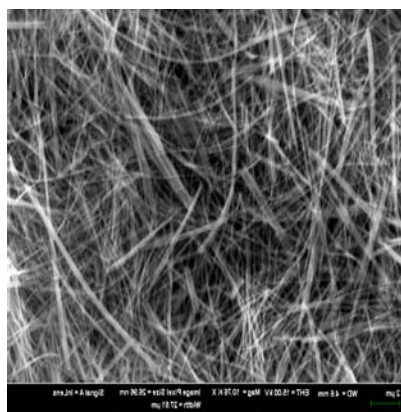


Titania Nanowire (Product No: NovaWireTi01, Industrial Grade)

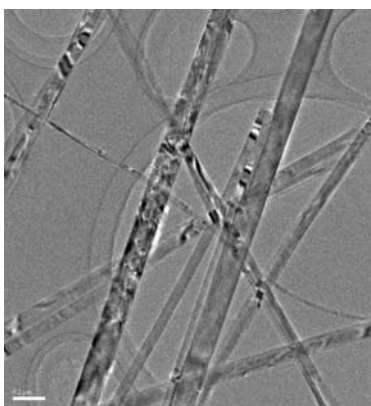
Product description

This product is prepared by hydrothermal treatment, in which titanium-containing precursor are treated in water at elevated temperature with controlled environment. The as-made product from the pressure vessel is lithium, sodium, or potassium titanate nanowires. These nanowires are then purified, dispersed and neutralized. Calcination at high temperature may be performed depending on customer's need.

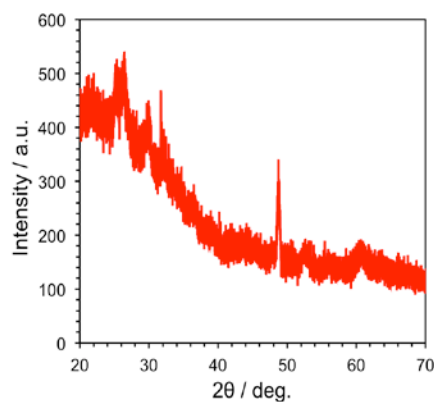
This product is characterized by SEM, TEM, XRD, and BET. The diameter and length measurements are based on SEM and TEM observations, the crystal phase is based on XRD profiles and the specific surface area (SSA) is based on BET method. It is accepted that SEM and TEM have certain limitation on determining nanomaterial diameter and length. XRD is mainly for large crystalline materials, when used for nanowires, one needs to be cautious to explain the profile.



SEM image



TEM image



XRD profile

Product features

- Diameter: *av.* 100nm (SEM)
- Length: *av.* 10 micron (SEM)
- Crystal Phase: see profile
- SSA: ~50m²/g

Potential applications:

- Filler for various nanocomposites including nanowire polymer composites, nanowire metal composite, and nanowire ceramic composites
- Filler for various adhesives and paints
- Filler for various high performance films
- Nanowire porous ceramics
- Catalyst supports
- Photocatalysts
- Sensors
- Surface coating
- Battery electrodes
-

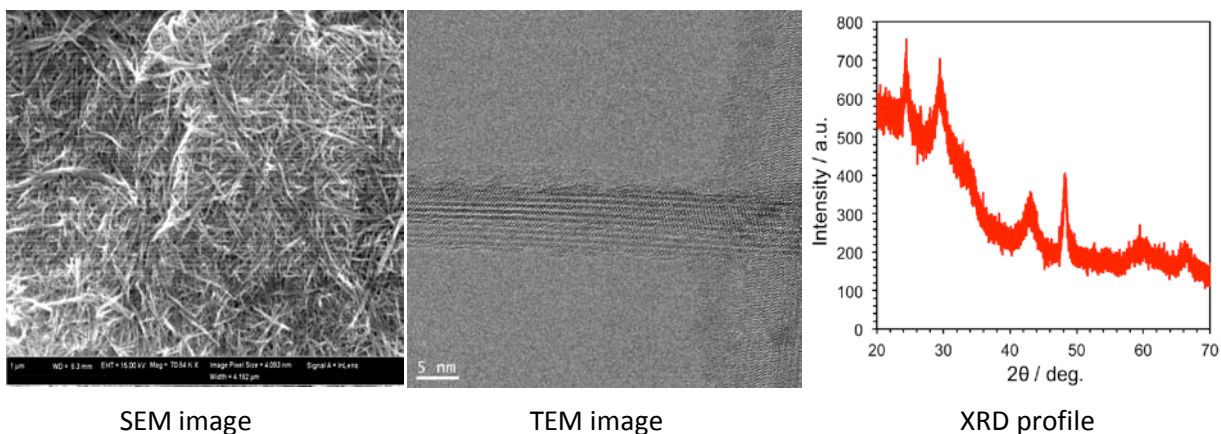
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Titania Nanowire (Product No: NovaWireTiO2, Industrial Grade)

Product description

This product is prepared by hydrothermal treatment, in which titanium-containing precursor are treated in water at elevated temperature with controlled environment. The as-made product from the pressure vessel is lithium, sodium, or potassium titanate nanowires. These nanowires are then purified, dispersed and neutralized. Calcination at high temperature may be performed depending on customer's need.

