

Graphene Market by Product Type (Mono-layer & Bi-layer graphene, Few Layer Graphene, Graphene Oxide, and Graphene Nano Platelets) and Application (Composites, Energy Storage, RFID, Sensors, Polymer additives, and Functional ink) - Global Opportunity Analysis and Industry Forecast, 2014-2021

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Abstracts

Graphene, which is the world's first 2D material, is ultra-light and extremely tough. The honey comb lattice structure of the material makes it 200 times stronger than steel and extremely flexible. The material is considered an excellent conductor of electricity and has high level of heat resistance as well. Due to its unique physiochemical characteristics, the material has wide applications across different industries such as energy, electronics, composite, coatings, biomedical, sensors, automobile, aerospace, etc. High-priced equipment and incapability in mass production are the two major restraining factors of the market. Additionally, the applications of graphene are still restricted in some sectors due to the absence of band gap in the material. There are also health and environmental risks associated with the handling of graphene during production, as the product is highly inflammable.

Due to the opportunities available in the graphene market, the graphene business has gained the attention of many players around the world. Existing companies in the market are also adopting excellent business strategies, such as product launch, collaboration, agreement, and partnership to promote the commercialization of the material. The companies involved in the graphene business are investing a substantial amount of capital and hiring efficient scientists to strengthen their research and development. The cross boundary collaboration of various companies is an excellent business strategy for a nascent market like graphene. This strategy would provide numerous opportunities to the companies to strengthen their business. Moreover, to get

the early movers advantage, large business houses, universities, individuals, and governments are partaking in a race to patent graphene based applications. Investors around the world are showing interest in the graphene market, which would encourage manufacturers to improve their production capacity and thereby lead to improved technologies. The cash flow from investors would also strengthen R&D activities. The major players of the global graphene market are CVD Equipment Corporation, Graphene Nanochem PLC, Vorbrck Materials, XG Sciences, Haydale Limited, Graphenea, Graphene Laboratories, Bluestone Global Tech, Angstrom Material, Inc. and ACS Material, LLC.

The global graphene market is segmented into type, applications and geography. In the products market, GNP was the largest revenue generating segment in 2013 and is expected to retain its position throughout 2014 - 2020. However, graphene oxide and monolayer & bi-layer graphene are the most promising segments and are anticipated to generate substantial revenue by 2020. This is due to the increasing adoption of these materials in higher applications. Electronics is currently the most significant segment in the graphene application market and would continue to be in the future as well. Defense is the most promising segment as graphene has higher flexibility and strength compared to the conventional materials used in the industry. Based on geography, the market is segmented into North America, Europe, Asia Pacific and LAMEA (Latin America, Middle East and Africa). In 2013, North America was the largest revenue-generating segment and this market would witness substantial market growth in the future as well.

Additionally, Asia Pacific is the fastest growing segment during the forecast period. The factors that drive the growth of Asia Pacific region include presence of large graphite mines in China; ongoing graphene research in India, China, Japan & Korea, and the vast scope of electronics application in this region.

Global Graphene Market

KEY BENEFITS

Estimations are made according to the current business scenario of the global graphene market and the future market structure & trends are forecast for the period 2014-2020 with the base figures of the year 2013

The report provides an in-depth analysis of both the global graphene bulk material market and graphene film market as well

Quantitative analysis of the current market and estimations through 2013-2020 are provided to showcase the financial caliber of the market

The report provides a wide view of the global graphene market, including market trends, market structure, limiting factors and opportunities available in the market

The drivers and restraints of this market are systematically analyzed and major emphasis is laid on the present opportunities in this market

Quantitative analysis of the opportunities for graphene in various high level applications, such as defense and electronics etc. is provided

Porters Five Forces model of the industry illustrates the potency of the buyers & suppliers participating in the market and provides insights into the competitive landscape of the market

Value chain analysis in the report gives a clear understating of the roles of stakeholder involved in the supply chain of the market

The advantages of the market are analyzed to help stakeholders identify the opportunistic areas in a comprehensive manner

KEY MARKET SEGMENTS

The global graphene market is segmented based on product type, application and geography.

GRAPHENE MARKET BY PRODUCT TYPE

Mono-layer & Bi-layer graphene

Few Layer Graphene

Graphene Oxide

Graphene Nano Platelets

Others

GRAPHENE MARKET BY APPLICATION

Graphene Market by Product Type (Mono-layer & Bi-layer graphene, Few Layer Graphene, Graphene Oxide, and Graph...

In Energy

Aerospace

Automotive

Biomedical and life sciences

Coatings

Composites

Sensors

Electronics

Defense

Others

GRAPHENE MARKET BY GEOGRAPHY

North America Application Market

In Energy

Aerospace

Automotive

Biomedical and life sciences

Coatings

Composites

Sensors

Electronics

Defense

Others

Europe Application Market

In Energy

Aerospace

Automotive

Biomedical and life sciences

Coatings

Composites

Sensors

Electronics

Defense

Others

Asia-Pacific Application Market

In Energy

Aerospace

Automotive

Biomedical and life sciences

Coatings

Composites

Sensors

Electronics

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LAMEA Application Market

In Energy

Aerospace

Automotive

Biomedical and life sciences

Coatings

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Sensors

Electronics

Defense

Others

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