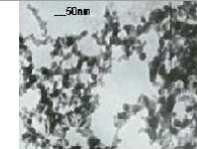
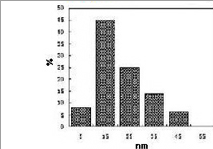

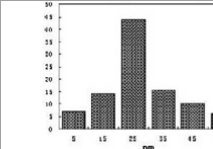
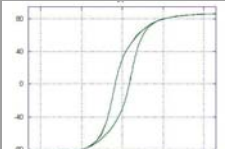
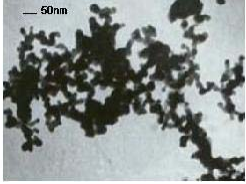
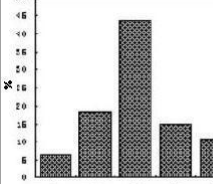

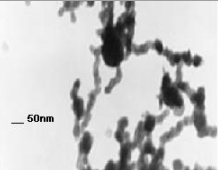
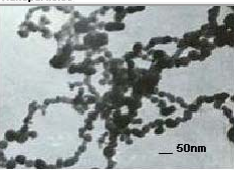
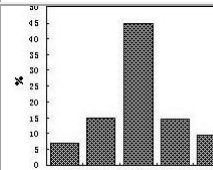
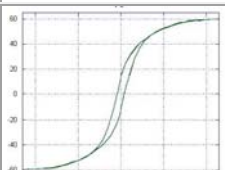
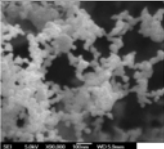
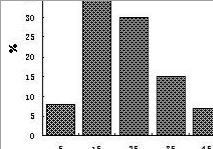
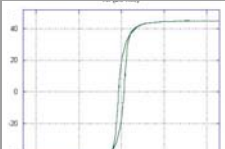


# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



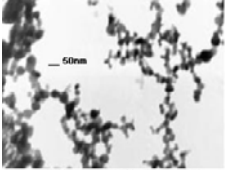
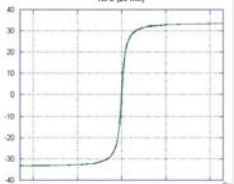
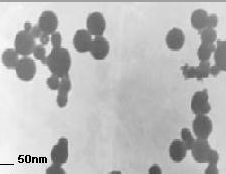
## METAL NANOPOWDERS

DESCRIPTION	AV SIZE	SIZE RANGE	SPECIFIC SURFACE AREA	OTHER INFO	TEM/SEM	PARTICLE SIZE DISTRIBUTION	MAGNETIC CURVE	ITEM #	PRICE
Aluminum	18 nm	2-50 nm	40 - 60 m <sup>2</sup> /g	n/a				SN1201	\$20/gram
Cobalt	28 nm	2-60 nm	40 - 60 m <sup>2</sup> /g	Spherical				SN1301	\$18/gram
Copper	25 nm	2-60 nm	30 - 50 m <sup>2</sup> /g	Spherical				SN1401	\$18/gram
Copper (Carbon Coated)	25 nm	2-60 nm	30 - 50 m <sup>2</sup> /g	Spherical				SN1402	\$18/gram
Iron (Carbon Coated)	25 nm	5-60 nm	40 - 60 m <sup>2</sup> /g	Spherical	 TEM Micrograph of Carbon Coated Iron Nanoparticles			SN1501	\$18/gram
Iron	25 nm	2-58 nm	40 - 60 m <sup>2</sup> /g	Spherical				SN1502	\$18/gram
Nickel	20 nm	2-50 nm	40 - 60 m <sup>2</sup> /g	Spherical				SN1601	\$20/gram


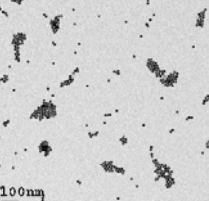
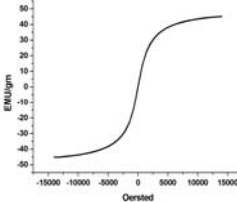
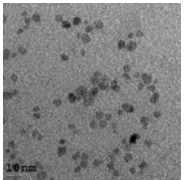
# Sun Innovations, Inc.

