



**Global and China Graphene Industry  
Report, 2014-2016**

**Sep. 2014**

## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

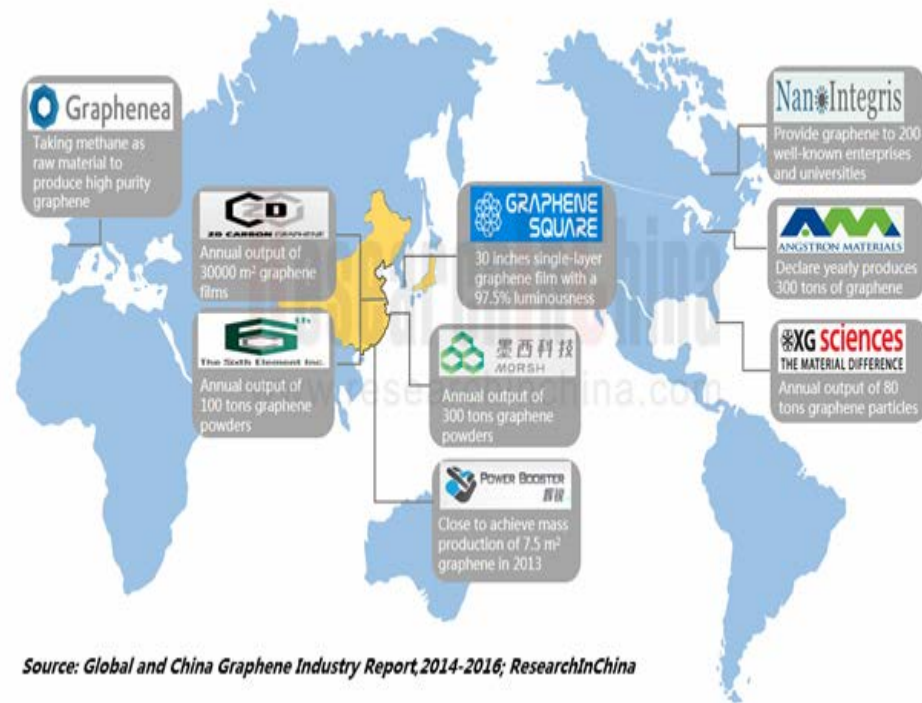
## Abstract

With excellent performance in mechanics, thermology, electricity and magnetics, graphene enjoys broad application prospects in high-performance electronic devices, composite materials, sensors, energy storage and the like.

At present, the productized graphene is mainly used in such fields as battery conductive additives, heat dissipating materials and composite materials, with products dominated by graphene powder and suspension prepared by oxidation-reduction method. Also, its costs have been reduced to within RMB10/g. In 2013, the industries including semiconductor electronics, energy (primarily battery) and composite materials showed the highest demand for graphene, which occupied 26%, 19% and 14%, respectively, of the total.

In 2013, the size of global graphene market stood at around USD12.5 million, up 50% year on year, and this figure is expected to climb to USD120 million by 2020. Currently, there is a small market size of graphene, and the integration progress of production and teaching is worse than expected. Consequently, the graphene industrialization will tend to be mature after 2020.

## Global and China Major Graphene Manufacturers, 2014



Source: Global and China Graphene Industry Report, 2014-2016; ResearchInChina

China's strong strength in graphene research provides a strong support for graphene industrialization and application extension. Up until now, China has successively set up dozens of graphene related enterprises, some of which has announced that the mass production lines went into operation. But these lines produce graphene powder or film products, rather than the graphene in its true sense.

In 2013, The Sixth Element (Changzhou) Materials Technology Co., Ltd. built the first large-scale macro preparation, full-automatic graphene powder production line in China, with existing capacity of 100 t/a, which is estimated to rise to 1,000 t/a by 2016.

In May 2013, 2D Carbon Graphene Material Co., Ltd. put its 30,000m<sup>2</sup>/a transparent graphene conductive film production line into operation, thus bringing into being a production scale of 5 million pcs/a graphene touch screen. It is predicted that by 2015 the company will produce 3,000,000 square meters of transparent grapheme conductive film per year.

Ningbo Morsh Technology's 300 t/a graphene project, which started its construction in September 2012, was completed and put into operation at the end of 2013. However, the products made by the project were not the real graphene but multilayer graphene nanoplatelets.

Global and China Graphene Industry Report, 2014-2016 released by ResearchInChina mainly deals with the followings:

- ⇒ Developments of graphene upstream and downstream sectors, including graphite, graphene device processing, etc.;
- ⇒ Developments of global graphene industry (including market demand and market size), industrialization prospects and downstream market segments such as lithium battery, supercapacitor and transparent electrode;
- ⇒ Developments of China's graphene industry and analysis of downstream market segments e.g. lithium battery, transparent electrode and monocrystalline silicon;
- ⇒ Operation and graphene business of 18 major global graphene enterprises, including Applied Graphene Materials, Haydale Graphene Industries, Graphene NanoChem Plc, etc.;
- ⇒ Operation and graphene business of 10 major Chinese grapheme enterprises including Fangda Carbon New Material, Sichuan Jinlu Group and Beijing Kangde Xin Composite Material.

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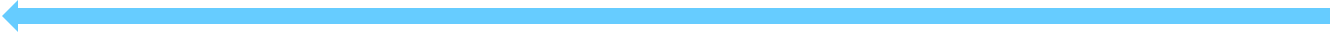
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