

PRODUCT LISTING GUIDE

ABOUT SABINANO

SabiNano (Pty) Ltd (**SabiNano**) is a privately owned South African nanotechnology (nanotech) company that manufactures and supplies carbon-based nanomaterials such as carbon nanotubes (CNTs), graphene and other nano and bio-based materials technologies for research and industrial applications. The company also conducts business in research and development (R&D) and offers nanotech consultancy and laboratory services for industry.

The company was founded in 2008 but officially became fully operational in 2018 with support from the Industrial Development Corporation (IDC). The Directors of SabiNano boast of extensive expertise and professional knowledge in the application of nanomaterials in a wide range of industries including water/wastewater treatment, advanced materials include polymer nanocomposites, energy storage, chemicals, sensors, coatings, and others.

SabiNano's head office and manufacturing facilities are currently located inside Mintek in Strijdom Park, Randburg, Johannesburg.

Nanomaterial product applications

Our nanotech products and technologies have applications in energy storage, batteries, energy devices, water/wastewater treatment, mine/industry tailings, sand stabilization, lightweight/mechanical reinforcement, heat dissipation materials, civil engineering and construction, transportation, electronic, etc. The company has at its disposal a wide range of technologies and extended know-how in all industry sectors that will guarantee its clients a cost-efficient solution meeting their product requirements.

Production of Carbon Nanotubes and Graphene

SabiNano has a dedicated team on R&I and production of carbon nanotubes and graphene with advanced properties for application in high tech products and academic projects.

First South African company to produce carbon nanotubes

SabiNano is the first South African company to produce carbon nanotubes for

research and industrial applications. This is revolutionary for both South Africa and African clients to have a supplier who can deliver within 24 hours locally and 7—14 days outside the country depending on the distance.

Annual Production of 10 tonne Carbon Nanotubes and 100 tons Graphene

SabiNano has production facilities and with an annual carbon nanotube production capacity of 10 tons. Through a partnership with Nanografi, with an annual production capacity of 100 tons of graphene, SabiNano is able to supply graphene to both research (academic) and industrial customers.

High Quality Nanomaterials Available

SabiNano materials offers high quality carbon nanotubes (CNTs), graphene, bionanofloculants and a range of other high-quality nanomaterials with cutting-edge properties.

SabinanoTubes™ have purities ranging between 90% (industrial grade) and >98% (research grade) with high surface areas and aspect ratios, depending on customer needs and the end use of the materials. Our unique CNT production process entails using a patented novel, environmentally friendly and economically viable process in a specially designed furnace.

Graphene and graphene oxide has purities greater than 99% and high surface areas, customized according to the client's specifications. Like CNTs, graphene is both thermally and electrically conductive.

Competitive Advantage

- ⇒ High quality, consistent properties, performance and supply.
- ⇒ Scalable production to meet demand.
- ⇒ Dispersible in a wide range of solvents.
- ⇒ High aspect ratios, surface area and mechanical properties.
- ⇒ Delivery within 24 hrs for smaller orders locally.
- ⇒ Customer tailor-made materials.

Strategic R&D and Consultancy Services

SabiNano materials contribute to our customers' projects with R&D and Consultancy Services for better understanding of the material's properties and offerings. This enables our customers to make informed decisions on the materials they chose for a specific application. Thus, adding a competitive edge to their final product.

SabiNano Materials offer diverse and tailored solutions to academia (universities, research institutions, R&D councils) and industry as well as collaborations and partnership with industry for R&D projects.

LIST OF ALL PRODUCTS

1. Carbon nanotubes

A range of research and industrial grade carbon nanotubes are supplied at varied purity, size, diameter and volumes according to the customer's specifications.

- MWCNTs industrial grade
- MWCNTs research grade
- MWCNTs-COOH
- MWCNTs-OH
- N-doped MWCNTs
- Aligned MWCNTs and SWCNTs
- MWCNT dispersions
- MWCNT-TiO₂ nanocomposites

2. Graphene and Graphene Oxide

A variety of research and industrial grade graphene materials are supplied at varied purity, size, diameter and volumes according to the customer's specifications.

- Graphene nanoplatelets
- Graphene oxide
- Reduced graphene

- Single layer graphene and graphene oxide
- Graphene dispersions

3. Other Nanomaterials

We supply a wide range of other nanomaterials (nanoparticles) to help you achieve your research or product goals.