This product is characterized by SEM, TEM, XRD, and BET. The diameter and length measurements are based on SEM and TEM observations, the crystal phase is based on XRD profiles, and the specific surface area (SSA) is based on BET method. It is accepted that SEM and TEM have certain limitation on determining nanomaterial diameter and length. XRD is mainly for large crystalline materials, when used for nanowires, one needs to be cautious to explain the profile.



SEM image

TEM image

XRD profile

Product features

- Diameter: av. 10nm (SEM)
- Length: av. 10 micron (SEM)
- Crystal Phase: see profile
- SSA: ~50m²/g

Potential applications:

- Filler for various nanocomposites including nanowire polymer composites, nanowire metal composite, and nanowire ceramic composites
- Filler for various adhesives and paints
- Filler for various high performance films
- Nanowire porous ceramics
- Catalyst supports
- Photocatalysts
- Sensors
- Surface coating
- Battery electrodes

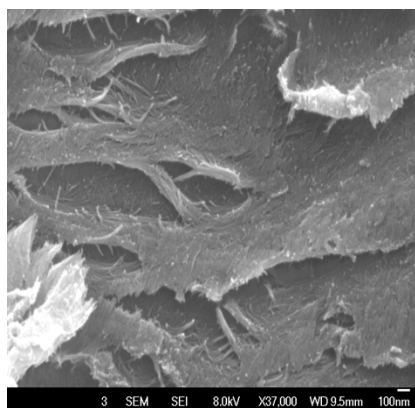
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Alumina Nanowire (Product No: NovaWireAl01)

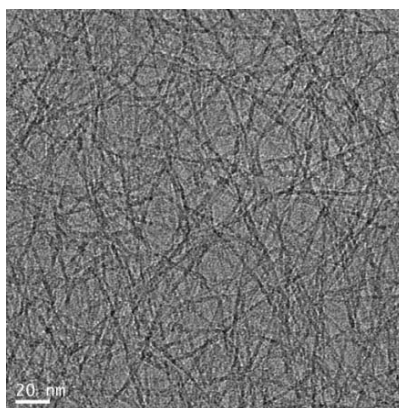
Product description

This product is prepared by hydrothermal treatment, in which aluminum-containing precursor are treated in water at elevated temperature with controlled environment. The as-made product from the pressure vessel is aluminum oxide nanowires. These nanowires are then dispersed, neutralized, and purified. Calcination at elevated temperature might be performed depending on customer's preference.

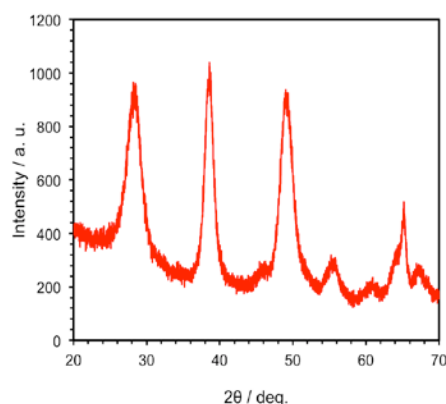
This product is characterized by SEM, TEM, and XRD. The diameter and length measurements are based on SEM and TEM observations, the crystal phase is based on XRD profile. It is well accepted that SEM and TEM have certain limitation on determining nanomaterial diameter and length. XRD is mainly for large crystalline materials, when used for nanowires, one needs to be cautious on explaining its profile.



SEM image



TEM image



XRD profile

Product features

- Diameter: *av.* 4nm (TEM)
- Length: *av.* 1 micron (SEM)
- Crystal Phase: see profile

Potential applications:

- Filler for various nanocomposites including nanowire polymer composites, nanowire metal composite, and nanowire ceramic composites
- Filler for various adhesives and paints
- Filler for various high performance films
- Nanowire porous ceramics
- Catalyst supports
- Sensors
- Surface multifunctional coating

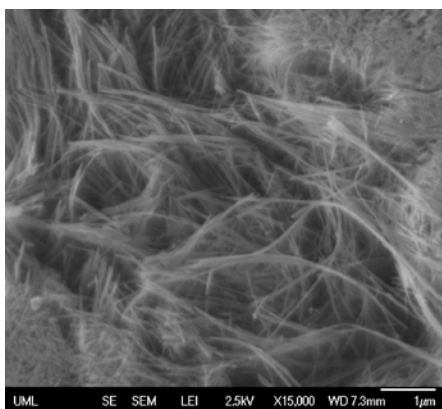
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Alumina Nanowire (Product No: NovaWireAlO2)

