TSXV: GRA
OTCQX: NNXPF

NanoXplore

Performance Through Carbon Chemistry

Investor Presentation

Version 6: April 9, 2021

Forward-Looking Statements

Forward-Looking Statements

This presentation contains express or implied forward-looking statements, which are based on current expectations of management. These statements relate to, among other things, our expectations regarding management's plans, objectives, and strategies. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any projections of financial information; any statements about historical results that may suggest trends for our business and results of operations; any statements of the plans, strategies and objectives of management for future operations, including the timing, funding and construction of planned manufacturing facilities and sales offices; any statements of expectation or belief regarding future events, potential markets or applications, the sizes of addressable markets, expected technology developments, strategic partnerships and collaborations, or enforceability of our intellectual property rights; any statements about the projected or expected economic or other benefits of our products compared to petroleum-derived equivalents, future sales and any statements of assumptions underlying any of the foregoing.

Forward-looking statements are subject to a number of risks, assumptions and uncertainties, many of which involve factors or circumstances that are beyond our control.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the events and circumstances reflected in the forward-looking statements will be achieved or occur and the timing of events and circumstances and actual results could differ materially from those projected in the forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. All such statements speak only as of the date made, and we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

Trademarks

Company Overview

Specialty chemical company founded in 2011 by CEO, Dr. Soroush Nazarpour

Manufacturer and supplier of advanced components and solutions based on proprietary graphene technology

Largest graphene producer in the world

Global company headquartered in Montreal employing 400 people

8 facilities in:

- Canada
- Switzerland
- United States

Serving blue chip customers in important markets

- Transportation: Volvo Truck, Volvo Bus, Paccar, Daimler, Caterpillar
- Renewable energy: Itron ???
- Energy storage:
- Industrial: GE ???

Management

Dr. Soroush Nazarpour, Ph.D
Chief Executive Officer

Expert in the field of graphene. Co-author of “Graphene Technology From Laboratory to Fabrication” (published by Wiley & Co in 2016). Ph.D in Nanotechnology from the University of Barcelona, Spain.

Rocco Marinaccio
Chief Operating Officer

More than 20 years of experience in operations. Previously with Martinrea International Inc. (MRE:TSX).

Luc Veilleux, CPA, CA
Chief Financial Officer

Over 20 years of executive management. Financial and operational experience in manufacturing and mining industries.

Supported by a strong Board of Directors*

*Please refer to slide 23

Share Ownership

Name	% Ownership (basic)
Martinrea International Inc.	23.28%
Fidelity Investments	9.03%
Dr. Soroush Nazarpour, CEO	8.81%
Investissement Québec	8.25%
BDC CleanTech	7.40%
CDPQ	7.13%
	63.90%

As of March 16, 2021

Shares Outstanding
(as at Feb. 24, 2021)

Recent Events

Feb. 2021

Closing of an equity offering

- Net proceeds of $43.2 million mainly used for battery initiative, debt reduction, graphene sales and marketing

Nov. 2020

Purchase order from Martinrea

- Supply graphene for fuel and brake lines for passenger vehicles
- Introduction in early 2021 (provide time period)

Sept. 2020

Acquisition of the assets of Continental Structural Plastics' operations in Newton, North Carolina

- Manufacturer of composite products for heavy trucks and machinery sold to OEMs and distributors in the United States, Canada and South America
- U.S. footprint providing opportunity to expand graphene sales and marketing efforts

July 2020

Completion of new, state-of-the-art graphene plant in Montreal

- Capacity of 4,000 tons/year; currently ramping up production (approx. 30% capacity)
- Significant milestone for NanoXplore and the entire industry

Manufacturing Footprint and Process

Eight facilities in Canada, the United States and Switzerland

New, state-of-the-art graphene facility in Montreal

Natural flake graphite (>100,000 layers of carbon) exfoliated via a mechanical-liquid proprietary process

- Low cost, high volume, highly scalable

Production of very consistent and high-quality graphene in volume

- 6-10 atomic layers in thickness with 96-98% purity

Montreal Graphene Facility Ramp-Up

Capacity of 4,000 tons/year

- Operating at approximately 30% of capacity, as of early March
- Full ramp-up expected by XXX

Fully automated facility

- Managed by Programmable Logic Controllers, ensuring product consistency and highest level of quality assurance

Expansion underway to double capacity to 8,000 tons/year

- Further expansion possible by increments of 4,000 tons/year through complete self-contained modules

