

Europe Carbon Nanotubes Market Forecast to 2028 –Regional Analysis – by Type (Multi-Walled Carbon Nanotubes and Single-Walled Carbon Nanotubes), and Application (Electronics and Semiconductors, Energy Storage, Structural Composites, Aerospace and Defense, Medical, and Others)

<https://marketpublishers.com/r/ECA73CC89B69EN.html>

Date: June 2023

Pages: 93

Price: US\$ 3,000.00 (Single User License)

ID: ECA73CC89B69EN

Abstracts

Europe carbon nanotubes market is expected to grow from US\$ 1,427.57 million in 2022 to US\$ 3,723.59 million by 2028. It is estimated to grow at a CAGR of 17.3% from 2022 to 2028.

Increasing Demand for Carbon Nanotubes (CNTs) for Energy Storage Applications is Fueling Europe Carbon Nanotubes Market

Carbon nanotubes are carbon nanostructures with characteristic electrochemical and mechanical properties such as low density, high strength and rigidity, high heat conductivity, and electrical conductivity. The aforementioned properties of CNTs are leveraged for the research and development of energy storage systems. Single-walled and multi-walled CNTs are utilized as conductive additives in Li-ion batteries and to develop battery electrodes in order to enhance battery performance. The rising demand for energy systems, along with its increasing cost, has influenced government organizations and researchers to develop efficient energy systems to fulfill global energy targets. For instance, in 2020, NAWA Technologies developed an ultra-fast carbon electrode, based on its patented Vertically-Aligned Carbon Nanotube (VACNT) technology, which is a vertical alignment of 100 billion nanotubes per square centimeter. In 2022, JiangSu Cnano Technology Ltd announced the plan to build battery materials, including conductive paste and carbon nanotubes, manufacturing plants in Germany.

The utilization of CNTs as a conductive additive in the production of batteries improves the conductivity by 10% compared to carbon black, thus reducing the use of conductive additives by 30%. Further, the growing demand for CNTs for electric vehicle battery materials has influenced carbon nanotube manufacturers to expand production facilities. For instance, in 2022, LG Chem Ltd invested in the establishment of a CNT single-line production facility in South Korea. The aim of the company was to produce 3,200 tons of carbon nanotubes per year to cater to the demands of the electric vehicle market. According to the International Energy Agency, the production capacity of batteries is projected to increase from 200 GWh in 2019 to more than 1,200 GWh by 2024, owing to rising electric vehicle sales. Thus, the increasing demand for CNTs for energy storage applications, as well as the rising battery production capacity, are driving the carbon nanotubes market

Europe Carbon Nanotubes Market Overview

The carbon nanotubes market in Europe is segmented into Germany, France, Italy, the UK, Russia, and the Rest of Europe. The regional market is anticipated to grow at a significant rate during the forecast period due to increasing demand for high-performance materials in various industries such as aerospace, automotive, and electronics. Europe is actively involved in research and development activities related to carbon nanotubes, with several prominent research institutions and companies operating in the region. Germany is a key market for carbon nanotubes in Europe, with the presence of several companies involved in the market and large number of research and development activities. Companies such as Bayer Material Science and Merck KGaA are involved in the production and supply of carbon nanotubes. Multiple research institutes, including the Fraunhofer Institute for Interfacial Engineering and Biotechnology, are also actively involved in research and development with respect to carbon nanotubes in Germany. The UK is another key market in the European carbon nanotubes market, as it houses several companies such as Haydale Graphene Industries and Thomas Swan that are involved in producing and commercializing carbon nanotubes. There are also many research institutions such as the University of Manchester's National Graphene Institute, which conduct research on the development of new carbon nanotube-based materials and applications.

Europe Carbon Nanotubes Market Revenue and Forecast to 2028 (US\$ Million)

Europe Carbon Nanotubes Market Segmentation

The Europe carbon nanotubes market is segmented into type, application, and country. Based on type, the Europe carbon nanotubes market is bifurcated into multi-walled carbon nanotubes, and single-walled carbon nanotubes. The multi-walled carbon nanotubes segment registered the largest market share in Europe carbon nanotubes market in 2022.

Based on application, the Europe carbon nanotubes market is segmented into electronics and semiconductors, energy storage, structural composites, aerospace and defense, medical, and others. The structural composites segment held a larger market share in 2022.

