

Biomimetic materials Market: Segmented by Type (Biomimetic Polymers, Biomimetic Ceramics & Glass, Biomimetic Metals & Alloys and Others), By Application (Medical, Automotive, Defense, Electronics and Others), and Region – Global Analysis of Market Size, Share & Trends for 2019–2020 and Forecasts to 2030

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Abstracts

[170+ Pages Research Report] Global Biomimetic materials Market to surpass USD 67.2 billion by 2030 from USD 40.6 billion in 2020 at a CAGR of 6.1% in the coming years, i.e., 2021-30.

Product Overview

Biomimetic materials are those that have both extrinsic and intrinsic qualities that allow them to change based on their surroundings. By nature, these are active and intelligent animals with a chemical makeup that permits them to change and adapt to new environments. Nanotechnology, robotics, medical devices, defense, automotive, and other industries have identified numerous applications for these materials, indicating that the development of biomimetic materials is developing and promising. Bionics, biomimicry, bioinspiration, and biogenesis are all terms used to describe these materials. Many businesses favour biomimetic materials because they can work under a variety of pressure and temperature conditions.

Market Highlights

Global Biomimetic materials market is expected to project a notable CAGR of 6.1% in 2030.

Over the projected period, the surge in demand for biomimetic materials from research in nanotechnology, robotics, the medical industry, artificial intelligence (AI), and the military is propelling the worldwide biomimetic materials market forward. Technological advances and R&D towards more effective biomimetic materials are also expected to present attractive growth prospects for key players in the biomimetic materials market in the approaching years.

Global Biomimetic materials: Segments

Biomimetic Polymers segment to grow with the highest CAGR during 2020-30

Global Biomimetic materials market is segmented by type into Biomimetic Polymers, Biomimetic Ceramics & Glass, Biomimetic Metals & Alloys and Others. Biomimetic Polymers segment held the largest market share in the year 2020 owing to a rise in demand for biomimetic polymers in industries such as pharmaceuticals, biomedical devices, electronics, and others. Furthermore, the benefits of biomimetic polymers, such as improved underwater adhesion, biocompatibility, adjustable modulus, antibacterial, and antifouling properties, increased demand for biomimetic polymers during the time period studied.

Medical segment to grow with the highest CAGR during 2020-30

Global Biomimetic materials market is divided by application into Medical, Automotive, Defense, Electronics, and Others. Over the forecast period, the medical segment is projected to expand at the fastest pace owing to an increase in demand for biomimetic materials in medical applications such as sensors in tissue responses, bone cement in bone-bonding systems, joint replacements, skin repair devices, localized drug delivery systems, dental implants for tooth fixation, and contact lenses.

Market Dynamics

Drivers

Rising demand in various industries as well as efficiency in executing basic activities

The rise in demand for biomimetic materials in the medical industry, information technology, robotics, telecommunications, and the automotive industry are projected to propel the biomimetic materials market forward over the forecast period. Furthermore, biomimetic materials are more effective than traditional materials like plastic, polymer, and ceramic, which is expected to drive the biomimetic materials market forward. Furthermore, the capacity of biomimetic materials to execute basic activities in varying

temperatures and pressures is expected to support the biomimetic materials market's growth.

Increased demand in creation of artificial organs and technological growth

Furthermore, the increased usage of biomimetic materials in the creation of artificial organs and electronics components used as substitutes for failed natural organs will give additional potential growth possibilities in the biomimetic materials market in the future years. Technological advances and R&D towards more effective biomimetic materials are also expected to present attractive growth prospects for key players in the biomimetic materials market in the approaching years.

Restraint

Increase in per-unit cost and difficulty in commercializing prototypes

The difficulty in commercializing prototypes due to the high level of sophistication required is expected to stymie the biomimetic materials market's expansion over the forecast period. Also, because to the low volume, an increase in the per-unit cost of production may pose a significant obstacle to the biomimetic materials market's growth in the near future.

Global Biomimetic materials: Key Players

TDK Corporation

Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis

Wright Medical Group

CTS Corporation

CeramTec

APC International

Kyocera Corporation

Channel Technologies

Advanced Cerametrics

LORD Corporation

Other Prominent Players

Global Biomimetic materials: Regions

Global Biomimetic materials market is segmented based on regional analysis into five

major regions: North America, Latin America, Europe, Asia Pacific, and the Middle East and Africa. The market in North America is expected to hold highest CAGR over the forecasted period due to significant demand from the electronic, electrical, construction, information technology, and healthcare industries. Also, owing to expansion in the automobile, information technology, and healthcare industries, Europe is predicted to grow at a steady pace. The key regional market drivers are biomimetic materials' environmental management and vibration control properties. Due to incremental expansion in the infrastructure and production industries, as well as increased product adoption, APAC is predicted to have a high CAGR during the projection period.

Global Biomimetic materials is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil, and Rest of Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey, and Rest of Europe

Asia Pacific Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia, and Rest of APAC

Middle East and Africa Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, Israel, GCC, South Africa, and Rest of MENA

Global Biomimetic materials report also contains analysis on:

Biomimetic materials Segments:

By Type

Biomimetic Polymers

Biomimetic Ceramics & Glass

Biomimetic Metals & Alloys

Others

By Application

Medical

Automotive

Defense

Electronics

Others

Biomimetic materials Dynamics

Biomimetic materials Size

Supply & Demand

Current Trends/Issues/Challenges

Competition & Companies Involved in the Market

Value Chain of the Market

Market Drivers and Restraints

Biomimetic materials Market Report Scope and Segmentation

Report Attribute Details

Market size value in 2020 USD 40.6 billion

Revenue forecast in 2030 USD 67.2 billion

Growth Rate CAGR of 6.1% from 2021 to 2030

Base year for estimation 2020

Quantitative units Revenue in USD million and CAGR from 2021 to 2030

Report coverage Revenue forecast, company ranking, competitive landscape, growth factors, and trends

Segments covered Type, end-user and Region

Regional scope North America, Europe, Asia Pacific, Latin America, Middle East & Africa (MEA)

Key companies profiled TDK Corporation, Wright Medical Group, CTS Corporation, Ceram Tec, APC International, Kyocera Corporation, Channel Technologies, Advanced Cerametrics, LORD Corporation, and Other Prominent Players.

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**The above given segmentations and companies could be subjected to further

modification based on in-depth feasibility studies conducted for the final deliverable.

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