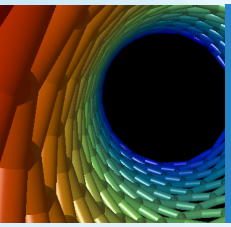
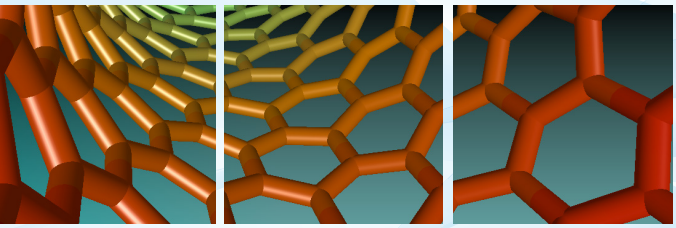
HORIBA Scientific

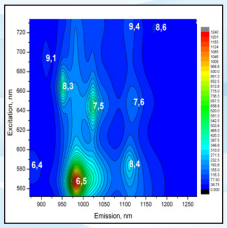


Nanosizer® Powered by Origin® Pro 8

For Single-Walled Carbon Nanotube Excitation-Emission Map Simulation and Analysis

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING





Designed for research in Nanotechnology and Nanomaterials

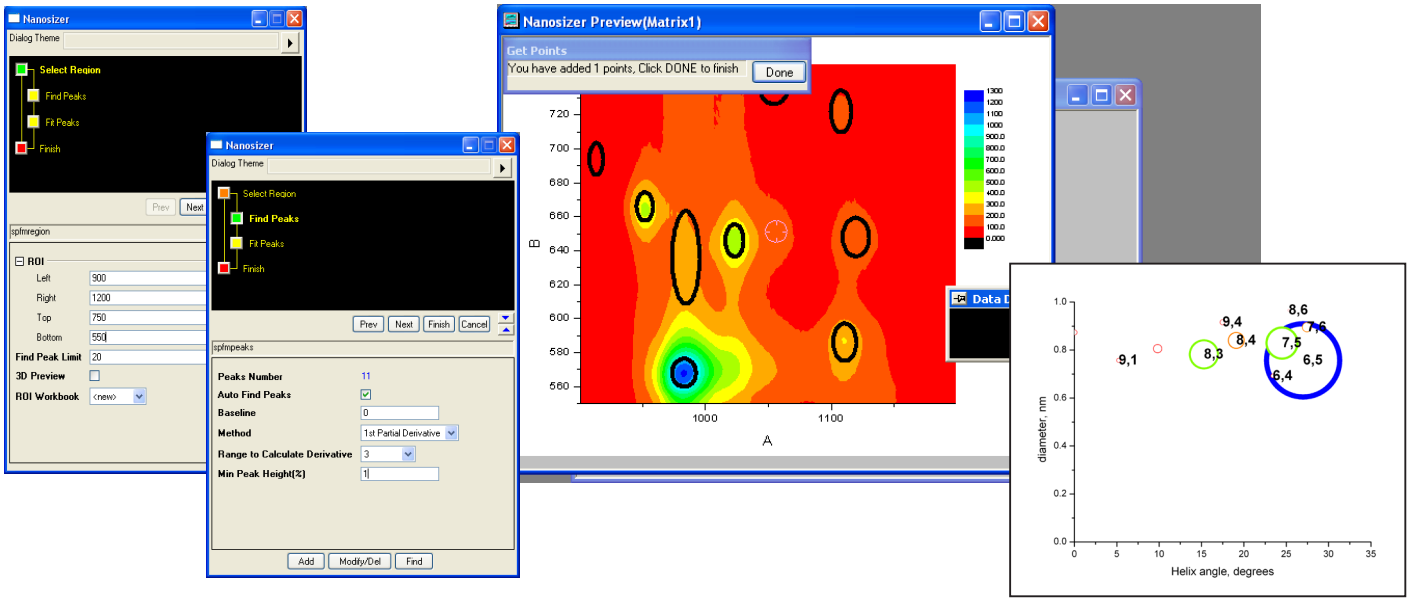
Nanosizer® in Origin® Pro 8 simplifies the process for simulation and analysis for single-walled carbon nanotube excitation-emission map simulation and analysis. Nanosizer is used with our Nanolog spectrofluorometers, which are specifically designed for research in nanotechnology and nanomaterials. Nanosizer comes with our patented double-convolution-integral algorithm specially designed for determining chirality and diameter of single-walled carbon nanotubes.