Potential redundancy expansion at other facilities

- Bring capacity closer to OEM customers locations

Our Main Product : Graphene

Pure carbon consisting of carbon atoms arranged in a few-layer honeycomb lattice

- Discovered at Manchester University in 2004 (2010 Nobel Prize)

Used in thermoplastic, thermoset and molded products; also available in powder

Greatly improves mechanical properties

Excellent barrier and weatherability to UV, harsh chemicals, water, and gases

Improves thermal and electrical conductivities

Unique electromagnetic properties

Sustainable alternative to other carbon additives

Global market size expected to grow at 39% CAGR between 2020-27 to reach nearly US$3 billion*

* Source: "Graphene Market Size, Share & COVID-19 Impact Analysis, By Product, By End-Use", Fortune Business Insights, August 2020

GRAPHITE

EXFOLIATION

GRAPHENE

Graphene Target Industries

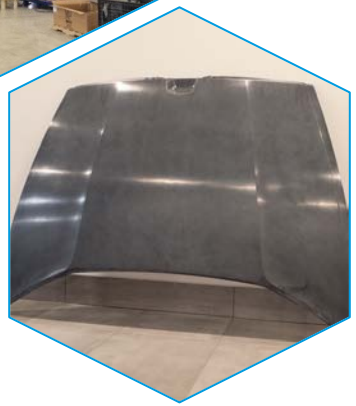
- Transportation & Automotive
- Energy Storage & Batteries
- Electronic Enclosures
- Tires & Rubbers
- Paints & Coatings
- Pipes & Tubes
- Consumer Packaging

Also making great strides into multiple industries and verticals with results exceeding expectation

Applications in Transportation

Technology: Sheet Molding Compound (SMC)

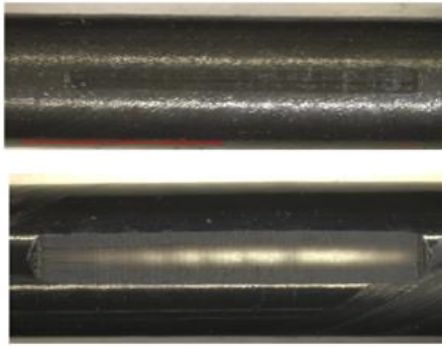
- **Compressive Strength**
- **Light weighting**
- **Processability**
- **UV Resistance**



Light-weight composite hoods made with graphene demonstrate smoother surface finish compared to traditional ones. Graphene also increases the strength and stiffness of the composite hoods, enabling weight reduction for molded parts.

Applications in Transportation

Brake Lines



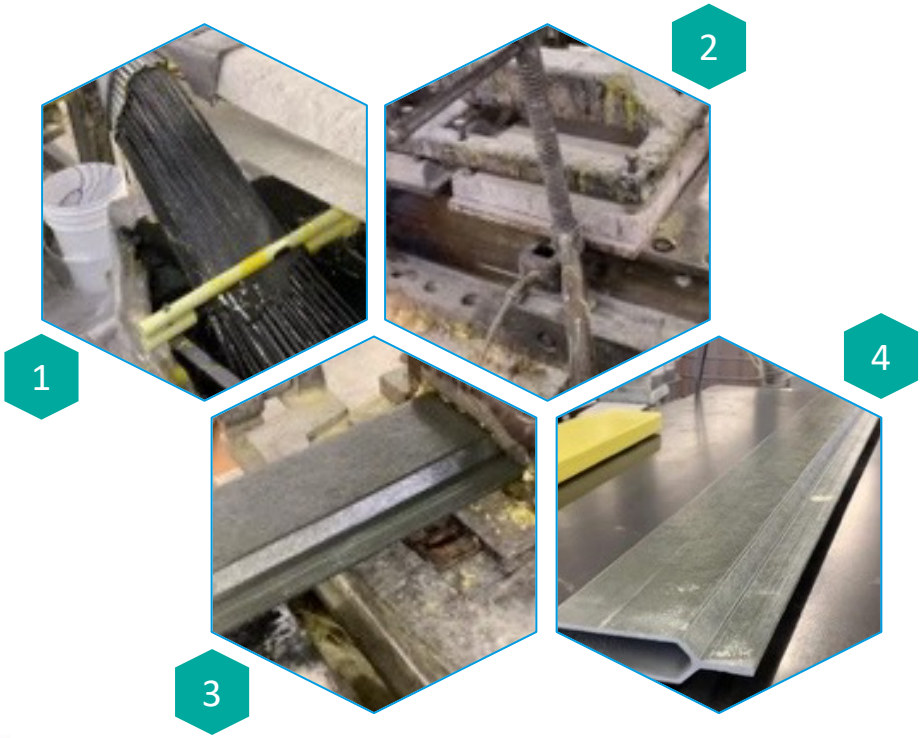
Material	Number of abrasion cycles	Improvement
Nylon/Graphene	>150,000	30X

