Market Analysis for Advanced Materials 2020

Dongyang Li

Advanced Materials Market Overview:

Advanced Materials are the modification of conventional materials with superior properties like hardness, toughness, durability and elasticity. The nature of the scope in researches and potential applications in advanced materials is very broad. Furthermore, advanced materials are the main factors which have given a phenomenal pace to the innovative advancements. Many new developments in the advanced materials have led to the design of many new innovations from medical devices, computers to warships.
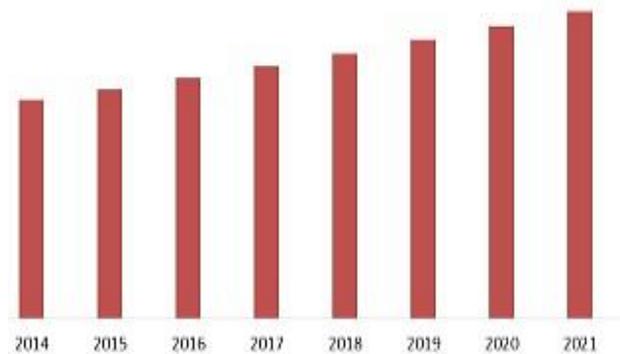
Advanced Materials Market Outlook:

The global Advanced Materials Market is anticipated to reach around $102 billion dollars by 2024. Some of the known advanced materials include plastics, fibers, resins, composites etc. Meanwhile, there is lot of futuristic opportunities in the advanced materials like Nano materials, colloids, catalysts etc. Asia Pacific is expected to account for a leading share in the regions by 2024 in the Advanced Materials Market. This development can be ascribed to expanding number of industries and rising manufacturing activities in this region.

Advanced Materials Market Growth Drivers: Due to rapid industrialization across the world, the demand for advanced material is increasing globally. Increasing number of R & D activities of advanced materials in many regions is one of the key drivers for the global Advanced Materials Market. Besides, expanding utilization of customer merchandise and expanding use of advanced materials in areas like healthcare, aerospace, automobile and others over the globe will support the development of the global Advanced Materials Market.

Advanced Materials Market Challenges: One of the challenges in the global Advanced Materials Market is the high prices of advanced materials produced. Some of the advanced materials like Nanomaterials have their average prices of around $1000 per gram. At present, carbon fiber reinforced polymers are used in various end-user industries like aerospace, energy and sports owing their excellent mechanical and thermal properties. Although they have many advantages, the demand for carbon fiber is more likely to reduce as its production is several times expensive than its conventional counterparts. These also demand a controlled environment and high temperatures for achieving the desired results. These high prices will make the industries to think twice before buying these even though they have better properties than many other alternatives available in the market.

Advanced Materials Market Value, 2014-2021 ($ Million)

Source: IndustryARC Analysis and Expert Insights

Advanced Materials Market Research Scope:

The base year of the study is 2017, with forecast done up to 2023. The study presents a thorough analysis of the competitive landscape, taking into account the market shares of the leading companies. It also provides information on unit shipments. These provide the key market participants with the necessary business intelligence and help them understand the future of the Advanced Materials market. The assessment includes the forecast, an overview of the competitive structure, the market shares of the competitors, as well as the market trends, market demands, market drivers, market challenges, and product analysis. The market drivers and restraints have been assessed to fathom their impact over the forecast period. This report further identifies the key opportunities for growth while also detailing the key challenges and possible threats. The key areas of focus include the types of Advanced Materials market and their specific applications in different types of vehicles.

Advanced Materials Market Report: Industry Coverage

Types of Advanced Materials: Light Weight Materials, Bio-Based Materials, Ceramics, Colloids, Nanomaterials, Smart Materials, Catalysts, Fibers, Plastics, Resins, Composites, Polymers, Woven & Non-Woven Materials, Conductive

Dongyang Li

Professor, Director of the Department of Pharmacology Aging Society, University of Tor Vergata, Italy, E-mail: dongyang.li@ualberta.ca

Materials, Organic Materials, Insulation Materials, Packaging Materials, Biomedical Materials, Graphene and Others.

End- User Industries of Advanced Materials: Building & Construction Industry, Aerospace Industry, Marine Industry, Defense, Automotive Industry, Electrical & Electronics Industry, Oil & Gas Industry, Health Care Industry, Paints & Coatings Industry and Others.

The Advanced Materials market report also analyzes the major geographic regions for the market as well as the major countries for the market in these regions. The regions and countries covered in the study include:

- North America: The U.S., Canada, Mexico
- South America: Brazil, Venezuela, Argentina, Ecuador, Peru, Colombia, Costa Rica
- Europe: The U.K., Germany, Italy, France, The Netherlands, Belgium, Spain, Denmark
- APAC: China, Japan, Australia, South Korea, India, Taiwan, Malaysia, Hong Kong
- The Middle East and Africa: Israel, South Africa, Saudi Arabia

Advanced Materials Market Key Players Perspective:

In an interview for Manufacturing Today Magazine, SR Mukherjee, CEO, Tata Advanced Materials Ltd (TAML), said that, "The early initiative focused on Kevlar and to a certain extent on carbon fibre, and the products were accessories for the defence segment. We started with ballistic vests and helmets and then along with Tata Motors moved to making plates for armoured vehicle. By the mid-90s, we had started working with leading industrial houses to make applications for medical technology."

Some of the other key players mentioned in this report are 3M Advanced Materials, Morgan Advanced Materials plc, Hexcel Corporation, Hanwa Group, Materion Corporation, Huntsman International LLC, Altairnano Blue Spark Technologies, Thomas Swan & Co. Ltd, TATA Advanced Materials, Hitachi Chemical Co., Ltd., and Smartglass International Ltd among others.

Advanced Materials Market Trends:

Nanomaterials-Graphene, a system of carbon particles orchestrated in thick sheets, has remarkable electrical properties making it perfect for batteries. Graphene is also one of the strongest materials used. Multi-scale modeling empowers researchers to investigate the remarkable properties of nanomaterials, rapidly and leanly distinguishing different formulations *in silico* to structure materials with bespoke properties for each new application.

Smart Materials- There are new programmed systems of materials developed that can respond and react to their surrounding environments. The shape of wood will change with respect to the surrounding temperature, pH, gravity and electric fields. These properties can be tuned to give optimal functions over an assortment of environments. Furthermore, wood can also recuperate itself given time and fundamental sources like water and CO_2.