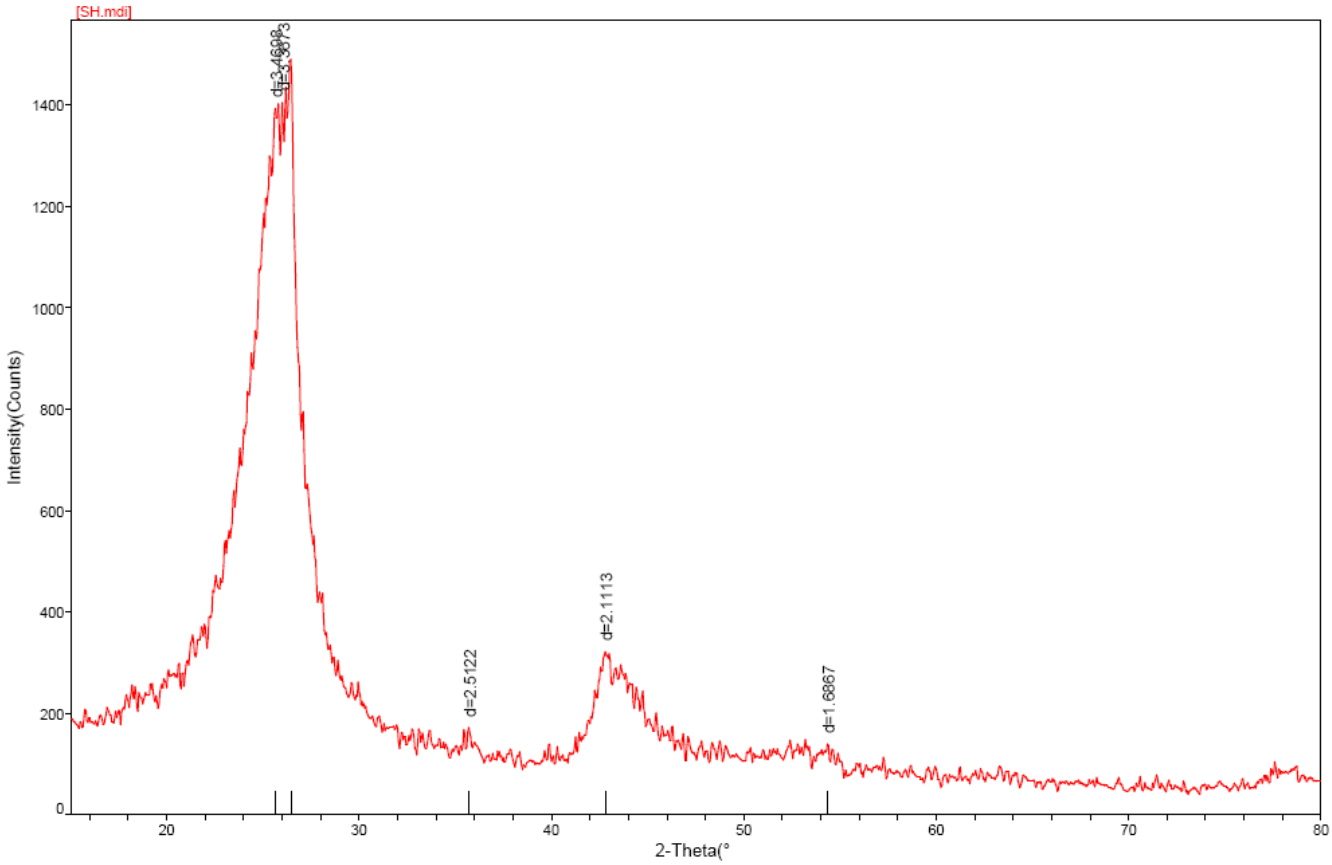
Testing pictures



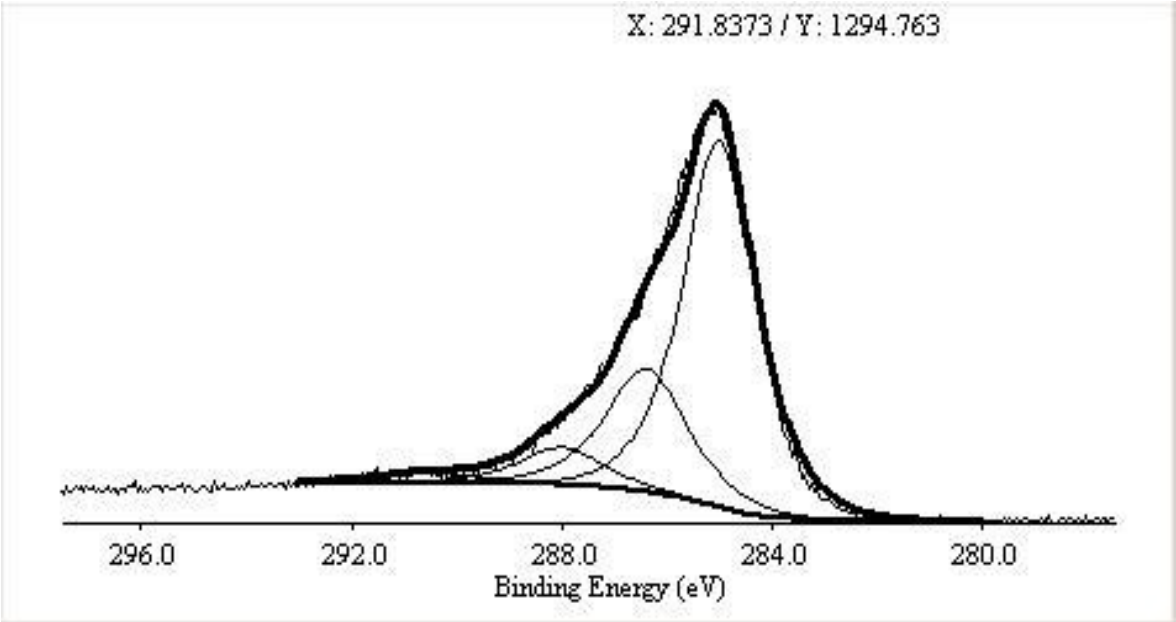
