

Battery X Metals Achieves Procedural Milestone with Global Top 20 University, Reporting Increases in Graphite Purity and Oxide Recovery Ahead of Additional Controlled Trials

07.05.2025 | [ACCESS Newswire](#)

News Release Highlights:

1. Identification of a new solvent that enhances separation of oxides from graphite in Battery X Recycling Technologies' proprietary eco-friendly flotation process.
2. Preliminary trial results show a 26.5% to 31.5% relative increase in oxide recovery (from 36.59% to 38.03 in prior tests to 48.10%) and a 5.5% to 6.3% relative increase in graphite purity (from 68.66% to 69.20% in prior tests to 73.0%).
3. Graphite recovery remained high at ~97% (96.30%), oxide purity remained consistent at ~90% (89.90%), and flotation time held steady at 5-7 minutes; further trials underway to optimize solvent use and flotation stages.

VANCOUVER, May 6, 2025 - [Battery X Metals Inc.](#) (CSE:BATX)(OTCQB:BATXF)(FSE:5YW,WKN:A40X9W)("Battery X Metals" or the "Company") an energy transition resource exploration and technology company, announces that its wholly-owned subsidiary, Battery X Recycling Technologies Inc. ("Battery X Recycling Technologies"), has achieved a key procedural milestone in its research collaboration with the Institute of Mining Engineering at a globally ranked Top 20 university (the "Global Top 20 University") for its proprietary eco-friendly froth flotation technology being developed.

As part of its ongoing work to optimize the recovery of battery-grade materials from end-of-life lithium-ion batteries, Battery X Recycling Technologies has identified a new solvent (the "New Solvent") that improves the separation of oxides from graphite using the Company's proprietary eco-friendly froth flotation technology. In recent controlled trials using 500g samples of unoxidized, Nickel-Manganese-Cobalt (NMC)-dominant black mass and Denver Cell flotation devices (the "Trials"), the application of the New Solvent led to a notable improvement in performance: oxide recovery in flotation concentrates (single-stage flotation) increased from 36.59% and 38.03% in prior tests (#3 and #4) to 48.10%, in the recent Trial, representing a relative increase of 26.5% to 31.5% (an absolute increase of 10.07 to 11.51 percentage points). Graphite purity also improved, increasing from 68.66% and 69.20% to 73.0%, representing a relative increase of 5.5% and 6.3% (an absolute increase of 3.80 to 4.34 percentage points) (the "Results"). The Results refer to the measured improvements in oxide recovery and graphite purity achieved through the application of the New Solvent during the Trials. These enhancements represent a notable improvement over the Company's prior results disclosed in its news release dated April 4, 2025. A comparison of the prior and current results is set out in the table below for reference.

Graphite Recovery & Grade Comparison

Parameter	Recent Trial Unoxidized Sample - pre-washed w/ New Solvent (Frother & Collector)	Prior Trial (Unoxidized)
Graphite Recovery (%)	96.30%	96.86%
Graphite Grade (%)		

73.0%

Metal Oxide Recovery & Grade Comparison

Parameter	Recent Trial Unoxidized Sample - pre-washed w/ New Solvent (Frother & Collector)	Recent Trial Oxidized Sample - pre-washed w/ New Solvent (Frother & Collector)
Metal Oxide Recovery (%)	48.10%	38.03%
Metal Oxide Grade (%)	89.90%	89.37%

Although oxide recovery appeared higher in prior tests #1 and #2 using the "Prior Solvent," those tests were conducted on oxidized black mass samples. In contrast, the recent Results were achieved using unoxidized black mass. Importantly, oxide purity using the New Solvent increased from 62.45% to 64.68% in prior tests #1 and #2 to 89.90% in the recent trials, representing a relative increase of approximately 39.0% to 44.0% (an absolute increase of 25.22 to 27.45 percentage points). This improvement highlights the New Solvent as a materially more effective solution for oxide recovery.

In addition to the improved recovery and purity metrics, other key parameters remained stable. Graphite recovery held steady at approximately 97% (96.30%), and oxide purity remained consistent at approximately 90%. Flotation times were unchanged from earlier trials, with effective separation occurring within approximately 5 to 7 minutes. As with prior tests, graphite purity was determined through burn-off assays conducted at 750°C for two hours, which quantify residual oxide content to validate separation efficiency.

