

Cerium Oxide Nanoparticles Market Report and Forecast 2025-2034

Market Report | 2025-08-11 | 151 pages | EMR Inc.

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Report description:

The global cerium oxide nanoparticles market stood at a value of around USD 0.74 Billion in 2024. The market is further expected to grow at a CAGR of 14.00% in the forecast period of 2025-2034 to attain a value of USD 2.74 Billion by 2034.

Heightened Demand in the Pharmaceutical Sector to Aid the Growth of the Global Cerium Oxide Nanoparticles Industry

Based on application, the pharmaceutical sector is predicted to hold a significant market share in the cerium oxide nanoparticles industry. This can be attributed to the increasing demand for cerium oxide nanoparticles in the pharmaceutical sector, which is witnessing a rapid growth due to the increased investments by the leading players.

In addition, the rising incidences of various lifestyle diseases worldwide and the growing geriatric population are also anticipated to propel the pharmaceutical industry growth in the coming years. These factors are expected to contribute to the overall market growth of cerium oxide nanoparticles in the forecast period.

North America to Provide Lucrative Growth Opportunities for the Global Cerium Oxide Nanoparticles Industry Growth

North America is estimated to hold a substantial share of the cerium oxide nanoparticles industry in the forecast period. This growth can be attributed to the presence of the leading market players in the region. and the increased utilisation of cerium oxide nanoparticles in biomedical applications. The antibacterial activity and neurodegenerative potential, among others, offered by cerium oxide nanoparticles are propelling their demand in the biomedical sector. Moreover, the increasing demand for semiconductors in the region is also predicted to bolster the market growth in the coming years.

Cerium Oxide Nanoparticles: Market Segmentation

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Cerium oxide (CeO₂) nanoparticles are metal oxide nanoparticles that showcase significant antimicrobial activity and also have the potential to remove pathogens efficiently from different environments. CeO₂ nanoparticles also offer antioxidant properties and find active use in semiconductor fabrication, as a component in catalytic converters for auto machines exhaustive, as a fuel additive, and as a UV-light absorber.

By application, the market is divided into:

- Energy Storage
- Polishing Agent
- Personal Care
- Pharmaceuticals
- Others

The regional markets for the product include:

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

Rising Demand for Renewable Energy Generation to Drive the Global Cerium Oxide Nanoparticles Industry Growth

The rising demand for renewable energy generation and the need to curb pollution levels globally are driving the demand for cerium oxide nanoparticles in various applications owing to their favourable properties. According to the World Bank statistics, pollution is the number one cause of premature death, with 9 million deaths caused as a direct result of air, water, and land pollution, annually. In addition, air pollution alone is responsible for a health damage of USD 5.7 trillion, increasing the economic burden. As a result, governments are strategising policies to mitigate pollution levels and global carbon emissions by deploying mechanisms to generate renewable energy. In this regard, cerium oxide nanoparticles find increasing usage as an electrolyte in solid oxide fuel cells, owing to their enhanced chemical reactivity, excellent oxygen storage capacity, and low emissions rate. Apart from this, the increased utilisation of nanocerium in personal care products, owing to its UV light filtering potential, is also projected to aid the market growth in the forecast period.

Key Industry Players in the Global Cerium Oxide Nanoparticles Market

The report gives a detailed analysis of the following key players in the global cerium oxide nanoparticles market, covering their competitive landscape, capacity, and latest developments like mergers, acquisitions, and investments, expansions of capacity, and plant turnarounds:

- Meliorum Technologies, Inc.
- Strem Chemical, Inc.
- Nanophase Technologies Corporation
- SkySpring Nanomaterials, Inc.
- Inframat Advanced Materials, LLC
- PlasmaChem GmbH
- Others

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The comprehensive EMR report provides an in-depth assessment of the industry based on the Porter's five forces model and SWOT analysis.

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