

Market Analysis of International Conference on Biopolymers and Advanced Polymeric Materials

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Biopolymers hold the potential to be the material of utopia and the production of various polymeric materials will assure the finest solutions to common complications around the world. Synthetic Polymers have played a vital role in medicinal practice of late. Several devices in medicine and even some artificial organs are created with the products from synthetic polymers. Thus, it is feasible for synthetic polymers to play a pivotal role in the pharmaceutical industry too.

The [polymers](#) market is rapidly evolving. Global polymer demand was 233.75 million tonnes in 2013 and is expected to reach 334.83 million tonnes by 2020, growing at 5.3 per cent from 2014 to 2020. Since the 1960s, global production of polymers increased twentyfold. The World biopolymers market is meant to achieve USD 655.29 billion by 2025.

The significant industries which target biopolymeric materials usage are Packaging industries, Ceramic industries, in retorting method used for food processing industries, in stem cell biology and Regenerative Medicine, in automotive industries, in aerospace industries, in electrical and electronic industries, etc., A study reveals that by region-wise Europe will occupy the highest percentage of Biopolymeric materials production as well as usage.

Fig: Biopolymer Market Share (%) - By Region - 2027



Source: Research Nester

[Biopolymers](#) accounts for around 65% of petrochemicals accountability and that is the main reason why they are one of the important constituents of the World chemical industry. Incredible innovation and new techniques and technologies in the production, permitted the polymer manufacturers to develop new exciting products that exceed the benefits of traditional materials such as paper, metals, glass, wood, leather and ceramics. Low cost, availability of raw materials, flexibility of use and easy manufacturing made polymers the material of choice in many new industries. Polymer Science has now widespread its applications in recent times and continue to flourish in the future too. Polymerization results in materials that produce new products with desirable properties.

Recent trend observed in the global biopolymer market is increasing demand for biopolymers in different industries, including building and construction, packaging, consumer goods, electronics and telecommunication, and automotive. The market has seen a significant growth in developing countries such as India, China, and Brazil, as consumers' purchasing power is increasing. Also, population of these countries are increasing, which increase the demand for essential products, which in turn, is driving the market growth.

On the basis of type, the biopolymer market is categorized into thermoplastics, thermosets, and elastomers. Among these, the thermosets category holds the maximum share in the market, owing to its superior properties. For example, thermosets are harder as compared to others, stronger as the strength between their covalent bonds is high, and they cannot be broken easily. Also, they have better stability as compared to the thermoplastics or elastomers. They are mainly used in making acrylic resins, polyesters, and vinyl esters.

Based on product, biopolymer market is classified into polyethylene, polyvinyl chloride, polypropylene, polystyrene, polyamide, polyurethane, and polyacrylamide. The most widely used product in the market is polyethylene due to its various usage in packaging industry such as packaging of juices and milk, and consumer goods; and in fiber and textile industry for manufacturing of apparels.

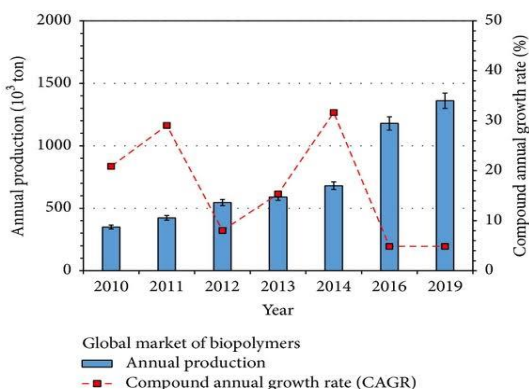
Global production capacities of bioplastics



On the basis of application, the biopolymer market is categorized into packaging, electronics, food, petrochemicals, healthcare, building and construction, electronics and communication, and transportation. Among these, the packaging application holds the maximum share in the market, as packaging involves in every sphere of life, which includes food packaging, pharmaceuticals packaging, medical packaging, and others.

Based on region, the biopolymer market is categorized into North America, Europe, Asia-Pacific, Latin America, and Middle East and Africa. Globally, Asia-Pacific and North America are the major consumers for these compounds in the market. Economic growth of the Asian countries is the major factor contributing toward the growth of the market.

Recent advances in polymer nanotechnology have made the Nano science field, one of the most important research areas in the past two decades. Nano composites are a new class of materials in which the dimension of the dispersed particles occurred at the nanometre scale. It covers composites, nanotechnology, testing and characterization, specialty materials, novelty materials, bio-based materials and applications. Polymers have a wide range of applications that well exceeds other class of materials available to humans. Polymer Science involves a leading-edge research and is rapidly changing and evolving field.

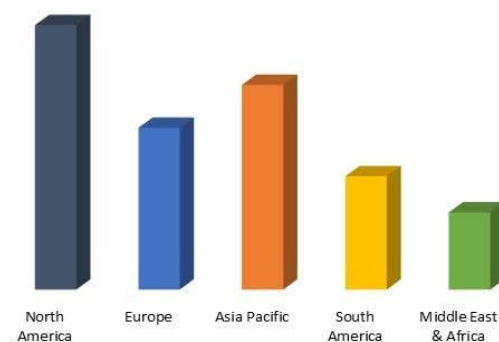


Major factors driving the growth of the biopolymer market are increasing demand for the compounds from electronics and electrical sector, need for light weight automotive, and superior properties. Polyphenylene sulphide, nylon 46, polythiazide, and polycyclohexylenedimethylene terephthalate are the major forms of polymers that are used in the electrical and electronics industry. These can withstand high temperature and can also withstand surface mount technology, making them most preferable in the market. The compounds can

reduce weight of automobile to a substantial amount, which in turn, would result in better fuel efficiency of the automobile.

Major restraining factor affecting the polymer market is stringent regulations by the regulatory bodies of various governments. For example, in December 2018, the European Union banned the usage of single use plastics as these single use [plastics](#) cause a lot of pollution and takes 1,000 years to decompose. Apart from these, the single use plastics cause a lot of pollution in oceans.

Global Biopolymer Films Market By Region (US\$ Mn)



Some of the major players operating in the global polymer market include The Dow Chemical Company, LyondellBasell Industries N.V., Exxon Mobil Corporation, SABIC, BASF SE, INEOS AG, Eni S.p.A., Chevron Phillips Chemical Company LLC, and LANXESS.

The global polymers market size was at around \$666.5 billion as of 2018, and its value is poised to grow at a CAGR of 5.1% during the forecast period (2019-2025). Increasing consumption of polymers in various end-user industries such as packaging, construction, automobiles, and healthcare, for the manufacturing of elastomers, adhesives, and surface coatings, is projected to fuel the growth of the market. Polymeric materials are usually obtained from oils such as petroleum and crude oil, but significant research is initiated to develop innovative methods of producing these materials using renewable energy sources.