Nanosizer lets you simulate excitation-emission maps of SWNTs near-IR fluorescence to compare to your actual data. Using built-in or custom libraries, Nanosizer rapidly assigns specific peaks to particular SWNT (n,m) structures, and even generates helical maps. Nanosizer also greatly simplifies FRET studies of SWNT bundles, length-distribution analyses, and nanotube purification analyses. Nanosizer even offers a platform suitable to support future ISO and ASTM standards for identification and purification of semiconducting SWNTs.

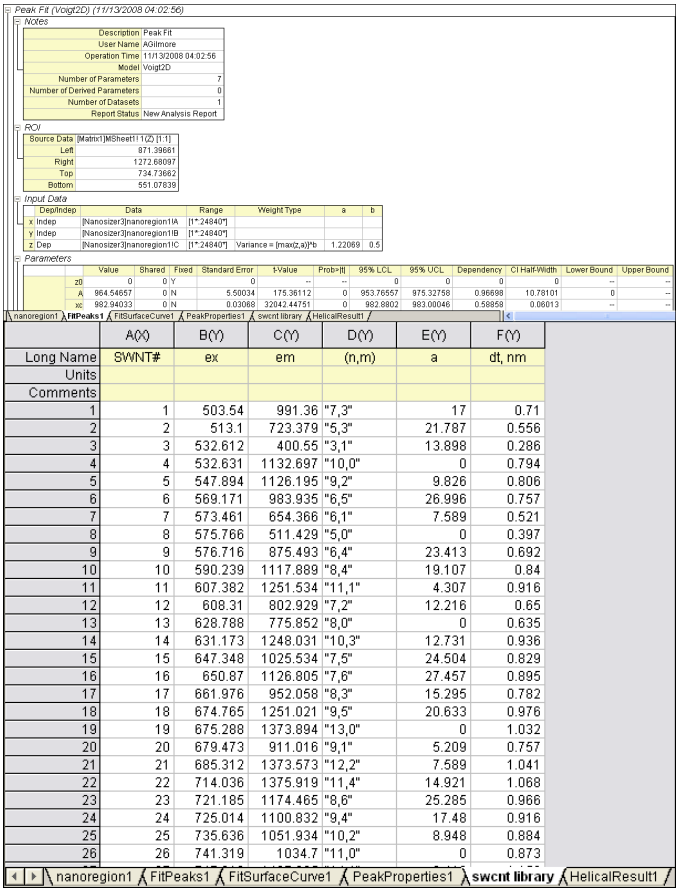
Perfect for FRET in SWNT Bundles, Length Distribution Analysis, and Purification applications.

How it works:

1. Select the spectral region to analyze
2. The Nanosizer makes an initial guess as to where the emission peaks are.
3. Edit Nanosizer's guess.
4. Nanosizer fits the peaks, and generates a report,



It's that simple!