Magnetic Nanoparticles

- Magnetic Powders of Fe₂O₃
- Magnetic Powders of Fe₃O₄

Nanocellulose

- Cellulose Nanocrystal
- Cellulose Nanofiber
- Cellulose Suspension

Element and Alloy Nanoparticles

- Alloy Nanoparticles e.g. Cu-In, Cu-Ni
- Aluminium Nanoparticles
- Bismuth Nanoparticles
- Boron Nanoparticles
- Carbon Nanoparticles
- Chromium Nanoparticles
- Cobalt Nanoparticles
- Copper Nanoparticles
- Gold Nanoparticles
- Indium Nanoparticles
- Iron Nanoparticles
- Molybdenum Nanoparticles
- Nickel Nanoparticles
- Platinum Nanoparticles
- Selenium Nanoparticles
- Silicon Nanoparticles
- Silver Nanoparticles
- Sulphur Nanoparticles
- Tantalum Nanoparticles
- Tin Nanoparticles
- Titanium Nanoparticles
- Tungsten Nanoparticles
- Zinc Nanoparticles

Multi-element Oxide Nanoparticles

- Antimony Tin Oxide (ATO) Nanoparticles
- Barium Carbonate (BaCO_3) Nanoparticles
- Barium Iron Oxide ($\text{BaFe}_{12}\text{O}_{19}$) Nanoparticles
- Barium Titanate (BaTiO_3) Nanoparticles
- Cesium Tungsten Oxide ($\text{Cs}_{0.33}\text{WO}_3$) Nanoparticles
- Cobalt Iron Oxide (CoFe_2O_4) Nanoparticles
- Indium Tin Oxide (ITO) Nanoparticles
- Lead Zirconate Titanate (PZT) Nanoparticles
- Lithium Metaborate (LiBO_2) Nanoparticles
- Magnesium Carbonate (MgCO_3) Nanoparticles
- Manganese Carbonate (MnCO_3) Nanoparticles
- Manganese Iron Oxide (MnFe_2O_4) Nanoparticles
- Nickel Cobalt Iron Oxide Nanoparticles
- Nickel Iron Oxide (NiFe_2O_4) Nanoparticles
- Strontium Titanate (SrTiO_3) Nanoparticles
- Yttrium Aluminate ($\text{Y}_3\text{Al}_5\text{O}_{12}$) Nanoparticles
- Zinc Cobalt Iron Oxide Nanoparticles
- Zinc Iron Oxide (ZnFe_2O_4) Nanoparticles
- Zinc Manganese Iron Oxide Nanoparticles

Compound Nanoparticles

- Aluminum Nitride (AlN) Nanoparticles
- Antibacterial Nanopowder
- Bismuth Sulfide (Bi_2S_3) Nanoparticles
- Boron Carbide (B_4C) Nanoparticles
- Boron Nitride (BN) Nanoparticles
- Cadmium Selenide (CdSe) Nanoparticles
- Cadmium Sulfide (CdS) Nanoparticles
- Chromium Carbide (Cr_3C_2) Nanoparticles
- Cuprous Oxide (Cu_2O) Nanoparticles
- Hafnium Carbide (HfC) Nanoparticles
- Hydroxyapatite Nanoparticles
- Lanthanum Trifluoride (LaF_3) Nanoparticles
- Molybdenum Disulfide (MoS_2) Nanoparticles
- PTFE Nanoparticles
- Silicon Carbide (SiC) Nanoparticles
- Silicon Nitride (Si_3N_4) Nanoparticles
- Tantalum Carbide (TaC) Nanoparticles
- Titanium Boride (TiB_2) Nano-

particles

- Titanium Carbide (TiC) Nanoparticles
- Titanium Nitride (TiN) Nanoparticles
- Tungsten Carbide (WC) Nanoparticles
- Tungsten Carbide Cobalt (WC/Co) Nanoparticles
- Tungsten Disulfide (WS_2) Nanoparticles
- Vanadium Carbide (VC) Nanoparticles
- Zirconium Carbide (ZrC) Nanoparticles
- Zirconium Diboride (ZrB_2) Nanoparticles
- Zirconium Hydride (ZrH_2) Nanoparticles

