Beyond Battery Recycling:
Sustainable, Engineered Battery Materials

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ASCEND® ELEMENTS

Support from Strategic Partners and Climate Investors:

Over $1.2 Billion Raised in 12 Months

THE WALL STREET JOURNAL.

EXCLUSIVE | FINANCE

Investors Flock to Battery Recyclers in Hunt for Climate Law Winners

The new investments come despite market turbulence for clean-energy startups

Recyclers like Ascend Elements shred old batteries and take in scrap metal, then turn the materials into useful battery components. PHOTO: JOSHUA DUDLEY GREER FOR THE WALL STREET JOURNAL

7% Existing Investors
37% U.S. Dept. Energy
56% New Investors

U.S. DEPARTMENT OF ENERGY
BATTERIES AWARDEE™

Sustainable pCAM and CAM for 750,000 EVs per Year

Building EV Battery Materials Infrastructure

Base 1: Georgia

Opened in 2022

- Processing Capability: >100 Tonnes of batteries a day
- Extracts Lithium Carbonate from Black Mass producing up to 3,000 Tonnes per year
- Low-volume production of pCAM in 2024

Apex 1: Kentucky

Coming in 2024

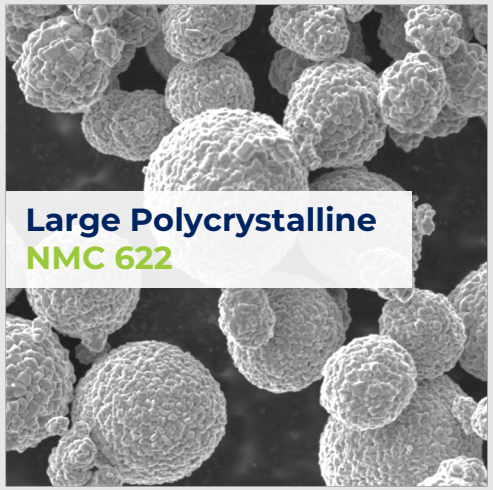
- North America's first commercial-scale pCAM production facility
- 140 Acres, 1 million square feet
- ~ $1B investment
- Additional Lithium extraction capacity

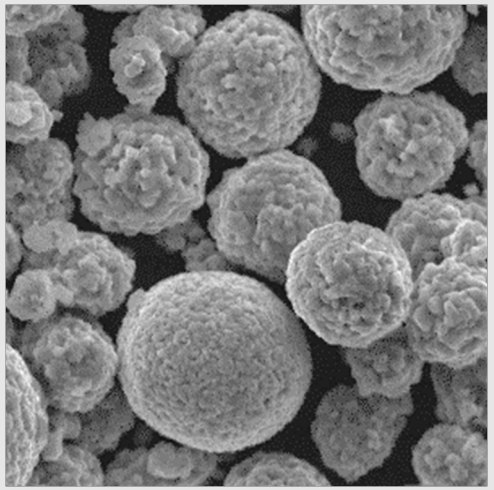
2025 & Beyond: Expansion in North America and Europe

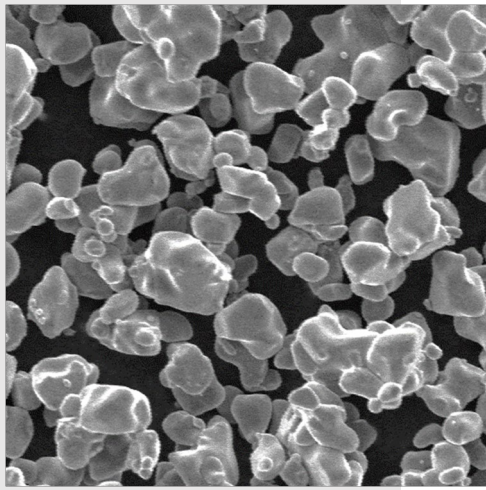
COMMERCIALIZATION OF OUR

Hydro-to-Cathode® Process

"The most **efficient** and **economical** way to return used Li-ion battery materials to the supply chain."







