

各種CNTの観察と測定Ⅳ

Various Types of CNT Observations and Measurements: #4

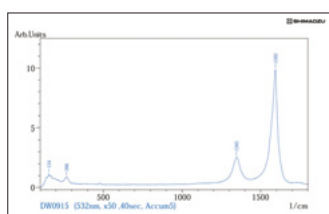
試料：二層カーボンナノチューブ

Sample: Double-walled carbon nanotubes

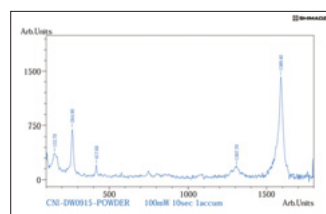
カーボンナノテクノロジー社製DWNTの観察、測定例です。

This is an example of observation and measurement of DWNT, produced by Carbon Nanotechnologies Inc.

ラマン分光 (HoloProbe モニタリングシステム) / Raman Scattering

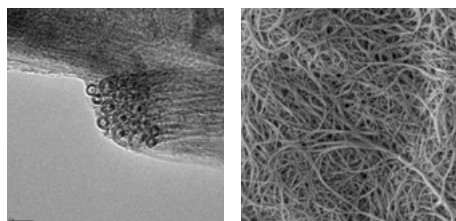


532nm励起のラマンスペクトル
Raman spectrum at 532 nm excitation



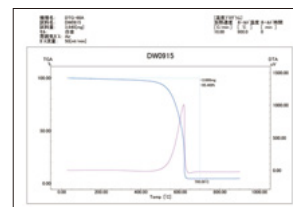
785nm励起のラマンスペクトル
Raman spectrum at 785 nm excitation

TEM・SEM



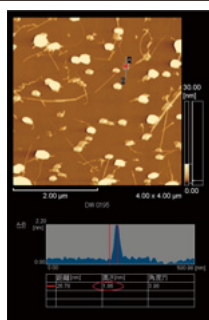
TEM・SEMによるDWNTの観察
DWNT observation by TEM and SEM

熱重量 (DTG-60A) / Thermogravimetry



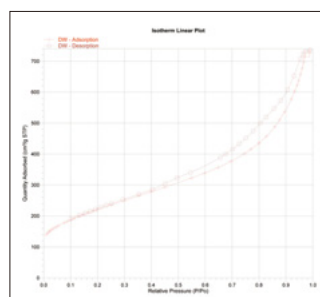
DTGによる熱重量測定
Thermogravimetric measurement by DTG

SPM (SPM-9600)



SPMによるDWNTの観察と直径の見積もり
DWNT observation and estimate of diameter by SPM

比表面積/細孔分布 (TriStar 3000形) / Specific Surface Area/Porous Distribution



前処理装置：バキュープレップ061形
前処理条件：300°Cで5時間、真空排気
吸着ガス：窒素ガス(液体窒素温度)

Pretreatment equipment: Vacu-prep 061
Pretreatment conditions:
Vacuum exhaust for 5 hours at 300°C
Absorption gas:
Nitrogen (liquid nitrogen temperature)

試料名	BET比表面積(m ² /g)	細孔容積(cm ³ /g)
Sample Name	BET Specific Surface Area (m ² /g)	Poros Volume (cm ³ /g)
DWNT	761	1.124500

定容法(ガス吸着法)による比表面積/細孔分布測定
Specific surface area/porous distribution measurement via constant volume (gas absorption) method