

Battery X Metals Announces New Strategic Partnership with Global Top 20 University Building on Preliminary Advancements in Critical Battery Material Recovery and Supporting Future Pilot-Scale Development of Proprietary Battery-Material Recycling Tech

02:00 Uhr | [ACCESS Newswire](#)

News Release Highlights:

1. Battery X Recycling Technologies Inc., a wholly-owned subsidiary of [Battery X Metals Inc.](#), has entered into a new Collaborative Research Agreement with a Global Top 20 University to advance and expand the development of its proprietary froth-flotation process for the recovery of high-purity graphite, oxides, and phosphates from end-of-life lithium-ion batteries.
2. The collaboration builds on prior laboratory success in which the Global Top 20 University identified a new solvent that, when combined with a two-stage re-flotation process, significantly improved material separation efficiency-achieving graphite recoveries above 98% and oxide purities up to 96% under mild, environmentally responsible conditions.
3. The new Agreement will focus on refining graphite grade and oxide purity, expanding the process to include lithium-iron-phosphate (LFP) black-mass chemistries, and advancing the data and methodologies required to support the future transition from laboratory development to pilot-scale validation and eventual commercialization.

VANCOUVER, November 25, 2025 - Battery X Metals Inc.(CSE:BATX)(OTCQB:BATXF)(FSE:5YW0, WKN:A41RJF) ("Battery X Metals" or the "Company") announces that its wholly-owned subsidiary, Battery X Recycling Technologies Inc. ("Battery X Recycling Technologies"), has entered into a new Collaborative Research Agreement (the "Agreement") with a globally ranked Top 20 university (the "Global Top 20 University").

As one of North America's largest and most advanced centers for mining engineering education and research, the Global Top 20 University's Institute of Mining Engineering will collaborate with Battery X Recycling Technologies to further advance the parties' jointly developed proprietary battery-material recovery technology. This new Agreement builds upon the foundation established under the previously disclosed Amended Collaborative Research Agreement, as disclosed in the Company's news release dated September 24, 2024, and continues the joint development and validation of the Company's eco-friendly froth-flotation process for the recovery of critical battery materials.

Battery X Metals' Commitment to the Global Energy Transition

This new phase of collaboration reinforces Battery X Metals' commitment to advancing technologies that support the global energy transition and sustainable resource recovery. The partnership between Battery X Recycling Technologies and the Global Top 20 University's Institute of Mining Engineering, recognized internationally for its leadership in mineral processing and flotation science, is focused on developing an environmentally responsible froth-flotation process designed to recover key battery-grade materials such as graphite, lithium, nickel, cobalt, manganese, and copper from end-of-life lithium-ion batteries. The proprietary process under development aims to minimize chemical use and energy consumption while improving the efficiency and purity of recovered materials to support a circular, low-impact supply chain for critical minerals.

Advancing a Preliminary Breakthrough

In the initial phase of collaboration, Battery X Recycling Technologies and the Global Top 20 University conducted a series of controlled laboratory tests on both oxidized and unoxidized black-mass samples to examine how surface oxidation and binder coatings affect flotation performance. The study confirmed that oxidation and polymer binders significantly reduced graphite hydrophobicity, causing metal oxides to float with graphite and reducing separation efficiency.

The Global Top 20 University's research team identified a new solvent capable of effectively removing these binder coatings while preserving the natural structure of the graphite. When combined with a two-stage re-flotation process, the solvent treatment restored surface properties and substantially improved material separation. Under optimized conditions, graphite recoveries exceeded 98%, and metal-oxide tailings reached purities of 95% to 96%. These results marked a critical step forward in validating the laboratory performance of the Company's eco-friendly process under mild and environmentally responsible conditions.

"This advancement marks a significant step in proving the capability of our proprietary process," said Massimo Bellini Bressi, Chief Executive Officer of Battery X Metals. "By combining the newly identified solvent with a two-stage re-flotation process, we achieved a preliminary lab-scale breakthrough in our results demonstrating high graphite recovery and oxide purity. These outcomes demonstrate the potential of our approach and reinforce the commercial potential of an environmentally responsible solution for recovering high-value battery materials. This progress continues to build momentum as we move toward the next stage of development and aspire to future pilot scale-up opportunities."

