

The Global Market for Carbon Nanotubes 2023-2033

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Abstracts

The global carbon nanotubes (CNT) market has experienced renewed growth recently, driven by demand for conductive materials for lithium-ion batteries for electric vehicles and other energy storage applications, with many producers greatly increasing production capacities.

Most of the main producers are targeting their materials as conductive additives for the batteries market. LG Chem, Cabot Corporation and CNano have expansion plans targeting the electric vehicle lithium-ion battery market, with LG planning to increase annual capacity to 6,100 tons by 2024. Cabot Corporation has plans to produce 15,000 metric tons/year of conductive carbon additives (CCA) including conductive carbons, carbon nanotubes (CNT), carbon nanostructures (CNS), and blends of CCAs by 2025. JEIO also recently completed construction of a CNT facility with annual capacity of 1,000 tons per annum (up from 120 tons), which will increase to 6,000 tons by 2023. The company also has plans to produce SWCNTs in 2023. Another South Korean company, Korbon, is building a 300 ton per annum single-walled carbon nanotube (SWCNT) plant in the United States as part of supply agreement for EV batteries. It is expected to be completed in the second half of 2024, and will begin mass-production in 2025.

Multi-walled carbon nanotube (MWCNT) powders, arrays, sheets, flakes, films and yarns have found applications in consumer electronics, power cables, ESD resins, batteries, polymer composites, coatings, aerospace, sensors, heaters, filters and biomedicine. Large-scale industrial production of single-walled carbon nanotubes (SWCNTs) has been initiated, promising new market opportunities in coatings, transparent conductive films, rubber & elastomers, transistors, sensors and memory devices. Demand for CNTs will potentially increase to >50,000 t.p.a. by 2035, with a potential market for CNT enabled-products of \$60-100 Billion.

The global market of carbon nanotubes is generally segmented by SWCNT, MWCNT, and others (DWCNT, FWCNT). For today, MWCNT comprise the biggest share in terms of sales volumes, and production capacities.

Report contents include:

In depth analysis of global carbon nanotubes landscape including materials, production, producers and market demand.

Global production capacities for MWCNTS and SWCNT in 2023.

Market demand for MWCNTS and SWCNT , historical and estimated to 2033.

Industry activity and product news 2020-2023.

Analysis of other carbon nanotube related materials including Double-walled carbon nanotubes, Vertically aligned CNTs (VACNTs), Few-walled carbon nanotubes (FWNTs), Carbon nanohorns (CNH), Boron Nitride nanotubes (BNNTs) and carbon nanofibers.

Analysis of carbon nanotubes production from carbon capture.

Market analysis of carbon nanotubes in batteries, supercapacitors, fuel cells, 3D printing, rubber, automotive and aerospace composites, packaging, electronics, adhesives, thermal management, construction materials, filters, biomedicine, lubricants, oil & gas, paints & coatings, solar cells, sensors, rubber, textiles and cables.

Analysis of competitive landscape against other additives (e.g. carbon fiber, carbon black, graphene etc.).

Analysis of synthesis methods. Analysis of carbon nanotubes synthesis from carbon capture, biomass and recycled materials.

Profiles of 159 companies. Companies profiled include Cabot Corporation, Canatu Oy, Carbice Corporation, Carbon X, C12 Quantum Electronics, Eden Innovations Ltd, Huntsman Corporation, JEIO, Korbon, LG Chem, Li-S Energy, Mattershift, MECHnano, NAWA Technologies, Nano-C, Nemo Nanomaterials, NEO Battery Materials, NovationSi, OCSiAl, Raymor, Shenzhen Cone

Technology, SixLine Semiconductor, SkyNano Technologies, SmartNanotubes Technologies, Somalytics, Verdox, Zeon Corporation and Zeta Energy.

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