Abrasion Resistance

Extend Lifetime

Applications in Renewable Energy

Technology: Sheet Molding Compound (SMC)



Windmill Blades

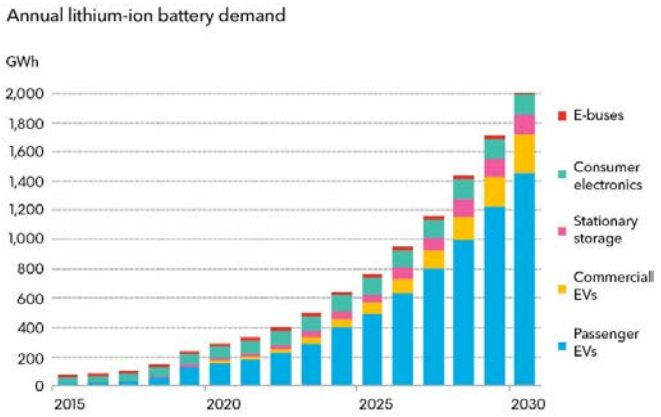
Graphene increases the strength and reduces the weight

Applications in Industrial and Agricultural Flooring

Recyclability

- Flooring parts made with 100% recycled plastics
- Graphene enables the use of recycled polypropylene without any virgin plastic
- Parts are fully recyclable at the end of life

Applications in Lithium-ion Batteries*



https://energycentral.com/c/ec/world-battery-production#:~:text=As%20of%20Dec%202019%2C%20the,40%20million%20EVs%20by%202028.

Additive that extends lifetime

Improves energy density, charge rate, and cycle life

Favourable trends in the battery market

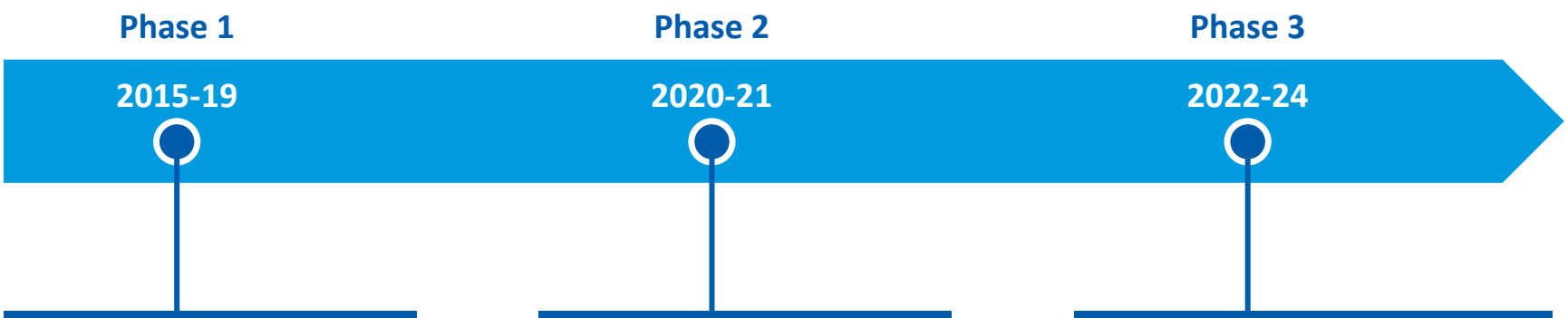
- Move toward larger cylindrical cells
- Nickel rich cathode formulation
- Silicon rich anode formulation

Our graphene battery initiative

- Over five years of R&D, internally and with partners
- Secured a strong IP portfolio for multiple applications
- Add GrapheneBlack™ to current Li-ion chemistries to improve energy capacity and charging speeds
- Applications in electric vehicles, trucks, buses and energy storage systems
- Dedicated R&D lab to support a pilot line for graphene-enhanced anodes and Li-ion batteries
- Low-cost technology enables us to potentially remove spherical graphite from Li-ion battery anodes, eliminating cost bottlenecks for commercial adoption