Transmission Electron Microscopy (TEM)



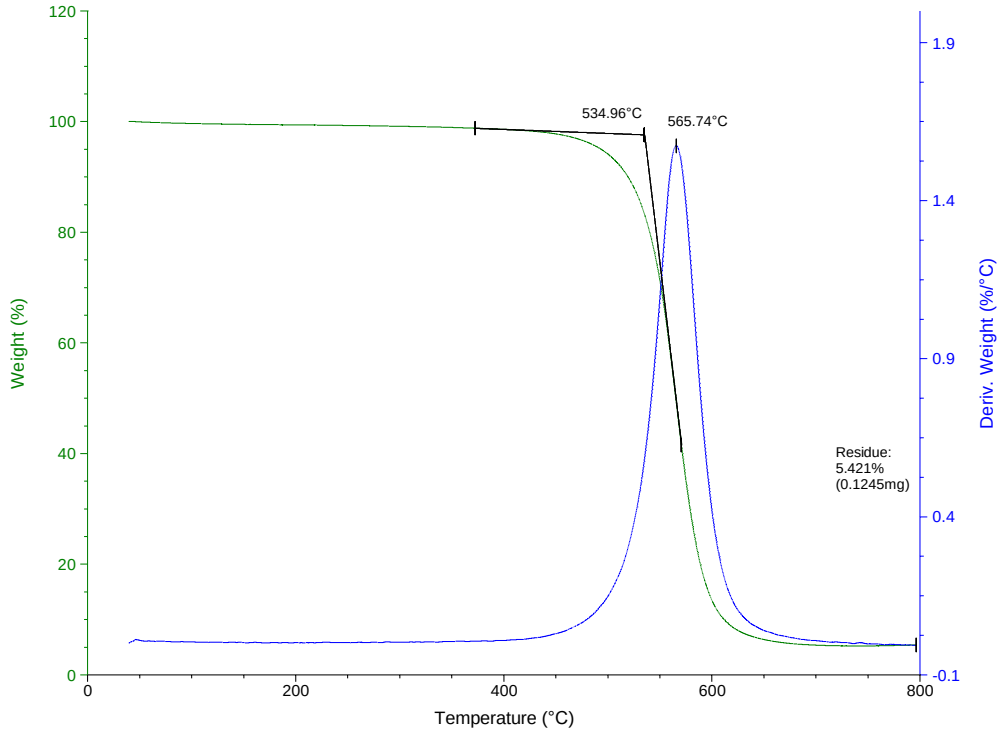
Scanning Electron Microscopy (SEM)


