

Global Graphene-enhanced Composites Market: Focus on Composite Type (Graphene-enhanced Polymer Composite, Graphene-enhanced Ceramic Composite, and Graphene-enhanced Metal Composite), Graphene Type, and Application-Analysis & Forecast, 2018-2023

https://marketpublishers.com/r/G20CDCD4607EEN.html

Date: September 2018 Pages: 310 Price: US\$ 5,000.00 (Single User License) ID: G20CDCD4607EEN

Abstracts

Hard copy option is available on any of the options above at an additional charge of \$500. Please email us at <u>order@marketpublishers.com</u> with your request.

Graphene-enhanced composites have enabled a myriad of applications from lightweight products to high capacity batteries and stronger materials. Graphene is the major driving force leading to the development of graphene-enhanced composites. The technological advancement for the mass production of graphene has positively impacted the growth of the graphene-enhanced composites. The combination of graphene with various matrices is so attractive that it not only reinforces the matrix but also introduces new mechanical and electronic properties to the material. Graphene is frequently reinforced with polymers such as thermoplastics and epoxies, among others.

Graphene-enhanced polymer composites, graphene-enhanced metal composites, and graphene-enhanced ceramic composites are some of the graphene-enhanced composites widely used across various end user applications. Graphene oxide and graphene nanoplatelets are the two forms of graphene being used to produce composites. Graphene-enhanced polymer composites are most widely used across various applications as polymers facilitates easy fabrication process with graphene in comparison to the other types. Along with this, polymer requires graphene in low amounts as compared to metals and ceramic. Haydale, XG Sciences, Inc., and Vorbeck Materials are some of the graphene-enhanced polymer composites manufacturers in



the global graphene-enhanced composites market.

The global graphene-enhanced composites market is expected to grow at a CAGR of 28.3% and 30.6% between 2018 and 2023 in terms of value and volume, respectively.

The report is a compilation of the different segments of the global graphene-enhanced composites market, including market breakdown by composite type, graphene type, application, and geographical areas. Herein the revenue generated from the composite type (graphene-enhanced polymer composite, graphene-enhanced ceramic composite, graphene-enhanced metal composite), graphene type (graphene oxide and graphene nanoplatelet), application (automotive, aerospace & defense, consumer electronics, building & construction, sports & leisure, and others), and geographies (North America, Europe, Asia-Pacific, Middle East and Africa, and South America) are tracked to calculate the overall market size, both in terms of value (\$million) and volume (tons). While highlighting the key driving and restraining forces for this market, the report also provides a detailed summary of the global graphene-enhanced composites market. It also includes the key participants involved in the industry at the relevant sections.

Key questions answered in the report:

What was the size in terms of value (\$million) and volume (tons) of the grapheneenhanced composites market in 2017, and what will be the growth rate during the forecast period 2018-2023?

What will be the market size of different types of composites (by value and volume) and their growth rate during the forecast period 2018-2023?

What will be the market size of different graphene types in the grapheneenhanced composites market (by value and volume) and their growth rate during the forecast period 2018-2023?

What will be the market size of different applications of graphene-enhanced composites market (by value and volume) and their growth rate during the forecast period 2018-2023?

What will be the market size for different regions and countries in terms of value and volume in the graphene-enhanced composites market and their growth rate in the forecast period 2018-2023?



What are the major driving forces that tend to increase the demand for grapheneenhanced composites in various end user industries during the forecast period?

What are the major challenges inhibiting the growth of the global grapheneenhanced composites market?

What are the competitive strengths of key players in the global grapheneenhanced composites by analyzing through market share analysis?

Who are the key players (along with their detailed analysis and profiles including their financials, company snapshots, key products & services, and SWOT analysis) in the market?

The report further includes a thorough analysis of the impact of the Porter's Five Forces to understand the overall attractiveness of the industry. The most commonly used strategy for developing a better hold on the market has been through partnerships, collaborations, and joint ventures. Moreover, the company profile section highlights significant information about the key companies involved along with their financial positions, key strategies, and developmental activities of recent years.

Further, the report includes an exhaustive analysis of the geographical split into North America, Europe, Asia-Pacific (APAC), Middle East & Africa, and South America. Each geography details the individual push and pull forces in addition to the key players from that region. This report is a meticulous compilation of research on more than 100 players in the global graphene-enhanced composites market and draws upon insights from in-depth interviews with the key opinion leaders of more than 50 leading companies, market participants, and vendors. The report also profiles approximately 16 companies with their financial analysis, SWOT, and product portfolio.

