



## Technical Data Sheet

# ACS Material Purified Hydroxylate Multi-Walled Carbon Nanotubes (MWNTs-OH, ~8 nm)

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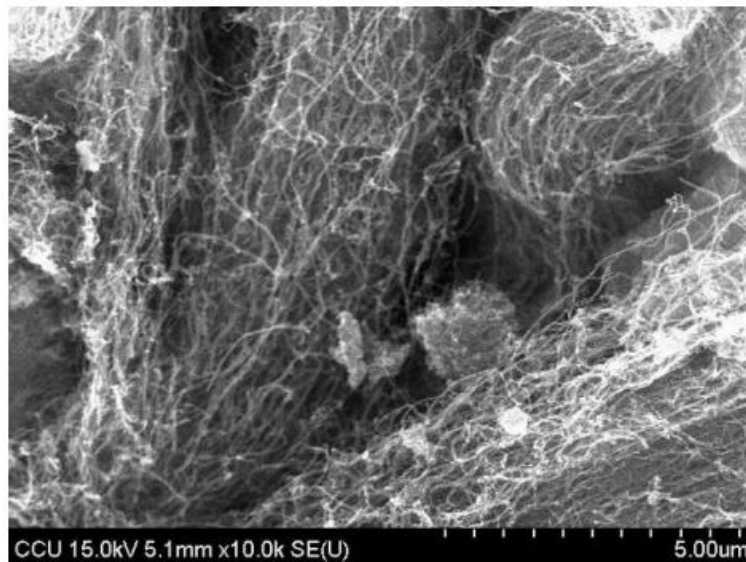
Revision: 110917

## 1. Preparation Method

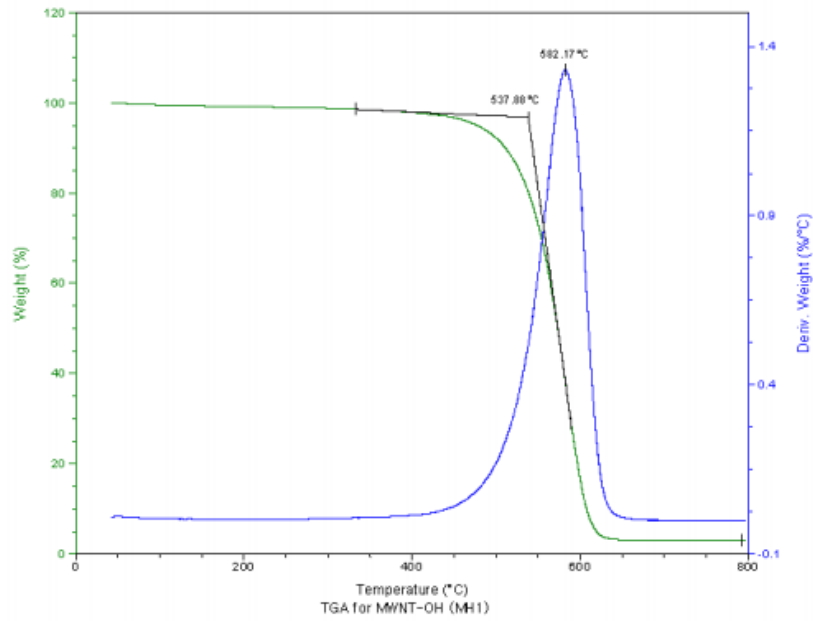
Chemical Vapor Deposition (CVD) Method

## 2. Characterizations

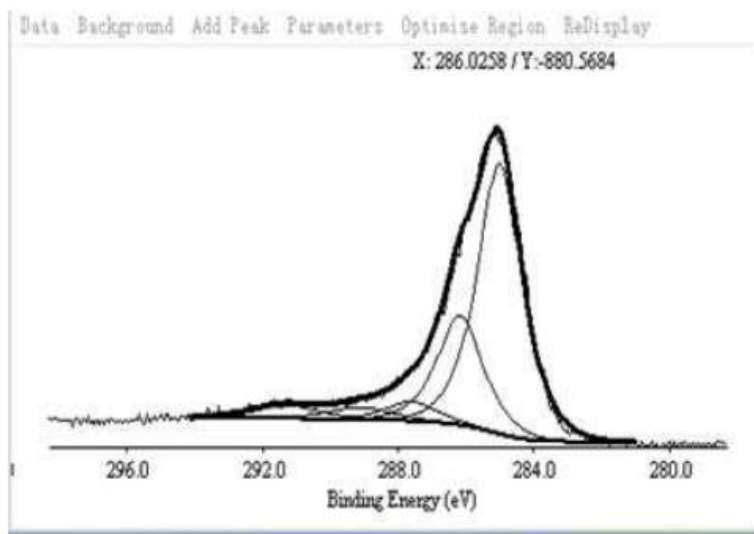
<b>Purity:</b>	>95%
<b>-OH Content:</b>	5.58 wt.%
<b>Color:</b>	Black
<b>Outer Diameter:</b>	<8 nm
<b>Inner Diameter:</b>	2-5 nm
<b>Length:</b>	0.5-2 $\mu\text{m}$ 10-30 $\mu\text{m}$
<b>SSA:</b>	>500m <sup>2</sup> /g
<b>Tap Density:</b>	0.27g/cm <sup>3</sup>
<b>True Density:</b>	~2.1g/cm <sup>3</sup>
<b>EC:</b>	>100 S/cm



SEM Image of ACS Material Purified MWNTs-OH (Length = 10-30  $\mu\text{m}$ )



TGA Analysis of ACS Material Purified MWNTs-OH (Length = 10-30  $\mu\text{m}$ )



Raman of ACS Material Purified MWNTs-OH (Length = 10-30  $\mu\text{m}$ )

## Certificate of Analysis

Components	Contents (%)
C	97.46
Al	0.19
Cl	1.02
Co	1.09
S	0.24

Analysis Method: Energy Dispersive X-ray Spectroscopy

EDS Analysis of ACS Material Purified MWNTs-OH (Length = 10-30  $\mu\text{m}$ )

### 3. Application Fields

Catalysts, additives in polymers, nanoelectrodes, drug delivery, sensors, electromagnetic-wave absorption and shielding, electron field emitters for cathode ray lighting elements, flat panel display, gas-discharge tubes in telecom networks, energy conversion, lithium-battery anodes, hydrogen storage, supercapacitors, nanotube composites (by filling or coating), nanoprobes for STM, AFM, and EFM tips, nanolithography, reinforcements in composites, *etc.*

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