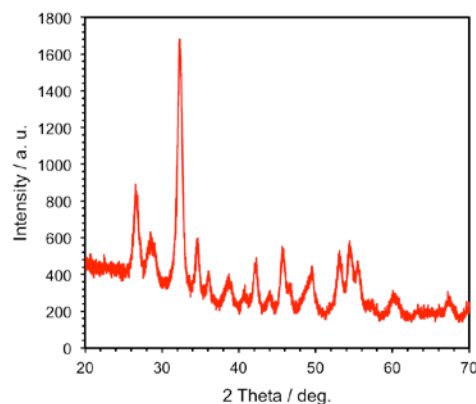
Product description

This product is prepared by hydrothermal treatment, in which aluminum-containing precursor are treated in water at elevated temperature with controlled environment. The as-made product from the pressure vessel is aluminum oxide nanowires. These nanowires are then dispersed, neutralized, and purified. Calcination at elevated temperature might be performed depending on customer's preference.

This product is characterized by SEM, TEM, and XRD. The diameter and length measurements are based on SEM and TEM observations, the crystal phase is based on XRD profile. It is well accepted that SEM and TEM have certain limitation on determining nanomaterial diameter and length. XRD is mainly for large crystalline materials, when used for nanowires, one needs to be cautious on explaining its profile.



SEM image



XRD profile

Product features

- Diameter: *av.* 30 - 50nm (SEM)
- Length: *av.* 4-10 micron (SEM)

Potential applications:

- Filler for various nanocomposites including nanowire polymer composites, nanowire metal composite, and nanowire ceramic composites
- Filler for various adhesives and paints
- Filler for various high performance films
- Nanowire porous ceramics
- Catalyst supports
- Sensors
- Surface multifunctional coating

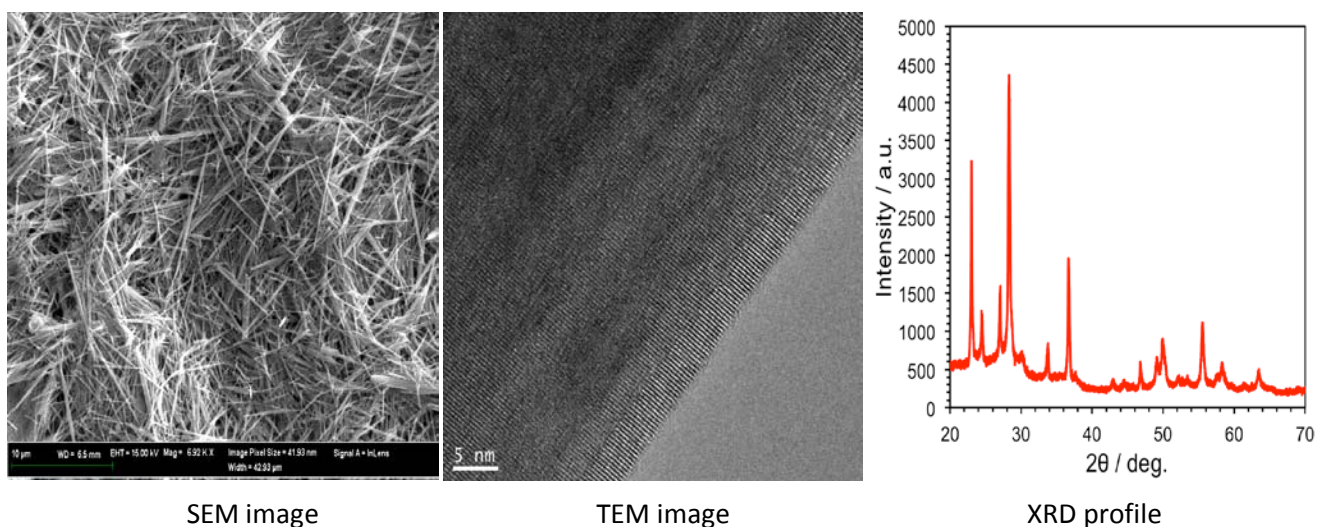
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Tungsten Oxide Nanowire (Product No: NovaWireW01)

Product description

This product is prepared by hydrothermal treatment, in which tungsten-containing precursor are treated in water at elevated temperature with controlled environment. The as-made product from the pressure vessel is tungsten oxide nanowires. These nanowires are then dispersed, neutralized, and purified. Calcination at elevated temperature may be performed depending on customer's demand.

This product is characterized by SEM, TEM, XRD. The diameter and length measurements are based on SEM and TEM observations, the crystal phase is based on XRD profile. It is well accepted that SEM and TEM have certain limitation on determining nanomaterial diameter and length. XRD is mainly for large crystalline materials, when used for nanowires, one needs to be cautious on explaining its profile.



Product features

- Diameter: *av.* 50nm (TEM)
- Length: *av.* 20 micron (SEM)
- Crystal Phase: see profile •

Potential applications:

- Sensors
- Photocatalysts
- Optoelectronic devices
- Separation membrane
- Electrochromic windows

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