The company profiles in the report are Applied Graphene Materials plc, Global Graphene Group, Graphene 3D Lab Inc., Graphene Composites Ltd., Graphene NanoChem Plc, Graphenano, Haydale Graphene Industries Plc, Merck KGaA, NanoXplore Inc., SHD Composite Materials Ltd, The Sixth Element (Changzhou) Materials Technology Co., Ltd., Thomas Swan & Co. Ltd., Versarien Plc, Vorbeck Materials Corporation, and XG Sciences, Inc.



Contents

EXECUTIVE SUMMARY

1 MARKET DYNAMICS

- 1.1 Overview
- 1.2 Drivers
- 1.2.1 Growing demand for lightweight materials

1.2.2 Government funding backing the growth of the global graphene-enhanced composites market

- 1.2.3 High expenditure on research and development (R&D) by key players
- 1.3 Restraints
 - 1.3.1 Production challenges
 - 1.3.2 Less focus on entry in the value chain
- 1.3.3 High cost of graphene-enhanced composites
- 1.4 Opportunities
- 1.4.1 Production of low-cost graphene-enhanced composites
- 1.4.2 Up scaling graphene production
- 1.4.3 Exploring opportunities across other end users

2 COMPETITIVE LANDSCAPE

- 2.1 Key Market Developments and Strategies
 - 2.1.1 Overview
 - 2.1.2 Partnerships, Collaborations, and Joint Ventures
 - 2.1.3 Product Launch
 - 2.1.4 Mergers & Acquisitions
 - 2.1.5 Business Expansion and Contracts
 - 2.1.6 Others
- 2.2 Industry Attractiveness
 - 2.2.1 Threat of new entrants
 - 2.2.2 Bargaining Power of Buyer
 - 2.2.3 Bargaining Power of Suppliers
 - 2.2.4 Threat from Substitutes
 - 2.2.5 Intensity of Competitive Rivalry
- 2.3 Global Graphene-enhanced Composites Market Share Analysis
 - 2.3.1 Overview
- 2.4 Opportunity Analysis

Global Graphene-enhanced Composites Market: Focus on Composite Type (Graphene-enhanced Polymer Composite, Grap...



2.5 R&D Analysis of Leading Players in the Global Graphene-enhanced Composites Market

3 GLOBAL GRAPHENE-ENHANCED COMPOSITES MARKET (BY COMPOSITE TYPE), \$MILLION AND TONS, 2017-2023

3.1 Assumptions and Limitations for Analysis and Forecast of the Global Grapheneenhanced Composites Market

- 3.2 Market Overview
- 3.3 Graphene-enhanced Polymer Composites
- 3.4 Graphene-enhanced Ceramic Composites
- 3.5 Graphene-enhanced Metal Composites

4 GLOBAL GRAPHENE-ENHANCED COMPOSITES MARKET (BY GRAPHENE TYPE), \$MILLION AND TONS, 2017-2023

- 4.1 Market Overview
- 4.2 Graphene Oxide
- 4.3 Graphene Nanoplatelets

5 GLOBAL GRAPHENE-ENHANCED COMPOSITES MARKET (BY APPLICATION), \$MILLION AND TONS, 2017-2023

- 5.1 Market Overview
- 5.2 Automotive Industry
- 5.3 Aerospace & Defense
- 5.4 Consumer Electronics
- 5.5 Sports & Leisure
- 5.6 Building & Construction
- 5.7 Others

6 GRAPHENE-ENHANCED COMPOSITES MARKET BY REGION, \$MILLION AND TONS, 2017–2023

- 6.1 Market Overview
- 6.2 North America
 - 6.2.1 North America Graphene-enhanced Composites Market (by Composite Type)
 - 6.2.2 North America Graphene-enhanced Composites Market (by Application)
 - 6.2.3 North America Graphene-enhanced Composites Market (by Graphene Type)