Based on country, the Europe carbon nanotubes market is segmented into Germany, France, Italy, the UK, Russia, and the Rest of Europe. Germany dominated the market share in Europe carbon nanotubes market in 2022.

Nanoshel LLC; Kumho Petrochemical Co Ltd; Klean Industries Inc; LG Chem Ltd; Nanocyl SA; Arkema SA; Tokyo Chemical Industries Co Ltd; and Cobot Corp are the leading companies operating in the carbon nanotubes market in the region.

Contents

1. INTRODUCTION

- 1.1 Study Scope
- 1.2 The Insight Partners Research Report Guidance
- 1.3 Market Segmentation
 - 1.3.1 Europe Carbon Nanotubes Market, by Type
 - 1.3.2 Europe Carbon Nanotubes Market, by Application
 - 1.3.3 Europe Carbon Nanotubes Market, by Country

2. KEY TAKEAWAYS

3. RESEARCH METHODOLOGY

- 3.1 Scope of the Study
 - 3.1.1 Europe Carbon Nanotubes Market, by Type, and Application
- 3.2 Research Methodology
 - 3.2.1 Data Collection:
 - 3.2.2 Primary Interviews:
 - 3.2.3 Hypothesis formulation:
 - 3.2.4 Macro-economic factor analysis:
 - 3.2.5 Developing base number:
 - 3.2.6 Data Triangulation:
 - 3.2.7 Country level data:

4. EUROPE CARBON NANOTUBES MARKET LANDSCAPE

- 4.1 Market Overview
- 4.2 Porter's Five Forces Analysis
 - 4.2.1 Threat of New Entrants:
 - 4.2.2 Bargaining Power of Suppliers:
 - 4.2.3 Bargaining Power of Buyers:
 - 4.2.4 Competitive Rivalry:
 - 4.2.5 Threat of Substitutes:
- 4.3 Ecosystem Analysis
 - 4.3.1 Overview:
 - 4.3.2 Raw Material Suppliers:

- 4.3.3 Manufacturers
- 4.3.4 Distributors
- 4.3.5 End-Use Industries
- 4.4 Expert Opinions

5. EUROPE CARBON NANOTUBES MARKET – KEY MARKET DYNAMICS

- 5.1 Market Drivers
 - 5.1.1 Increasing Demand for Carbon Nanotubes (CNTs) for Energy Storage Applications
 - 5.1.2 Rising Demand for Carbon Nanotube Based Composites
- 5.2 Market Restraints
 - 5.2.1 Environmental Concerns Related to Carbon Nanotubes
- 5.3 Market Opportunities
 - 5.3.1 Adoption of Carbon Nanotubes for Cancer Treatment
- 5.4 Future Trends
 - 5.4.1 Utilization of Carbon Nanotubes in 3D Printing
- 5.5 Impact Analysis

6. CARBON NANOTUBES – EUROPE MARKET ANALYSIS

- 6.1 Europe Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Mn)
- 6.2 Europe Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

7. EUROPE CARBON NANOTUBES MARKET ANALYSIS – BY TYPE

- 7.1 Overview
- 7.2 Europe Carbon Nanotubes Market, By Type (2021 and 2028)
- 7.3 Multi-Walled Carbon Nanotubes
 - 7.3.1 Overview
 - 7.3.2 Multi-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)
 - 7.3.3 Multi-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)
- 7.4 Single-Walled Carbon Nanotubes
 - 7.4.1 Overview
 - 7.4.2 Single-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)
 - 7.4.3 Single-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market –Volume

and Forecast to 2028 (Tons)

