

# The Global Nanotechnology Market 2025-2035

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## Abstracts

Nanotechnology offers disruptive breakthroughs and innovations that can provide solutions to industrial, environmental and societal challenges in markets including energy, electronics, environmental protection, resource management and healthcare. Nanomaterials can be produced with outstanding magnetic, electrical, optical, mechanical, and catalytic properties that are substantially different from their bulk counterparts. These properties can be tuned as desired via precisely controlling the size, shape, synthesis conditions, and appropriate functionalization.

Nanotech-based devices & processes and engineered nanomaterials (ENMs) have been incorporated in products across all major markets. Nanomaterials are increasingly becoming part of our daily lives and are already heavily used in products such as sunscreens (titanium dioxide/zinc oxide nanoparticles), sporting goods (carbon nanotubes, graphene etc.), conductive battery additives (carbon nanotubes, graphene etc.), automotive composites (nanotubes, graphene, cellulose nanofibers etc.) and high-definition TVs (quantum dots). Their use is only going to increase due to continued industry demand for nanomaterials for current and next generation batteries, biomedical imaging and flexible electronics. They are also contributing to sustainability challenges as they offer properties that improve an application's functionality, including corrosion protection, water and moisture protection, friction reduction, antifouling and antibacterial properties, self-cleaning, heat and radiation resistance and thermal management.

The future of nanotechnology extends far beyond current applications. Emerging trends suggest increasing interdisciplinary convergence, with technologies blending across multiple domains. Sustainable nanotechnologies, integration with artificial intelligence, expansion of quantum technologies, and more sophisticated molecular engineering approaches promise to reshape our technological landscape. Challenges remain significant. High development costs, complex regulatory environments, safety concerns, and scaling difficulties present ongoing obstacles. However, the potential for solving

complex technological challenges continues to drive massive investment and research efforts.

At over 880 pages, The Global Nanotechnology Market 2025-2035 is an in-depth analysis of the opportunities afforded by these remarkable materials and technologies. It covers 40 major types of nanomaterials such as cellulose nanofibers, graphene, carbon nanotubes, silver nanoparticles, titanium dioxide nanoparticles and more. The report analyzes nanomaterial properties, synthesis methods, applications in end-use markets, technology readiness levels, production capacities, regional demand, pricing, competitive landscape, market drivers/trends/challenges and revenue forecasts to 2035.

End-use industry application analysis is provided in sectors such as coatings, composites, electronics, energy storage, automotive, aerospace, sensors, medical, filtration, agriculture, food, household care and more. Report contents include:

- In-depth analysis of the global market for nanotechnology and engineered nanomaterials based products.

- Nanotechnology's role in sustainability and sustainable development.

- Comprehensive listings of applications and products.

- Analysis of current market for nanotech/nanomaterials-enabled products and forecasts and market outlook to 2035,.

- Global demand for nanomaterials globally (e.g. Carbon nanomaterials, quantum dots, metal and metal oxide nanomaterials and other nanomaterials) in terms of volume (tonnes).

- Demand for nanomaterial-based products in globally by market (e.g. electronics, automotive, batteries, consumer goods, medicine, coatings and other relevant markets) in terms of revenues (Millions USD).

- Assessment of competitive landscape, commercial prospects, applications, demand by market and region, stage of commercialization, prices and producer profiles.

- Technology roadmaps for engineered nanomaterials

Technology roadmaps for end user markets.

Exploration of Engineered nanomaterials and nanotech-enabled products market structures and value chains.

Assessment of end user markets for nanotechnology and Engineered nanomaterials including market drivers and trends, applications, market opportunity, market challenges and application and product developer profiles.

Markets covered include a

electronics & semiconductors

energy storage

healthcare & life sciences

coatings & paints

composites

adhesives & sealants

aerospace and aviation

automotive

conductive inks

construction & infrastructure

cosmetics & personal care

filtration

environmental

food and agriculture

household care and sanitary

lighting

lubricants

marine, oil, gas and mining

plastics and packaging

rubber

security and defence

sensors

photovoltaics

tools & manufacturing

textiles and apparel

3D printing/additive manufacturing

catalysts

thermoelectrics.

Unique assessment tools for the nanomaterials market, end user applications, economic impact, addressable markets and market challenges to provide the complete picture of where the real commercial opportunities in nanotechnology and nanomaterials are. Nanomaterials covered include:

Carbon-based nanomaterials including Carbon Nanotubes, Carbon Nanofibers, Fullerenes, Graphene, Nanodiamonds, Graphene quantum dots.

Metal and metal oxide nanoparticles including Silicon Oxide Nanoparticles, Silver Nanoparticles, Titanium Dioxide (TiO<sub>2</sub>) Nanoparticles, Zinc Oxide Nanoparticles, Zirconium Oxide Nanoparticles, Aluminium Oxide Nanoparticles,

Antimony Tin Oxide (ATO) Nanoparticles, Bismuth Oxide Nanoparticles, Cerium Oxide Nanoparticles, Cobalt Oxide Nanoparticles, Copper Oxide Nanoparticles, Gold Nanoparticles, Iron Oxide Nanoparticles, Magnesium Oxide Nanoparticles, Manganese Oxide Nanoparticles, Nickel Nanoparticles, Erbium Oxide Nanoparticles.

Bio-based nanomaterials including Cellulose Nanofibers, Cellulose Nanocrystals, Bacterial Nanocellulose, Chitin and Chitosan Nanoparticles, Lignin Nanoparticles, Protein-based Nanoparticles, Lipid-based Nanoparticles, Alginate Nanoparticles.

Other types including Dendrimers, Nanoclays, Polymer Nanofibers, Quantum Dots, Boron Nitride nanotubes (BNNTs), Molybdenum Nanoparticles, Perovskite Quantum Dots.

Main application and product opportunities in nanotechnology and nanomaterials.

Profiles of over 1,600 nanotechnology and engineered nanomaterials producers and product developers. Companies profiled include Actnano, AlterBiota, Applied Materials, Archer Materials, ARIZ Precision Medicine, Arkema, Black Swan, Blueberry Therapeutics, Cabot Corporation, Canatu, Carbice Corp., Carbon Upcycling Technologies, Cello Therapeutics, C2CNT LLC, CHASM Advanced Materials, Chiral, ColossusTex, CONovate, CrayoNano AS, Daicel Corporation, Denso, Direct-C, Gerdau Graphene, GIT Coatings, Graphene Trace, GS Alliance Co. Ltd., GS Bavaria GmbH, Elmarco, Evercloak, Evove, FabricNano, Foshan Nanotech, Huntsman Corporation, HydroGraph, Levidian, LG Chem, LianBio, Lyten, Mechnano, Meijo Nano Carbon, Nanoco Group, Nanofiber Quantum Technologies, Nanoform Finland, Nanolayr, Nanosys, Nanotech Energy, Nemo Nanomaterials, Nfinite Nanotech, Obayashi Corporation, OCSiAl, Oxford Nanopore Technologies, Paragraf, Pixelligent Technologies, Promethean Particles, Radetec Diagnostics, Rimere, RTX Corporation, Smart Nanotubes Technologies, Solidion Technology, SuperBranche, TrimTabs, 2D Fab, Zeon Corporation and Zylo Therapeutics.

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