

# **Catalysts Market Forecasts to 2032 – Global Analysis By Type (Heterogeneous Catalysts, Homogeneous Catalysts and Enzymatic Catalysts), Process, Raw Material, Application and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Catalysts Market is accounted for \$34.66 billion in 2025 and is expected to reach \$50.76 billion by 2032 growing at a CAGR of 5.6% during the forecast period. Catalysts are materials that enhance the rate of chemical reactions while remaining unchanged after the process. By reducing the activation energy barrier, they make reactions proceed faster and more effectively. These substances are widely applied across industries like pharmaceuticals, petrochemicals, food technology, and environmental management. In medicine, catalysts significantly aid drug manufacturing by improving efficiency and quality. Within energy production, they support cleaner fuel development and help minimize harmful emissions. Enzymes, the natural catalysts in living systems, are fundamental for essential biochemical reactions. In essence, catalysts are crucial drivers of innovation, sustainability, and industrial progress, enabling advancements that shape modern science and global industries.

According to the American Chemical Society (ACS), Catalysts are responsible for more than 90% of all commercially produced chemical products. They are essential to the chemical industry and play a critical role in reducing energy consumption and improving process efficiency.

Market Dynamics:

Driver:

## Rising demand from the automotive industry

The catalysts market is strongly driven by automotive applications, particularly in catalytic converters designed to curb vehicle emissions. With global automobile production on the rise and governments implementing stricter emission standards, the demand for efficient catalysts is steadily increasing. The automotive sector's transition toward sustainable technologies, coupled with heightened efforts to improve air quality, further boosts catalyst adoption. Even as electric and hybrid vehicles expand, certain processes still require catalysts, creating consistent opportunities. Environmental awareness and regulatory frameworks continue to pressure automakers to use advanced catalysts, thereby making the automotive industry one of the most significant growth drivers of this market.

### Restraint:

#### High production and operational costs

One of the major restraints in the catalysts market is the high cost associated with production and raw materials. Catalysts often utilize rare metals like palladium, rhodium, and platinum, which are both costly and prone to global price volatility. Manufacturing processes require advanced equipment, energy-intensive operations, and rigorous testing to ensure performance, adding to expenses. Smaller manufacturers often struggle to remain competitive under such financial pressures, while cost-sensitive industries may delay or avoid adopting expensive catalysts. This financial burden directly impacts market penetration, particularly in developing regions, where budget limitations and economic constraints reduce the adoption rate of advanced catalysts.

### Opportunity:

#### Growing adoption of green and sustainable catalysts

Sustainability trends are opening vast opportunities for catalysts, particularly in the development of eco-friendly and recyclable options. With industries embracing green chemistry, catalysts are crucial in lowering emissions, minimizing waste, and boosting process efficiency. Increasing global focus on renewable energy, bio-based fuels, and biodegradable materials is further accelerating demand for advanced sustainable catalysts. Governments across regions are promoting cleaner technologies through strict regulations and supportive policies, enhancing market prospects. Heavy investments in research are paving the way for safer, non-toxic, and recyclable catalyst

systems. Consequently, the transition toward environmentally responsible practices strongly positions green catalysts as a major market opportunity.

#### Threat:

##### Intense market competition and substitutes

Growing competition and the emergence of substitute technologies present a serious threat to the catalysts market. Alternatives like bio-catalysts, enzyme-based systems, and nanotechnology-driven solutions are gaining traction due to better efficiency, eco-friendliness, and affordability. These substitutes create pricing pressure for conventional catalyst producers, reducing margins and challenging growth. In addition, new manufacturers in cost-sensitive regions are offering cheaper products, further intensifying rivalry. As industries increasingly prioritize sustainable and innovative solutions, traditional catalysts face the risk of being replaced. Unless established players adapt quickly with advanced and competitive offerings, the threat from substitutes and intense competition will continue to challenge market stability.

#### Covid-19 Impact:

The outbreak of COVID-19 severely affected the catalysts market, causing disruptions in global supply chains and halting industrial activities. Lockdown measures led to production declines in automotive, petrochemicals, and several manufacturing sectors, reducing overall catalyst consumption. Raw material scarcity and transportation delays added to market difficulties during the crisis. On the other hand, pharmaceutical and healthcare industries saw higher catalyst demand to support drug development and production. As restrictions eased, focus on sustainability, renewable energy, and clean technologies accelerated catalyst adoption. While the pandemic initially posed considerable setbacks, it ultimately created opportunities for innovation and positioned the catalysts market for stronger recovery.