6.2.4 North America Graphene-enhanced Composites Market (by Country)6.2.4.1 The U.S.

6.2.4.1.1 U.S. Graphene-enhanced Composites Market (by Composite Type)

6.2.4.1.2 U.S. Graphene-enhanced Composites Market (by Application) 6.2.4.2 Canada

6.2.4.2.1 Canada Graphene-enhanced Composites Market (by Composite Type)

6.2.4.2.2 Canada Graphene-enhanced Composites Market (by Application)6.2.4.3 Mexico

6.2.4.3.1 Mexico Graphene-enhanced Composites Market (by Composite Type)

6.2.4.3.2 Mexico Graphene-enhanced Composites Market (by Application)6.3 Asia-Pacific

6.3.1 Asia-Pacific Graphene-enhanced Composites Market (by Composite Type)

6.3.2 Asia-Pacific Graphene-enhanced Composites Market (by Application)

6.3.3 Asia-Pacific Graphene-enhanced Composites Market (by Graphene Type)

6.3.4 Asia-Pacific Graphene-enhanced Composites Market (by Country)

6.3.4.1 China

6.3.4.1.1 China Graphene-enhanced Composites Market (by Composite Type)

6.3.4.1.2 China Graphene-enhanced Composites Market (by Application)

6.3.4.2 Japan

6.3.4.2.1 Japan Graphene-enhanced Composites Market (by Composite Type)

6.3.4.2.2 Japan Graphene-enhanced Composites Market (by Application) 6.3.4.3 India

6.3.4.3.1 India Graphene-enhanced Composites Market (by Composite Type)

6.3.4.3.2 India Graphene-enhanced Composites Market (by Application)

6.3.4.4 South Korea

6.3.4.4.1 South Korea Graphene-enhanced Composites Market (by Composite Type)

6.3.4.4.2 South Korea Graphene-enhanced Composites Market (by Application) 6.3.4.5 Singapore

6.3.4.5.1 Singapore Graphene-enhanced Composites Market (by Composite Type)

6.3.4.5.2 Singapore Graphene-enhanced Composites Market (by Application)

6.3.4.6 Australia & New Zealand (ANZ)

6.3.4.6.1 Australia & New Zealand (ANZ) Graphene-enhanced Composites Market (by Composite Type)

6.3.4.6.2 Australia & New Zealand (ANZ) Graphene-enhanced Composites Market (by Application)

6.3.4.7 Rest-of-APAC

6.3.4.7.1 Rest-of-APAC Graphene-enhanced Composites Market (by Composite Type)



6.3.4.7.2 Rest-of-APAC Graphene-enhanced Composites Market (by Application) 6.4 Europe 6.4.1 Europe Graphene-enhanced Composites Market (by Composite Type) 6.4.2 Europe Graphene-enhanced Composites Market (by Application) 6.4.3 Europe Graphene-enhanced Composites Market (by Graphene Type) 6.4.4 Europe Graphene-enhanced Composites Market (by Country) 6.4.4.1 The U.K. 6.4.4.1.1 The U.K. Graphene-enhanced Composites Market (by Composite Type) 6.4.4.1.2 U.K. Graphene-enhanced Composites Market (by Application) 6.4.4.2 Germany 6.4.4.2.1 Germany Graphene-enhanced Composites Market (by Composite Type) 6.4.4.2.2 Germany Graphene-enhanced Composites Market (by Application) 6.4.4.3 France 6.4.4.3.1 France Graphene-enhanced Composites Market (by Composite Type) 6.4.4.3.2 France Graphene-enhanced Composites Market (by Application) 6.4.4.4 Italy 6.4.4.4.1 Italy Graphene-enhanced Composites Market (by Composite Type) 6.4.4.4.2 Italy Graphene-enhanced Composites Market (by Application) 6.4.4.5 Spain 6.4.4.5.1 Spain Graphene-enhanced Composites Market (by Composite Type) 6.4.4.5.2 Spain Graphene-enhanced Composites Market (by Application) 6.4.4.6 The Netherlands 6.4.4.6.1 The Netherlands Graphene-enhanced Composites Market (by Composite Type) 6.4.4.6.2 The Netherlands Graphene-enhanced Composites Market (by Application) 6.4.4.7 Rest-of-Europe 6.4.4.7.1 Rest-of-Europe Graphene-enhanced Composites Market (by Composite Type) 6.4.4.7.2 Rest-of-Europe Graphene-enhanced Composites Market (by Application) 6.5 Middle East & Africa (MEA) 6.5.1 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Composite Type)

6.5.2 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Application)

6.5.3 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Graphene Type)

6.5.4 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Country)

