Global Carbon Nanotubes Market: Analysis By Technology (Arc Discharge, Laser Ablation, CVD, Catalytic CVD, High Pressure Carbon Monoxide, CoMoCAT, Floating Catalyst, and Others), By Type (Single Walled and Multi Walled), By Application (Semiconductor & Electronics, Energy & Storage, Structural Composites, Chemical & Materials, Medical & Pharmacy, and Others), By Region Size and Trends with Impact of COVID-19 and Forecast up to 2028

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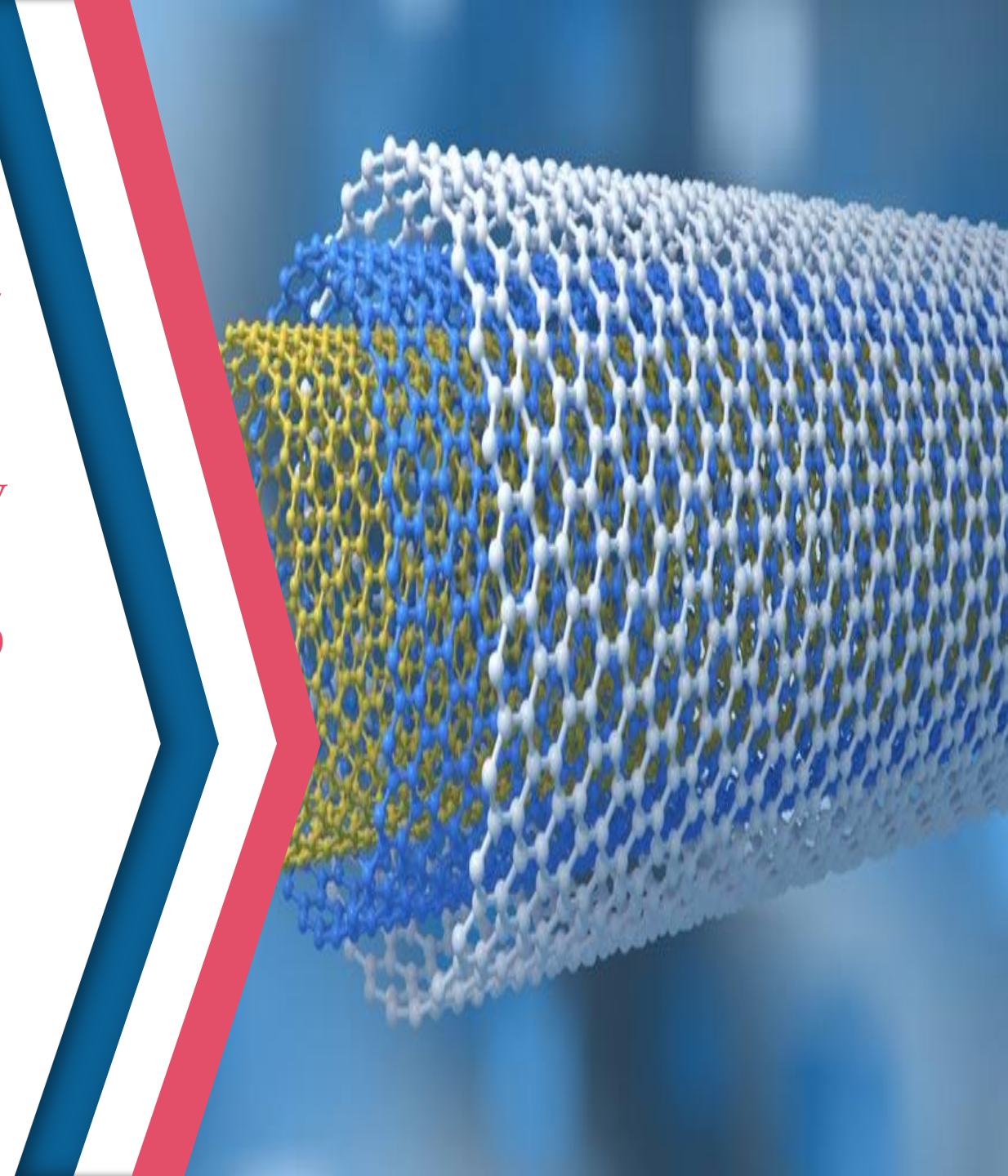
Daedal Research



