

X-BATT® builds the first 18650 battery using coal

Could coal be the key to overcoming a critical mineral shortfall?

ORLANDO, FL, UNITED STATES, February 9, 2023 /EINPresswire.com/ -- The need for electric vehicle batteries is booming. And the solution may come from an unexpected source – coal.

[X-BATT®](#) is one step closer to solving this problem with a green solution. The innovative company has combined coal with its proprietary, low-cost, resin-based technology to create industrial-sized 18650 batteries – the same type

of battery used in popular electric vehicles. This latest breakthrough is a 500 percent scale up from where it began with lab-scale, coin cell batteries.

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Instead, we should be looking for a solution to replace materials currently being used and coal should be a part of that discussion,” said [Bill Easter](#), founder of X-BATT® and X-MAT®.

The EV boom is in full swing with sales of electric vehicles increasing from 6.6 million in 2021 to nearly 11 million sold in 2022. It is expected that demand will continue to grow; projections show sales increasing to 20 million in 2025 and then to over 46 million in 2030. The real question is do we have the raw materials required to support this unprecedented growth?



X-BATT 3 Battery



Logo

Graphite, a critical mineral, is in nearly every lithium-ion battery today and not only is it in short

supply but the raw materials and processing are controlled by China. To meet demand, it is projected that 97 new natural graphite mines and 56 new synthetic graphite plants would need to be opened by 2035; representing a 550% and 145% increase respectively.

With graphite making up about 28% of the typical EV battery or about 114lbs per car, the total amount of graphite needed would reach many millions of tons by 2035, and the energy, time and resources required to mine or produce graphite at this scale is astonishing. Based on the results of our research and development funded by the Department of Energy's National Energy Technology Laboratory, we believe that coal can play a major role in mitigating this shortfall and it is already being produced in the volumes that would be required.

This innovation combines raw coal with X-MAT's proprietary, low-cost, resin-based technology to create a new anode material that could supplement or even replace graphite. Over the course of this three-year project the X-BATT team has developed and tested the material in small, research level coin cell batteries and has most recently scaled up production into industrial format 18650 batteries – a type of battery used in many applications from consumer electronics and power tools to popular electric vehicles. This scale up and third party testing has been completed in partnership with the Battery Innovation Center in Newbury, IN and shows that the material is able to be scaled up in large quantities and processed using standard, already available manufacturing equipment and processes.

“The demand for lithium-ion batteries is continuing to increase,” said Easter. “Our coal-based material can meet this demand in an eco-friendlier way and would lead to a domestic source for anode material, helping the U.S. reduce reliance on foreign countries for the critical materials needed to support the growing demand for electrification.”

To learn more about X-BATT®, visit www.x-battinc.com.

About X-BATT®

Established in 2019, X-BATT® focuses on leveraging its patented technology for high-capacity, low-cost, scalable lithium-ion battery components and provides customized, cutting-edge solutions that will allow the renewable energy future to be fully realized. www.x-battinc.com

About X-MAT®

X-MAT®, the Advanced Materials Division of Semplastics, launched in 2013. X-MAT® developed a revolutionary, high-performance material that combines some of the best properties of metals (electrical conductivity), engineering plastics (lightweight) and ceramics (high operating temperature). X-MAT® has had several partnerships including work with NASA, Space Florida and the NETL. X-MAT®'s game-changing material has various current applications including fireproof roof tiles, lightweight space mirrors, battery electrodes and 3D printed ceramics. X-MAT® technology can be custom-engineered to fit many specifications and has unlimited potential market applications. www.x-materials.com

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