



## Technical Data Sheet

# ACS Material Graphitized Carboxylic Multi-Walled Carbon Nanotubes (Graphitized MWNTs-COOH, >50 nm)

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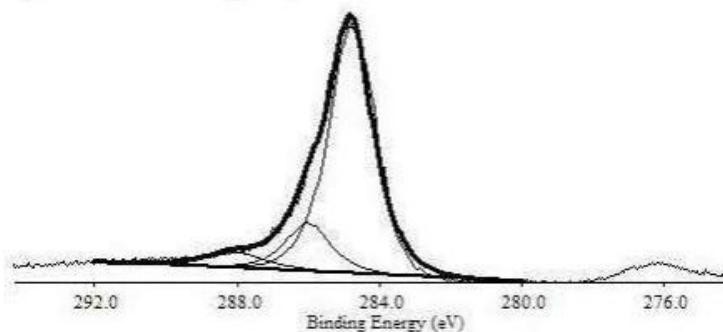
## 1. Preparation Method

Chemical Vapor Deposition (CVD) method, at 2800°C to preparation

## 2. Characterizations

<b>Purity:</b>	>99.9%
<b>-COOH Content:</b>	0.25 wt.%
<b>Color:</b>	Black
<b>Outer Diameter:</b>	>50 nm
<b>Inner Diameter:</b>	5-15 nm
<b>Length:</b>	<10 $\mu\text{m}$
<b>SSA:</b>	>20 $\text{m}^2/\text{g}$
<b>True Density:</b>	$\sim 2.1 \text{ g}/\text{cm}^3$
<b>EC:</b>	>100 S/cm

Graphitized-COOH- $\text{K}_2\text{CrO}_7$ -C 50nm



XPS Spectrum of ACS Material Graphitized MWNTs-COOH (Length <10  $\mu\text{m}$ )

### 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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