Next Phase of Collaboration

The new Agreement is focused on advancing the development of Battery X Recycling Technologies' proprietary battery-material recovery process through continued laboratory research and process refinement. The next phase will concentrate on improving graphite grade and metal-oxide purity by optimizing flotation parameters and solvent treatments, while also expanding testing to include lithium-iron-phosphate (LFP) black-mass chemistries. This work is intended to generate the data and process understanding necessary to support future pilot-scale development once additional laboratory objectives have been met.

The research will be led by the head Professor in the Department of Mining Engineering at the Global Top 20 University, supported by a dedicated team of researchers focused on advancing the separation and recovery of high-value battery materials through efficient and environmentally responsible methods.

"The University's Institute of Mining Engineering is among the world's most respected centers for flotation research," said Massimo Bellini Bressi, Chief Executive Officer of Battery X Metals. "This next phase represents the continuation of our technical progress as we move from discovery toward engineering refinement, laying the groundwork for the eventual advancement of our process to larger-scale testing."

Problem: The Challenge of Sustainable Battery Recycling and Graphite Recovery

The global transition to electrification is accelerating demand for lithium-ion batteries, which play a central role in reducing reliance on fossil fuels¹ and are projected to increase more than 6x by 2030, rising from approximately 700 GWh in 2022 to 4.7 TWh². This growth is driven primarily by the rapid adoption of electric vehicles and large-scale energy storage systems². Government incentives, carbon-reduction targets, and the global phase-out of internal-combustion-engine vehicles are further intensifying this growth.

Despite these advances, fewer than 5% of end-of-life lithium-ion batteries are currently recycled³. This has created an urgent need for more sustainable and efficient recycling technologies capable of recovering key materials from battery waste. Over the next two decades, electric vehicles and battery storage systems are projected to account for roughly half of the total mineral demand growth from clean energy technologies. By 2040, total mineral demand from these technologies is expected to increase severalfold, driven by surging demand for battery materials. Mineral demand from EVs and battery storage alone could rise by an order of magnitude or more, led by materials such as graphite, copper, nickel, and lithium, with lithium expected to see the fastest growth as demand increases more than 40x by 2040.⁴

Existing recycling methods, including hydrometallurgy and pyrometallurgy, treat these materials differently and often result in significant material losses. In hydrometallurgical processes, leaching agents are used to extract metals such as cobalt, nickel, and lithium. However, graphite, being non-metallic, is typically degraded or discarded, making recovery both difficult and costly^{5,6}.

Hydrometallurgy can also alter metal oxides into ionic forms, requiring additional reprocessing steps to restore them for reuse^{6,7}. Pyrometallurgical methods, on the other hand, rely on high-temperature smelting that burns off graphite completely and converts metal oxides into metallic forms that must later be re-oxidized⁷⁻⁹. While these methods can recover certain metals such as cobalt and nickel, other valuable elements, including lithium and aluminum, are often lost to slag, limiting both efficiency and sustainability^{7,8}.

Solution: Advancing Eco-Friendly Froth Flotation for Critical-Material Recover

Battery X Metals, through its wholly owned subsidiary Battery X Recycling Technologies Inc., is developing an environmentally responsible recycling process that addresses these limitations. Its proprietary froth-flotation technology is designed to selectively recover essential battery materials-such as graphite, lithium, nickel, cobalt, manganese, and copper-from "black mass," the residual material produced when end-of-life lithium-ion batteries are processed.

In collaboration with a Global Top 20 University, the Company is refining and validating this process for the efficient recovery and separation of graphite and metal oxides under low-temperature, low-chemical conditions. Early testing has demonstrated that the approach can recover both graphite and oxides with high purity and efficiency, setting a foundation for the continued development of sustainable recycling methods.

Unlike traditional leaching or smelting processes, Battery X's flotation-based approach does not rely on harsh chemicals or high heat, allowing the recovered materials to retain their quality for reuse in new batteries. This innovation supports the creation of a circular and resource-efficient supply chain for critical battery materials, reducing environmental impact while strengthening North America's domestic clean energy ecosystem.

