

Special Report September 2024

Mayfair, London, UK

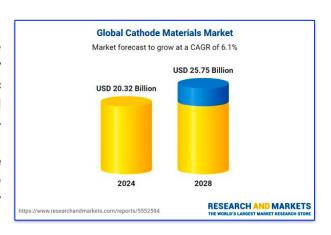
# **Big Battery Business**

# Nano One Materials Corp.

TSX: NANO OTC: NNOMF FSE: LBMB Tokyo: 5713

# Revolutionising the production of cathode-active materials for lithium ion batteries

Focus on GreenTech - The Venture Letter™ has found a company that is revolutionising the production of cathode active materials (CAM) for lithium-ion batteries. CAMs are crucial to electric vehicles (EVs) and renewable energy storage, and are also the most expensive & environmentally-demanding component in lithium ion batteries. CAMs also make up roughly 50% of the cost of the battery in which components including many of the critical minerals are combined to make a battery function.



We are eager to introduce readers to Nano One Materials Corp. listed on the Toronto Stock Exchange (NANO), and its patented, scalable industrial processes aimed to provide a localised, battery supply chain called 'The One-Pot process' greatly needed by EV producers and energy storage firms. This patented process enables the low-cost production of high-performance cathode materials used in lithium-ion batteries.

In a nutshell, Nano One is a cutting-edge, clean technology company that develops cathode production processes that could disrupt international critical mineral supply chains for lithium-

nanoOne

ion batteries. This means that battery materials can be made with fewer steps, less waste and fewer emissions at low-costs, while retaining high-battery performance. This is a big, big time & money-saver for major battery producers, in particular.

Nano One has received three positive analyst

**reports** from major investment firms in Canada in the past two years. NANO is currently trading around the C\$0.75 range (09/24). The Venture Letter<sup>™</sup> feels this stock has the potential for

# Powering the World with Sustainable Battery Materials









**Real-World Impact** 

Reduced Waste

**Streamlined Process** 

**Enhanced Durability** 

Our process reduces greenhouse gas emissions by up to 60% for NMC and up to 50% for LFP cathodes. We use approximately 80% less water in our production process while eliminating 100% of wasteful sulfate by-products.

Our simplified production process enables flexible supply chains plus cuts time, energy consumption, and cost.

Our Next-Gen Cathodes are protected at the nano-level to improve EV battery cycle-life and durability.

significant gains within the next year and beyond. We will do our best to outline in detail why we feel this is possible in the following pages of this **Special Report.** 

The One-Pot process mixes lithium and other raw materials together in a reactor, dries the slurry, and then calcines it in a kiln to produce the final cathode powder. This efficient, scalable approach is compatible with all cathode formations, such as LFP and NMC cathodes.

Nano One has already struck multiple, strategic collaborations and partnerships, including automotive original equipment manufacturers (OEMs) and major strategic, industry supply-chain companies like BASF Chemicals, Sumitomo Metals Mining, Umicore & Rio Tinto Mining.









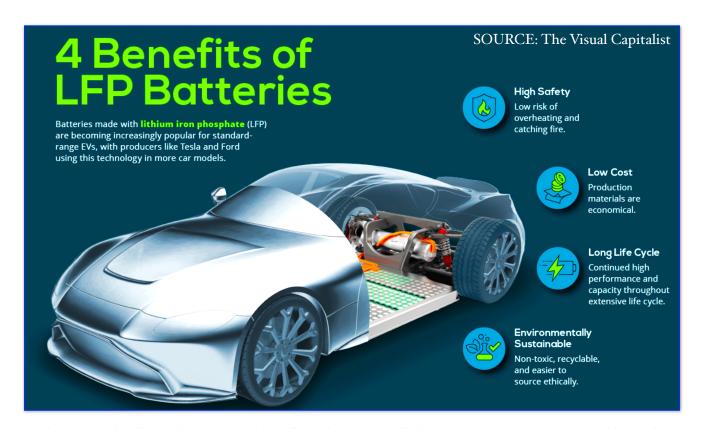
Nano One's technology is applicable to electric vehicles, energy storage, and consumer electronics, reducing costs and carbon intensity while improving environmental impact. Just as an example, on September 24th, 2023 Sumitomo announced it signed a collaboration agreement with Nano One and invested C\$16.9 million as a strategic investment in Nano One.