6.5.4.1 Saudi Arabia



6.5.4.1.1 Saudi Arabia Graphene-enhanced Composites Market (by Composite Type)

6.5.4.1.2 Saudi Arabia Graphene-enhanced Composites Market (by Application) 6.5.4.2 The UAE

6.5.4.2.1 The UAE Graphene-enhanced Composites Market (by Composite Type) 6.5.4.3 Iran

6.5.4.3.1 Iran Graphene-enhanced Composites Market (by Composite Type)

6.5.4.3.2 Iran Graphene-enhanced Composites Market (by Application)

6.5.4.4 Rest-of-MEA

6.5.4.4.1 Rest of MEA Graphene-enhanced Composites Market (by Composite Type)

6.5.4.4.2 Rest of MEA Graphene-enhanced Composites Market (by Application)6.6 South America

6.6.1 South America Graphene-enhanced Composites Market (by Composite Type)

6.6.2 South America Graphene-enhanced Composites Market (by Application)

6.6.3 South America Graphene-enhanced Composites Market (by Graphene Type)

6.6.4 South America Graphene-enhanced Composites Market (by Country)

6.6.4.1 Brazil

6.6.4.1.1 Brazil Graphene-enhanced Composites Market (by Composite Type)

6.6.4.1.2 Brazil Graphene-enhanced Composites Market (by Application)

6.6.4.2 Argentina

6.6.4.2.1 Argentina Graphene-enhanced Composites Market (by Composite Type)

6.6.4.2.2 Argentina Graphene-enhanced Composites Market (by Application) 6.6.4.3 Colombia

6.6.4.3.1 Colombia Graphene-enhanced Composites Market (by Composite Type)

6.6.4.3.2 Colombia Graphene-enhanced Composites Market (by Application)

6.6.4.4 Rest-of-South America

6.6.4.4.1 Rest of South America Graphene-enhanced Composites Market (by Composite Type)

6.6.4.4.2 Rest of South America Graphene-enhanced Composites Market (by Application)

7 COMPANY PROFILES

7.1 Overview

7.2 Applied Graphene Materials plc

7.2.1 Company Overview

7.2.2 Product Portfolio

7.2.3 Financials

Global Graphene-enhanced Composites Market: Focus on Composite Type (Graphene-enhanced Polymer Composite, Grap...





- 7.2.4 Financial Summary
- 7.2.5 SWOT Analysis
- 7.3 Global Graphene Group
 - 7.3.1 Company Overview
 - 7.3.2 Corporate Summary
 - 7.3.3 Product Portfolio
 - 7.3.4 SWOT Analysis
- 7.4 Graphene 3D Lab Inc.
 - 7.4.1 Company Overview
 - 7.4.2 Product Portfolio
 - 7.4.3 Financials
 - 7.4.4 Financial Summary
 - 7.4.5 SWOT Analysis
- 7.5 Graphene Composites Ltd.
 - 7.5.1 Company Overview
- 7.5.2 Corporate Summary
- 7.5.3 Product Portfolio
- 7.5.4 SWOT Analysis
- 7.6 Graphene NanoChem Plc
 - 7.6.1 Company Overview
 - 7.6.2 Product Portfolio
 - 7.6.3 Financials
 - 7.6.4 Financial Summary
- 7.6.5 SWOT Analysis
- 7.7 Graphenano
 - 7.7.1 Company Overview
 - 7.7.2 Corporate Summary
 - 7.7.3 Product Portfolio
 - 7.7.4 SWOT Analysis
- 7.8 Haydale Graphene Industries Plc
 - 7.8.1 Company Overview
 - 7.8.2 Product Portfolio
 - 7.8.3 Financials
 - 7.8.4 Financial Summary
 - 7.8.5 SWOT Analysis
- 7.9 Merck KGaA
 - 7.9.1 Company Overview
 - 7.9.2 Product Portfolio
 - 7.9.3 Financials



- 7.9.4 Financial Summary
- 7.9.5 SWOT Analysis
- 7.10 NanoXplore Inc.
 - 7.10.1 Company Overview
 - 7.10.2 Corporate Summary
 - 7.10.3 Product Portfolio
 - 7.10.4 SWOT Analysis
- 7.11 SHD Composite Materials Ltd
 - 7.11.1 Company Overview
 - 7.11.2 Corporate Summary
 - 7.11.3 Product Portfolio
 - 7.11.4 SWOT Analysis
- 7.12 The Sixth Element (Changzhou) Materials Technology Co., Ltd.
 - 7.12.1 Company Overview
 - 7.12.2 Corporate Summary
 - 7.12.3 Product Portfolio
 - 7.12.4 SWOT Analysis
- 7.13 Thomas Swan & Co. Ltd.
 - 7.13.1 Company Overview
 - 7.13.2 Corporate Summary
 - 7.13.3 Product Portfolio
 - 7.13.4 SWOT Analysis
- 7.14 Versarien Plc
 - 7.14.1 Company Overview
 - 7.14.2 Product Portfolio
 - 7.14.3 Financials
 - 7.14.4 Financial Summary
 - 7.14.5 SWOT Analysis
- 7.15 Vorbeck Materials Corporation
 - 7.15.1 Company Overview
 - 7.15.2 Corporate Summary
 - 7.15.3 Product Portfolio
 - 7.15.4 SWOT Analysis
- 7.16 XG Sciences, Inc.
 - 7.16.1 Company Overview
 - 7.16.2 Product Portfolio
 - 7.16.3 Financials
 - 7.16.4 Financial Summary
 - 7.16.5 SWOT Analysis