Global Carbon Nanotubes Market: Coverage

- Executive Summary and Scope
- Introduction/Market Overview
- Global Market Analysis
- Regional Market Analysis
- Impact Of COVID-19
- Dynamics
- Competitive Landscape
- Company Profiling

Global Carbon Nanotubes Market: Coverage

Scope of the Report

Attributes	Details
Title	Global Carbon Nanotubes Market: Analysis By Technology (Arc Discharge, Laser Ablation, CVD, Catalytic CVD, High Pressure Carbon Monoxide, CoMoCAT, Floating Catalyst, and Others), By Type (Single Walled and Multi Walled), By Application (Semiconductor & Electronics, Energy & Storage, Structural Composites, Chemical & Materials, Medical & Pharmacy, and Others), By Region Size and Trends with Impact of COVID-19 and Forecast up to 2028
Coverage	Global and Regional
Regional Coverage	North America (The US, Canada, and Mexico), Europe (Germany, UK, France, Italy, Spain and Rest of Europe), Asia Pacific (China, India, Japan, South Korea and rest of Asia Pacific), and Rest of the World.
Market Influencing Variables	Growth Drivers, Challenges, Market Trends
Forecast Period of Market	2023-2028
Competition in the Market	Consolidated
Key Players	Arkema Group (Arkema S.A.); Resonac Holdings Corporation (Showa Denko K.K.); LG Chem Ltd.; Cabot Corporation; Klean Industries Inc.; CHASM Advanced Materials, Inc.; OCSiAl; Raymor Industries Inc.; Chengdu Organic Chemicals Co. Ltd. (Timesnano); Cheap Tubes Inc.; Hyperion Catalysis International, Inc.; Jiangsu Cnano Technology Co., Ltd; and Nanocyl SA

Global Carbon Nanotubes Market: Coverage

Executive Summary

Carbon Nanotubes (CNT) are one dimensional allotropes of carbon made by rolled-up sheets of single-layer carbon atoms (graphene). Carbon nanotubes are composed of carbon atoms linked in hexagonal shapes, with each carbon atom covalently bonded to three other carbon atoms. The global CNT market value stood at US$5.72 billion in 2022, and is expected to reach US$13.32 billion by 2028. The market would grow at a CAGR of 15.11% over the projected period of 2023-2028.

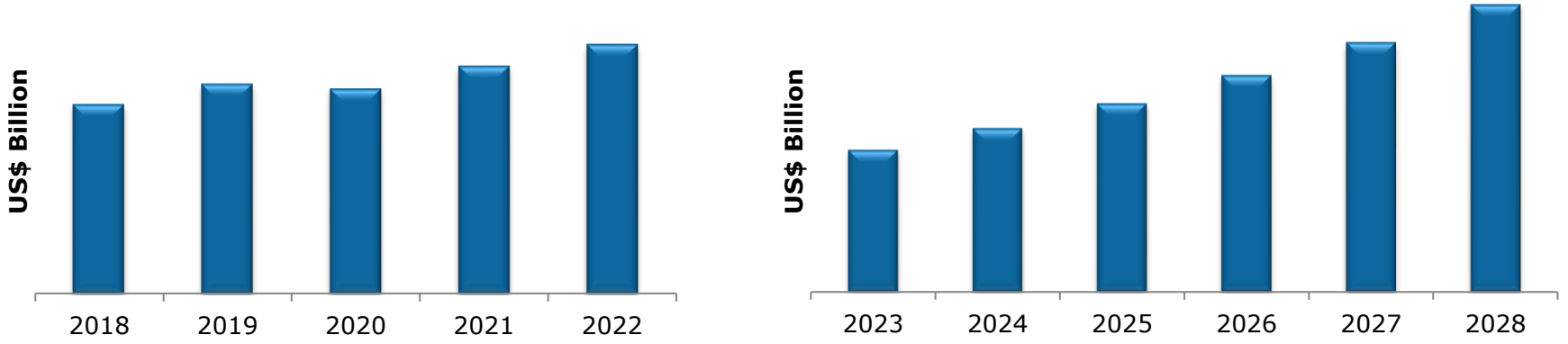
The carbon nanotubes market can be segmented on the basis of technology (arc discharge, laser ablation, CVD, catalytic CVD, high pressure carbon monoxide, CoMoCAT, floating catalyst, and others), type (single walled and multi walled), and application (semiconductor & electronics, energy & storage, structural composites, chemical & materials, medical & pharmacy, and others). CVD carbon nanotubes market is the largest segment of global CNT market, owing to commercial adoption of CVD technology by key players, rapidly expanding end user industries, rising demand from emerging application in areas such as plastic additives, medical implants, carrier tapes, coatings, elastomers, etc., and added advantages offered by CVD process in the form of scalability and control, versatile substrate compatibility, vertical alignment capability, etc.