Most recently, Nano One entered into a Strategic Alliance Agreement & License Agreement with Worley Chemetics (a wholly owned Canadian subsidiary of Worley Limited, a global engineering

leader in sustainability solutions). Under the Strategic Alliance Agreement, Nano One and Worley will jointly develop, market, and deploy One-Pot-Process-enabled cathode plant designs, helping accelerate the deployment of One-Pot process LFP production and other cathode chemistries. Nano One and Worley will jointly develop a



CAM package that incorporates the One-Pot process into a modular process engineering design



package with intellectual property rights, flow sheets, detailed engineering, the operational know-how of both parties, and applicable proprietary equipment. The License Agreement oversees the sale of CAM packages, including necessary cross-licensing of intellectual property, license fees, and remuneration to both parties over a term of up to 20 years.

Nano One is piloting its technology as turn-key production solutions for license, joint venture, plus independent production opportunities, leveraging its talent and technology for emerging markets in North America, Europe, and the Indo-Pacific region. The company is currently in ongoing discussions with multiple industrial, battery-energy-storage, defence, and automotive customers on its lithium iron phosphate (LFP) CAM. Management reports that some of these discussions are progressing towards the licensing NANO's technology in a turn-key facility



that will be 20-40 times more capacity than the Commercial LFP Plant they have in Quebec today. (see image to the left)

#### **NOTE TO READERS:**

Nano One Materials Corp. has received important SDTC funding from the Governments of Canada and British Columbia. This funding provides a great deal of validity to the company's operations.

## Nano One Materials Corp.'s key products and technologies include:

- ✓ One-Pot process: Nano One has developed a patented One-Pot process for the manufacturing of advanced battery cathode materials. This technology simplifies the production process by integrating multiple steps into a single reactor, resulting in cost savings, improved production efficiency, and enhanced product performance.
- ✓ High-Performance Battery Materials: Nano One's technology enables the production of high-performance lithium-ion battery materials, such as lithium nickel manganese cobalt oxide (NMC) and lithium iron phosphate (LFP) which are crucial components of rechargeable batteries used in electric vehicles (EVs), energy storage systems, and other applications. These materials offer longer lifespan and enhanced safety compared to conventional battery materials.
- ✓ Coatings and Additives: Nano One also leverages its expertise in coatings and additives to enhance the performance and stability of lithium-ion battery materials. By developing tailored coatings and additives, Nano One aims to improve battery performance and prolong battery life.
- ✓ Licensing and Partnerships: In addition to its proprietary technology, Nano One offers licensing opportunities to battery and materials manufacturers. Through these partnerships, Nano One collaborates with industry players to further develop and commercialise its technology, expanding its market reach and accelerating the adoption of its innovative battery materials.

#### SIMPLIFY. THEN SCALE.

# Nano One's Innovative Process Solutions



Our patented process innovations unlock efficiencies throughout the process, drastically reducing production time, cost and environmental footprint.

### **Sulfate-Free Inputs**

Our M2CAM® Technology enables sulfate-free metal powder inputs which eliminates 100% of wasteful sodium sulfate by-products while simplifying manufacturing. This innovation also unlocks flexible supply chains for increased security and resiliency.

# Streamlined One-Pot Process

Central to our cathode manufacturing solutions, the One-Pot process simplifies production and enables our M2CAM® technology. Our production methods require less water and consume less energy, reducing operational cost and time while using sustainable, scalable design.

#### **Next-Gen Durable Cathodes**

Our simplified One-Pot process enables cathodes to form simultaneously with their protective coating at the nano level. This eliminates process steps and protects cathodes from degradation, enhancing durability for a longer-lasting lithium-ion battery.

By focusing on technological advancements and collaborative partnerships, Nano One Materials aims to address key challenges in the battery industry and contribute to the development of more efficient and sustainable energy storage solutions.



The One-Pot-enabled CAM package will be marketed, sold, and deployed to a wide range of customers in North America, Europe, the Indo-Pacific, and other regions globally, enabling them to develop competitive CAM production assets to meet emerging market demand in renewable energy storage and electric vehicle sectors. The CAM package is expected to reduce risk and cost, while accelerating the timeline to project certainty and financial investment decision.

# Nano One up to 2023 - Milestones Achieved

In 2023, Nano One successfully reached the **C\$25.0 million mark in non-share-dilutive, Canadian Government grants** from both Federal and Provincials programs. **This significantly validates NANO's technology** and aligns the company strategically with governments' objectives to meet net zero emission targets.

