

Global Cerium Market: Analysis By Type (Cerium Metal, Cerium Oxide, Cerium Fluoride, Cerium Nitrate, Cerium Hydrate and Others), By Application (Glass Polishing, Catalysis, Alloys & Metallurgy and Others), By End-User (Automotive & Transportation, Glass Manufacturing, Petroleum & Chemical Processing and Others), By Region Size and Trends with Forecast up to 2030

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Abstracts

The global cerium market was valued at US\$692.18 million in 2024. The market value is expected to reach US\$885.84 million by 2030. Cerium (Ce) is a soft, malleable, and ductile rare earth metal with atomic number 58, belonging to the lanthanide series. It is widely used in industrial applications due to its unique chemical properties, such as high oxygen storage capacity, redox behavior, and thermal stability. It plays a central role in processes aimed at emission control, glass polishing, electronic manufacturing, and environmental protection.

In the forthcoming years, the global cerium market is anticipated to experience steady growth, driven by a combination of industrial, environmental, and technological trends. A key driver is the escalating demand for cerium-based compounds in automotive catalytic converters, as countries enforce stricter emission regulations to combat air pollution. Cerium, the most abundant rare earth element, is also extensively used in glass polishing, metal alloys, and as a catalyst in petroleum refining, aligning with expanding applications across the automotive, electronics, and energy sectors. The global transition toward cleaner energy and sustainable manufacturing is further propelling cerium's role in emerging technologies, including fuel cells and water splitting

systems.

Technological advancements in rare earth separation and cerium recycling are improving supply chain efficiency and reducing environmental impact, making cerium more cost-effective and sustainable. Moreover, increasing investments in electric vehicles and renewable energy infrastructure are expected to boost demand for high-purity cerium in magnet and battery production. Together, these developments are set to support the continued expansion of the global cerium market in the foreseeable future. The market is expected to grow at a CAGR of approx. 4% during the forecasted period of 2025-2030.

Market Segmentation Analysis:

By Type: The report provides the bifurcation of the cerium market into six segments on the basis of type: Cerium Oxide, Cerium Fluoride, Cerium Metal, Cerium Nitrate, Cerium Hydrate and Others. The cerium oxide segment holds a significant share of the global cerium market due to its extensive use in automotive catalytic converters for emission control and in glass polishing applications for its superior abrasive properties. Its growing adoption in clean energy technologies, such as fuel cells and catalysts, further supports its demand. With rising environmental regulations and advancements in green technologies, cerium oxide is expected to play a pivotal role in driving the market's expansion in the coming years.

By Application: The report provides the bifurcation of the cerium market into four segments on the basis of application: Glass Polishing, Catalysis, Alloys & Metallurgy and Others. Glass Polishing emerged as the largest segment globally, driven by the widespread use of cerium oxide in the precision polishing of optical lenses, flat panel displays, mirrors, and automotive glass. Its superior performance, cost-effectiveness, and ability to deliver high-quality finishes have made it the material of choice in various glass manufacturing industries. As demand for consumer electronics, automotive components, and high-end optical products continues to rise, the glass polishing segment is expected to significantly contribute to the growth and expansion of the global cerium market in the coming years.

By End User: The report provides the bifurcation of the cerium market into four segments on the basis of end user: Automotive & Transportation, Glass Manufacturing, Petroleum & Chemical Processing and Others. The glass manufacturing segment held a significant share of the global cerium market, primarily driven by the extensive use of cerium oxide in polishing and refining high-precision glass used in electronics,

automotive, and construction. Its effectiveness in improving clarity, durability, and finish has made it indispensable in producing display panels, optical lenses, and solar glass. As demand for advanced display technologies, electric vehicles, and energy-efficient buildings grows, the glass manufacturing segment is expected to continue supporting the expansion of the global cerium market in the coming years.

By Region: In the report, the global cerium market is divided into four regions: Asia Pacific (China, Japan, India and rest of Asia Pacific), North America (the US, Canada, and Mexico), Europe (Germany, France, UK, Italy, Spain and Rest of Europe), and Rest of the World. In 2024, the Asia Pacific region led the cerium market, propelled by strong industrial growth, high demand from the automotive and glass manufacturing sectors, and the presence of major rare earth producers like China. The region's rapid urbanization, expanding electronics industry, and supportive government policies for clean energy and infrastructure development further boosted cerium consumption, solidifying Asia Pacific's dominant position in the global market.

During 2025-2030, the US is forecasted to maintain its lead within the North America cerium market, due to its strong automotive and aerospace industries, increasing adoption of clean energy technologies, and ongoing investments in advanced manufacturing and catalytic converter production. Additionally, the country's focus on reducing dependence on imported rare earths through domestic processing initiatives and strategic reserves is expected to further support cerium demand and solidify its market position.

Market Dynamics:

Growth Drivers: The global cerium market growth is predicted to be supported by numerous growth drivers such as growth in electronics and energy storage applications, expansion of the glass and polishing industry, strategic investments and supply chain development, increasing use in environmental and personal care products and many other factors. The rising prevalence of nutritional deficiencies and anemia is a key driver of the global cerium market, as cerium is one of the most abundant and commonly extracted elements among rare earths. Increased mining activity enhances the availability and affordability of cerium, supporting its widespread use across various industries such as automotive, electronics, glass, and catalysis. This improved supply chain efficiency and raw material access are expected to play a vital role in meeting the growing global demand and sustaining the expansion of the cerium market in the years ahead.

Challenges: However, the market growth would be negatively impacted by various challenges such as environmental concerns and regulatory pressure on mining, competition from substitute materials and technological alternatives, etc.

Trends: The market is projected to grow at a fast pace during the forecast period, due to various latest trends such as increasing demand for automotive catalysts, integration of cerium in clean energy technologies, technological advancements and R&D in cerium compounds, emergence of cerium recycling and circular economy initiatives, geographic diversification of supply chains, etc. The development of advanced cerium-based nanomaterials is becoming a key trend in the cerium market due to their unique physicochemical properties, including high surface area, redox activity, and catalytic efficiency, which make them ideal for applications in biomedical research, environmental remediation, fuel cells, and next-generation electronics. These nanomaterials are enabling innovations in drug delivery, UV protection, and energy storage, thereby expanding cerium's application scope beyond traditional industries. As research and commercialization of cerium nanotechnology accelerate, this trend is expected to significantly contribute to the dynamic growth of the global cerium market.

Competitive Landscape:

The global cerium market is moderately consolidated and highly strategic, driven by a mix of dominant state-backed enterprises and emerging international players. The key players in the global cerium market are:

Mitsui Mining & Smelting Co., Ltd.
Solvay SA
3M Company
Umicore N.V.
Johnson Matthey PLC
BASF SE
China Northern Rare Earth High-tech Co., Ltd.
American Elements
Lynas Rare Earths, Ltd.
The Shepherd Chemical Company
Avalon Advanced Materials Inc.
Arafura Rare Earths Ltd.
Rainbow Rare Earths Limited

Major strategies employed by these firms include vertical integration, technological

innovation, expansion of production capacities, strategic alliances, and the development of value-added cerium-based products for applications in catalysts, glass polishing, electronics, and renewable energy. For example, in April 2025, Lynas Rare Earths announced the commissioning of its expanded processing facility in Western Australia, aimed at increasing output of high-purity cerium oxide for use in advanced catalytic converters and green technologies. Such initiatives underscore the dynamic and evolving nature of the cerium market, as companies seek to capitalize on growing demand from the automotive, electronics, and clean energy sectors while navigating challenges related to resource security and environmental regulations.

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