8 REPORT SCOPE & METHODOLOGY

- 8.1 Report Scope
 - 8.1.1 Assumptions
 - 8.1.2 Limitations
 - 8.1.3 Primary Data Sources
 - 8.1.4 Secondary Data Sources
 - 8.1.5 Data Triangulation
 - 8.1.6 Market Estimation and Forecast



List Of Tables

LIST OF TABLES

Table 1 Global Graphene-enhanced Composites Market Snapshot, 2017 and 2023

Table 2 Global Graphene-enhanced Composites Market (by Application), Tons, 2017-2023

Table 1.1 R & D Expenses of Leading Companies in Graphene-enhanced Composites Market

Table 2.1 Key Partnership, Collaborations, and Joint Ventures Activities (2015-2018)

Table 2.2 Key Products Launched (2015-2018)

Table 2.3 Key Mergers & Acquisition (2014-2017)

Table 2.4 Key Business Expansions and Contracts (2015-2018)

Table 2.5 Key Other Activities (2015-2018)

Table 4.1 Global Graphene-enhanced Composites Market (by Graphene type), Tons,2017-2023

Table 4.2 Global Graphene-enhanced Composites Market by Graphene type, 2017-2023 (\$Million)

Table 5.1 Global Graphene-enhanced Composites Market (by Application), Tons,2017-2023

Table 5.2 Global Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023

Table 6.1 Graphene-enhanced Composites Market (by Region), Tons, 2017-2023

Table 6.2 Graphene-enhanced Composites Market (by Region), \$Million, 2017-2023

Table 6.3 North America Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023

Table 6.4 North America Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023

Table 6.5 North America Graphene-enhanced Composites Market (by Application), Tons, 2017-2023

Table 6.6 North America Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023

Table 6.7 North America Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017-2023

Table 6.8 North America Graphene-enhanced Composites Market (by Graphene Type), \$Million, 2017-2023

Table 6.9 North America Graphene-enhanced Composites Market (by Country), Tons, 2017-2023

Table 6.10 North America Graphene-enhanced Composites Market (by Country),



\$Million, 2017-2023 Table 6.11 U.S. Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.12 U.S. Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.13 U.S. Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.14 U.S. Graphene-enhanced Composites Market (by End User), \$Million, 2017-2023 Table 6.15 Canada Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.16 Canada Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.17 Canada Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.18 Canada Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.19 Mexico Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.20 Mexico Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.21 Mexico Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.22 Mexico Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.23 Asia-Pacific Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.24 Asia-Pacific Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.25 Asia-Pacific Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.26 Asia-Pacific Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.27 Asia-Pacific Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017-2023 Table 6.28 Asia-Pacific Graphene-enhanced Composites Market (by Graphene Type), \$Million, 2017-2023 Table 6.29 Asia-Pacific Graphene-enhanced Composites Market (by Country), Tons, 2017-2023



Table 6.30 Asia-Pacific Graphene-enhanced Composites Market (by Country), \$Million, 2017-2023 Table 6.31 China Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.32 China Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.33 China Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.34 China Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.35 Japan Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.36 Japan Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.37 Japan Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.38 Japan Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.39 India Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.40 India Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.41 India Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.42 India Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.43 South Korea Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.44 South Korea Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.45 South Korea Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.46 South Korea Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.47 Singapore Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.48 Singapore Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.49 Singapore Graphene-enhanced Composites Market (by Application), Tons,



2017-2023

Table 6.50 Singapore Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.51 Australia & New Zealand Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.52 Australia & New Zealand Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.53 Australia & New Zealand Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.54 Australia & New Zealand Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.55 Rest-of-APAC Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.56 Rest-of-APAC Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.57 Rest-of-APAC Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.58 Rest-of-APAC Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.59 Europe Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.60 Europe Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.61 Europe Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.62 Europe Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.63 Europe Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017-2023 Table 6.64 Europe Graphene-enhanced Composites Market (by Graphene Type), \$Million, 2017-2023 Table 6.65 Europe Graphene-enhanced Composites Market (by Country), Tons, 2017-2023 Table 6.66 Europe Graphene-enhanced Composites Market (by Country), \$Million, 2017-2023 Table 6.67 The U.K. Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.68 U.K. Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023