COVID-19 pandemic brought in many changes in the world in terms of reduced productivity, loss of life, business closures, and closing down of factories and organizations. Lockdown policies, imposed by the government to prevent the spread of virus forced various end user industries to either shut down or run low on production capacity, resulting in lower production and manufacturing activities by various end user industries and since end user industries demand carbon nanotubes based materials and products for production of electronic components, high-performance energy storage devices, etc., there was a sudden fall in the demand of CNTs as result of reduced production activities, impeding the growth of the global carbon nanotubes market during the period, 2019-2020

The global CNT market has increased from 2018-2022 and the projections are made that the market will continue to rise in the next five years i.e. 2023-2028. The demand for CNT market has been rising significantly in recent years owing to rising demand in electrical, electronics & semiconductor applications, increasing application in energy storage, growing demand of CNTs in other end user industries, increasing demand of CNTs in renewable energy and water treatment, etc. Further, the market is expected to grow at a rapid pace due to integration of AI and ML, rising adoption of electric vehicles (EVs), emergence of functionalized carbon nanotubes, increasing integration of nanotechnology and biotechnology, etc. Yet the market faces some challenges such as growing environmental and safety concerns, high production and manufacturing cost, etc.

Carbon Nanotubes Market: Global Analysis

Global Carbon Nanotubes Market by Value



CAGR	
2023-2028	xx%

Global carbon nanotubes market was valued at US$... billion in 2022 and is anticipated to reach up to US$... billion by 2028 from US$... billion in 2023, with a CAGR of xx%.

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Carbon Nanotubes Market: Global Analysis

Global Carbon Nanotubes Market by Application; 2022

Application	Share (2022)
Semiconductor and Electronics	xx%
Structural Composites	xx%
Energy and Storage	xx%
Chemical and Materials	xx%
Medical and Pharmacy	xx%
Others	xx%

Global Carbon Nanotubes Market by Type; 2022

Type	Share (2022)
Multi Walled	xx%
Single Walled	xx%

Carbon Nanotubes Market: Global Analysis

Global Carbon Nanotubes Market by Technology; 2022

Technology	Share (2022)
Chemical Vapor Deposition	xx%
Arc Discharge	xx%
Laser Ablation	xx%
Floating Catalyst	xx%
CoMoCAT	xx%
Catalytic CVD	xx%
High Pressure Carbon Monoxide	xx%
Others	xx%

