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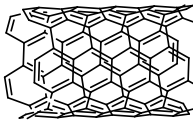
P2-SWNT

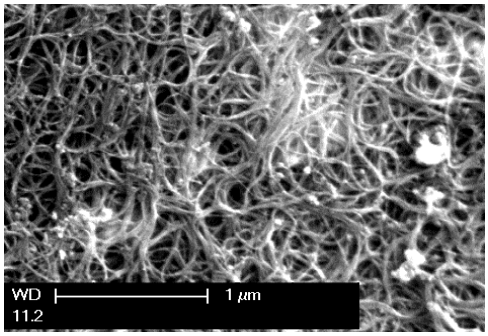
Product Description: Purified SWNTs; AP-SWNT purified by air oxidation and subsequently treated to remove the catalyst. The purified material closely approximates the pristine state with low functionality and low chemical doping.



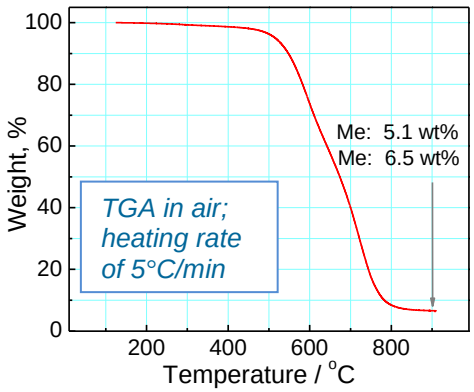
Carbonaceous Purity*:	*>90%*
Metal Content **:	*4 – 8%*
Typical Bundle length:	*1 – 5 µm*
Typical Bundle Diameter:	*4 – 5 nm*
Typical Diameter of Individual SWNT:	*1.55 +/- 0.1 nm*
Dispersibility* in DMF:**	*0.1 mg/mL*

* Determined according to procedure described in *Nano Lett.* **2003**, *3*, 309-314; and NIST Recommended Practice Guide "Measurement Issues in Single Wall Carbon Nanotubes": **http://www.nist.gov/customcf/get_pdf.cfm?pub_id=852726**
** Weight % estimated from the residual of the thermal gravimetric analysis (TGA) in air, corrected for metal oxide.
*** From solution phase NIR spectroscopy

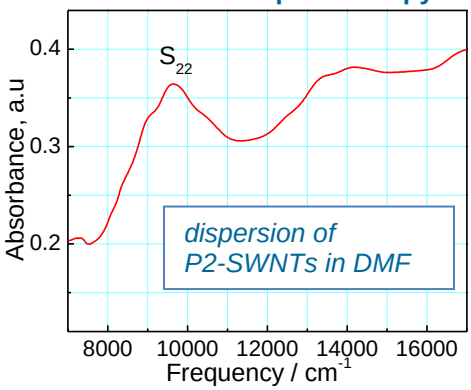
Scanning Electron Microscopy



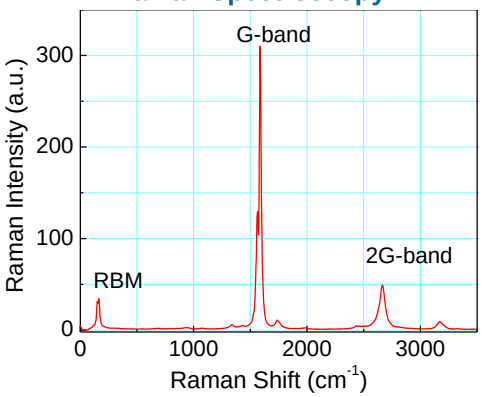
Thermogravimetric Analysis



Near Infrared Spectroscopy



Raman Spectroscopy



Areas of applications:

- Thin film transparent conducting coating
- Separation of metallic and semiconducting SWNTs
- Nanoelectronics
- Peapods
- Sensors

Selected References:

1. Green, A. A., Duch, M. C. & Hersam, M. C. Isolation of Single-Walled Carbon Nanotube Enantiomers by Density Differentiation. *Nano Res* **2**, 69-77 (2009).

2. Sundramoorthy, A.K., Mesgari, S., Wang, J., Kumar, J. , Alam Sk., M., Yeap, S. H., Zhang, Q., Sze, S.K., Lim, K. H., Chan-Park, M.B., Scalable and Effective Enrichment of Semiconducting Single-Walled Carbon Nanotubes by a Dual Selective Naphthalene-Based Azo Dispersant. *J. Am. Chem. Soc.* **135**, 5569-5581 (2013).

3. Bounty, C. M., Negre, M., Jorda, M. Vardoulis, O., Chortos, A., Khatib, O. & Bao, Z. A hierarchically patterned, bioinspired e-skin able to detect the direction of applied pressure for robotics. *Science Robotics* 3 (24), eaau69142, (2018). DOI: 10.1126/scirobotics.aau6914

4. He., X. et. al. Wafer-scale monodomain films of spontaneously aligned single-walled carbon nanotubes. *Nature Nanotech.* **11**, 633-638 (2016).