* Refer to slides 24 to 27 in appendix for further technical details

Execution Strategy in Li-ion Battery Market



Coin Cell Level

- Completed lab testing regarding graphene additive for anodes and cathodes paste
- First patent published
- Obtained funding for pilot lines

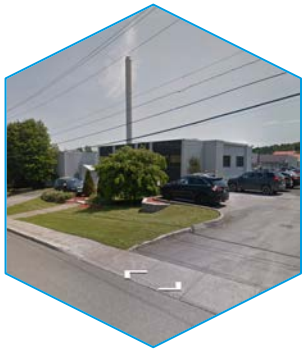
Pilot Line

- Feasibility report started in 2020
- Set up of a pilot line for anode paste
- Customer validation
- Supply chain partnership
- Obtain permits, certifications and standards

Commercial Production Line

- Set up an anode paste manufacturing plant, depending on results from a feasibility study
- Construction, commissioning and start of production

Composite Group



RMC

St-Éphrem-de-Beauce, Québec

- Production of molded plastic and composite parts and assemblies for the transportation, agriculture, and construction sectors
- Three production facilities in Québec; RMC will also integrate the newly-acquired assets of Continental Structural Plastics

Faroex

Gimli, Manitoba

- Manufacturing of critical components for the alternative energy, agriculture, specialty vehicle and commercial transport markets using specialized processes such as pultrusion, resin infusion, reaction injection molding, and structural injection molding

CEBO

Vallorbe, Switzerland

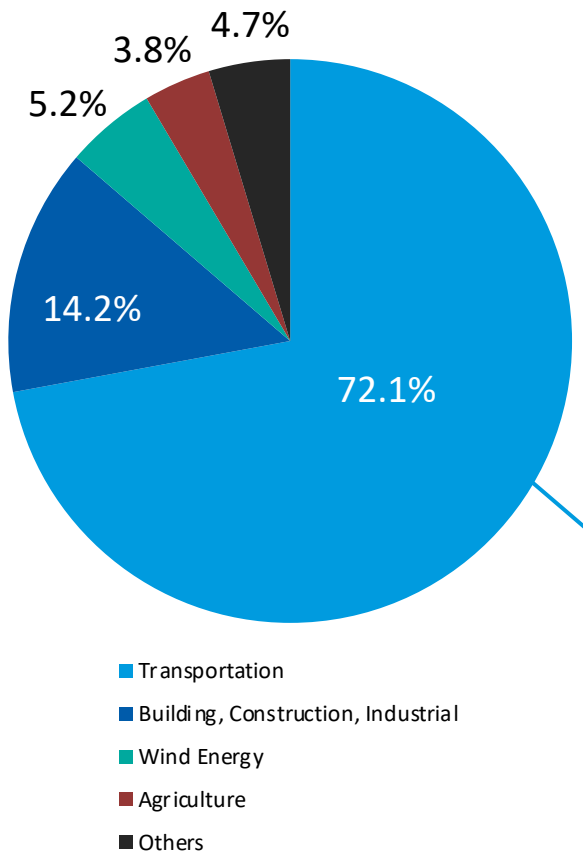
- Precision injection molding of complex parts for highly technical applications in the automotive, medical, electrotechnical, cosmetic, and watchmaking industries

Development of graphene-enhanced products to markets serviced

Solid relationships with large OEM manufacturers

Operating Results

Fiscal 2020 Sales Breakdown



SALES	
Periods ended Dec. 31, 2020	
Three months	$17.5 M
Six months	$33.0 M
Trailing 12 months	$60.5 M

Mainly sales of composite products. Graphene sales were minimal, but will grow with the start-up of the Montreal facility

Financial Position

Cash and cash equivalent of $23.1 million as at Dec. 31, 2020

- Additional net proceeds of $43.2 million from equity issue in February 2021

Pro-forma debt/equity of approximately 0.25

Projected capital expenditure of XXXXX

Analyst Coverage

NATIONAL BANK FINANCIAL MARKETS	Rupert Merer
ECHELON WEALTH PARTNERS	Amr Ezzat
CORMARK SECURITIES INC.	MacMurray Whale
BEACON Securities Limited	Ahmad Shaath
PARADIGM CAPITAL	Marvin Wolff
RAYMOND JAMES®	Michael Glen

Why Invest in NanoXplore?

- Largest graphene powder producer in the world
- Graphene market expected to grow significantly
- New capacity addition addresses significant market potential
- Solid business relationships with large OEM customers
- Provider of sustainable solutions
- Powerful combination of experience with state-of-the-art technology and methodologies to continuously improve products
- Committed to bring the best in class technology and processes to customers at a lower cost without sacrificing quality
- Sound financial position

APPENDIX

Board of Directors

Rob Wildeboer, MBA, LLM, Chairman
Chairman and Co-founder of Martinrea International Inc.