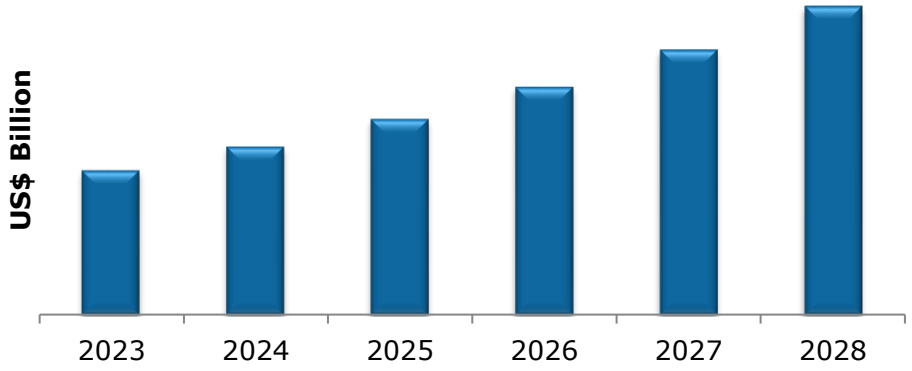
Carbon Nanotubes Market: Global Analysis

Global Carbon Nanotubes by Region; 2022

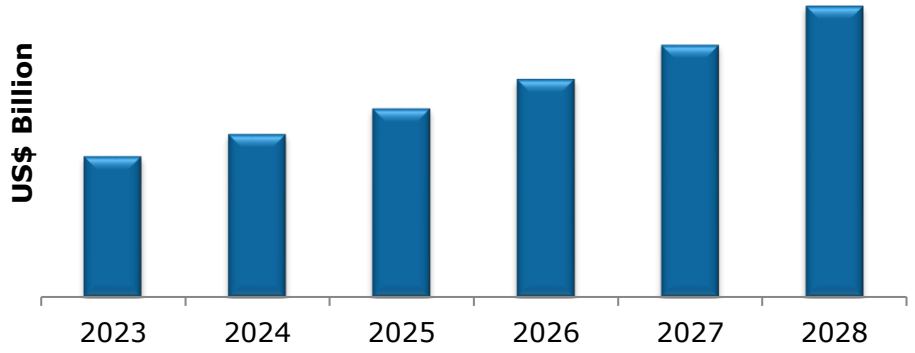
- North America, xx%
- Europe, xx%
- Asia Pacific, xx%
- Rest of the World, xx%

Carbon Nanotubes Market: Application Analysis

Global Semiconductor and Electronics Carbon Nanotubes Market by Value



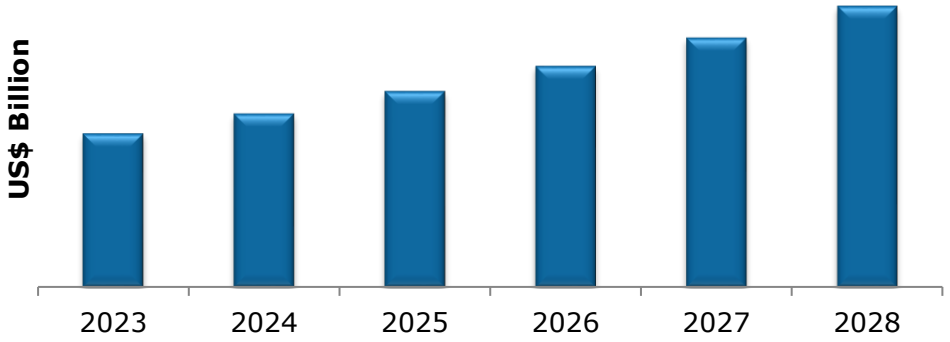
Global Energy and Storage Carbon Nanotubes Market by Value



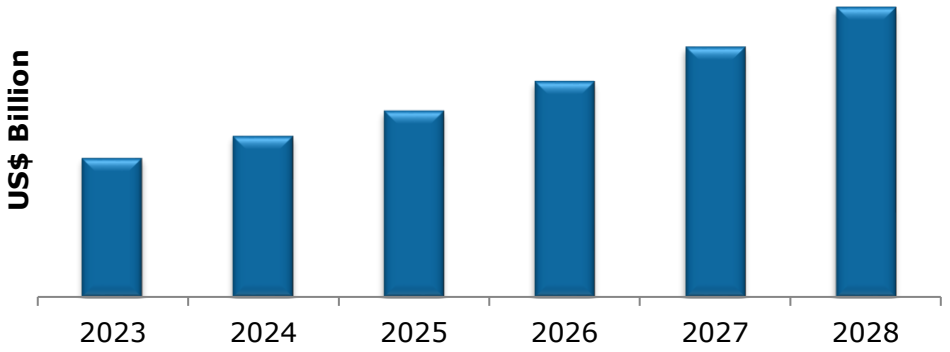
Application	CAGR (2023-2028)
Semiconductor and Electronics	xx%
Structural Composites	xx%
Energy and Storage	xx%
Chemical and Materials	xx%
Medical and Pharmacy	xx%
Others	xx%