As well, the company announced it has partnered with two global giants, Rio Tinto and Sumitomo, to build a resilient supply chain. Nano One's management team was able to secure a whopping C\$30 million in equity investments into the company. NANO also acquired the only LFP cathode plant from the multinational chemical company Johnson Matthey,



securing the most experienced production team outside of Asia. The NANO team was also successful in fast tracking the commercialisation process for the One-Pot technology. NANO allowed full, commercial-scale materials to be made at the tonne level, sending this out to partners for evaluation with the goal of entering new, off-take agreements.

Additionally, in 2023 & 2024 Nano One reported its progress and financial results, providing updates on its achievements and outlining its key objectives for future growth. These milestones align with Nano One Materials' continuous efforts to advance its proprietary technology for the low-cost production of high-performance lithium-ion battery materials, positioning the company as a significant player in the clean technology and energy storage industries.

# Nano One 2024 - Further Progress Anticipated

In 2024 and into 2025, Nano One's LFP optimisation and product validation work will continue for the purposes of:

- ★ Generating product sales and first revenues, and expanding capacity, up to 1,000 to 2,000 tonnes per annum (tpa), at the Company's existing facilities in Candiac, Quebec;
- ★ Securing larger volume customer off-takes in support of the current 25,000 tpa LFP plant development project;
- ★ Forming the feasibility study (FEL 3) currently underway and financial investment decisions for the 25,000 tpa LFP project; and
- ★ Developing, marketing, licensing, and deploying of One-Pot-enabled LFP CAM packages (engineering process-design packages) in alliance with Worley.

# Competition? Not really... Nano One's competitors *are its target clients*.

The move to create localised supply chains that decouple from China are being backed by Western governments in the forms of tariffs on Chinese products. This significantly limits Foreign Entities of Concern (FEOC) from participating in projects and **ongoing government incentives for domestic companies is setting the stage for Nano One**. In terms of market positioning, Nano One is positioned as a technology and innovation-driven company that **collaborates with industry partners** to advance the development and commercialisation of its battery material technologies.



The company's strategic partnerships and collaborations with key industry players strengthen its position in the market, and provide opportunities for market penetration and growth. With a business model like this, we feel this company is very unique.

# Nano One Materials Corp.

### - KEY POINTS TO CONSIDER -

- ✓ Process technology company tackling issues for global energy transition: cost reduction, performance enhancement, eliminating sulphate waste, and reducing water usage - all significant hurdles for scaling lithium-ion batteries sustainably & getting projects permitted;
- ✓ North America's only producing LFP cathode plant and the most experienced LFP production team outside of Asia in the world;
- ✓ Management reports a current treasury of just over C\$20 million;
- ✓ Key partners that provide great validity to NANO:
- ✓ Rio Tinto: One of the world's largest mining companies took 5% equity stake
  and key partner for Iron supply which is IRA compliant
- ✓ Sumitomo Metal Mining: 450 yr old Japanese fully integrated cathode producer took 5% equity stake and key partner for LFP for Asia and North America
- ✓ Worley: \$9B Engineering firm partnering and marketing CAM Packages to global network
- ✓ BASF: JDA to produce BASF proprietary materials using Nano One process to reduce costs and lower the environmental impact
- ✓ Umicore: JDA to produce Umicore's proprietary materials using Nano One process to reduce costs and lower the environmental impact
- ✓ De-risked technology Q3 2023 by producing samples in full commercial scale equipment;
- ✓ Sending samples to global partners for evaluation and validation of materials for entering into an offtake agreement for LFP CAM - NOTE: First Revenues
- ✓ Converting existing LFP plant to the One-Pot process and targets 1000-2000 tonnes per year (tpa) production to support initial off-takes.
- ✓ Planning 25,000 tpa with room to expand for first commercial plant to support large off-take.
- ✓ Over C\$25 million in government grants to date and many more applications in to support commercial next steps.
- ✓ Government mandated transition supported by OEM's globally and growing Energy Storage Solutions for power on grids.
- ✓ Forty (40) issued patents globally with fifty-five more pending (55+).
- Business model is self-production, joint ventures and licensing for growth.

The Venture Letter™ feels that, at its current trading levels (06/24), Nano One Materials Corp. presents an opportunity for venture investors to seriously consider (TSX: NANO).