8. EUROPE CARBON NANOTUBES MARKET ANALYSIS – BY APPLICATION

8.1 Overview

8.2 Europe Carbon Nanotubes Market, By Application (2021 and 2028)

8.3 Electronics and Semiconductors

8.3.1 Overview

8.3.2 Electronics and Semiconductors: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

8.4 Energy Storage

8.4.1 Overview

8.4.2 Energy Storage: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

8.5 Structural Composites

8.5.1 Overview

8.5.2 Structural Composites: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

8.6 Aerospace and Defence

8.6.1 Overview

8.6.2 Aerospace and Defence: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

8.7 Medical

8.7.1 Overview

8.7.2 Medical: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

8.8 Others

8.8.1 Overview

8.8.2 Others: Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)

9. EUROPE CARBON NANOTUBES MARKET – COUNTRY ANALYSIS

9.1 Europe: Carbon Nanotubes Market

9.1.1 Europe: Carbon Nanotubes Market, by Key Country

9.1.1.1 Germany: Carbon Nanotubes Market – Analysis and Forecast to 2028 (US\$ Million)

9.1.1.1.1 Germany: Carbon Nanotubes Market, by Type

9.1.1.1.2 Germany: Carbon Nanotubes Market, by Application

9.1.1.2 France: Carbon Nanotubes Market –Analysis and Forecast to 2028 (US\$ Million)

9.1.1.2.1 France: Carbon Nanotubes Market, by Type

9.1.1.2.2 France: Carbon Nanotubes Market, by Application

9.1.1.3 Italy: Carbon Nanotubes Market –Analysis and Forecast to 2028 (US\$ Million)

9.1.1.3.1 Italy: Carbon Nanotubes Market, by Type

9.1.1.3.2 Italy: Carbon Nanotubes Market, by Application

9.1.1.4 U.K: Carbon Nanotubes Market –Analysis and Forecast to 2028 (US\$ Million)

9.1.1.4.1 U.K: Carbon Nanotubes Market, by Type

9.1.1.4.2 U.K: Carbon Nanotubes Market, by Application

9.1.1.5 Russia: Carbon Nanotubes Market –Analysis and Forecast to 2028 (US\$ Million)

9.1.1.5.1 Russia: Carbon Nanotubes Market, by Type

9.1.1.5.2 Russia: Carbon Nanotubes Market, by Application

9.1.1.6 Rest of Europe: Carbon Nanotubes Market –Analysis and Forecast to 2028 (US\$ Million)

9.1.1.6.1 Rest of Europe: Carbon Nanotubes Market, by Type

9.1.1.6.2 Rest of Europe: Carbon Nanotubes Market, by Application

10. INDUSTRY LANDSCAPE

10.1 Overview

10.2 Market Initiative

10.3 New Product Development

10.4 Merger and Acquisition

11. COMPANY PROFILES

11.1 Nanoshel LLC

11.1.1 Key Facts

11.1.2 Business Description

11.1.3 Products and Services

11.1.4 Financial Overview

11.1.5 SWOT Analysis

11.1.6 Key Developments

11.2 Kumho Petrochemical Co Ltd

11.2.1 Key Facts

11.2.2 Business Description

11.2.3 Products and Services

11.2.4 Financial Overview

11.2.5 SWOT Analysis

- 11.2.6 Key Developments
- 11.3 Klean Industries Inc
 - 11.3.1 Key Facts
 - 11.3.2 Business Description
 - 11.3.3 Products and Services
 - 11.3.4 Financial Overview
 - 11.3.5 SWOT Analysis
 - 11.3.6 Key Developments
- 11.4 LG Chem Ltd
 - 11.4.1 Key Facts
 - 11.4.2 Business Description
 - 11.4.3 Products and Services
 - 11.4.4 Financial Overview
 - 11.4.5 SWOT Analysis
 - 11.4.6 Key Developments
- 11.5 Nanocyl SA
 - 11.5.1 Key Facts
 - 11.5.2 Business Description
 - 11.5.3 Products and Services
 - 11.5.4 Financial Overview
 - 11.5.5 SWOT Analysis
 - 11.5.6 Key Developments
- 11.6 Arkema SA
 - 11.6.1 Key Facts
 - 11.6.2 Business Description
 - 11.6.3 Products and Services
 - 11.6.4 Financial Overview
 - 11.6.5 SWOT Analysis
 - 11.6.6 Key Developments
- 11.7 Tokyo Chemical Industry Co Ltd
 - 11.7.1 Key Facts
 - 11.7.2 Business Description
 - 11.7.3 Products and Services
 - 11.7.4 Financial Overview
 - 11.7.5 SWOT Analysis
 - 11.7.6 Key Developments
- 11.8 Cabot Corp
 - 11.8.1 Key Facts
 - 11.8.2 Business Description

- 11.8.3 Products and Services
- 11.8.4 Financial Overview
- 11.8.5 SWOT Analysis
- 11.8.6 Key Developments