The heterogeneous catalysts segment is expected to be the largest during the forecast period

The heterogeneous catalysts segment is expected to account for the largest market share during the forecast period due to their extensive application in petroleum refining, chemical processing, automotive, and environmental sectors. Operating in a different phase than reactants, they offer advantages of easy separation, high recyclability, and cost efficiency. Their robustness and effectiveness in large-scale reactions make them

indispensable for industrial operations. Key processes like catalytic cracking, hydroprocessing, and pollution control rely predominantly on these catalysts. Growing demand for sustainable fuels, rising environmental regulations, and continuous expansion of petrochemical capacity further enhance their usage. As a result, heterogeneous catalysts remain the most dominant and widely adopted segment globally.

The zeolites segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the zeolites segment is predicted to witness the highest growth rate. Their crystalline microporous framework provides exceptional adsorption, ion-exchange, and shape-selective properties, making them vital in refining, petrochemical, and environmental processes. They play a central role in catalytic cracking, reforming, and emission reduction. The increasing need for ultra-low sulfur fuels and stricter environmental norms support their rising adoption. Furthermore, expanding applications in water purification, gas separation, and sustainable chemical synthesis drive market demand. With their efficiency and eco-friendly profile, zeolite catalysts are set to achieve the most rapid growth within the catalysts industry.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by its growing industrial base, increasing energy needs, and rising automotive and petrochemical activities. Nations like China, India, Japan, and South Korea dominate with advanced refining infrastructure and large-scale chemical production facilities. Urban growth and expanding construction sectors also fuel higher demand for fuels and raw materials, encouraging catalyst adoption. Furthermore, stricter regulations on emissions and cleaner energy policies push industries to utilize efficient catalytic processes. With continuous investments in petrochemical projects and expanding end-user industries, Asia-Pacific remains the leading regional market, firmly holding the largest global share.

Region with highest CAGR:

Over the forecast period, the Middle East & Africa region is anticipated to exhibit the highest CAGR. This growth is supported by strong investments in oil refining, petrochemicals, and industrial infrastructure. The region's vast crude oil and natural gas reserves generate substantial need for catalysts in refining, hydroprocessing, and emission reduction. National initiatives aimed at economic diversification are driving

expansion in chemical production, automotive, and energy sectors. Stricter environmental policies and adoption of clean fuel standards further accelerate demand. With increasing partnerships with global companies and establishment of advanced facilities, Middle East & Africa emerges as the most rapidly expanding catalysts market.

#### Key players in the market

Some of the key players in Catalysts Market include Clariant AG, Evonik Industries AG, Johnson Matthey Plc, The Dow Chemical Company, W.R. Grace & Co., Albemarle Corporation, BASF SE, Axens, LyondellBasell, DuPont, ExxonMobil Corporation, Topsoe, Honeywell International, China Petrochemical Corporation and Mitsubishi Chemical Corporation.

#### Key Developments:

In July 2025, Clariant announced that it has signed a strategic cooperation agreement with Shanghai Boiler Works, a full subsidiary of Shanghai Electric, specializing in energy conversion and the development of new energy applications, to jointly foster innovation in sustainable energy solutions. The partners will combine their expertise to advance green energy projects in China. The agreement is the result of close and successful cooperation in Shanghai Electric's new biomass-to-green methanol plant in Taonan, Jilin Province, China.

In May 2025, Johnson Matthey Plc is pleased to announce that it has reached an agreement to sell its Catalyst Technologies business ("CT") to Honeywell International, Inc. at an enterprise value of \$1,800m on a cash and debt-free basis. The Transaction is expected to deliver net sale proceeds of c. \$1.6bn to the Group, subject to customary closing adjustments.

In March 2025, Evonik has entered into an exclusive agreement with the Cleveland-based Sea-Land Chemical Company for the distribution of its cleaning solutions in the U.S. The agreement builds on a long-standing relationship with the distributor and expands the reach of Evonik's cleaning solutions to the entire U.S. region. Evonik provides the homecare, vehicle care, and industrial and institutional cleaning markets with innovative cleaning solutions, many of which have a strong sustainability profile.

#### Types Covered:

##### Heterogeneous Catalysts

Homogeneous Catalysts

Enzymatic Catalysts

Processes Covered:

Recycling

Regeneration

Rejuvenation

Raw Materials Covered:

Chemical Compounds

Metals

Zeolites

Supports & Carriers

Other Raw Materials

Applications Covered:

Chemical Synthesis

Petroleum Refining

Polymers & Petrochemicals

Environmental Catalysis

Biochemical & Green Catalysis

## Regions Covered:

### North America

US

Canada

Mexico

### Europe

Germany

UK

Italy

France

Spain

Rest of Europe

### Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

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All the customers of this report will be entitled to receive one of the following free customization options:

#### Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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