

The Global Critical Raw Materials Recovery Market 2025-2040

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Abstracts

The Critical Raw Materials (CRM) Recovery market is experiencing significant growth and transformation as the world shifts towards cleaner technologies and a circular economy. The market focuses on the extraction and recycling of materials deemed critical for advanced technologies, particularly those essential for the clean energy transition and digital revolution. Key drivers of the CRM Recovery market include:

Increasing demand for clean energy technologies like electric vehicles, wind turbines, and solar panels, which require substantial amounts of CRMs.

Growing awareness of supply chain vulnerabilities and the need for resource security, especially given the geographic concentration of many CRM sources.

Regulatory pressures promoting recycling and sustainable resource use, such as the EU's Critical Raw Materials Act.

Advancements in recycling technologies making CRM recovery more economically viable.

The market encompasses various materials, including rare earth elements, lithium, cobalt, platinum group metals, and others. Major sources for recovery include:

End-of-life products (e-waste, spent batteries, catalytic converters)

Industrial production scrap

Urban mining initiatives

Landfill mining projects

Key technologies in the CRM Recovery market include hydrometallurgy, pyrometallurgy, bioleaching, and direct recycling methods. The choice of technology depends on the specific materials being recovered and the source. The CRM Recovery market is poised for substantial growth as it plays a crucial role in enabling the transition to a more sustainable and resilient global economy. The market is attracting increased investment and seeing the entry of both established players and innovative start-ups, driving technological advancements and expanding recovery capabilities. This comprehensive market research report provides an in-depth analysis of the global critical raw materials market from 2025 to 2040. Report contents include:

Detailed market size forecasts in both volume (ktonnes) and value (USD billions) from 2025-2040

Segmentation by material type, recovery source, and geographic region

Analysis of 15+ critical materials including rare earth elements, lithium, cobalt, platinum group metals, and more

Evaluation of primary and secondary (recycled) material sources

Assessment of extraction and recovery technologies

Profiles of 155+ key players in the CRM industry. Companies profiled include ACCUREC-Recycling GmbH, Ascend Elements, BANiQL, BASF, Ceibo, Cirba Solutions, Cyclic Materials, Enim, Heraeus Remloy, HyProMag, JPM Silicon GmbH, Librec AG, MagREESource, NeoMetals, Noveon Magnetics, Phoenix Tailings, Posco, REEtec, Rivalia Chemical, SiTration, Sumitomo and Summit Nanotech.

Global supply and trade dynamics for CRMs

The circular economy and sustainable use of CRMs

Critical and strategic materials used in the energy transition

CRM Recovery in Semiconductors and Electronics: Types of CRMs found in e-waste; Concentration and value of CRMs in e-waste; Collection, sorting, and pre-processing technologies; Metal recovery technologies like pyrometallurgy, hydrometallurgy, and biometallurgy; Market forecasts for CRM recovery from electronics 2025-2040.

CRM Recovery in Lithium-ion Batteries: Li-ion battery recycling value chain; Recycling processes for different cathode chemistries; Comparison of recycling techniques (hydrometallurgy, pyrometallurgy, direct recycling); Economic factors in battery recycling; Market forecasts for CRM recovery from batteries 2025-2040.

Rare Earth Elements Recovery: REE recovery technologies; Comparison of recovery methods; REE recycling markets and players; Forecasts for REE recovery 2025-2040.

Platinum Group Metals Recovery: PGM recovery from automotive catalysts; PGM recovery from fuel cells and electrolyzers; PGM recycling markets; Forecasts for PGM recovery 2025-2040

Critical raw materials are essential enablers of the clean energy transition and next-generation technologies. However, they face supply risks, price volatility, and sustainability concerns. This report provides businesses, investors, and policymakers with crucial intelligence on the rapidly evolving CRM market landscape.

Key questions answered include:

What are the supply and demand projections for key CRMs through 2040?

Which recovery technologies and sources will see the highest growth?

How will recycling and urban mining impact primary CRM production?

What are the economic factors driving CRM recovery from end-of-life products?

Which geographic markets offer the greatest opportunities for CRM recovery?

Who are the key players across the CRM value chain?

What regulatory and sustainability trends will shape the market?

With detailed forecasts, technology assessments, and competitive analysis, this report offers an essential tool for strategy formulation in the critical materials sector. The shift towards clean energy and electrification is creating major market opportunities in CRM recovery and recycling. This comprehensive study provides the market intelligence needed to capitalize on the growing demand for sustainably-sourced critical raw materials.

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