Arinder Mahal, B.Eng. MBA
Founder & CEO, Antera Inc.

Benoit Gascon, CPA, CA, Vice-Chairman
Former President and CEO of Mason Graphite

Jodie Morgan
CEO and Director of GreenMantra

Cameron Harris, Ph.D.
President of CAENG ltd

Nathalie Pilon
Corporate director

Denis Labrecque, B.Eng
President and founder of NorCap Canada Ltd and Groupe Gestion GDL

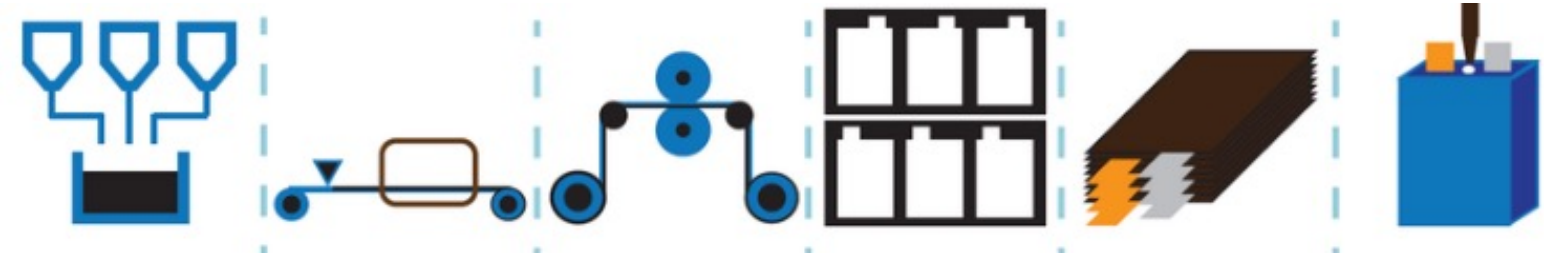
Applications in Li-ion Batteries

Additive in **NMC111 CATHODE**

Material	Discharge Capacity Improvement
Super-P (Carbon Black)	-
Graphene 0X	5%

Active material in **ANODE** (after 70 cycles)

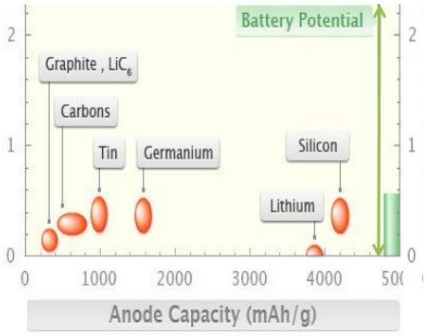
Material	Reversible Capacity
MAGD (synthetic graphite)	340 mAh/g
Graphene 0X	345 mAh/g



Battery cell manufacturing process: https://www.researchgate.net/figure/Manufacturing-steps-of-Li-ion-batteries_fig1_294275605

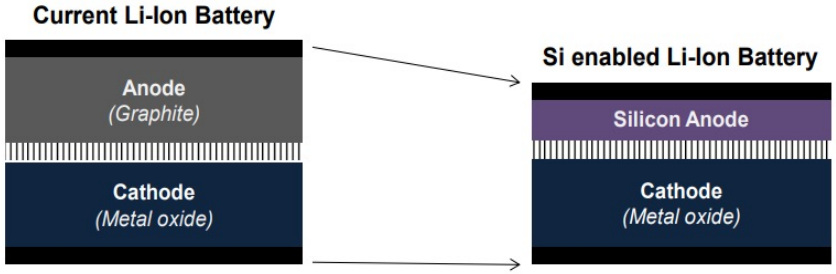
Applications in Li-ion Batteries

	Graphite	Silicon
Intercalation Reaction	Li + 6C ↔ LiC_6	4.4Li + Si ↔ $Li_{4.4}Si$
Potential vs Li/Li^+	0.05 V	0.4 V
Gravimetric Capacity	372 mAh/g	4200 mAh/g