Single Metal Oxide Nanoparticles

- Aluminum Hydroxide Nanoparticles
- Aluminum Oxide Nanoparticles
- Antimony Trioxide Nanoparticles
- Bismuth Oxide Nanoparticles
- Boron Oxide Nanoparticles
- Calcium Oxide Nanoparticles
- Cerium Oxide Nanoparticles
- Cesium Tungsten Oxide Nanoparticles
- Chromium Oxide Nanoparticles
- Cobalt Oxide Nanoparticles
- Copper Oxide Nanoparticles
- Cuprous Oxide Nanoparticles
- Dysprosium Oxide Nanoparticles
- Erbium Oxide Nanoparticles
- Europium Oxide Nanoparticles
- Gadolinium Oxide Nanoparticles
- Hafnium Oxide Nanoparticles
- Indium Hydroxide Nanoparticles
- Indium Oxide Nanoparticles
- Iron Oxide Nanoparticles
- Lanthanum Oxide Nanoparticles
- Magnesium Carbonate Nanoparticles
- Magnesium Hydroxide Nanoparticles
- Magnesium Oxide Nanoparticles
- Manganese Oxide Nanoparticles
- Molybdenum Trioxide Nanoparticles
- Neodymium Oxide Nanoparticles
- Nickel Hydroxide Nanoparticles
- Nickel Oxide Nanoparticles
- Platinum Oxide Nanoparticles

- Praseodymium Oxide Nanoparticles
- Samarium Oxide Nanoparticles
- Silicon Dioxide Nanoparticles
- Terbium Oxide Nanoparticles
- Tin Dioxide Nanoparticles
- Titanium Dioxide Nanoparticles
- Tungsten Trioxide Nanoparticles
- Vanadium Oxide Nanoparticles
- Yttrium Oxide Nanoparticles
- Zinc Carbonate Nanoparticles
- Zinc Oxide Nanoparticles
- Zirconium Oxide Nanoparticles

Fullerenes

- Fullerene C60
- Fullerene C70
- Polyhydroxylated fullerenes (Fullerenols)

Nanoclays

- Hydrotalcite, $Mg_4Al_2(OH)_{12}CO_3 \cdot 3H_2O$
- Betsopa™ OM AL510

4. Microparticles

We supply a wide range of microparticles to help you achieve your research or product goals.

Elemental Micron Powder

- Aluminium Micron Powder
- Antimony Micron Powder
- Barium Micron Powder
- Beryllium Micron Powder
- Bismuth Micron Powder
- Boron Micron Powder
- Cadmium Micron Powder
- Carbon Micron Powder
- Cerium Micron Powder
- Chromium Micron Powder
- Cobalt Micron Powder
- Copper Micron Powder
- Dysprosium Micron Powder

- Erbium Micron Powder
- Europium Micron Powder
- Gadolinium Micron Powder
- Germanium Micron Powder
- Hafnium Micron Powder
- Holmium Micron Powder
- Iron Micron Powder
- Lanthanum Micron Powder
- Lead Micron Powder
- Magnesium Micron Powder
- Manganese Micron Powder
- Molybdenum Micron Powder
- Neodymium Micron Powder
- Nickel Micron Powder
- Niobium Micron Powder
- Phosphorus Micron Powder
- Praseodymium Micron Powder
- Promethium Micron Powder
- Samarium Micron Powder
- Scandium Micron Powder
- Selenium Micron Powder
- Silicon Micron Powder
- Silver Micron Powder
- Sulphur Micron Powder
- Tantalum Micron Powder
- Tellurium Micron Powder
- Terbium Micron Powder
- Thulium Micron Powder
- Tin Micron Powder
- Titanium Micron Powder
- Tungsten Micron Powder
- Vanadium Micron Powder
- Ytterbium Micron Powder
- Yttrium Micron Powder
- Zinc Micron Powder
- Zirconium Micron Powder

Single Metal Oxide Micron Powder

- Aluminium Oxide Micron Powder
- Antimony Trioxide Micron Powder
- Bismuth Trioxide Micron Powder
- Calcium Oxide Micron Powder
- Cerium Oxide Micron Powder
- Cobalt Oxide Micron Powder
- Copper Oxide Micron Powder
- Cuprous Oxide Micron Powder
- Dysprosium Oxide Micron Powder
- Erbium Oxide Micron Powder
- Europium Oxide Micron Powder
- Gadolinium Oxide Micron Powder
- Hafnium Oxide Micron Powder
- Holmium Oxide Micron Powder
- Indium Hydroxide Micron Powder
- Indium Oxide Micron Powder
- Iron Oxide Micron Powder
- Lanthanum Oxide Micron Powder
- Lead Oxide Micron Powder
- Lutetium Oxide Micron Powder
- Magnesium Oxide Micron Powder
- Manganese Dioxide Micron Powder
- Molybdenum Trioxide Micron Powder
- Neodymium Oxide Micron Powder
- Nickel Oxide Micron Powder
- Praseodymium Oxide Micron Powder
- Samarium Oxide Micron Powder
- Scandium Oxide Micron Powder
- Selenium Dioxide Micron Powder