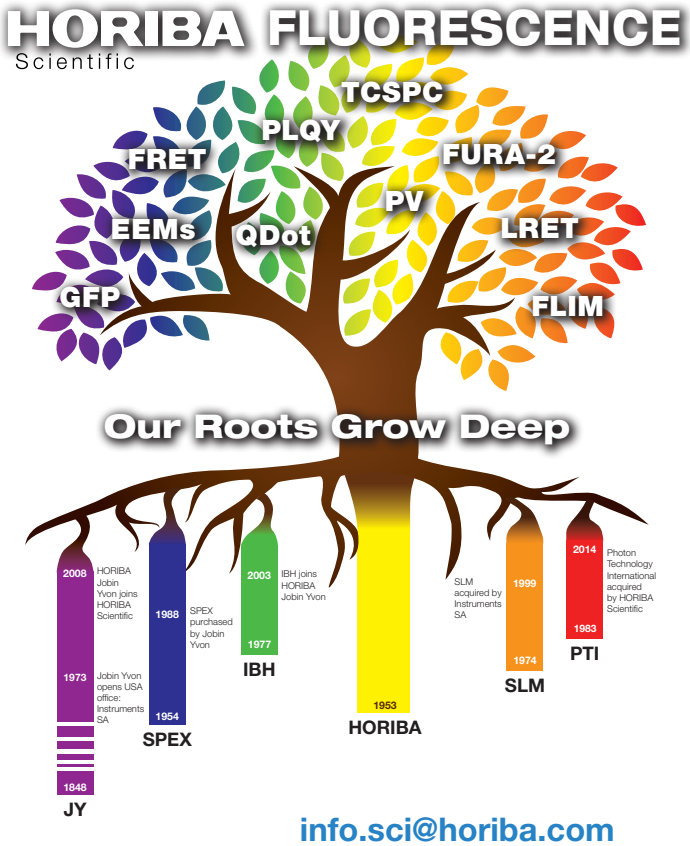


	A(X)	B(Y)	C(Y)	D(Y)	E(Y)	F(Y)
Long Name	SWNT#	ex	em	(n,m)	a	dt, nm
Units						
Comments						
1	1	503.54	991.36	"7,3"	17	0.71
2	2	513.1	723.379	"5,3"	21.787	0.556
3	3	532.612	400.55	"3,1"	13.898	0.286
4	4	532.631	1132.697	"10,0"	0	0.794
5	5	547.894	1126.195	"9,2"	9.826	0.806
6	6	569.171	983.935	"6,5"	26.996	0.757
7	7	573.461	654.366	"6,1"	7.589	0.521
8	8	575.766	511.429	"5,0"	0	0.397
9	9	576.716	875.493	"6,4"	23.413	0.692
10	10	590.239	1117.889	"8,4"	19.107	0.84
11	11	607.382	1251.534	"11,1"	4.307	0.916
12	12	608.31	802.929	"7,2"	12.216	0.65
13	13	628.788	775.852	"8,0"	0	0.635
14	14	631.173	1248.031	"10,3"	12.731	0.936
15	15	647.348	1025.534	"7,5"	24.504	0.829
16	16	650.87	1126.805	"7,6"	27.457	0.895
17	17	661.976	952.058	"8,3"	15.295	0.782
18	18	674.765	1251.021	"9,5"	20.633	0.976
19	19	675.288	1373.894	"13,0"	0	1.032
20	20	679.473	911.016	"9,1"	5.209	0.757
21	21	685.312	1373.573	"12,2"	7.589	1.041
22	22	714.036	1375.919	"11,4"	14.921	1.068
23	23	721.185	1174.465	"8,6"	25.285	0.966
24	24	725.014	1100.832	"9,4"	17.48	0.916
25	25	735.636	1051.934	"10,2"	8.948	0.884
26	26	741.319	1034.7	"11,0"	0	0.873

nanoregion1 FitPeaks1 FitSurfaceCurve1 PeakProperties1 swcnt library HelicalResult1

Features and Benefits of Nanosizer in OriginPro 8

- Efficient Region of Interest and Initial Model Parameterization
- Virtually unlimited number of peaks
- Global linking and fixing of peak parameters
- Full constraints on all model peak parameters
- Save themes for rapid model parameterization
- 2D analytical line shapes: Gaussian, Lorentzian and Voigt Convolution
- Correct statistical weighting of residuals
- Fully featured statistical analysis of fit peak parameters
- Graphical and tabular presentation of fit results and residuals
- Fits data in energy (cm–1, eV) or wavelength (nm) units
- Compares peak parameters to user editable library for helix angle, diameter and (n,m) distribution plots and tables
- Designed for ISO and ASTM Standards for Semiconducting SWNT Identification/Quantification



You'll find what you need
and love what you get
from the HORIBA fluorescence division

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