



## Market Analysis

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## Introduction

Materials chemistry involves the use of chemistry for the design and synthesis of materials with interesting or potentially useful physical characteristics, such as magnetic, optical, structural or catalytic properties. It also involves the characterization, processing and molecular-level understanding of these substances

## Why to organize this conference?

1. To share learning and best follow from thought leaders and specialists in the field of Materials science
2. To engage with compatible individuals with shared interests
3. To inspire and generate awareness to Materials chemistry
4. To make a discussion about the new technology and invention
5. To form new partnerships all over the world
6. To get results and diffuse messages face to face in an exceedingly value effective manner
7. To provoke action and collectively bring the evolution in the field of Materials chemistry & Science
8. To network and meet new people and organisations who are professional in the field of Materials science
9. To encourage PR and media coverage

## Importance &amp; Scope

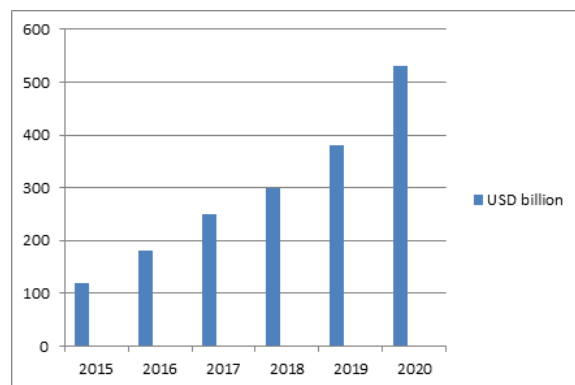
Materials science is advancing each day. With expanding urbanization and new age requests for shrewd innovation, better wellbeing security, health is affecting the market extraordinarily; there is exceptional weight on assets, for example, transportation, lodging, vitality, and common foundation and most particularly the synthetic substances and materials industry to help advancements over these segments. A huge number of concoction and material mixes make difficulties for researchers when applying them to genuine applications that customers contact each day.

The composites and polymers portion commanded the worldwide lightweight materials market representing a piece of the pie of 30.4%, in 2015. Nanomaterials Market is required to reach USD 55,016 million by 2022 from USD 14,741.6 million out of 2015, bolstered by a CAGR of 20.7%. Research assumes a novel job in this industry, driven by generation costs (and at last the expense of the material to the market) maybe more than some other industry analyzed.

Glance at Materials Science Market:

The global market is projected to reach \$6,000 million by

2020 and register a CAGR of 10.2% between 2015 and 2020 in terms of value. The growth in market is estimated to be driven by the increasing demand for aero gel materials from oil & gas and construction applications. The North American region remains the largest market, followed by Asia-Pacific. The Europe market is estimated to be growth at a steady rate due to economic recovery in the region along with the increasing concern for the building insulation and energy savings. The structural core material market in aerospace interior is estimated to grow from USD 142.2 Million in 2016 to USD 220.2 Million by 2021, at a compound annual growth rate (CAGR) of 9.13% between 2016 and 2021. The base year considered for the study is 2015 and the market size is projected between 2016 and 2021. Increase in the demand for Boeing 787 and Airbus 350 is expected to significantly drive the structural core material market in aerospace interiors. The market size of high-temperature composite materials is projected to reach USD 5.01 Billion by 2021, at a CAGR of 8.41% during the forecast period. The introduction of safety norms in public transport as well as increasing demand for lightweight and high-performance composite materials in the aerospace & defence, transportation, and energy & power applications are key factors responsible for the growth of the high-temperature composite materials market. Global Metallurgy market will develop at a modest 5.4% CAGR from 2014 to 2020. This will result in an increase in the market's valuation from US\$6 in 2013 to US\$8.7 by 2020. The global market for powder metallurgy parts and powder shipments was 4.3 billion pounds (valued at \$20.7 billion) in 2011 and grew to nearly 4.5 billion pounds (\$20.5 billion) in 2012. This market is expected to reach 5.4 billion pounds (a value of nearly \$26.5 billion) by 2018



Materials Industry:

The global market for carbon fiber reached \$1.8 billion in 2014, and further the market is expected to grow at a five-year CAGR (2015 to 2020) of 11.4%, to reach \$3.5 billion in 2020. Carbon fiber reinforced plastic market reached \$17.3 billion in 2014, and further the market is expected to grow at a five-year CAGR (2015 to 2020) of 12.3%, to reach \$34.2 billion in 2020. The competition in the global carbon fiber and carbon fiber reinforced plastic market is intense within a few large players, such as Toray Toho, Mitsubishi, Hexcel, Formosa, SGL carbon, Cytec, Aksa, Hyosung, Sabic, etc.

## Top Global Universities

## America

- \* Rice University
- \* Brown University

- \* McGill University
- \* Purdue University
- \* Cornell University
- \* Harvard University
- \* Stanford University
- \* Columbia University
- \* McMaster University
- \* University of Michigan
- \* Northwestern University
- \* The Ohio State University
- \* Carnegie Mellon University
- \* University of Pennsylvania
- \* Pennsylvania State University
- \* University of Texas at Austin
- \* Georgia Institute of Technology
- \* North Carolina State University
- \* Case Western Reserve University
- \* California Institute of Technology (Caltech)
- \* University of California, Berkeley (UCB)
- \* University of California, Los Angeles (UCLA)
- \* Massachusetts Institute of Technology (MIT)
- \* University of California, Santa Barbara (UCSB)
- \* University of Illinois at Urbana-Champaign

