

Smart Polymers Market by Stimulus (Physical Stimuli Responsive, Chemical Stimuli Responsive, and Biological Stimuli Responsive), Type (Shape Memory Polymers, Electroactive Polymers, Self-Healing Polymers, and Others), and Application (Biomedical & Biotechnology, Textile, Electrical & Electronics, Automotive, Nuclear Energy) - Global Opportunity Analysis and Industry Forecast, 2014-2022

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# **Abstracts**

The global smart polymer market was valued at \$1,250 million in 2015, and is projected to reach \$3,070 million by 2022, growing at CAGR of 12.6% from 2016 to 2022. Smart polymers are tough, easy to process, flexible, resilient, and biocompatible that are used in numerous applications. The significance of smart polymers is increasing day by day owing to their ability to undergo large reversible, physical, or chemical changes in response to fluctuations in the environmental conditions. They respond to several environmental stimuli such as pH, temperature, light, electric field, enzymes, and biomolecules. These are used in numerous promising applications in biomedical field such as tissue engineering scaffolds, cell culture supports, delivery systems of therapeutic agents, and sensors or actuators systems.

The global smart polymer market is in its growth stage wherein North America and Europe are leading markets, owing to increase in research activities and technological advancement in biomedical field. The market is driven by factors such as, increase in need for efficient and economical drug delivery system, innovative use of smart polymers in the automotive industry, and valuable property of reversible phase transitions of smart polymers, whereas high cost is anticipated to hamper market growth.



The report segments the smart polymers market on the basis of stimulus type, polymer type, application, and geography. On the basis of stimulus type, the market is divided into physical stimuli responsive, chemical stimuli responsive, and biological stimuli responsive smart polymers. On the basis of type, it is categorized into shape memory polymers, electroactive polymers, self-healing polymers, and others. Furthermore, based on applications, it is segmented into biomedical & biotechnological, textile, electrical & electronics, automotive, nuclear energy, and others. On the basis of geography, it is classified into North America, Europe, Asia-Pacific, and LAMEA. In January 2016, Lubrizol Corporation launched a new series of thermoplastic polyurethane (TPU) products, Estane SMART TPU, for use in smart wearable devices. Thermoplastic polyurethane (TPU) products are specially designed to cater the demand of rapidly growing wearable devices.

Comprehensive competitive analysis and profiles of the major market players include:

Covestro AG

BASF SE

Saudi Arabia Basic Industries Corporation (SABIC)

Akzonobel

Nippon Shokubai

FMC Corporation

Autonomic Materials Inc.

Advanced Polymer Materials Inc.

Lubrizol Corporation

Nexgenia Corporation

#### KEY MARKET BENEFITS

This report provides an extensive analysis of the current & emerging market



trends & dynamics of the global smart polymers market.

In-depth analysis of all regions is conducted by constructing market estimations for key segments between 2014 and 2022, which assist to identify the prevailing market opportunities.

The report assists to understand the strategies adopted by the companies for the growth of the market.

This study evaluates competitive landscape to understand the competitive environment across the geographies.

Extensive analysis is conducted by following key player positioning and monitoring the top competitors within the market framework.

Smart Polymers Market Key Segments: By Stimulus Type

Physical Stimuli Responsive

Chemical Stimuli Responsive

**Biological Stimuli Responsive** 

Ву Туре

Shape Memory Polymers

**Electroactive Polymers** 

Self-Healing Polymers

Others

#### By Application

Smart Polymers Market by Stimulus (Physical Stimuli Responsive, Chemical Stimuli Responsive, and Biological St...



#### Biomedical & Biotechnology

Drug Delivery

**Tissue Engineering** 

**Bio-separation** 

Biocatalyst

Textile

**Electrical & Electronics** 

Automotive

Nuclear Energy

Others

#### By Geography

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France



Spain

Italy

Rest of Europe

#### Asia-Pacific

China

Japan

India

Korea

Australia

**Rest of Asia-Pacific** 

#### LAMEA

Brazil

South Africa

Kingdom of Saudi Arabia

Rest of LAMEA

Other major players in the industry include:

Huntsman Corporation

Acros Organics

ConvaTec Inc.



Bioastra

**BCMaterials** 

The above list of companies is not profiled in the report, but can be added based on client interest.



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