Compound Micron Powder

- Boron Carbide (B_4C) Micron Powder
- Boron Nitride (BN) Micron Powder
- Cadmium Selenide (CdSe) Micron Powder
- Carbon Aluminum Nitride (AlNC) Micron Powder
- Carbon Titanium Nitride (TiNC) Micron Powder
- Chromium Nitride (CrN) Micron Powder
- Graphite Fluoride Micron Powder
- Graphite Micron Powder
- Hydroxyapatite Micron Powder
- Lanthanum Hexaboride (LaB_6) Micron Powder

- Magnesium Nitride (Mg_3N_2) Micron Powder
- Molybdenum Carbide (Mo_2C) Micron Powder
- Molybdenum Disilicide ($MoSi_2$) Micron Powder
- Molybdenum Disulfide (MoS_2) Micron Powder
- Niobium Carbide (NbC) Micron Powder
- Silicon Carbide (SiC) Micron Powder
- Silicon Nitride (Si_3N_4) Micron Powder
- Tantalum Carbide (TaC) Micron Powder
- Titanium Boride (TiB_2) Micron Powder
- Titanium Carbide (TiC) Micron Powder
- Titanium Hydride (TiH_2) Micron Powder
- Tungsten Carbide (WC) Micron Powder
- Tungsten Disulfide (WS_2) Micron powder
- Zirconium Diboride (ZrB_2) Micron Powder
- Zirconium Hydride (ZrH_2) Micron Powder
- Zirconium Nitride (ZrN) Micron Powder

Alloy Micron Powder

- Al 2024 Alloy Powder
- Al 6061 Alloy Powder
- Al 7075 Alloy Powder
- Aluminum Zirconium Alloy Powder
- AZ91 Magnesium Alloy Powder
- Chromium Cobalt Alloy Powder
- Copper Tin Alloy Powder
- Iron Nickel Alloy Powder
- Nickel Chromium Alloy Powder
- Type 316 Stainless Steel Powder

Multi-element Oxide Micron Powder

- Barium Ferrite Micron Powder
- Magnesium Carbonate Micron Powder
- Magnesium Hydroxide Micron Powder
- Manganese Ferrite Black Oxide Micron Powder
- Polyether Ether Ketone Micron Powder
- Strontium Iron Oxide Micron Powder
- Strontium Titanate Micron Powder
- Titanium Aluminium Carbide Micron Powder
- Titanium Silicon Carbide Micron Powder

3D Printer Materials

- Nickel-based
- Titanium-based

5. Nanotech Coatings

Contact us for our anti-friction and anti-corrosion products.

- Anti-friction coatings
- Anti-corrosion coatings

6. Equipment for Nano and Micro Materials

- Three Roll Mill Lab Model
- High Speed Homogeniser
- Ultrasonic Homogenizer

7. Silicon Wafers and Semiconductor Wafers

- CZ-Si Wafers
- Si + SiO₂ Wafers
- FZ-Si Wafers
- Quartz Wafer
- Fused Silica Wafers
- GaAs Wafer
- Indium Phosphide (InP) Wafers
- Gallium Antimonide (GaSb) wafers
- Silicon carbide Wafer (SiC-4H) - 4H
- Silicon carbide Wafer (SiC-6H) - 6H
- Silicon on Insulator (SOI) wafers
- Si + SiN_x Wafers
- Indium Arsenide (InAs) Wafers
- Borosilicate Glass Wafers

8. Sputtering Targets

- Aluminum Sputtering Targets
- Aluminum Nitride Sputtering Targets
- Aluminum Oxide Sputtering Targets
- Aluminum Silicon Sputtering Targets
- Aluminum Silicon Copper Sputtering Targets
- Antimony Sputtering Targets
- Antimony Telluride Sputtering Targets
- Barium Sputtering Targets
- Barium Fluoride Sputtering Targets