#### Europe

- \* UCL
- \* KU Leuven
- \* ETH Zurich
- \* University of Oxford
- \* Politecnico di Milano
- \* Politecnico di Torino
- \* RWTH Aachen University
- \* Imperial College London
- \* University of Cambridge
- \* The University of Dublin
- \* The University of Sheffield
- \* The University of Manchester
- \* Delft University of Technology
- \* Technische Universität Dresden
- \* Technical University of Munich
- \* Technical University of Denmark
- \* Chalmers University of Technology
- \* KTH Royal Institute of Technology
- \* Institute polytechnique de Grenoble
- \* Karlsruhe Institute of Technology (KIT)
- \* Technische Universität Berlin (TU Berlin)

- \* Ecole Polytechnique Federale de Lausanne (EPFL)

#### Asia-Pacific

- \* Kyoto University
- \* Fudan University
- \* Osaka University
- \* Peking University
- \* Tohoku University
- \* Hanyang University
- \* Tsinghua University
- \* The University of Tokyo
- \* Seoul National University
- \* City University of Hong Kong
- \* Shanghai Jiao Tong University
- \* Tokyo Institute of Technology
- \* Harbin Institute of Technology
- \* Beijing Institute of Technology
- \* Indian Institute of Science
- \* National Taiwan University (NTU)
- \* Sungkyunkwan University (SKKU)
- \* National University of Singapore (NUS)
- \* Indian Institute of Technology Bombay (IITB)
- \* Indian Institute of Technology Madras (IITM)
- \* University of Science and Technology of China
- \* Nanyang Technological University, Singapore (NTU)
- \* The Hong Kong University of Science and Technology
- \* Pohang University of Science and Technology (POSTECH)
- \* Korea Advanced Institute of Science & Technology (KAIST)

#### Middle East

- \* Bilkent University
- \* Tel Aviv University
- \* University of Tehran
- \* King Saud University
- \* Weizmann Institute of Science
- \* Istanbul Technical University
- \* King Abdulaziz University (KAU)
- \* Middle East Technical University
- \* Ben Gurion University of The Negev
- \* Technion - Israel Institute of Technology
- \* King Fahd University of Petroleum & Minerals
- \* King Abdullah University of Science & Technology (KAUST)

#### Global Research Centers

##### America

- \* Theoretical Science
- \* The Plasma Fusion Center
- \* The Enrico Fermi Institute
- \* Energy and The Environment
- \* The Argonne National Laboratory
- \* Materials Science and Technology
- \* The Center for Materials Research
- \* Computational Science and Engineering
- \* The Research Laboratory of Electronics
- \* The Institute for Molecular Engineering
- \* The Materials and Process Simulation Center
- \* The Novartis Center for Continuous Manufacturing
- \* The Center for Materials Science and Engineering
- \* The Institute for Medical Engineering and Science
- \* The Center for Science and Engineering of Materials
- \* The Materials Research Science and Engineering Center

##### Europe

- \* Solid-state NMR Methods
- \* The Lennard-Jones Centre
- \* Computational Chemistry Labs
- \* The Cambridge Graphene Center
- \* The Centre for Molecular Informatics



- \* The BP Institute for Multiphase Flow
- \* The Laboratory of Physical Chemistry
- \* Chemical Synthesis of Complex Compounds
- \* The Melville Laboratory for Polymer Synthetics
- \* The International Centre for Advanced Materials
- \* The Institute for Chemical and Biochemical Engineering
- \* Biophysical and Biochemical Methods to Study Folding and Modifications

#### Asia-Pacific

- \* Centre for Nanomaterials (CNM)
- \* Centre for Ceramic Processing (CCP)
- \* Centre for Non-Oxide Ceramics (CNOC)
- \* Centre for Fuel Cell Technology (CFCT)
- \* Institute of Engineering and Management
- \* Field Emission Scanning Electro Microscope
- \* Solution and solid-state NMR spectrometers
- \* The Atmosphere and Ocean Research Institute
- \* Centre for Automotive Energy Materials (CAEM)
- \* The Center for Ultrafast Intense Laser Science
- \* Centre for Laser Processing of Materials (CLPM)
- \* Vorozhtsov Novosibirsk Institute of Organic Chemistry
- \* Institute of Solid State Chemistry and Mechanochemistry
- \* Centre for Materials Characterization and Testing (CMCT)
- \* Voevodsky Institute for Chemical Kinetics and Combustion
- \* Field-emission SEM (FEI NOVA 230), (Hitachi S800), (FEI Inspect F50)

#### Middle East

- \* KAUST Catalysis Center
- \* Nano and Biomaterials Research Lab
- \* CENTER OF ADVANCED MATERIALS RESEARCH
- \* Masdar Institute of Science and Technology
- \* National Center for Nanotechnology Research
- \* Hokkaido University Institute for Catalysis
- \* Singapore University of Technology and Design
- \* Institute Center for Water and Environment (iWater)
- \* Materials Science and Engineering Research Institute (MSERI)
- \* Basque center for materials, applications & nanostructures BCMaterials

#### Funds assigned to Materials Chemistry:

- MSE workforce are driving various research ventures, which are bolstered by a normal of \$4-5 million every year.
- A critical bit of this financing originates from government awards: U.S. Division of Defense and all parts of the military, U.S. Branch of Energy, National Science Foundation, and Center for Disease Control and Prevention. Another part originates from State or private establishments.
- At last, industry (from little new businesses to enormous worldwide organizations) gives a great part of the rest of, which give both to graduate research assistantships and backing for students directing exploration on an undertaking.

#### Reference:

<https://www.prnewswire.com/news-releases/nanomaterials-market-is-expected-to-reach-55016-million-by-2022-globally---allied-market-research-597327281.html>

<https://www.globenewswire.com/news-release/2019/05/15/1825245/0/en/Global-Smart-Nanomaterial-Market-to-witness-a-CAGR-of-67-3-during-2019-2025.html>