43241 Osgood Rd.  
 Fremont, CA 94539 USA  
 Main Phone: +1 (510) 651-1329  
 Sales Phone: +1 (831) 334-1840  
 ORDER ONLINE: NANOMATERIALSTORE.COM



Nickel (Carbon Coated)	20 nm	2-50 nm	40 - 60 m <sup>2</sup> /g	Spherical				SN1602	\$20/gram
Silver	35 nm	2-100 nm	30 - 50 m <sup>2</sup> /g	Spherical				SN1101	\$100/gram

**DISPERSIONS:** PLEASE CONTACT US FOR A QUOTE IF YOU NEED A DISPERSION OTHER THAN THOSE LISTED BELOW. ALL OUR NANOTUBES ARE AVAILABLE AS 1.6 WEIGHT DISPERSIONS. ALL DISPERSIONS HAVE A \$150 MINIMUM ORDER.

DESCRIPTION	AV SIZE	SIZE RANGE	DISPERSION	MORPHOLOGY	COLOR	OTHER	TEM/SEM	ITEM #	PRICE	
Aligned MWNT Aqueous Dispersion (1.6 Wt %, 10-20 nm OD)		10-20 nm OD	Aqueous Solution with Non-Ionic Surfactant		Black			SN10801	\$100/gram	
Gold Colloid Aqueous Suspension, 0.02% wt	15 nm	11~18 nm Monodisperse	Aqueous Suspension Au amount: 0.02%, <0.1% Sodium citrate as stabilizer	Roughly Spherical	Red, non-fading	Storage Temperature: 2-8 degrees C		GCP1001	\$15/ml	
Cobalt Aqueous Dispersion	28 nm	2-60 nm	Aqueous Solution with Non-Ionic Surfactant	Spherical	Black and grey			SN65132	\$90/ml	
Copper Aqueous Dispersion (1.85 wt %)	25 nm		Aqueous Solution with Non-Ionic Surfactant					SN98456	\$90/ml	
Copper Aqueous Dispersion (Carbon Coated, 1.8 wt %)	25 nm		Aqueous Solution with Non-Ionic Surfactant					SN10402	\$90/ml	
FerroFluid Fe <sub>3</sub> O <sub>4</sub> Aqueous Colloid, 5 mg/ml	6 nm		Aqueous Suspension Fe <sub>3</sub> O <sub>4</sub> amount: 0.5%	Roughly Spherical	Black				FF1001	\$90/ml

# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



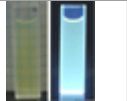

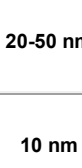


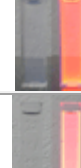
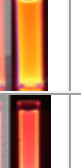
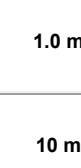


