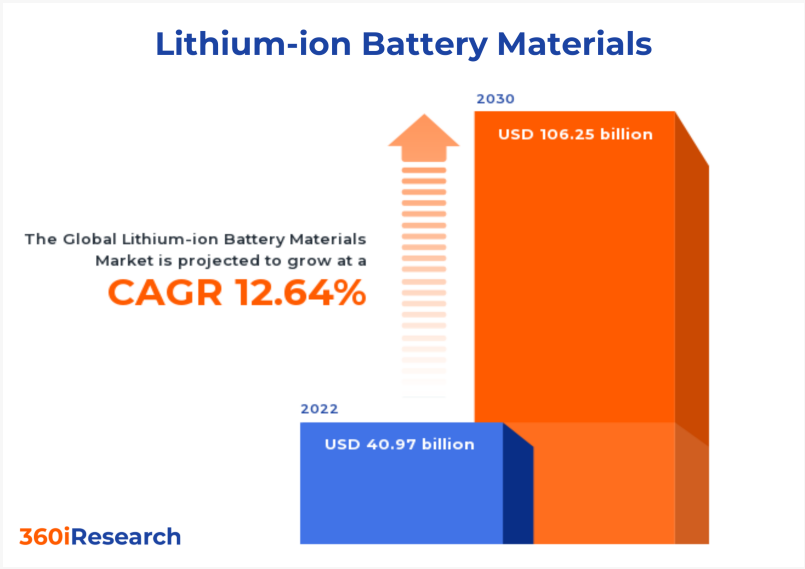
Lithium-ion Battery Materials Market worth $106.25 billion by 2030- Exclusive Report by 360iResearch

The Global Lithium-ion Battery Materials Market to grow from USD 40.97 billion in 2022 to USD 106.25 billion by 2030, at a CAGR of 12.64%.



Lithium-ion Battery Materials Market - Exclusive Report by 360iResearch

PUNE, MAHARASHTRA, INDIA , December 8, 2023 /EINPresswire.com/ -- The "Lithium-ion Battery Materials Market by Type (Anode, Cathode, Electrolyte), Applications (Automotive, Consumer Devices, Industrial) - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.

The Global Lithium-ion Battery Materials Market to grow from USD 40.97 billion in 2022 to USD 106.25 billion by 2030, at a CAGR of 12.64%.

Request a Free Sample Report @ https://www.360iresearch.com/library/intelligence/lithium-ion-battery-materials?utm_source=einpresswire&utm_medium=referral&utm_campaign=sample

Lithium-ion battery materials pertain to a broad range of chemical components deployed in producing lithium-ion batteries. These resources, known for their crucial role in the performance, efficiency, and lifespan of such batteries, comprise an assortment of substances - each with a distinct role within the battery construction hierarchy. The rising demand for electric vehicles and renewable energy are the prime factors influencing the lithium-ion battery materials market growth. However, the extraction process of lithium is often environmentally damaging and under ethical scrutiny. This impacts the supply chain and potentially risks the long-term sustainability of the market. Nevertheless, battery technology advancements and discoveries in material science provide vast opportunities for this market. Furthermore, innovations such as solid-state lithium-ion batteries, lithium-sulfur batteries, and new energy storage solutions indicate an optimistic outlook for the lithium-ion battery materials sector.

Applications: Evolving utilization of lithium-ion battery materials in the automotive industry
Lithium-ion batteries have significantly contributed to the advancement of the automotive industry, especially electric vehicles (EVs) and hybrid electric vehicles (HEVs). These vehicles require high-energy-density batteries that store extensive energy in a compact space. Lithium-ion batteries, with their excellent energy density characteristics, facilitate long-distance driving and rapid acceleration, making EVs and HEVs more practical and appealing to users. Lithium-ion battery materials provide reliable and prolonged consumer usage times in devices, including smartphones, laptops, tablets, and power banks. Lithium-ion batteries are comparably lighter and boast a high energy density, making them the preferred choice for portable electronic gadgets. Furthermore, they do not exhibit a 'memory effect,' eliminating the need for a complete discharge before recharging, thus augmenting the convenience for the users. Lithium-ion batteries contribute significantly to the industrial sector as they are utilized in numerous applications, including power tools, forklifts, mining equipment, and uninterruptible power supply (UPS) systems. These applications necessitate high power output and long working cycles, provided efficiently by lithium-ion batteries. Furthermore, these batteries offer potential benefits such as lower maintenance costs and improved worker safety by replacing traditional lead-acid batteries in many industrial applications.

