



The Future of Li-ion Energy Storage

Available Today



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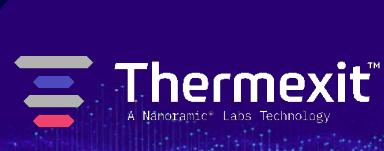
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Market Innovator Since Inception – Well-Positioned to Transform the Energy Storage Market

Grants for Research to Advance Energy Storage Nano-technology



Thermal Interface Materials



2009 - 2015

2016

2017

2018

2019

2020

2021

Founded out
of MIT



FastCap[®]
Ultracapacitors
A Nanoramic[®] Labs Technology

Extreme Environment
• Aerospace & Defense
• Oil & Gas



Designed for aerospace
supercapacitors.
Ready for next-chapter
EV batteries.



Chip Ultracapacitors

HALLIBURTON

FORTISTAR
SUSTAINABLE PERFORMANCE

Nanoramic Laboratories – Business Segments

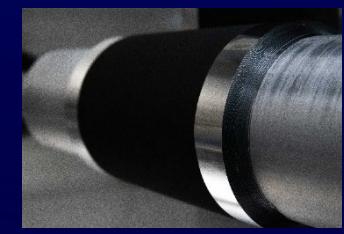


FastCap[®]
Ultracapacitors
A Nanoramic[®] Labs Technology

FastCap[®] Ultracapacitors is an industry leader in harsh environment energy storage, producing the only ultracapacitors capable of operating in temperatures up to 150°C and under conditions of high shock and vibration. FastCap's ultracapacitor technology is derived from years of government funded R&D in advanced materials.



Neocarbonix[™] AT THE CORE[™]
Neocarbonix[™] at the Core is an electrode technology for rechargeable Li-ion batteries, Li-ion capacitors, and supercapacitors. Neocarbonix electrodes are created using a low-cost process with an advanced 3D nanocarbon binding structure. The resulting product provides greater power, energy density, and performance in extreme environments compared to traditional battery designs.



Thermexit[™]
A Nanoramic[®] Labs Technology

Thermexit[™] is a line of high-end thermal interface gap filler pads. Nanoramic's[®] gap fillers are a non-reactive, non-silicon, no cure system featuring high thermal conductivity and high thermal stability. Nanoramic[®] produces 2 novel product lines, a High-Performance TIM Gap Filler and an Electrically Insulating TIM Gap Filler.



Nanoramic Labs manufactures Li-ion cells with **NEOCARBONIX™ at the Core technology**

- The Neocarbonix™ at the Core technology **is applicable to** Li-ion cathode, Si-anode, and Supercapacitor electrodes



Industry Standard Polymer Binders for Cathodes (PVDF)

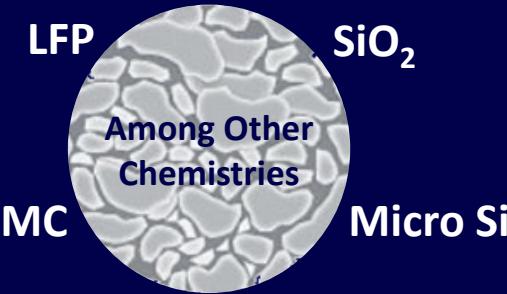
Replaced
With...



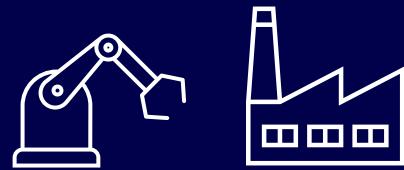
NMP-free, PVDF-free coating process for:

- All cathodes
- Silicon anodes
- High mass loading ($> 6.0 \text{ mAh/cm}^2$)

NEOCARBONIX™ at the Core Value Proposition & Ease of Use – Immediate Applications & Cost Savings for All Li-ion & Solid-State Batteries



