Advanced Materials 2020-Market Analysis

Osman ADIGÜZEL

FÄrat UniversityÂ, Turkey

E-mail: oadiguzel@firat.edu.tr

Advanced Materials and Sustainable Development during **November 24-25, 2020** at *Vancouver, Canada* (Advanced Materials 2020) will focus on the main theme of this congress is to discuss upon **"Advancements in Materials Science and Technologies : Breakthrough to Excellence".**

Conference Series LLC Ltd is an open resource platform that conducts 3000+ global events including International Conferences, Workshops, Symposia, Trade Shows, Exhibitions and Science Congresses in all the major scientific disciplines, including Clinical, Medical, pharmaceutical, Engineering, Technology, Business Management and Life Sciences across America, Europe, The Middle East, and Asia Pacific. It is reaching over 25 million researchers, scholars, students, professionals and corporate entities all over the globe.

Details of Advanced Materials 2020 **Conference:-**

Conference Series LLC Ltd organizing Advanced Materials and Sustainable Development at Vancouver, Canada. We organize Advanced Materials 2020 Meetings in the fields related to Materials Sciences, Advanced Materials Technologies, Materials manufacturing, Advanced materials Industry.

Conference Name	Place	Date
Advanced Materials 2020	Vancouver, Canada	November 24-25, 2020

Market Analysis

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 has led to the design of many new innovations from medical devices, computers to warships.
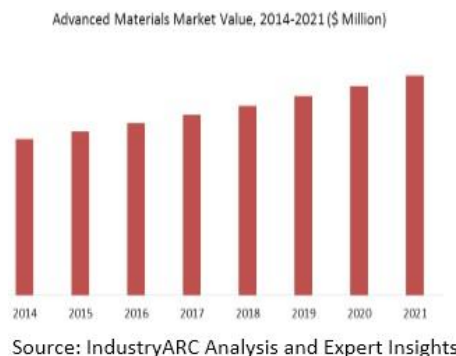
Advanced Materials Market Outlook:

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 are 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 Nanomaterial's have their average prices of around $1000 per gram approx. 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 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 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 nanomaterial's, 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

A material is considered as a advanced material when the input stimulus of a variable changes the output of other variables that were not given as input. If there is a change in the external environments such as light, pressure, temperature, and electricity, then the materials would change some of its properties with respect to the change in the environment. The reaction of different advanced materials varies with the chemical structure of the materials. The materials sense the change in the environment and react to it by varying their properties for adopting the surroundings. Suitably designed structures are made from smart materials that can expand, bend or contract when a voltage or electricity is applied to them. There is a need for advanced materials due to its certain properties such as lightweight, functionality, performance optimization and facility of preventive maintenance.

On the basis of the type of products, the smart materials market can be categorized as Piezo-electric materials, biomimetic materials, magnetostrictive materials, halochromic materials, shape-memory materials, smart fluids, thermally responsive materials, and smart hydrogels. If mechanical stress is applied to piezoelectric materials, then they produce electricity, whereas shape memory restores to its original shape if there is any change in temperature. Magnetostrictive materials change their shape under the power of the magnetic field and under the influence of mechanical stress; it shows the change in their magnetization.