

X-BATT unveils Glassact™, a spherical anode technology that more than doubles graphite's capacity

Domestically produced anode spheres targeting >800 mAh/g and a path to safer, higher-energy lithium-ion cells

ORLANDO, FL, UNITED STATES, May 22, 2026 /EINPresswire.com/ -- Silicon-based anodes have long been viewed as one of the most promising ways to

dramatically increase lithium-ion battery capacity, but stability has remained a persistent challenge. X-BATT today unveiled Glassact™, a domestically manufactured silicon oxycarbide (SiOC) anode designed to deliver the high energy capacity associated with silicon batteries in a stable ceramic particle, engineered for safer, higher-energy battery cells that can be produced at scale.



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Glassact™ changes what's possible for silicon-based anodes. It delivers higher energy, better stability, and a path to scalable production that the industry has been working toward for years.”

Bill Easter, CEO of X-BATT

Recognizing the battery industry's history of overpromised battery breakthroughs, X-BATT is publishing its targets up front. Glassact™ performance targets include greater than 800 mAh/g reversible capacity, greater than 8C charge rates retaining more than 80% of its nominal capacity, less than 8% cyclic swelling, and greater than 8,000 cycles at a greater than 80% depth of discharge.

“This is the kind of materials innovation the U.S. battery supply chain has been waiting for,” said Bill Easter, CEO of

X-BATT. “We're developing an anode powder that will more than double the energy of graphite, made domestically, at a cost structure that scales.”

Glassact™ is designed to solve one of the battery industry's biggest problems: how to increase energy capacity without sacrificing stability or safety. X-BATT shapes its proprietary pre-ceramic resin into nearly perfect microspheres with tightly controlled size distribution, then converts them to ceramic at high yield. This eliminates most of the costly back-end powder processing competing materials require.

Inside each sphere, a conductive carbon scaffold supports a glassy ceramic matrix tuned at the nanoscale for lithium storage, all wrapped in a protective outer shell that keeps the electrolyte stable. The structure is formed in low-temperature, short-residence pyrolysis furnaces. The result is high capacity, high conductivity, fast charging and improved stability without the swelling issues that have limited pure-silicon anodes.

As a thermally and chemically stable ceramic, SiOC does not swell during charging. Combined with low surface area and clean spherical morphology, Glassact™ offers more energy with a wider safety margin, valuable for EVs, grid storage, defense and consumer electronics. X-BATT produces the spheres through a scalable emulsion process using feedstocks and equipment already proven in adjacent industries.

“Glassact™ changes what’s possible for silicon-based anodes,” Easter added. “It delivers higher energy, better stability, and a path to scalable production that the industry has been working toward for years.”

To view or download visuals, [click here](#).

About X-BATT

Founded in 2019, X-BATT® pioneers tomorrow's energy-storage materials through curiosity-driven, disruptive R&D. Our mission is to advance energy-storage material science through bold research, innovative materials development, and collaborative partnerships, delivering transformative solutions for a sustainable future. www.x-battinc.com

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