



## Technical Data Sheet

# ACS Material Carbon Nanotubes, Multi-walled, Nitrogen-doped (MWCNTs)

### Table of Contents

---

[1 – Preparation Method](#)

[2 – Characterizations](#)

[3 – Application Fields](#)

---

#### **Contact Information:**

Manufacturer: ACS Material, LLC.

Address: 959 E Walnut St., Suite 100, Pasadena, CA 91106

Phone: (866)-227-0656

Fax: (781)-518-0284

E-Mail: [contact@acsmaterial.com](mailto:contact@acsmaterial.com)

Revision: 042117

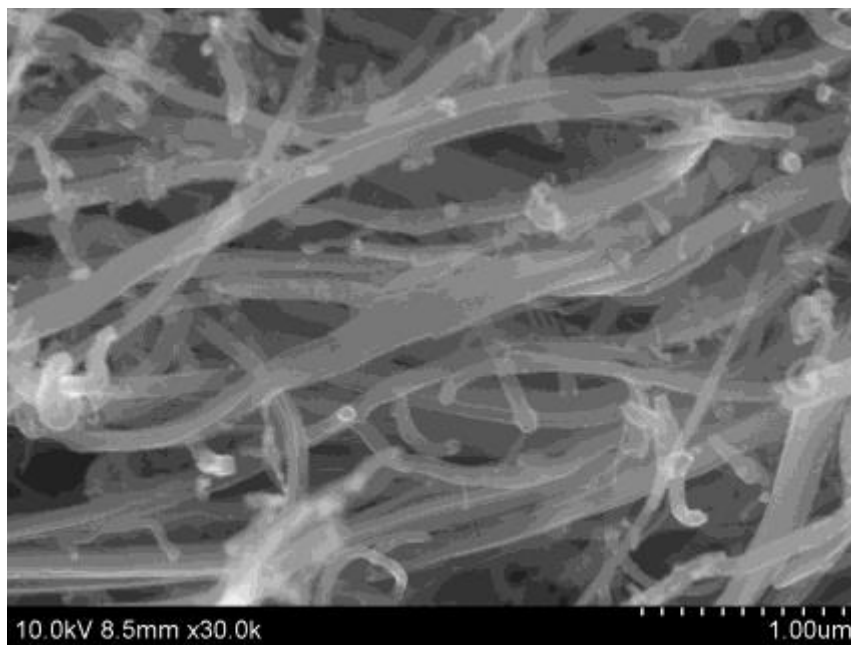
## 1. Preparation Method

Chemical Vapor Deposition (CVD) Method

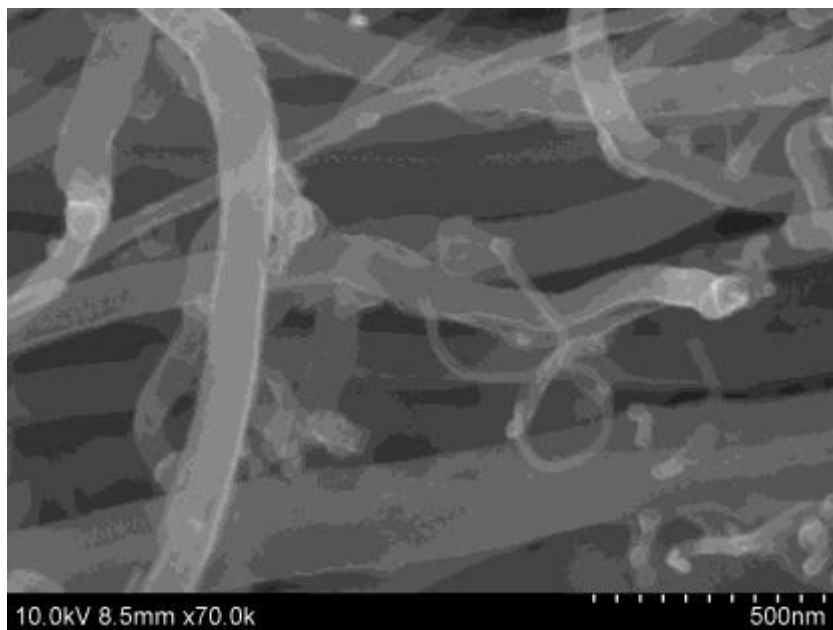
## 2. Characterizations

<b>Purity:</b>	>98%
<b>Color:</b>	Black
<b>Outer Diameter:</b>	40-100 nm
<b>Length:</b>	10-30 $\mu\text{m}$
<b>Special Surface Area:</b>	>78.9 $\text{m}^2/\text{g}$
<b>Ignited temperature:</b>	460°C
<b>Tap density:</b>	0.27 $\text{g}/\text{cm}^3$
<b>Electric Conductivity:</b>	>100s/cm

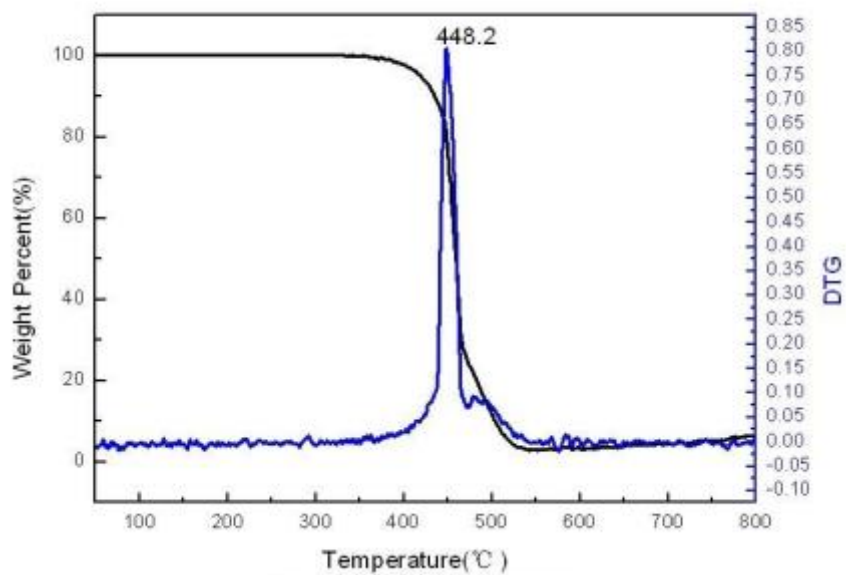
Components	Area(CPS)	Contents	Components
C	8000	0.25	91.63%
O	1300	0.66	5.64%
N	400	0.42	2.73%



Typical SEM Image of ACS Material Carbon Nanotubes, Multi-walled, Nitrogen-doped



Typical SEM Image of ACS Material Carbon Nanotubes, Multi-walled, Nitrogen-doped



TGA Analysis of ACS Material Carbon Nanotubes, Multi-walled, Nitrogen-doped

### 3. Application Fields

- 1) Catalysts
- 2) Lithium-battery anodes
- 3) Nanotube composites (by filling or coating)
- 4) Supercapacitor

5) Drug delivery

**Disclaimer:** ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.