Table 6.69 U.K. Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.70 U.K. Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.71 Germany Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.72 Germany Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.73 Germany Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.74 Germany Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.75 France Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.76 France Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.77 France Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.78 France Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.79 Italy Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.80 Italy Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.81 Italy Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.82 Italy Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.83 Spain Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.84 Spain Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.85 Spain Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.86 Spain Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.87 The Netherlands Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.88 Netherlands Graphene-enhanced Composites Market (by Composite Type),



\$Million, 2017-2023 Table 6.89 The Netherlands Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.90 The Netherlands Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.91 Rest-of-Europe Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.92 Rest-of-Europe Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.93 Rest-of-Europe Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.94 Rest-of-Europe Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.95 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.96 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.97 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.98 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.99 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017-2023 Table 6.100 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Graphene Type), \$Million, 2017-2023 Table 6.101 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Country), Tons, 2017-2023 Table 6.102 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Country), \$Million, 2017-2023 Table 6.103 Saudi Arabia Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.104 Saudi Arabia Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.105 Saudi Arabia Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.106 Saudi Arabia Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.107 The UAE Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023



Table 6.108 The UAE Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.109 The UAE Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.110 The UAE Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.111 Iran Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.112 Iran Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.113 Iran Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.114 Iran Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.115 Rest of MEA Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.116 Rest of MEA Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.117 Rest of MEA Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.118 Rest of MEA Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.119 South America Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.120 South America Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.121 South America Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.122 South America Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.123 South America Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017-2023 Table 6.124 South America Graphene-enhanced Composites Market (by Graphene Type), \$Million, 2017-2023 Table 6.125 South America Graphene-enhanced Composites Market (by Country), Tons, 2017-2023 Table 6.126 South America Graphene-enhanced Composites Market (by Country), \$Million, 2017-2023 Table 6.127 Brazil Graphene-enhanced Composites Market (by Composite Type),



Tons, 2017-2023 Table 6.128 Brazil Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.129 Brazil Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.130 Brazil Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.131 Argentina Graphene-enhanced Composites Market (by Composite Type), Tons. 2017-2023 Table 6.132 Argentina Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.133 Argentina Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.134 Argentina Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.135 Colombia Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.136 Colombia Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.137 Colombia Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.138 Colombia Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 6.139 Rest of South America Graphene-enhanced Composites Market (by Composite Type), Tons, 2017-2023 Table 6.140 Rest of South America Graphene-enhanced Composites Market (by Composite Type), \$Million, 2017-2023 Table 6.141 Rest of South America Graphene-enhanced Composites Market (by Application), Tons, 2017-2023 Table 6.142 Rest of South America Graphene-enhanced Composites Market (by Application), \$Million, 2017-2023 Table 7.1 Applied Graphene Materials plc: Product Portfolio Table 7.2 Global Graphene Group: Product Portfolio Table 7.3 Graphene 3D Lab Inc.: Product Portfolio Table 7.4 Graphene Composites Ltd.: Product Portfolio Table 7.5 Graphene NanoChem Plc: Product Portfolio Table 7.6 Graphenano: Product Portfolio Table 7.7 Haydale Graphene Industries Plc: Product Portfolio Table 7.8 Merck KGaA: Product Portfolio



Table 7.9 NanoXplore Inc.: Product Portfolio

Table 7.10 SHD Composite Materials Ltd: Product Portfolio

Table 7.11 The Sixth Element (Changzhou) Materials Technology Co., Ltd: Product Portfolio

Table 7.12 Thomas Swan & Co. Ltd.: Product Portfolio

Table 7.13 Versarien Plc: Product Portfolio

Table 7.14 Vorbeck Materials Corporation: Product Portfolio

Table 7.15 XG Sciences, Inc.: Product Portfolio



List Of Figures

LIST OF FIGURES

Figure 1 Global Graphene-enhanced Composites Market Snapshot, 2017 and 2023 Figure 2 Global Graphene-enhanced Composites Market (by Type), 2017 & 2023 Figure 3 Global Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 4 Global Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023

Figure 5 Global Graphene-enhanced Composites Market (by Region), 2017 & 2023

Figure 6 Global Graphene-enhanced Composites Market (by Region), 2017

- Figure 7 Graphene-enhanced Composites Market: Leading Players Analysis,2017
- Figure 1.1 Market Dynamics
- Figure 1.2 Impact Analysis of Drivers
- Figure 1.3 Impact Analysis of Restraints

Figure 1.4 Impact Analysis of Opportunities

Figure 2.1 Strategies Adopted by the Key Players

Figure 2.2 Share of Key Market Strategies and Developments

Figure 2.3 Global Graphene-enhanced Composites Porter's Five Forces Analysis

Figure 2.4 Analysing Threat of New Entrants

Figure 2.5 Analyzing the Bargaining Power of Buyer

Figure 2.6 Analyzing the Bargaining Power of Suppliers

Figure 2.7 Analyzing Threat from Substitutes

Figure 2.8 Analysing the Intensity of Competitive Rivalry

Figure 2.9 Global Graphene-enhanced Composites Market Share Analysis, 2017

Figure 2.10 Opportunity Analysis

Figure 2.11 R&D Analysis of the Key Players in the Global Graphene-enhanced Composites Market