Shredding

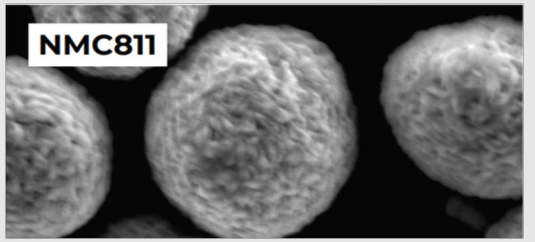
Leaching

Impurity Extraction and Direct Precursor Synthesis

Cathode Production

Core IP

Battery Manufacturing

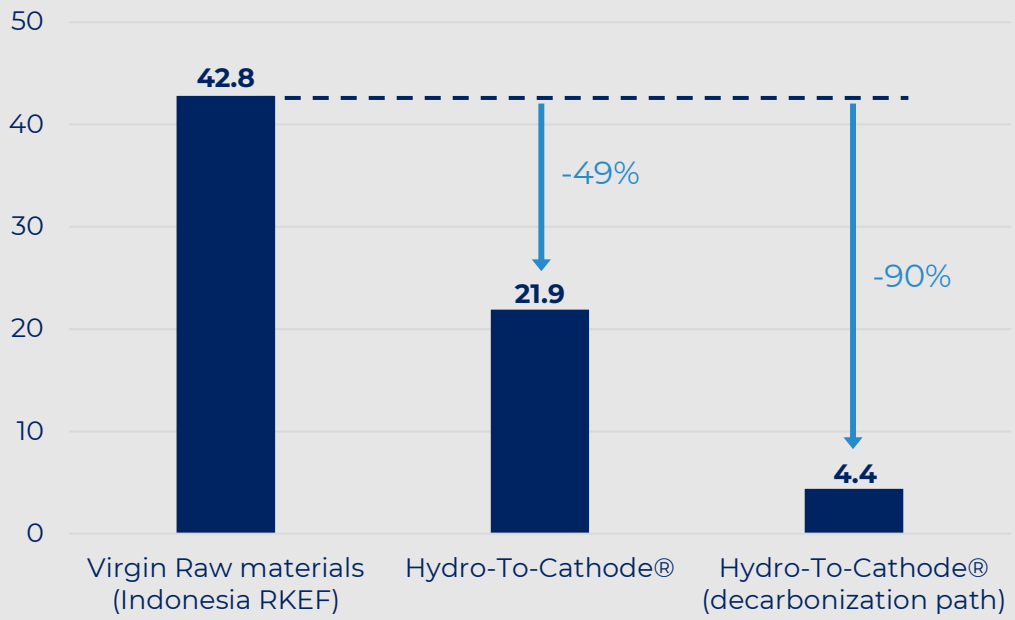


Lower Carbon Emissions

NMC 622 CAM Life Cycle Assessment Results

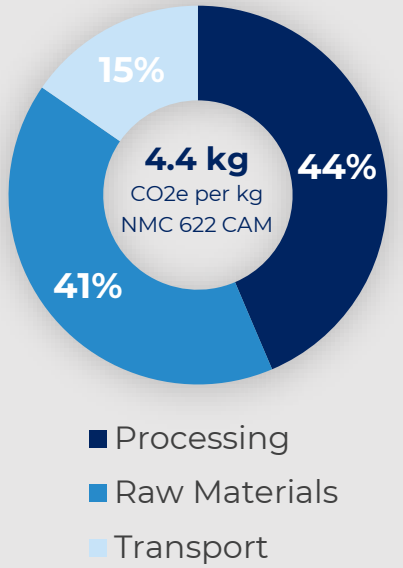
CARBON FOOTPRINT

(kg CO_2e/kg NMC 622 CAM)



DECARBONIZATION PATH:

Carbon footprint of producing **1kg of NMC 622 CAM** using Ascend Elements Hydro-to-Cathode® (HtC) Technology:



UP TO 90% REDUCTION

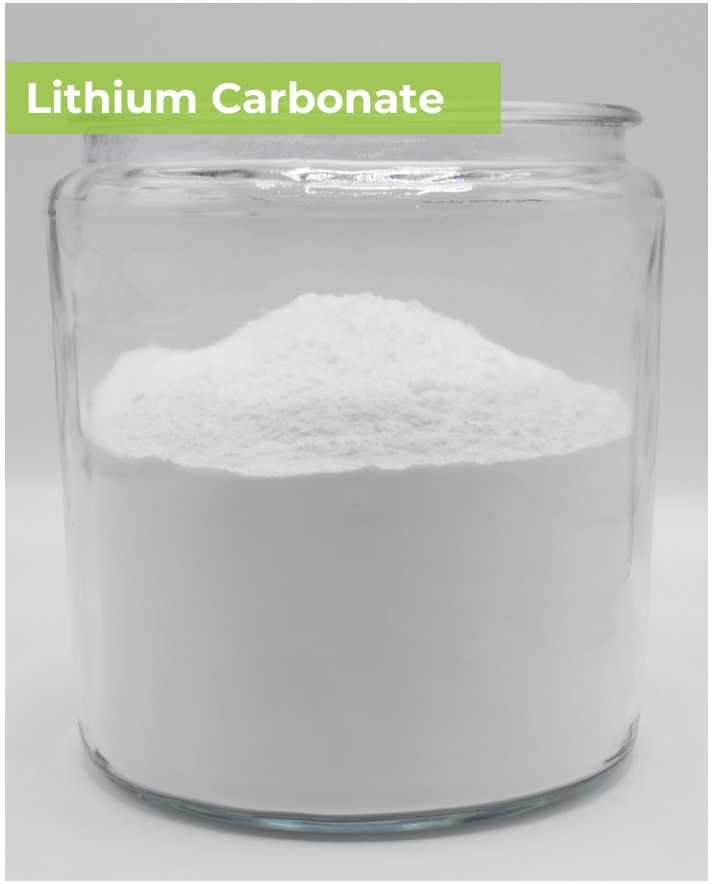
in CO_2 emissions compared to virgin raw material production