FerroFluid Fe <sub>3</sub> O <sub>4</sub> Aqueous Colloid, 25 mg/ml	6 nm		Aqueous Suspension Fe <sub>3</sub> O <sub>4</sub> amount: 2.5%	Roughly Spherical	Black			FF1002	\$315/ml
FerroFluid Fe <sub>3</sub> O <sub>4</sub> Aqueous Colloid, 50 mg/ml	6 nm		Aqueous Suspension Fe <sub>3</sub> O <sub>4</sub> amount: 5%	Roughly Spherical	Black			FF1003	\$450/ml
FerroFluid Fe <sub>3</sub> O <sub>4</sub> Aqueous Colloid, 100 mg/ml	6 nm		Aqueous Suspension Fe <sub>3</sub> O <sub>4</sub> amount: 10%	Roughly Spherical	Black			FF1004	\$600/ml
Iron Aqueous Dispersion (Carbon Coated, 2.9 wt%)	25 nm	5-60 nm	Aqueous Solution with Non-Ionic Surfactant	Spherical				SN67805	\$90/ml
Nickel Aqueous Dispersion (1.85 wt %)	20 nm	2-50 nm	Aqueous Solution with Non-Ionic Surfactant					SN66185	\$90/ml
Nickel Aqueous Dispersion (Carbon Coated 1.85 wt %)	20 nm	2-50 nm	Aqueous Solution with Non-Ionic Surfactant					SN10602	\$90/ml
Silicon Carbide(SiC) Aqueous Dispersion(1.6 wt %)			Aqueous Solution with Non-Ionic Surfactant					SN76897	\$90/gram
Silver Aqueous Dispersion (1.6% wt., Av. Size 35 nm)	35 nm	2-100 nm	Aqueous Solution with Non-Ionic Surfactant	Spherical	Black and Grey			SN86785	\$90/ml
Short-MWNT Aqueous Dispersion (1.6 Wt %, 10-20 nm OD)		10-20 nm OD			Black			SN10601	\$60/gram
SWNT Aqueous Dispersion (1.6 Wt %, < 2 nm OD)	< 2 nm OD		Aqueous dispersion with non- ionic surfactant		Black			SN10701	\$100/gram

# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



## PhosphorDots: Cadmium-Free Quantum Dots

DESCRIPTION	EXCITE	EMISS	AV SIZE	DISPERSION	PICTURE	CONCENTRATION	COOH Option	STORAGE	ITEM #	PRICE
Cerium Doped Yttrium Aluminum Garnet Colloid	465 nm	545 nm	10 nm	Solvent: 1,4-butanediol		8 mg/ml	Yes	Refrigerate but do not freeze	YAG1001	\$200/ml
Dysprosium Doped Yttrium Vanadate Colloid	300 nm	486 & 576 nm	10 nm	Aqueous Colloid with Trace of Citrate		10 mg/mL	Yes	Refrigerate but do not freeze	YVD1001	\$70/ml
Dysprosium Doped Yttrium Vanadate Colloid	300 nm	486 & 576 nm	20-50 nm	<0.7 mg/mL PVP		1.0 mg/mL	Yes	Refrigerate but do not freeze	YVD1101	\$400/ml
Erbium Doped Yttrium Vanadate Colloid	300 nm	527 & 556 nm	20-50 nm	Aqueous Colloid with Trace of Citrate		10 mg/mL	No	Refrigerate but do not freeze	YVER1004	\$250/ml
NaYF4:YbEr Colloid	980 nm	545 nm	25 nm	Hexane		10 mg/mL	No	Refrigerate but do not freeze	YF1001	\$300/ml
Europium Doped Yttrium Vanadate Colloid	300 nm	620 nm	20-50 nm	<0.7 mg/mL PVP		1.0 mg/mL	Yes	Refrigerate but do not freeze	YVE1101	\$400/ml
Europium Doped Yttrium Vanadate Colloid	350 nm	617 nm	10 nm	Solvent: H2O		10 mg/mL	Yes	Refrigerate but do not freeze	YVE1005	\$70/ml
Samarium Doped Yttrium Vanadate Colloid	300 nm	568, 607, & 650 nm	10 nm	Aqueous Colloid with Trace of Citrate		10 mg/mL	Yes	Refrigerate but do not freeze	YVS1001	\$70/ml
Samarium Doped Yttrium Vanadate Colloid	300 nm	568, 607, & 650 nm	20-50 nm	<0.7mg/mL PVP		1.0 mg/mL	Yes	Refrigerate but do not freeze	YVS1101	\$400/ml
Thulium Doped Yttrium Vanadate Colloid	300 nm	477 nm	20-50 nm	<0.7mg/mL PVP		1.0 mg/mL	Yes	Refrigerate but do not freeze	YVT1101	\$400/ml

# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



## CERAMIC NANOPOWDERS

DESCRIPTION	AV SIZE	SIZE RANGE	SPECIFIC SURFACE AREA	OTHER INFO	PICTURE	ITEM #	PRICE
Europium Doped Yttrium Oxide Powder	10 nm			Refrigerate but do not freeze		YOE1001	\$800/gram
Silicon Carbide-beta Powder	<50 nm	40-50 nm	60-80 m <sup>2</sup> /g	Nearly Spherical Crystallographic Form: Cubic		SN5101	\$3.2/gram
Titanium Carbide	< 30 nm	—	90 m <sup>2</sup> /g	Nearly Spherical; Crystallographic Form: Cubic Dissociative Si: <0.4%, Oxygen Content: < 1.0%		SN6101	\$6.6/gram
Aluminum Nitride	<50 nm	40-50 nm	> 75m <sup>2</sup> /g	Crystal Phase: Hexagonal, Effective duration: 24 months		SN4101	\$6.2/gram
Silicon Nitride	≤20 nm	10-20 nm	> 115 m <sup>2</sup> /g	Amorphous Si <sub>3</sub> N <sub>4</sub> , Effective duration: 24 months		SN4201	\$3.6/gram
Alpha Silicon Nitride - Whisker	Diameter <100 nm x Length 800 nm	n/a	>45 m <sup>2</sup> /g	Crystal: hexagonal, effective duration 24 months		SN53490	\$3.6/gram
Titanium Nitride	<15 nm	10-20 nm	> 80 m <sup>2</sup> /g	Spherical, Crystallographic Form: FCC		SN4301	\$6.6/gram
Aluminum Oxide	60 nm	60-100 nm	180 m <sup>2</sup> /g	Gamma phase		SN3101	\$1/gram
Aluminum Oxide	155 nm	>300 nm	10 m <sup>2</sup> /g	Alpha phase		SN3102	\$1/gram
Ball Particle Silicon Oxide	30 nm	20-50 nm	160 m <sup>2</sup> /g	UV Diffraction: > 75%		SN3201	\$1.2/gram
Ball Particle Silicon Oxide Powder (Hydrophobic)	30 nm	20-50 nm	205 m <sup>2</sup> /g	Particle surface treated with oil, highly dispersed		SN3202	\$1.8/gram
Multi-pore Silicon Oxide	20 nm	20-50 nm	645 m <sup>2</sup> /g	n/a		SN3203	\$1.2/gram
Multi-pore Silicon Oxide (Hydrophobic)	20 nm	20-50 nm	680 m <sup>2</sup> /g	Particle surface treated with oil, highly dispersed		SN3204	\$1.8/gram
Titanium Oxide (Anatase)	5-10 nm	n/a	215m <sup>2</sup> /g	Crystal phase: Anatase		SN3301	\$1.5/gram
Titanium Oxide (Rutile)	50 nm	n/a	35 m <sup>2</sup> /g	Crystal phase: Rutile		SN3302	\$1.8/gram

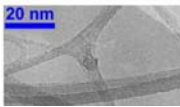
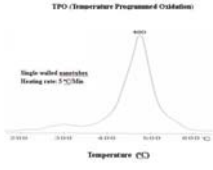


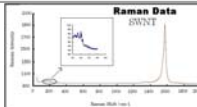
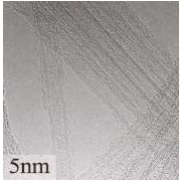
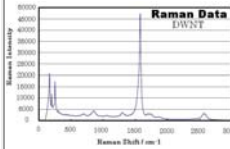
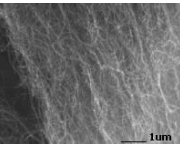
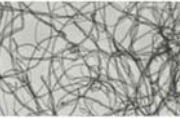
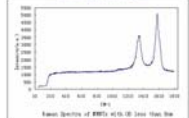


# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



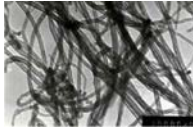
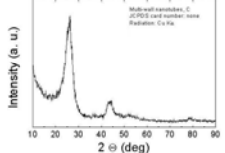
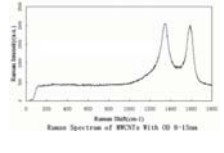

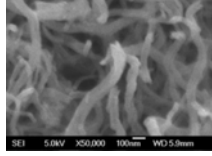
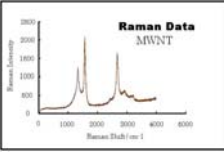
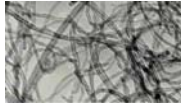
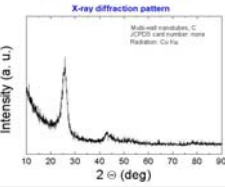
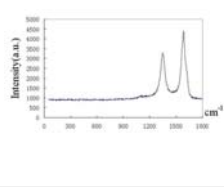
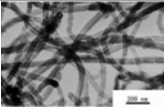
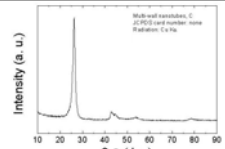
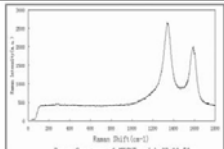
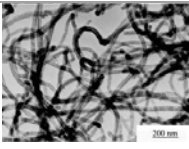
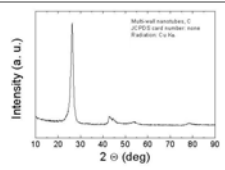
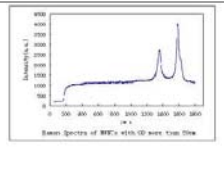
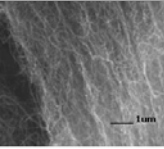
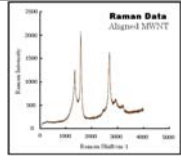

## CARBON NANOTUBES: PLEASE NOTE ALL NANOTUBES ARE AVAILABLE AS 1.6 WEIGHT DISPERSIONS WITH \$150 MINIMUM ORDER

DESCRIPTION	PURITY	ID	OD	LENGTH	SPECIFIC SURFACE AREA	OTHER INFO	TEM/SEM/TPO	XRD	RAMAN	ITEM #	PRICE
SWNT Powder	95%	0.8-1.6 nm	1-2 nm	5-30 µm	>380 m <sup>2</sup> /g	Thermal conductivity ~ 4000W/mk				SN2102	\$280 /gram
SWNT Powder	90%	n/a	<2 nm	<20 µm	>450 m <sup>2</sup> /g	Thermal conductivity ~ 4000W/mk				SN2101	\$220 /gram
-OH Functionalized SWNT, 3.96 wt%	95%	0.8-1.6 nm	1-2 nm	5-30 µm	>380 m <sup>2</sup> /g	-OH content: Surface carbon functionalization ratio: 8-10 mol%				SN67865	\$330 /gram
-COOH Functionalized SWNT, 2.73wt%	95%	0.8-1.6 nm	1-2 nm	5-20 µm	>380 m <sup>2</sup> /g	-COOH content : Surface carbon functionalization ratio: 8-10 mol%				SN542390	\$330 /gram
Short SWNT	95%	0.8-1.6 nm	1-2 nm	1-3 µm	>380 m <sup>2</sup> /g	n/a				SN542094	\$330 /gram
-COOH Functionalized Short SWNT	90%	0.8-1.6 nm	1-2 nm	0.5-2 µm	>380 m <sup>2</sup> /g	-COOH Content: 2.73% wt				SN542394	\$400 /gram
DWNT Powder	90%	1-2 nm	< 3 nm	< 20 µm	>450 m <sup>2</sup> /g	DWNTs: > 60%, Amorphous carbon: < 5%, Ash (catalyst residue): < 3% Thermal conductivity ~ 4000W/mk				SN2201	\$310 /gram
Aligned MWNT Powder	95%	n/a	10-20 nm	5-15 µm	40-300 m <sup>2</sup> /g	Amorphous carbon: <3%, Ash (catalyst residue): <0.2% Thermal conductivity ~ 2000W/mk				SN2501	\$330 /gram
MWNT Powder	95%	2-5 nm	< 8 nm	10-30 µm	>500 m <sup>2</sup> /g					SN2301	\$35 /gram

# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM



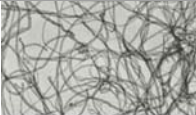
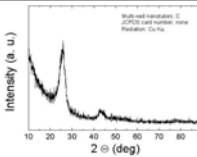
MWNT Powder	95%	3-5 nm	8-15 nm	~50 μm	>233 m <sup>2</sup> /g	C 99.76%, Al .03%, Cl .09%, S .12%				SN7689	\$28 /gram
MWNT Powder	95%	5-10 nm	10-20 nm	0.5-2 μm	40-300 m <sup>2</sup> /g	Amorphous carbon: <3%, Ash (catalyst residue): <0.2%				SN2302	\$22 /gram
MWNT Powder	95%	5-10 nm	10-20 nm	10-30 μm	>200 m <sup>2</sup> /g	C 99.8%, Cl 0.2% Electrical conductivity > 100 s/cm				SN9847	\$17 /gram
MWNT Powder	95%	5-10 nm	20-30 nm	10-30 μm	>110 m <sup>2</sup> /g	C 98.39%, Cl 0.45%, Fe 0.23%, Ni 0.93% Electrical conductivity > 100 s/cm				SN4908	\$17 /gram
MWNT Powder	95%	5-12 nm	30-50 nm	10-20 μm	>60 m <sup>2</sup> /g	Electrical conductivity > 100 s/cm				SN4093	\$17 /gram
MWNT Powder	95%	5-15 nm	>50 nm	5-15 μm	>40 m <sup>2</sup> /g	Amorphous carbon: <3%, Ash (catalyst residue): <0.2% Electrical conductivity > 100 s/cm				SN3498	\$17 /gram
Aligned MWNT Powder	95%	n/a	10-20 nm	5-15 μm	40-300 m <sup>2</sup> /g	Amorphous carbon: <3%, Ash (catalyst residue): <0.2% Electrical conductivity > 100 s/cm				SN2501	\$330 /gram
Industrial Grade MWNT	85%	5-10 nm	10-30 nm	10-30 μm	>200 m <sup>2</sup> /g	n/a				SN-5906837	\$2 /gram
Industrial Grade MWNT	85%	5-10 nm	20-40 nm	10-30 μm	>110 m <sup>2</sup> /g	n/a				SN-690342	\$1.5 /gram
Short MWNT	95%	2-5 nm	<10 nm	1-2 μm	40-300 m <sup>2</sup> /g	n/a				SN-6578943	\$55 /gram
Short MWNT	95%	5-10 nm	10-20 nm	1-2 μm	40-300 m <sup>2</sup> /g	n/a				SN485968	\$45 /gram



# Sun Innovations, Inc.

43241 Osgood Rd.  
Fremont, CA 94539 USA  
Main Phone: +1 (510) 651-1329  
Sales Phone: +1 (831) 334-1840  
ORDER ONLINE: NANOMATERIALSTORE.COM

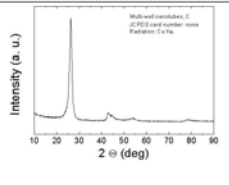
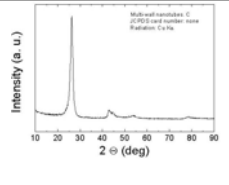