Type: Increasing significance of cathode material as it influences the voltage and capacity of the battery
The negative electrode, anode in lithium-ion batteries, plays a critical role in the electrochemical processes that power these batteries. They are typically composed of graphite, ho technological advancements have introduced materials like lithium titanium oxide or silicon-based materials for enhanced performance and longevity. Regarding need-based preferences, graphite anodes are preferred for their ability to maintain structural stability. In contrast, silicon-based anodes are coveted for their high capacity, albeit with a trade-off in shorter lifespan. The cathode, the positive electrode in lithium-ion batteries, fundamentally determines aspects such as energy density and cycle life of the battery. The common materials include lithium cobalt oxide ($LiCoO_2$), lithium iron phosphate($LiFePO_4$), and lithium nickel manganese cobalt oxide ($LiNiMnCoO_2$ or NMC). Each of these materials has specific use-case scenarios; for instance, $LiCoO_2$ is ideal for mobile applications due to its high specific energy, while $LiFePO_4$ is preferred in electric vehicles for its stability and safety features. The electrolyte serves as the conduit through which the lithium ions traverse between the anode and cathode during the charging and discharging processes. The electrolyte in a lithium-ion battery is a solution of lithium salts, such as lithium hexafluorophosphate ($LiPF_6$), in an organic solvent. It must exhibit the characteristics of high thermal stability, a wide electrochemical window, and ion conductivity, thus ensuring efficient operation of the battery.

Regional Insights:
The lithium-ion battery materials market is evolving in the Americas owing to the advanced technology industries that heavily rely on lithium-ion batteries, including electric vehicles (EVs) and renewable energy storage. The EU's strategies towards achieving carbon neutrality have also

heightened the need for efficient energy storage solutions, raising demand for lithium-ion battery materials. The Middle East and Africa represent immense potential in the lithium-ion battery materials market, owing to the ongoing expansion of renewable energy projects, particularly solar and wind. The Asia Pacific region is one of the significant consumers of lithium-ion batteries due to the significant penetration of consumer electronics and emphasis on the adoption of electric vehicles. Besides, ongoing research to advance and improve the properties of lithium-ion battery materials is anticipated to increase their use across end-use applications globally.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Lithium-ion Battery Materials Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the Lithium-ion Battery Materials Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the Lithium-ion Battery Materials Market, highlighting leading vendors and their innovative profiles. These include 3M Company, BASF SE, BTR New Material Group Co., Ltd., Fujitsu Laboratories Ltd., Hitachi High-Tech Corporation, JFE Chemical Corporation, Kureha Corporation, L&F CO., Ltd., Long Power Systems (Suzhou) Co., Ltd, Mitsubishi Chemical Corporation, NEI Corporation, Nichia Corporation, POSCO FUTURE M Co., Ltd., Resonac Group Companies, Santoku Corporation, SGL Carbon SE, Sumitomo Metal Mining Co., Ltd., Tanaka Chemical Corporation, Targray Technology International Inc., TODA KOGYO Group, UBE Corporation, Umicore Group, and Xiamen Tmax Battery Equipments Limited..

Inquire Before Buying @ https://www.360iresearch.com/library/intelligence/lithium-ion-battery-materials?utm_source=einpresswire&utm_medium=referral&utm_campaign=inquire

Market Segmentation & Coverage:

This research report categorizes the Lithium-ion Battery Materials Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Type, market is studied across Anode, Cathode, and Electrolyte. The Electrolyte is projected to witness significant market share during forecast period.

Based on Applications, market is studied across Automotive, Consumer Devices, and Industrial. The Automotive is projected to witness significant market share during forecast period.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa commanded largest market share of 36.21% in 2022, followed by Americas.

Key Topics Covered:

The report provides insights on the following pointers:
1. Market Penetration: Provides comprehensive information on the market offered by the key players
2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets
3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments

4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players
5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:
1. What is the market size and forecast of the Lithium-ion Battery Materials Market?
2. Which are the products/segments/applications/areas to invest in over the forecast period in the Lithium-ion Battery Materials Market?
3. What is the competitive strategic window for opportunities in the Lithium-ion Battery Materials Market?
4. What are the technology trends and regulatory frameworks in the Lithium-ion Battery Materials Market?
5. What is the market share of the leading vendors in the Lithium-ion Battery Materials Market?
6. What modes and strategic moves are considered suitable for entering the Lithium-ion Battery Materials Market?

Read More @ https://www.360iresearch.com/library/intelligence/lithium-ion-battery-materials?utm_source=einpresswire&utm_medium=referral&utm_campaign=analyst

Mr. Ketan Rohom
360iResearch
+1 530-264-8485
ketan@360iresearch.com
