

Global Asymmetric catalysts Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Asymmetric catalysts market size was valued at US\$ 1731 million in 2025 and is forecast to a readjusted size of US\$ 3694 million by 2032 with a CAGR of 11.7% during review period.

Asymmetric catalysts are catalytic systems capable of inducing the formation of enantiomerically enriched or single-enantiomer products in chemical or biological reactions, including metal–ligand catalytic systems (such as chiral diphosphine ligands coordinated with transition metals) and biocatalytic systems (such as engineered enzymes), fundamentally enabling stereochemical control of reaction pathways and serving as the core technology for industrial chiral synthesis.

Asymmetric catalysts function by creating chiral environments to enable enantioselective reactions, encompassing both metal–ligand systems (including ligands and precious metal catalytic components) and engineered enzyme systems; within chemical catalysis, chiral diphosphine-based systems dominate with approximately 70% value share, while in biocatalysis, ketoreductases and transaminases account for about 75% of the enzyme market. Pricing follows a dual-track structure, with chemical catalysts (including metal components) averaging around \$20,000/kg and biocatalysts around \$600/kg, resulting in a blended gross margin of approximately 58% (about 65% for chemical catalysis and 55% for biocatalysis). Demand is highly concentrated in pharmaceuticals, accounting for about 75%, primarily for enantiopure API synthesis and CDMO process development, with the remaining ~25% in agrochemicals and fine chemicals. The upstream includes high-purity organophosphorus intermediates, precious metals (Rh, Ru, Ir), and fermentation systems, the midstream focuses on ligand design and enzyme engineering (directed evolution), and downstream integration

occurs deeply within pharmaceutical and CDMO production processes. The industry exhibits a three-layer structure of structural control (ligands/enzymes), technology platforms (metal catalysis/enzyme engineering), and process integration (CDMOs). Overall, the industry is in a phase of mature deepening alongside structural substitution, driven by increasing molecular complexity in innovative drugs and the transition toward green chemistry, with biocatalysis steadily replacing certain hydrogenation and reduction pathways, while chemical routes such as asymmetric coupling remain irreplaceable; key uncertainties lie in route selection dynamics and the expansion of substrate scope in biocatalysis.

This report is a detailed and comprehensive analysis for global Asymmetric catalysts market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Technology and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Asymmetric catalysts market size and forecasts, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Asymmetric catalysts market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Asymmetric catalysts market size and forecasts, by Technology and by Application, in consumption value (\$ Million), sales quantity (Tons), and average selling prices (US\$/Ton), 2021-2032

Global Asymmetric catalysts market shares of main players, shipments in revenue (\$ Million), sales quantity (Tons), and ASP (US\$/Ton), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Asymmetric catalysts

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Asymmetric catalysts market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Takasago International, Solvias, Johnson Matthey, BASF, Umicore, Strem Chemicals, Novozymes, DSM-Firmenich, Codexis, Amano Enzyme, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

Asymmetric catalysts market is split by Technology and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Technology, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Technology

Chemical Asymmetric Catalysis

Biocatalysis

Market segment by Catalyst Type

Diphosphine Catalysts

Other Chiral Ligands

Engineered Enzymes

Immobilized Enzymes

Market segment by Application

Pharmaceuticals

Agrochemicals

Fine Chemicals

Major players covered

Takasago International

Solvias

Johnson Matthey

BASF

Umicore

Strem Chemicals

Novozymes

DSM-Firmenich

Codexis

Amano Enzyme

Prozomix

Enzymaster

WuXi AppTec

Asymchem

Lonza

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Asymmetric catalysts product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Asymmetric catalysts, with price, sales quantity, revenue, and global market share of Asymmetric catalysts from 2021 to 2026.

Chapter 3, the Asymmetric catalysts competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Asymmetric catalysts breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Technology and by Application, with sales market share and growth rate by Technology, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021

to 2026.and Asymmetric catalysts market forecast, by regions, by Technology, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Asymmetric catalysts.

Chapter 14 and 15, to describe Asymmetric catalysts sales channel, distributors, customers, research findings and conclusion.

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