Figure 3.1 Global Graphene-enhanced Composites Market (by Composite Type)

Figure 3.2 Global Graphene-enhanced Composites Market (by Composite Type), 2017 & 2023

Figure 3.3 Global Graphene-enhanced Composites Market Attractiveness Analysis (by Composite Type) 2018-2023

Figure 3.4 Graphene-enhanced Polymer Composites in Global Graphene-enhanced Composites Market, 2017-2023

Figure 3.5 Graphene-enhanced Ceramic Composites in Global Graphene-enhanced Composites Market, 2017-2023

Figure 3.6 Graphene-enhanced Metal Composites in Global Graphene-enhanced Composites Market, 2017-2023



Figure 4.1 Global Graphene-enhanced Composites Market by Graphene type Figure 4.2 Global Graphene-enhanced Composites Market (by Graphene type), 2017 & 2023 Figure 4.3 Graphene Oxide in Global Graphene-enhanced Composites Market, 2017-2023 Figure 4.4 Graphene Nanoplatelets in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.1 Global Graphene-enhanced Composites Market (by Application) Figure 5.2 Global Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 5.3 Automotive Industry in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.4 Aerospace & Defense in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.5 Consumer Electronics in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.6 Sports & Leisure in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.7 Building & Construction in Global Graphene-enhanced Composites Market, 2017-2023 Figure 5.8 Others in Global Graphene-enhanced Composites Market, 2017-2023 Figure 6.1 Graphene-enhanced Composites Market- Geographic Segmentation Figure 6.2 Graphene-enhanced Composites Market Growth Rate, 2018-2023 Figure 6.3 Graphene-enhanced Composites Market (by Region), 2017 & 2023 Figure 6.4 North America Graphene-enhanced Composites Market (by Composite Type), 2017,2018 and 2023 Figure 6.5 North America Graphene-enhanced Composites Market (by Composite Type), 2017, 2018, and 2023 Figure 6.6 North America Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.7 North America Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.8 North America Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.9 North America Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.10 North America Graphene-enhanced Composites Market (by Country), 2017 & 2023

Figure 6.11 The U.S. Graphene-enhanced Composites Market, 2017-2023



Figure 6.12 Canada Graphene-enhanced Composites Market, 2017-2023 Figure 6.13 Mexico Graphene-enhanced Composites Market, 2017-2023 Figure 6.14 Asia-Pacific Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.15 Asia-Pacific Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.16 Asia-Pacific Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.17 Asia-Pacific Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.18 Asia-Pacific Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.19 Asia-Pacific Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.20 Asia-Pacific Graphene-enhanced Composites Market (by Country), Tons, 2017 & 2023 Figure 6.21 China Graphene-enhanced Composites Market, 2017-2023 Figure 6.22 Japan Graphene-enhanced Composites Market, 2017-2023 Figure 6.23 India Graphene-enhanced Composites Market, 2017-2023 Figure 6.24 South Korea Graphene-enhanced Composites Market, 2017-2023 Figure 6.25 Singapore Graphene-enhanced Composites Market, 2017-2023 Figure 6.26 Australia & New Zealand Graphene-enhanced Composites Market, 2017-2023 Figure 6.27 Rest-of-APAC Graphene-enhanced Composites Market, 2017-2023 Figure 6.28 Europe Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.29 Europe Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.30 Europe Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.31 Europe Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.32 Europe Graphene-enhanced Composites Market (by Graphene Type), Tons, 2017 & 2023 Figure 6.33 Europe Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.34 Europe Graphene-enhanced Composites Market (by Country), Tons, 2017 & 2023 Figure 6.35 The U.K. Graphene-enhanced Composites Market, 2017-2023