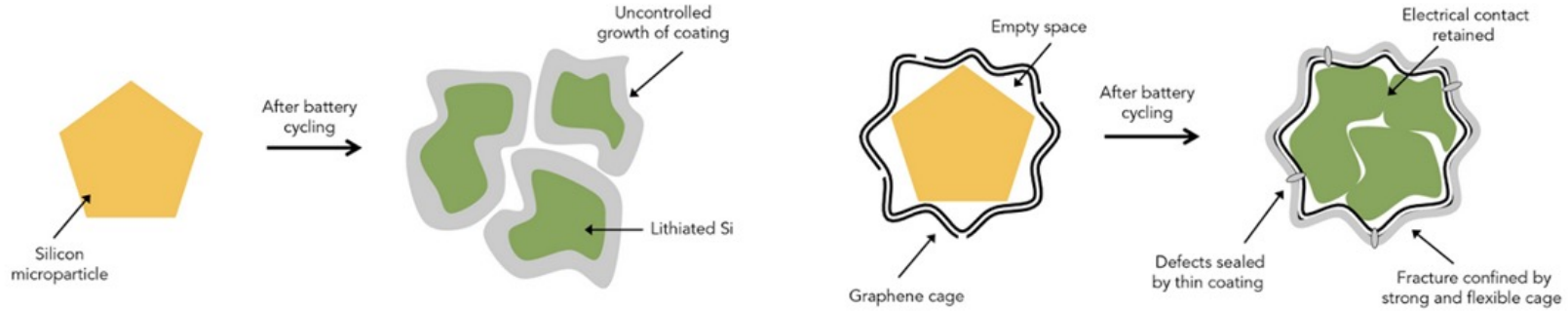
- >10x (theoretical) increase in lithium storage capacity
- Vastly abundant
- Environmentally benign
- Well understood from semiconductor industry

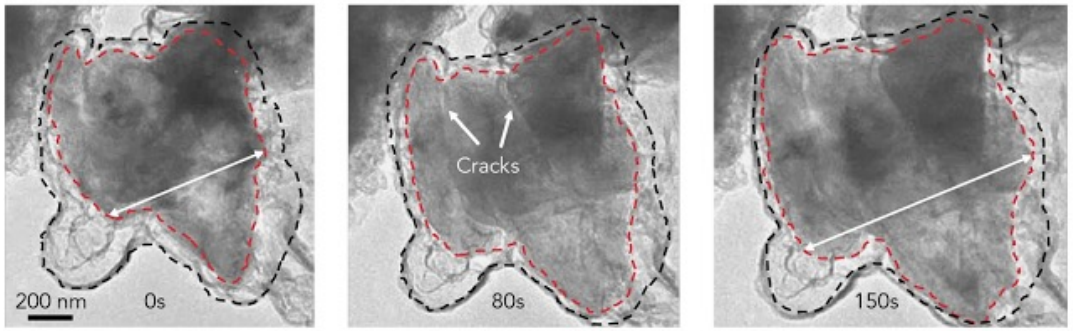
Source: Nexeon.co.uk

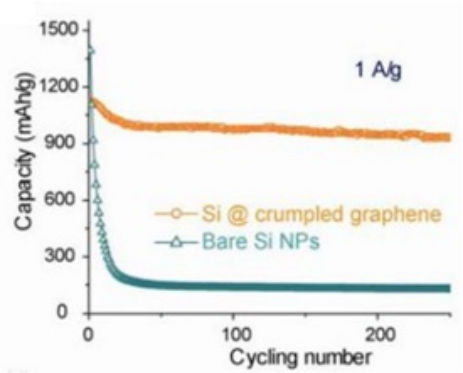


System	mAh/g (AM_{Anode})	mAh/g (AM_{Total})	Capacity Increase
Silicon / NMC	**2000**	**156**	**46%**
Graphite / NMC	370	107	

Applications in Li-ion Batteries







Time-lapse images from an electron microscope show a silicon microparticle expanding and cracking within its graphene cage as lithium ions rush in during battery charging. The cage is outlined in black, and the particle in red. (Y. Li et al., Nature Energy)

Graphene Technical Benefits

- Mechanical Properties
- EMI Shielding & ESD
- Processability
- Extend Lifetime
- Permanent Anti-static
- UV Resistance
- Colorable
- Cost Reduction
- Thermal Dissipation
- Barrier Properties
- Thermal Stability
- Light Weighting
- Abrasion Resistance
- Corrosion Resistance
- Weathering Resistance
- Sound Dampening
- Oxidation Resistance
- Electrical Conductivity
- Moisture Barrier
- Compressive Strength
- Recyclability
- Lubricant
- Improved Cycle Time
- Flame Retardant

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www.nanoxplore.ca

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