Carbon Nanotubes Market: Type Analysis

Global Single Walled Carbon Nanotubes Market by Value



Global Multi Walled Carbon Nanotubes Market by Value



Type	CAGR (2023-2028)
Single Walled	xx%
Multi Walled	xx%

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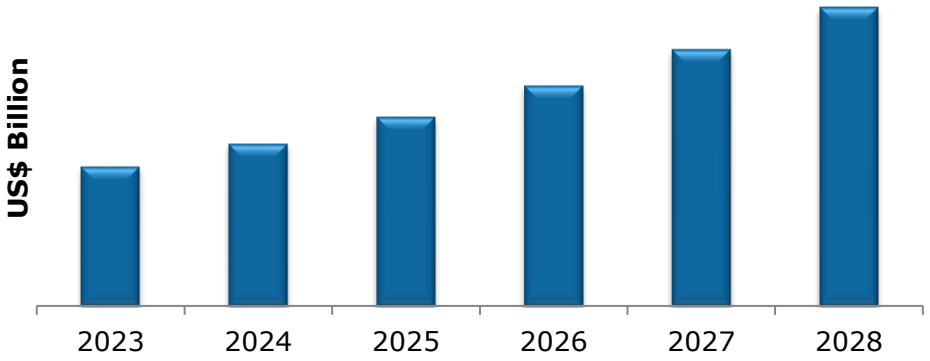
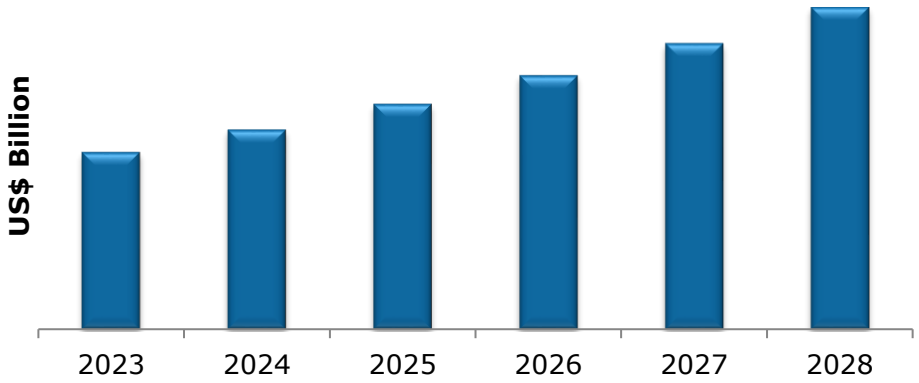
Carbon Nanotubes Market: Technology Analysis

Global Arc Discharge Carbon Nanotubes Market by Value



Global Laser Ablation Carbon Nanotubes Market by Value



Technology	CAGR (2023-2028)
Chemical Vapor Deposition	xx%
Arc Discharge	xx%
Laser Ablation	xx%
Floating Catalyst	xx%
CoMoCAT	xx%
Catalytic CVD	xx%
High Pressure Carbon Monoxide	xx%
Others	xx%