The Agreement provides for a thirteen (13)-month term (the "Term") commencing on November 7, 2025, during which the Global Top 20 University will conduct the research program in collaboration with Battery X Recycling Technologies. The total project value is CAD \$224,560, inclusive of all direct and indirect costs, payable by Battery X Recycling Technologies to the Global Top 20 University in four scheduled instalments as follows: (i) CAD \$60,000 upon entry into the Agreement (the "Initial Payment"); (ii) CAD \$54,853.34 payable three (3) months after the Initial Payment; (iii) CAD \$54,853.33 payable six (6) months after the Initial Payment; and (iv) CAD \$54,853.33 payable nine (9) months after the Initial Payment. The Global Top 20 University will provide periodic progress updates throughout the Term and deliver a comprehensive final report within sixty (60) days following the project's completion.

All intellectual property ("IP") developed solely by Battery X Recycling Technologies will remain the property of the Company ("BATX IP"), while IP developed solely by the Global Top 20 University will remain the property of the Global Top 20 University ("University IP"). Any IP jointly developed under the project will be jointly owned by both parties ("Joint IP"), with each retaining the right to independently use and commercialize the Joint IP, subject to the terms of the Agreement.

Battery X Recycling Technologies has been granted a non-exclusive, non-transferable, royalty-free license to use University IP for research, development, and commercialization purposes, and retains a time-limited exclusive option to negotiate a sole, royalty-bearing license for the commercial use of any University IP or Joint IP arising from the collaboration.

The Agreement also contains standard confidentiality, indemnification, publication-review, and termination provisions typical of academic-industry research collaborations, ensuring the protection of proprietary information and alignment of both parties' commercial and research objectives.

1 EnergyX, 2 McKinsey & Company, 3 CAS, 4 IEA, 5 MDPI (1), 6 MDPI (2), 7 MDPI (3), 8 MDPI (4), 9 MDPI (5)

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. Forward-looking statements in this release relate to, among other things: the objectives, scope, and expected outcomes of the Collaborative Research Agreement with the Global Top 20 University; the total value, duration, and terms of the Collaborative Research Agreement; the research and development goals of the collaboration, including improvements to graphite and oxide purity, phosphate recovery, and process optimization; the potential applicability of the Company's proprietary froth-flotation process to lithium-iron-phosphate and other battery chemistries; the anticipated generation of laboratory data to support future pilot-scale validation and commercial-readiness efforts; the potential for environmental, operational, or commercial advantages of the Company's technology compared to conventional recycling methods; the prospective ability of the process to improve material recovery yields, purity levels, and sustainability; the ability of the Company and the Global Top 20 University to jointly develop or commercialize intellectual property arising from the collaboration; the future demand for clean energy solutions such as lithium-ion batteries; and the Company's broader strategic objectives to advance proprietary recycling and rebalancing technologies across the battery materials value chain. Forward-looking statements are based on current expectations, estimates, and projections that management believes to be reasonable as of the date of this news release. However, such statements are inherently subject to known and unknown risks, uncertainties, and other factors that may cause actual results, performance, or achievements to differ materially from those expressed or implied by such statements. These risks and uncertainties include, but are not limited to: the ability of the parties to successfully execute the planned research and achieve the anticipated results within the expected timeframe or budget; variability in laboratory results or technical performance; the feasibility of scaling the process to pilot or commercial levels; the successful generation, protection, and commercialization of intellectual property; the availability of funding or resources for continued research and development; market acceptance of emerging recycling technologies; changes in regulatory, environmental, or industry conditions; and general economic and geopolitical factors that may affect the Company's operations or partnerships. Forward-looking statements reflect management's beliefs, assumptions, and expectations only as of the date hereof and are not guarantees of future performance. The Company undertakes no obligation to update or revise any forward-looking information to reflect new information, future events, or otherwise, except as required by applicable securities laws. Readers are cautioned not to place undue reliance on forward-looking statements and are encouraged to consult the Company's continuous disclosure filings available under its profile at www.sedarplus.ca for additional risk factors and further information.

SOURCE: Battery X Metals

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Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/713525--Battery-X-Metals-Announces-New-Strategic-Partnership-with-Global-Top-20-University-Building-on-Preliminary-Ad>

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