Compatible with Any Active Material in Li-ion & Solid-State Batteries

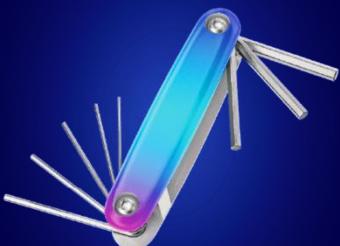


Drop-in Replacement to Existing Manufacturing & Infrastructure

Lower Cost/KWh



Use Same Equipment



Higher Energy Density



Long Cycle Life



Faster Charging



Environmentally Friendly

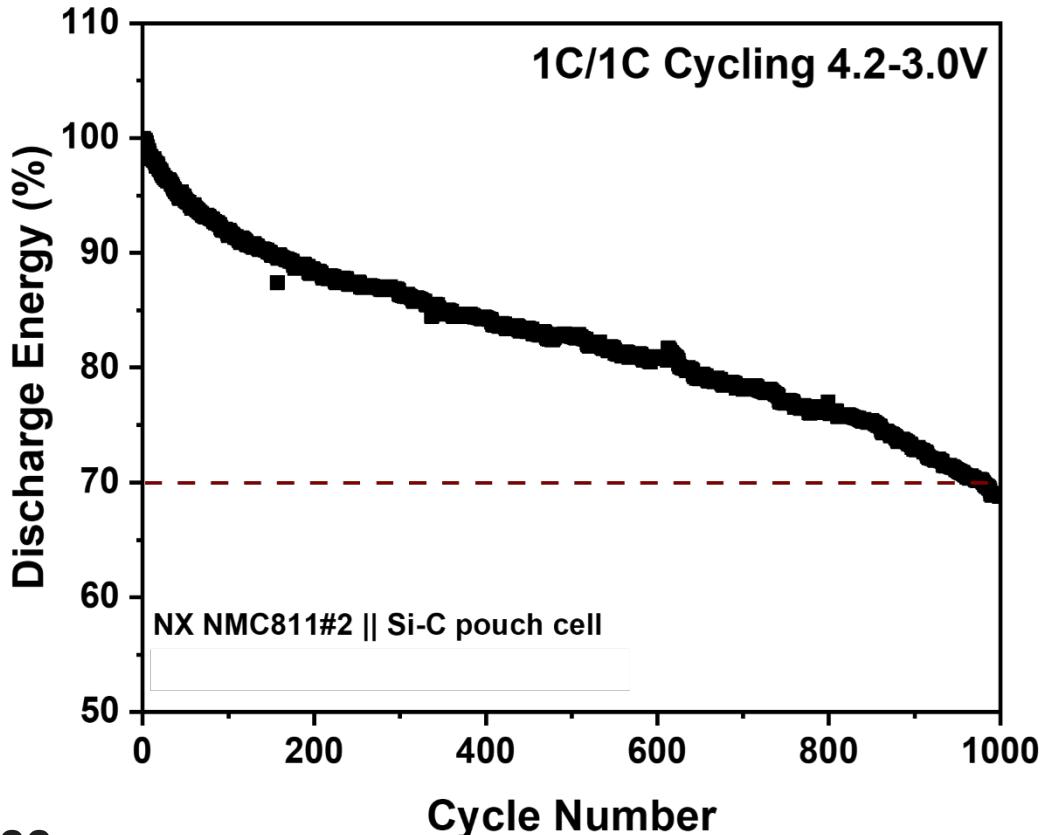


NEOCARBONIX SILICON DOMINANT ANODE – NMC811 || – 9 Ah CELLS

Cell Capacity	Specific Energy	Energy Density
9Ah Cell	≥ 315 Wh/kg	≥ 820 Wh/L



- ≥ 315 Wh/kg, ≥ 820 Wh/L in 9 Ah format cells:
- Less than 8.8% volume expansion from SOC0 to SOC100
- Excellent cycle stability: ~70% at 1000 cycles



Battery Gigafactory - Concept

Nanoramic Laboratories

Will build and operate a US-based Gigafactory

Max \$60MM
Min \$40MM
Equity

North American Customers

Invest to secure high-performance
Li-ion battery supply *Made in the USA*

Min \$40MM
Max \$60MM
Equity

US Government Funding

For expansion to 3GWh via the infrastructure bill
(\$3Bn available for cell manufacturing)

\$100MM
Matching
Grant

1.5 GWh → 3 GWh
Gigafactory in the US

Targeted Facility
Completion: Q4 2023





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