[SH.mdi]
Intensity(Counts)
2-Theta(°
d=2.5122
d=2.1113
d=1.6867

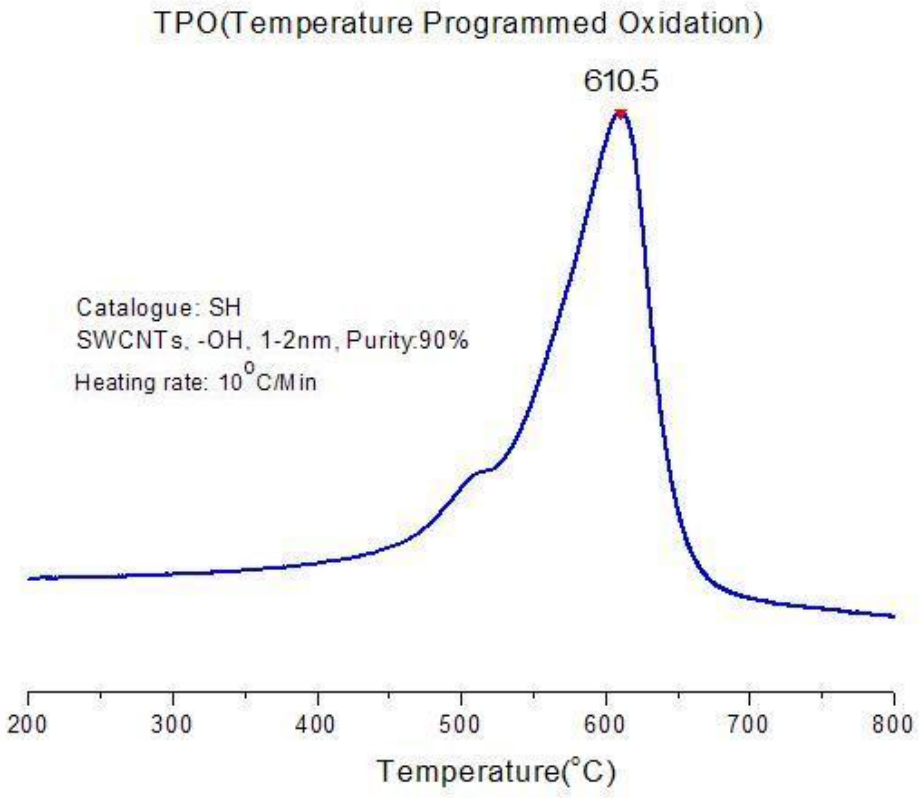
XRD


X: 291.8373 / Y: 1294.763
296.0
292.0
288.0
284.0
280.0
Binding Energy (eV)

Xps


534.96°C
565.74°C
Residue:
5.421%
(0.1245mg)
Weight (%)
Deriv. Weight (%/°C)
Temperature (°C)

TGA


TPO(Temperature Programmed Oxidation)
610.5
Catalogue: SH
SWCNTs, -OH, 1-2nm, Purity:90%
Heating rate: 10°C/Min
Temperature(°C)

Application instruction

Potential Applications of Carbon Nanotubes

Additives in ploymers

Catalysts

Electron field emitters for cathode ray lighting elements

flat panel display

gas-discharge tubes in telecom networks

Electromagnetic-wave absorption and shielding

Energy conversion

Lithium-battery anodes

Hydrogen storage

Nanotube composites (by filling or coating);

Nanoprobes for STM, AFM, and EFM tips

nanolithography

nanoelectrodes

drug delivery

sensors

Reinforcements in composites

Supercapacitor