Significance of Procedural Milestone

The identification of the New Solvent represents a significant procedural milestone for Battery X Recycling Technologies. Efficient separation of oxides from graphite is critical to unlocking high-purity outputs, and the New Solvent enables this separation more effectively than previously achieved. The improvements are expected to contribute meaningfully to the Company's goal of maximizing recovery yields of battery-grade materials.

This development also addresses a long-standing technical challenge identified during joint research: a rubber-like coating found on black mass samples, believed to be a by-product of thermal and chemical degradation during battery use. This coating was previously observed to inhibit optimal separation of oxides from graphite. Battery X Recycling Technologies and the Global Top 20 University successfully analyzed and identified the composition of the coating on this specific sample of black mass, enabling a targeted treatment strategy using the New Solvent. To date, it has demonstrated the most promising results in overcoming this barrier.

The Trials conducted to date have utilized a single-stage flotation process. Building on this preliminary achievement, Battery X Recycling Technologies and the Global Top 20 University are actively pursuing additional controlled trials using different solvent dilutions and/or multi-stage flotation processes, with the goal of further improving the Results. The objective is to further improve battery material recovery and purity metrics through its proprietary froth flotation process optimization and refinement. The Company anticipates sharing further results as they become available.

"These encouraging results mark an important step forward in our mission to develop eco-friendly solutions for battery material recovery," said Massimo Bellini Bressi, CEO of Battery X Metals. "The identification of this new solvent not only improves the performance of our flotation process, but also validates our collaborative approach to innovation. We're excited by the potential of these findings and look forward to further optimizing the technology as we advance toward further validation."

Lithium-Ion Battery Recycling Industry Tailwinds and the Significance of Graphite Recovery
 Battery X Metals, through its wholly-owned subsidiary Battery X Recycling Technologies, is advancing sustainable lithium-ion battery recycling through its amended research collaboration agreement with the Global Top 20 University. The research focuses on proprietary froth flotation technology under development to recover critical battery-grade materials-graphite, lithium, nickel, cobalt, manganese, and copper-from end-of-life lithium-ion batteries, supporting a circular battery economy.

Graphite, comprising 95% of lithium-ion battery anodes¹, is often neglected in traditional hydrometallurgy and

pyrometallurgy recycling methods². Battery X Metals' process shows promise to enable the separation of cathode-active metal oxides from anode-active graphite without degradation, unlike high-temperature treatments³ and chemical leaching⁴ processes such as pyrometallurgy and hydrometallurgy.

In October 2024, Mercedes-Benz (FSE:MBG) opened Europe's first battery recycling plant, integrating mechanical-hydrometallurgical processes and becoming the first automotive manufacturer worldwide to establish an in-house battery recycling loop ⁵, underscoring the industry's shift toward battery recycling.

Further emphasizing the industry's momentum, Redwood Materials, Inc., founded by Tesla co-founder and former Chief Technology Officer J.B. Straubel, became the exclusive battery recycling partner for Lime's shared scooters and e-bikes in April 2025. This collaboration, covering operations in the United States, Germany, and the Netherlands, aims to recycle end-of-life batteries, thereby enhancing the domestic supply of critical materials and improving battery recycling supply chains⁶.

Redwood Materials has also established partnerships with major companies such as Ford, Panasonic, BMW, General Motors, and Toyota. The company has received a \$2 billion conditional loan from the U.S. Department of Energy to build and expand a battery materials campus in Nevada, supporting the growing electric vehicle market in America^{7,8}.

The global shift toward electrification is driving the clean energy transition, with lithium-ion batteries playing a central role in reducing reliance on fossil fuels⁹. Global lithium-ion battery demand is projected to rise 670% by 2030¹⁰ with energy storage requirements rising from 700 GWh in 2022 to 4.7 TWh¹⁰, primarily due to the increased adoption of EVs¹⁰. Yet, recycling remains underutilized, with less than 5% of batteries currently recycled¹¹. EVs and battery storage will account for nearly half of mineral demand growth from clean energy technologies over the next two decades¹², making the recovery of materials like graphite, lithium, nickel, and cobalt critical.

As the industry prioritizes battery recycling, Battery X Metals' eco-friendly technology stands out by recovering battery-grade graphite-anode material often lost in conventional methods. This positions Battery X Metals to address a major gap in the growing battery recycling market.