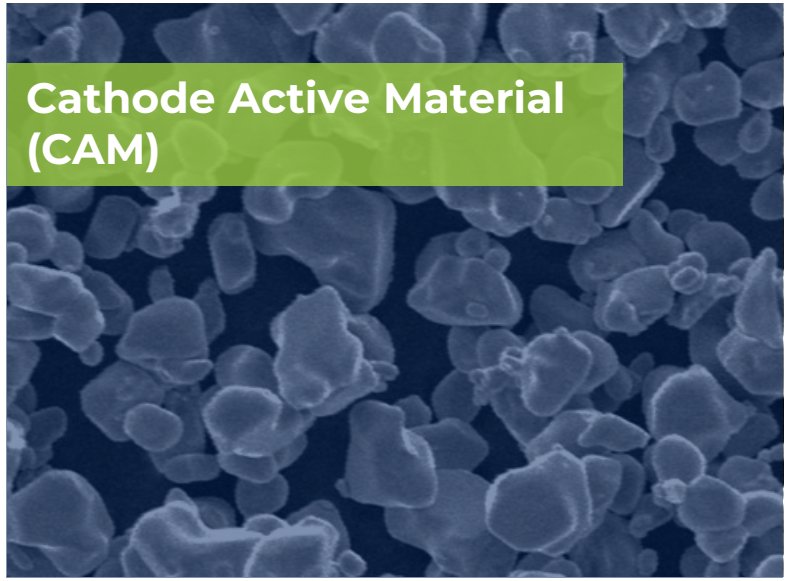
38,400 KG CO_2e AVOIDED

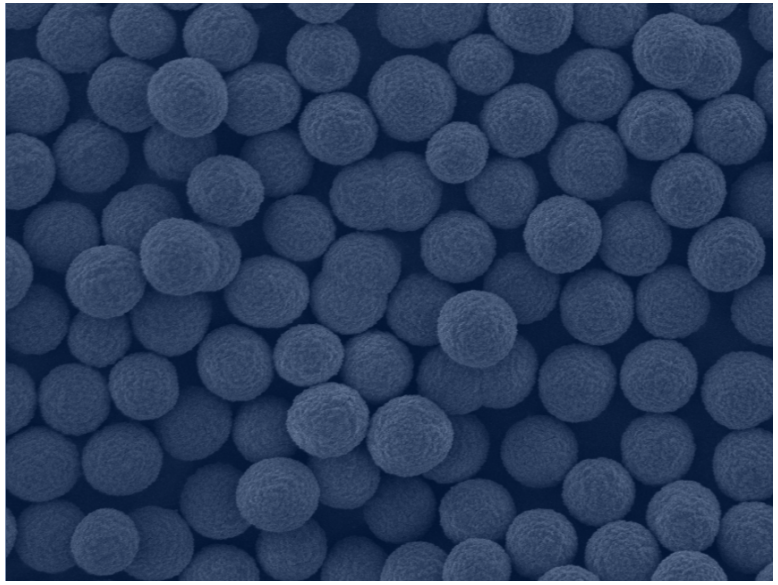
for every one ton of NMC 622 CAM produced by Ascend Elements

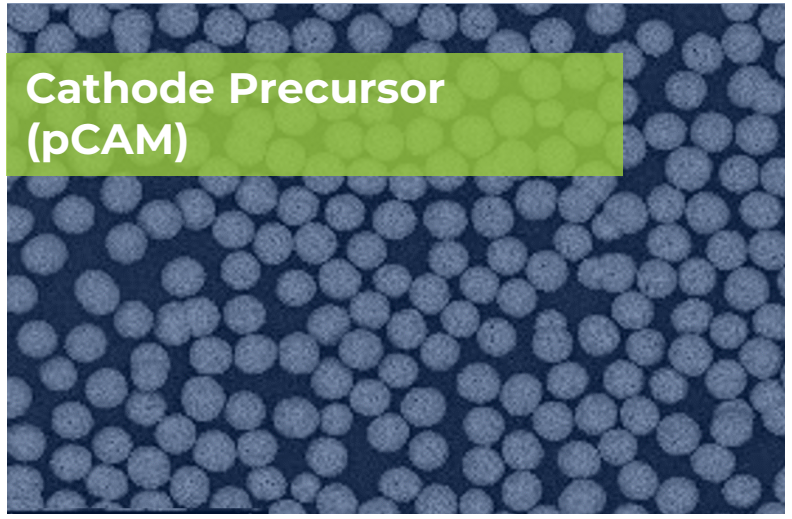
EXPANSIVE PATENT PORTFOLIO

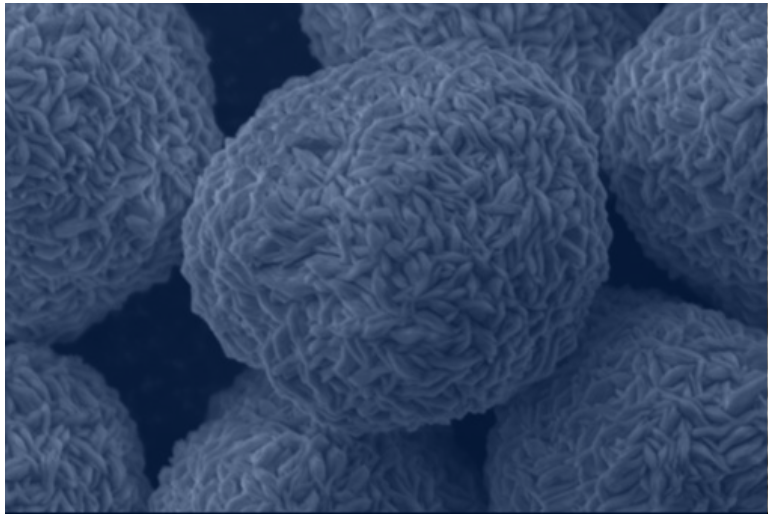
Cutting Edge Battery Materials











PATENTS GRANTED OR PENDING WORLDWIDE **96**


ASCEND
ELEMENTS