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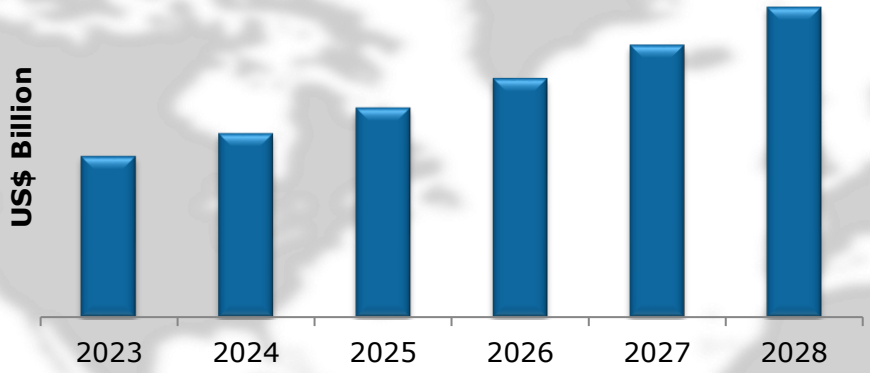
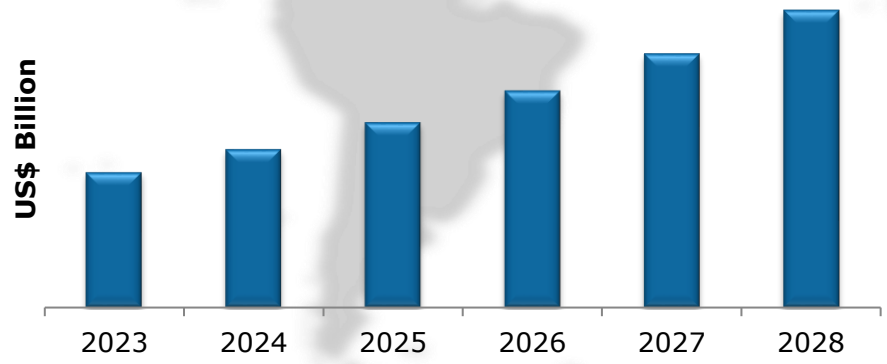
Carbon Nanotubes Market: Regional Analysis

North America Carbon Nanotubes Market by Value



Asia Pacific Carbon Nanotubes Market by Value



Region	CAGR (2023-2028)
North America	xx%
Europe	xx%
Asia Pacific	xx%
Rest of the World	xx%

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North America Carbon Nanotubes Market: An Analysis

North America Carbon Nanotubes Market by Region; 2022

Region	Share (2022)	CAGR (2023-2028)
The US	xx%	xx%
Canada	xx%	xx%
Mexico	xx%	xx%

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Asia Pacific Carbon Nanotubes Market: An Analysis

Asia Pacific Carbon Nanotubes Market by Region; 2022

Region	Share (2022)	CAGR (2023-2028)
China	xx%	xx%
Japan	xx%	xx%
India	xx%	xx%
South Korea	xx%	xx%
Rest of Asia Pacific	xx%	xx%

Europe Carbon Nanotubes Market: An Analysis

Europe Carbon Nanotubes Market by Region; 2022

Region	Share (2022)	CAGR (2023-2028)
Germany	xx%	xx%
UK	xx%	xx%
France	xx%	xx%
Italy	xx%	xx%
Spain	xx%	xx%
Rest of Europe	xx%	xx%

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Global Carbon Nanotubes Market: Dynamics

Growth Driver

- Increasing Application in Energy Storage
- Rising Demand in Electrical, Electronics & Semiconductor Applications

Challenges

- Growing Environmental and Safety Concerns
- High Production and Manufacturing Cost

Market Trends

- Increasing Integration of AI and ML
- Rising Adoption of Electric Vehicles (EVs)

Global Carbon Nanotubes Market: Competitive Landscape

Players Profiled

- Arkema Group (Arkema S.A.)
- Resonac Holdings Corporation (Showa Denko K.K.)
- LG Chem Ltd.
- Cabot Corporation
- Klean Industries Inc.
- CHASM Advanced Materials, Inc.
- OCSiAl
- Raymor Industries Inc.
- Chengdu Organic Chemicals Co. Ltd. (Timesnano)
- Cheap Tubes Inc.
- Hyperion Catalysis International, Inc.
- Jiangsu Cnano Technology Co., Ltd
- Nanocyl SA

Global Carbon Nanotubes Players by Market Share; 2022 (Percentage, %)