1 ECGA, 2 National Library of Medicine, 3 Rho Motion, 4 LA Ist, 5 Mercedes-Benz ,6 TechCrunch , 7 Redwood Materials, 8 Ford Authority 9 Energy X, 10 Mckinsey & Company, 11 CAS, 12 Mining Review Africa

About Battery X Metals Inc.

Battery X Metals (CSE:BATX)(OTCQB:BATXF)(FSE:5YW, WKN:A40X9W) is an energy transition resource exploration and technology company committed to advancing domestic and critical battery metal resource exploration and developing next-generation proprietary technologies. Taking a diversified, 360° approach to the battery metals industry, the Company focuses on exploration, lifespan extension, and recycling of lithium-ion batteries and battery materials. For more information, visit batteryxmetals.com.

On Behalf of the Board of Directors
Massimo Bellini Bressi, Director

For further information, please contact:
Massimo Bellini Bressi
Chief Executive Officer
Email: mbellini@batteryxmetals.com
Tel: (604) 741-0444

Disclaimer for Forward-Looking Information

This news release contains forward-looking statements within the meaning of applicable securities laws. These statements relate to the Company's objectives, strategies, and future plans, including the development, commercialization, and deployment of proprietary technologies, exploration initiatives, and financial objectives. Specific forward-looking statements include expectations regarding the Company's ongoing research collaboration with the Global Top 20 University; the identification and performance of the New Solvent in enhancing oxide separation and graphite purity; anticipated improvements in oxide recovery, graphite recovery and grade, flotation kinetics, and overall process efficiency; the evaluation and testing of

alternative flotation stages, solvent dilutions, surfactants, and selective collectors; and the continued development, optimization, and potential scalability of the Company's eco-friendly froth flotation process. Additionally, forward-looking statements include the expected contribution of the New Solvent and targeted treatment strategies in addressing rubber-like coatings found on black mass samples; the ability of the Company's technology to enable the recovery of battery-grade materials, including graphite, lithium, nickel, cobalt, manganese, and copper; the potential application of the technology in overcoming limitations of pyrometallurgical and hydrometallurgical methods; the anticipated role of Battery X Metals' technologies in supporting a circular battery economy; and the expectation of further trial results and process validation to be disclosed as they become available. Further forward-looking statements relate to broader industry trends, including the projected increase in global lithium-ion battery demand and the effect of EV adoption on the projected increase, the growing importance of sustainable battery recycling, the increasing focus on graphite recovery in battery recycling, and the evolving regulatory landscape supporting critical mineral recovery and domestic supply chains. These statements also include references to industry partnerships, facilities, and government support, as well as the Company's belief that it is well-positioned to fill a gap in the battery recycling market through the recovery of battery-grade graphite and other critical materials. These forward-looking statements are based on current expectations, assumptions, and beliefs as of the date of this release. However, they involve known and unknown risks, uncertainties, and other factors that could cause actual results or events to differ materially from those expressed or implied. Risks include, but are not limited to, market conditions, fluctuations in commodity prices, and regulatory changes impacting battery recycling and material recovery technologies; technical challenges in the development, testing, and optimization of the Company's flotation process and separation methodologies; the ability to secure financing or government support to advance research and commercialization efforts; potential delays, unexpected findings, or setbacks in laboratory testing and pilot-scale validation of the Company's proprietary recovery processes; dependence on third-party collaborations, university research partnerships, and external suppliers for equipment and testing; competition in the battery recycling and critical minerals market, including advancements in alternative recycling technologies; and changes in consumer demand, global supply chains, or geopolitical factors affecting the adoption of sustainable battery recycling solutions. Battery X Metals assumes no obligation to update or revise any forward-looking statements to reflect events, circumstances, or changes in expectations, except as required by law. Investors are cautioned not to place undue reliance on these forward-looking statements and are encouraged to refer to the Company's public filings on SEDAR+ for further risk disclosures.

SOURCE: Battery X Metals

View the original press release on ACCESS Newswire

Dieser Artikel stammt von [Rohstoff-Welt.de](https://www.rohstoff-welt.de)

Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/691100--Battery-X-Metals-Achieves-Procedural-Milestone-with-Global-Top-20-University-Reporting-Increases-in-Graphite-P>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer!](#)

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!
Alle Angaben ohne Gewähr! Copyright © by Rohstoff-Welt.de -1999-2026. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).