Figure 6.36 Germany Graphene-enhanced Composites Market, 2017-2023 Figure 6.37 France Graphene-enhanced Composites Market, 2017-2023 Figure 6.38 Italy Graphene-enhanced Composites Market, 2017-2023 Figure 6.39 Spain Graphene-enhanced Composites Market, 2017-2023 Figure 6.40 The Netherlands Graphene-enhanced Composites Market, 2017-2023 Figure 6.41 Rest-of-Europe Graphene-enhanced Composites Market, 2017-2023 Figure 6.42 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 Figure 6.43 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 Figure 6.44 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.45 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.46 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.47 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.48 Middle East & Africa (MEA) Graphene-enhanced Composites Market (by Country), 2017 & 2023 Figure 6.49 Saudi Arabia Graphene-enhanced Composites Market, 2017-2023 Figure 6.50 The UAE Graphene-enhanced Composites Market, 2017-2023 Figure 6.51 Iran Graphene-enhanced Composites Market, 2017-2023 Figure 6.52 Rest of Middle East & Africa (MEA) Graphene-enhanced Composites Market, 2017-2023 Figure 6.53 South America Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.54 South America Graphene-enhanced Composites Market (by Composite Type), 2017, 2018 & 2023 Figure 6.55 South America Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.56 South America Graphene-enhanced Composites Market (by Application), 2017 & 2023 Figure 6.57 South America Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.58 South America Graphene-enhanced Composites Market (by Graphene Type), 2017 & 2023 Figure 6.59 South America Graphene-enhanced Composites Market (by Country), Tons & \$Million, 2017 & 2023



Figure 6.60 Brazil Graphene-enhanced Composites Market, 2017-2023

Figure 6.61 Argentina Graphene-enhanced Composites Market, 2017-2023

Figure 6.62 Colombia Graphene-enhanced Composites Market, 2017-2023

Figure 6.63 Rest-of-South America Graphene-enhanced Composites Market,

2017-2023

Figure 7.1 Share of Key Companies

Figure 7.2 Applied Graphene Materials plc: Overall Financials, 2015-2017

Figure 7.3 Applied Graphene Materials plc: SWOT Analysis

Figure 7.4 Global Graphene Group: SWOT Analysis

Figure 7.5 Graphene 3D Lab Inc.: Overall Financials, 2015-2017

Figure 7.6 Graphene 3D Lab Inc.: SWOT Analysis

Figure 7.7 Graphene Composites Ltd.: SWOT Analysis

Figure 7.8 Graphene NanoChem Plc: Overall Financials, 2015-2017

Figure 7.9 Graphene NanoChem Plc: SWOT Analysis

Figure 7.10 Graphenano : SWOT Analysis

Figure 7.11 Haydale Graphene Industries Plc: Overall Financials, 2015-2017

Figure 7.12 Haydale Graphene Industries Plc: Net Revenue by Business Segment, 2015-2017

Figure 7.13 Haydale Graphene Industries Plc: Net Revenue by Region, 2015-2017

Figure 7.14 Haydale Graphene Industries Plc: SWOT Analysis

Figure 7.15 Merck KGaA: Overall Financials, 2015-2017

Figure 7.16 Merck KGaA: Net Revenue by Business Segment, 2015-2017

Figure 7.17 Merck KGaA: Net Revenue (by Region), 2015-2017

Figure 7.18 Merck KGaA: SWOT Analysis

Figure 7.19 NanoXplore, Inc.: SWOT Analysis

Figure 7.20 SHD Composite Materials Ltd : SWOT Analysis

Figure 7.21 The Sixth Element (Changzhou) Materials Technology Co., Ltd: SWOT Analysis

Figure 7.22 Thomas Swan & Co. Ltd.: SWOT Analysis

Figure 7.23 Versarien Plc: Overall Financials, 2015-2017

Figure 7.24 Versarien Plc: Net Revenue by Business Segment, 2015-2017

Figure 7.25 Versarien Plc: Net Revenue by Region, 2015-2017

Figure 7.26 Versarien Plc: SWOT Analysis`

Figure 7.27 Vorbeck Materials Corporation: SWOT Analysis

Figure 7.28 XG Sciences, Inc.: Overall Financials, 2015-2017

Figure 7.29 XG Sciences, Inc.: SWOT Analysis`

Figure 8.1 Global Graphene-enhanced Composites Market Scope

Figure 8.2 Report Design

Figure 8.3 Primary Interviews (by Player, Designation, and Region)



Figure 8.4 Sources of Secondary Research Figure 8.5 Data Triangulation Figure 8.6 Top-Down & Bottom-Up Approach



I would like to order

- Product name: Global Graphene-enhanced Composites Market: Focus on Composite Type (Grapheneenhanced Polymer Composite, Graphene-enhanced Ceramic Composite, and Grapheneenhanced Metal Composite), Graphene Type, and Application-Analysis & Forecast, 2018-2023
 - Product link: https://marketpublishers.com/r/G20CDCD4607EEN.html
 - Price: US\$ 5,000.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service: <u>info@marketpublishers.com</u>

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/G20CDCD4607EEN.html</u>

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

Custumer signature ____

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



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