Short MWNT	95%	5-10 nm	20-30 nm	1-2 $\mu\text{m}$	>110 $\text{m}^2/\text{g}$	n/a				SN-6957838	\$40 /gram
Short MWNT	95%	5-12 nm	30-50 nm	0.5-2 $\mu\text{m}$	>60 $\text{m}^2/\text{g}$	n/a				SN102983	\$35 /gram
Short MWNT	95%	5-15 nm	>50 nm	1-2 $\mu\text{m}$	>40 $\text{m}^2/\text{g}$	n/a				SN-6847332	\$35 /gram
-COOH Functionalized MWNT	95%	2-5 nm	< 8 nm	10-30 $\mu\text{m}$	>500 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 8-10 mol%, weight percentage 3.86 wt%				SN546903	\$45 /gram
-COOH Functionalized MWNT	95%	5-10 nm	10-20 nm	10-30 $\mu\text{m}$	>200 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 8-10 mol%, weight percentage 2.0 wt%				SN647578	\$40 /gram
-COOH Functionalized MWNT	95%	5-10 nm	20-30 nm	10-30 $\mu\text{m}$	>110 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 8-10 mol%, weight percentage 1.23 wt%				SN5423654	\$28 /gram
-COOH Functionalized MWNT	95%	5-15 nm	30-50 nm	10-20 $\mu\text{m}$	>60 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 8-10 mol%, weight percentage 0.73 wt%				SN903543	\$28 /gram
-COOH Functionalized MWNT	95%	5-15 nm	>50 nm	10-20 $\mu\text{m}$	>40 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 8-10 mol%, weight percentage 0.49 wt%				SN254356	\$28 /gram
-COOH Functionalized Short SWNT	90%	0.8-1.6 nm	1-2 nm	0.5-2 $\mu\text{m}$	>380 $\text{m}^2/\text{g}$	-COOH Content: 2.73% wt				SN542394	\$400 /gram
-OH Functionalized MWNT, C 97.46% Al 0.19% Cl 1.02%, Co 1.09%, S 0.24%	95%	2-5 nm	< 8 nm	10-30 $\mu\text{m}$	>500 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 20-26 mol%, weight percentage 1-7wt%				SN89324	\$45 /gram
-OH Functionalized MWNT, C 99.8%, CL .2%	95%	5-10 nm	10-20 nm	10-30 $\mu\text{m}$	>200 $\text{m}^2/\text{g}$	Surface carbon functionalization ratio: 20-26 mol%, weight percentage 1-7wt%				SN32547	\$40 /gram

# Sun Innovations, Inc.

43241 Osgood Rd.  
 Fremont, CA 94539 USA  
 Main Phone: +1 (510) 651-1329  
 Sales Phone: +1 (831) 334-1840  
 ORDER ONLINE: NANOMATERIALSTORE.COM



-OH Functionalized MWNT, C 98.39%, Cl .45%, Fe .23%, Ni .93%	95%	5- 10 nm	20- 30 nm	10-30 $\mu$ m	110 m <sup>2</sup> /g	n/a				SN89067	\$28 /gram
-OH Functionalized MWNT, C 97.37%, Cl 0.2%, Fe .55%, Ni 1.86%, S .02%	95%	5- 15 nm	30- 50 nm	10-20 $\mu$ m	60 m <sup>2</sup> /g	Surface carbon functional- ization ratio: 20-26 mol%, weight percentage 1- 7wt%				SN675432	\$28 /gram
-OH Functionalized MWNT, C 97.37%, Cl 0.2%, Fe .55%, Ni 1.86%, S .02%	95%	5- 15 nm	>50 nm	10-20 $\mu$ m	40 m <sup>2</sup> /g	Surface carbon functional- ization ratio: 20-26 mol%, weight percentage 1- 7wt%				SN348903	\$28 /gram