- Barium Titanate Sputtering Targets
- Barium Strontium Titanate Sputtering Targets
- Barium Zirconate Sputtering Targets
- Bismuth Sputtering Targets
- Bismuth Ferrite Sputtering Targets
- Bismuth Ferrite (Indium) Sputtering Targets
- Bismuth Telluride Sputtering Targets
- Bismuth Oxide Sputtering Targets
- Boron Sputtering Targets
- Boron Carbide Sputtering Targets
- Boron Nitride Sputtering Targets
- Calcium Manganate Sputtering Targets
- Carbon Sputtering Targets
- Carbon (Graphite) Sputtering Targets
- Carbon (Pyrolytic Graphite) Sputtering Targets
- Cerium Oxide Sputtering Targets
- Chromium Sputtering Targets
- Chromium Oxide Sputtering Targets
- Cobalt Sputtering Targets
- Cobalt Iron Boron Sputtering Targets
- Copper Sputtering Targets
- Erbium Oxide Sputtering Targets
- Germanium Sputtering Targets
- Indium Sputtering Targets
- Indium Oxide Sputtering Targets
- Indium Tin Oxide (ITO) Sputtering Targets
- Indium Zinc Oxide Sputtering Targets
- Iron Sputtering Targets
- Iron Oxide Sputtering Targets
- Lanthanum Manganate Sputtering Targets
- Lanthanum Aluminate (indium) Sputtering Targets
- Lanthanum Calcium Manganate (La_{0.7}Ca_{0.3}MnO₃)
- Lanthanum Nickel Oxide Sputtering Targets
- Lanthanum Strontium Manganate (La_{0.9}Sr_{0.1}MnO₃)

- Lanthanum Titanate Sputtering Targets
- Lead Sputtering Targets
- Lead Zirconium Titanate, PZT Sputtering Targets
- Lithium Cobalt Oxide Sputtering Targets
- Lithium Nickel Cobalt Oxide (LiNi_(1-x)Co_xO₂)
- Lithium Niobate Sputtering Targets
- Lithium Phosphate Sputtering Targets
- Lithium Titanate Sputtering Targets
- Magnesium Sputtering Targets
- Magnesium Fluoride Sputtering Targets
- Magnesium Oxide Sputtering Targets
- Manganese Sputtering Targets
- Molybdenum Sputtering Targets
- Molybdenum Disilicide Sputtering Targets
- Molybdenum Disulfide Sputtering Targets
- Molybdenum Oxide Sputtering Targets
- Nickel Sputtering Targets
- Nickel Chromium Sputtering Targets
- Nickel Iron Sputtering Targets
- Nickel Oxide Sputtering Targets
- Nickel Vanadium Sputtering Targets
- Niobium Sputtering Targets
- Niobium Oxide Sputtering Targets
- Permalloy Sputtering Targets
- Platinum Sputtering Targets
- Praseodymium Calcium Manganate Sputtering Targets
- Praseodymium Sputtering Targets
- Selenium Sputtering Targets
- Silicon Nitride Sputtering Targets
- Silicon (Si) (undoped) Sputtering Targets
- Silicon Carbide Sputtering Targets
- Silicon Dioxide (Fused Quartz) Sputtering Targets
- Silicon (Si (N-type)) Sputtering Target
- Silicon (Si (P-type)) Sputtering Targets
- Silver Sputtering Targets
- Strontium Titanate Sputtering Targets
- Tantalum Sputtering Targets
- Tantalum Oxide Sputtering Targets
- Tin Sputtering Targets
- Tin Oxide Sputtering Targets
- Titanium Boride Sputtering Targets
- Titanium Dioxide Sputtering Targets
- Titanium Carbide Sputtering Targets
- Titanium Nitride Sputtering Targets
- Tungsten Sputtering Targets
- Tungsten Disulfide Sputtering Targets
- Tungsten Oxide Sputtering Targets
- Tungsten Titanium Sputtering Targets
- Vanadium Sputtering Targets
- Vanadium Oxide Sputtering Targets
- Ytterbium Oxide Sputtering Targets
- Yttrium Sputtering Targets
- Yttrium Ferrite Sputtering Targets
- Zinc Sputtering Targets
- Zinc Oxide Sputtering Targets
- Zinc Oxide with Alumina Sputtering Targets
- Zinc Sulfide Sputtering Targets

9. Speciality Chemicals

Wastewater Treatment Technologies

- Bionanoflocullants
- Bionanocoagulants

Other Speciality Chemicals

- Acids
- Bases
- Binders
- Surfactants

SOME OF OUR CUSTOMERS



CONTACT US

SABINANO (PTY) LTD

General inquiries: info@sabinano.co.za

Sales: sales@sabinano.co.za

Technical information: technical@sabinano.co.za

Shop online: www.sabinano.co.za

Telephone (head office): +27 11 709 4798

Physical Address:

200 Malibongwe Drive, Strijdom Park

Randburg, 2194, Johannesburg, South Africa

Company registration number:2017/254908/07