12. APPENDIX

- 12.1 About The Insight Partners
- 12.2 Glossary of Terms

List Of Tables

LIST OF TABLES

- Table 1. Europe Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Mn)
- Table 2. Europe Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)
- Table 3. Europe Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 4. Europe Carbon Nanotubes Market, by Type–Volume and Forecast to 2028 (Tons)
- Table 5. Europe Carbon Nanotubes Market, by Application – Revenue and Forecast to 2028 (US\$ Million)
- Table 6. Germany Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 7. Germany Carbon Nanotubes Market, by Type – Volume and Forecast to 2028 (Tons)
- Table 8. Germany Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)
- Table 9. France Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 10. France Carbon Nanotubes Market, by Type – Volume and Forecast to 2028 (Tons)
- Table 11. France Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)
- Table 12. Italy Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 13. Italy Carbon Nanotubes Market, by Type – Volume and Forecast to 2028 (Tons)
- Table 14. Italy Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)
- Table 15. U.K Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 16. U.K Carbon Nanotubes Market, by Type – Volume and Forecast to 2028 (Tons)
- Table 17. U.K Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)
- Table 18. Russia Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)
- Table 19. Russia Carbon Nanotubes Market, by Type – Volume and Forecast to 2028

(Tons)

Table 20. Russia Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)

Table 21. Rest of Europe Carbon Nanotubes Market, by Type – Revenue and Forecast to 2028 (US\$ Million)

Table 22. Rest of Europe Carbon Nanotubes Market, by Type – Volume and Forecast to 2028 (Tons)

Table 23. Rest of Europe Carbon Nanotubes Market, by Application– Revenue and Forecast to 2028 (US\$ Million)

Table 24. Glossary of Terms, Europe Carbon Nanotubes Market

List Of Figures

LIST OF FIGURES

- Figure 1. Europe Carbon Nanotubes Market Segmentation
- Figure 2. Europe Carbon Nanotubes Market Segmentation – By country
- Figure 3. Europe Carbon Nanotubes Market Overview
- Figure 4. Europe Carbon Nanotubes Market, By Type
- Figure 5. Europe Carbon Nanotubes Market, by Country
- Figure 6. Porter's Five Forces Analysis of Europe Carbon Nanotubes Market
- Figure 7. Europe Carbon Nanotubes Market, Ecosystem Analysis
- Figure 8. Europe Expert Opinion
- Figure 9. Europe Carbon Nanotubes Market Impact Analysis of Drivers and Restraints
- Figure 10. Europe Carbon Nanotubes Market – Revenue and Forecast to 2028 (US\$ Mn)
- Figure 11. Europe Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)
- Figure 12. Europe Carbon Nanotubes Market Revenue Share, By Type (2021 and 2028)
- Figure 13. Multi-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 14. Multi-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market –Volume and Forecast To 2028 (Tons)
- Figure 15. Single-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 16. Single-Walled Carbon Nanotubes: Europe Carbon Nanotubes Market –Volume and Forecast To 2028 (Tons)
- Figure 17. Europe Carbon Nanotubes Market Revenue Share, By Application (2021 and 2028)
- Figure 18. Electronics and Semiconductors: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 19. Energy Storage: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 20. Structural Composites: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 21. Aerospace and Defense: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 22. Medical: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028 (US\$ Mn)
- Figure 23. Others: Europe Carbon Nanotubes Market – Revenue and Forecast To 2028

(US\$ Mn)

Figure 24. Europe: Carbon Nanotubes Market, by Key Country—Revenue (2021) (US\$ Million)

Figure 25. Europe: Carbon Nanotubes Market Revenue Share, by Key Country (2021 and 2028)

Figure 26. Germany: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 27. Germany: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

Figure 28. France: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 29. France: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

Figure 30. Italy: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 31. Italy: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

Figure 32. U.K: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 33. U.K: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

Figure 34. Russia: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 35. Russia: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

Figure 36. Rest of Europe: Carbon Nanotubes Market –Revenue and Forecast to 2028 (US\$ Million)

Figure 37. Rest of Europe: Carbon Nanotubes Market –Volume and Forecast to 2028 (Tons)

I would like to order

Product name: Europe Carbon Nanotubes Market Forecast to 2028 –Regional Analysis – by Type (Multi-Walled Carbon Nanotubes and Single-Walled Carbon Nanotubes), and Application (Electronics and Semiconductors, Energy Storage, Structural Composites, Aerospace and Defense, Medical, and Others)

Product link: <https://marketpublishers.com/r/ECA73CC89B69EN.html>

Price: US\$ 3,000.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/ECA73CC89B69EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970