

# Rare Earths: Global Markets, Applications, Technologies

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## Abstracts

### REPORT SCOPE:

This report provides an updated review of rare earth materials, sources, pricing and production processes and identifies current and emerging applications for these materials.

BCC Research delineates the current market status for rare earths, defines trends and presents growth forecasts for the next five years. Supply and sourcing issues, including the latest developments, are also discussed.

The rare earth market is analyzed based on material type and application, and it is expressed as rare earth consumption (in metric tons [t]) and revenues (in \$ millions).

A detailed U.S. patent analysis provides further insight regarding market and technological developments.

More specifically, the market analysis conducted by BCC Research for this report is divided into seven sections.

In the first section (Chapter 3), an introduction to the topic and a historical review of rare earth technology are provided, including an outline of recent events. In this section, current and emerging applications for these materials are also identified and divided by sector (e.g., metallurgical/mechanical, chemical, energy and electronics).

The second section (Chapter 4) outlines the latest process developments and improvements related to rare earth production and ends with a summary of global

production by country.

The third section (Chapter 5) provides a detailed analysis of the geographical distribution of rare earth sources, discussing the major rare earth mining activities in each country, including supplying an updated assessment of world reserves, a status report on the most important mining projects and global production forecasts.

Past, present and future price trends are presented and discussed in the fourth section (Chapter 6).

Chapter 7 provides a global market analysis of rare earths. Global demand for rare earths is presented by industry/application and by element, with actual data for the years 2019 and estimated data for 2023. Global rare earth revenues by industry are also provided. This analysis of the current rare earth market is followed by a detailed presentation of market growth trends based on industry growth and technological trends. The fifth section concludes by providing projected demand for rare earths within each segment, together with forecast compound annual growth rates (CAGRs) for 2019 through 2023.

The sixth section (Chapter 8) of the study, which covers global industry structure, lists rare earth suppliers and descriptions of their products. The analysis includes a description of the geographical distribution of these firms and an evaluation of other key industry players. Detailed company profiles of the top players are also provided.

The seventh and final section (Chapter 9) includes an extensive U.S. patent analysis, with a summary of patents related to rare earth materials, processes and applications issued in 2019. Patent analysis is performed by region, country, assignee, patent category, application and material type.

## **REPORT INCLUDES:**

70 data tables and 41 additional tables

An overview of the global market for rare earth elements and description of its current applications

Analyses of global market trends, with data corresponding to market size for 2019, estimates from 2020 to 2022, and projections of CAGRs through 2023

Details about rare earth compounds and green technology and market share analysis for each of the application

Insights into government initiatives across the geographies, regulatory framework, political implications and environmental and health regulations

Coverage of novel technologies, R&D progress, market forecast and recent activities in the rare earth element technology

Details of mergers & acquisitions, joint ventures, collaborations and agreements and other key market strategies

Market share analysis of the key companies of the industry, and their detailed company profiles, including Aluminum Corp. of China, Arnold Magnetic Technologies, Gansu Rare Earth Group, Hitachi Metals Ltd., Indian Rare Earths Ltd., Mitsui Kinzoku, Rare Element Resources Ltd. and Solvay

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ALUMINUM CORP. OF CHINA

ALKANE RESOURCES LTD.

ARAFURA RESOURCES

ARNOLD MAGNETIC TECHNOLOGIES

AVALON ADVANCED MATERIALS INC.

CHINA MINMETALS

CHINA NORTHERN RARE EARTH HI-TECH CO., LTD.

CHINA RARE EARTH HOLDINGS

FERRO

GANSU RARE EARTH GROUP  
GANZHOU RARE EARTH GROUP  
GREENLAND MINERALS LTD.  
HEXI INDUSTRIAL PARK  
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HUDSON RESOURCES INC.  
INDIAN RARE EARTHS  
IRTYSH RARE EARTHS  
ILUKA RESOURCES  
LYNAS CORP.  
MITSUI KINZOKU  
MOLYCORP  
NAMIBIA CRITICAL METALS INC.  
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RAINBOW RARE EARTHS  
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