Lithium-Ion Battery Recycling Market to Hit $38.21 Billion by 2030, Driven by EV Boom and Eco Regulations

Surging EV Demand and Eco-Regulations Power Lithium-Ion Battery Recycling Market Growth

WILMINGTON, DE, UNITED STATES, July 25, 2025 /EINPresswire.com/ -- The global lithium-ion battery recycling market is gaining significant traction as the world turns toward sustainable solutions for energy and waste management. According to a recent report by Allied Market Research, the market was valued at $1.33 billion in 2020 and is projected to surge to $38.21 billion by 2030, growing at an impressive CAGR of 36.0% from 2021 to 2030.

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> Lithium-ion battery recycling market to reach $38.21B by 2030, fueled by EV demand, eco laws & growth in electronics waste recovery. □□□”
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> *Allied Market Research*

Lithium-ion batteries are widely used in electric vehicles (EVs), consumer electronics, and industrial energy storage. As the demand for such applications continues to rise, the need for effective recycling solutions becomes more urgent. Recycling lithium-ion batteries not only mitigates environmental risks but also helps recover critical metals like lithium, cobalt, and nickel, making it both an ecological and economic opportunity. □□

□□ The Importance of Lithium-Ion Battery Recycling

The surge in e-waste and retired EV batteries is driving the need for organized recycling. While lithium-ion batteries were once discarded into landfills, increasing awareness of their environmental impact has led to widespread efforts in battery recovery and reuse.

Previously driven by regulatory compliance, recycling has now become a profitable industrial activity. The recovered metals are valuable inputs for new battery manufacturing, reducing the need for raw material mining and lowering the overall carbon footprint.

 Market Segmentation Insights

 By Battery Chemistry

The lithium-manganese oxide segment dominated the market in 2020, accounting for 32.2% of the total share. This segment continues to lead due to its use in applications like gas & water meters, fire alarms, and security devices. These batteries offer high reliability, long life cycles, and enhanced temperature tolerance, making them a preferred choice across various industries.

 By Source

The electronics segment held the largest market share in 2020, driven by the ever-growing usage of smartphones, laptops, digital cameras, and other gadgets. As consumer reliance on portable electronics rises, so does the need to recycle these batteries at end-of-life.

Interestingly, electric vehicles are emerging as the fastest-growing source, forecasted to grow at a CAGR of 46.1% through 2030. This shift reflects the global boom in EV adoption and the subsequent surge in EV battery retirements.

 By Recycling Process

The hydrometallurgical process was the most utilized recycling method in 2020, capturing 64.8% of the market. Its popularity stems from benefits like low energy consumption, effective metal recovery, and minimal environmental waste. It is also more efficient in recovering lithium and aluminum compared to traditional methods.

 By End Use

In terms of end use, the non-automotive segment took the lead in 2020, primarily fueled by demand from the consumer electronics industry. Devices like laptops and smartphones are ideal for second-life battery applications, where the battery capacity may be lower, but still functional for non-intensive usage.

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 Regional Outlook

Europe led the global market in 2020, contributing over 35.7% of the revenue. The region's dominance is credited to its stringent environmental regulations, large EV consumer base, and active involvement of key recycling companies. Additionally, the EU's push for a circular economy and reduced dependence on raw imports is boosting market growth.

Meanwhile, Asia-Pacific is forecasted to be the fastest-growing region, registering a CAGR of 40.8%. Countries like China, India, Japan, and South Korea are rapidly expanding their EV fleets and electronics sectors, necessitating robust recycling frameworks.

□□ Key Players in the Market

Major companies driving innovation and capacity expansion in the lithium-ion battery recycling industry include:

Ganfeng Lithium Co., Ltd.

American Battery Technology Company

Li-Cycle Corp.

Fortum Corporation

Retriev Technologies, Inc.

Umicore

Lithion Recycling Inc.

Accurec Recycling GmbH

Emerging players such as Neometals, Green Li-ion Pvt. Ltd., and Redux GmbH are also investing in new technologies to scale up recycling efficiency.

□ COVID-19 Impact

The COVID-19 pandemic caused initial setbacks in 2020, particularly due to lockdowns that halted production, disrupted logistics, and reduced consumer demand for electronics and vehicles. However, as global economies reopened and green recovery plans took shape, the lithium-ion battery recycling market rebounded strongly in 2021. Recovery was supported by increased battery waste, revived manufacturing, and growing environmental awareness post-pandemic.

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 Conclusion

The lithium-ion battery recycling market is positioned at the intersection of environmental sustainability, technological advancement, and economic profitability. With surging demand for EVs and consumer electronics, the amount of retired batteries will only rise, making recycling not just an option—but a necessity.

Innovations in hydrometallurgical and direct recycling processes, coupled with favorable government regulations and private investments, will continue to accelerate market expansion.

As we move toward a greener, circular economy, the lithium-ion battery recycling industry will play a crucial role in shaping a sustainable energy future.

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David Correa
Allied Market Research
+ 1 800-792-5285
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X