We feel there is significant room for improvement in the company's market capitalisation in the near and long term.

# **NANO Market Commentary**

The trading in (TSX: NANO) has seen downward pressure on the company's per share value since the fall of last year. This does, however, present an attractive entry-point with considerable upside potential. This is especially considering the current stage of the business' development & monumental growth potential on offer.



# Nano One Materials' Team of Experts is Second to None.

As we have stated multiple times in multiple editions of The Venture Letter™, *professional investors bet on people more than anything*. Nano One Materials Corp. has a management team, board of directors and top clinical advisory board fully capable of delivering short, medium & long-term growth/value to company shareholders.





# A Powerhouse Team Building A Powerhouse Company

#### Dan Blondal - Founder & Chief Executive Officer

Mr. Blondal is the Founder of Nano One Materials Corp. and has been the company's Chief Executive Officer (CEO) since 2015. He previously served as the CEO of Perfect Lithium Corp. from 2014 until 2015 and Co-CEO since 2011. Mr. Blondal's prior experiences include various positions within Fluor, Andronic Devices, Creo, Kodak and General Fusion including Engineer, Project Engineer, Product Manager, and Technology Manager. He earned his B.A.Sc in Mechanical Engineering from the University of British Columbia.

#### **Carlo Valente - Chief Financial Officer**

Mr. Valente, CA, CPA, has served as the Chief Financial Officer (CFO) of Nano One since January 2024. **He previously served as CFO for six companies**, including Andion Global Inc from 2020 until 2024. Mr. Valente is a Chartered Accountant and served as a Managing Director at Price Waterhouse Coopers and graduated from Simon Fraser University in 1997 with a Bachelor of Business Administration.

### **Alex Holmes - Chief Operating Officer**

COO since 2021, Mr. Holmes, M.Sc., CFA has also served as a **Director of VRIFY Technologies Inc.** since 2017. Mr. Holmes served as a **Director of Plateau Energy Metals** from 2018 until 2021.

He is the Founder of CROAM Capital Corp., a Vancouver based business advisory firm established in 2016. He was a Partner and Co-Founder of **Oxygen Capital Corp.** Mr. Holmes holds an M.Sc in Investment Management from Cass Business School.

# **Denis Geoffroy - Chief Commercialization Officer**

Mr. Geoffroy has served as the Chief Commercialization Officer of Nano One since 2022. He previously served in various capacities including as Technical Director and Chief Operating Officer and was an early contributor to the start-up of the



**LFP cathode material industry at Phostech Lithium**. He also worked at Argo-Tech Productions; a Hydro-Québec subsidiary responsible for **developing the first commercial version of solid-state lithium batteries**. Mr. Geoffroy has earned his bachelor's and master's degrees in chemical engineering from Laval University.

### Paul Matysek, Chairman

Mr. Matysek has served as the Executive Chairman of Nano One since 2015. He is a seasoned professional with experience serving as Executive Chairman at Lithium X Energy Corp. from 2015 until 2018, Executive Chairman at Freeman Gold Corp. since 2021, and Chairman of First Cobalt Corp. from 2017 until 2019. He is the Co-Founder of Canadian Nexus Team Ventures Corp. Previously, Mr. Matysek served as Director, President, and CEO of Goldrock Mines Corp. since 2012 until 2016. He holds a Master of Science degree in Geology.

### **Gordon Kukec, Director**

Mr. Kukec has served as a Director at Nano One since 2021. He had previously served as a Director at British Columbia Ferry Services from 2014 until 2022, and currently serves as the Director of Intelligent City. He holds a Bachelor of Arts in Economics from the University of Calgary and a Master of Business Administration from Queen's University. Mr. Kukec is certified in Cybersecurity and Governance of Enterprise Information Technology (CGEIT) from the Information Systems Audit and Control Association (ISACA), Sustainable Energy Management from BCIT and is a holder of the Institute of Corporate Directors' designation.

#### **Carla Matheson, Director**

Ms. Matheson brings over 10-years of experience in a variety of public and private industries, specializing in business development, merges and acquisitions, and financial reporting. She is currently the CFO of Plank Ventures Ltd. Prior to this, she was CFO of Tiny Capital. In both roles, Ms. Matheson held multiple ascending roles overseeing early-stage-start-up companies that are seeking funding for rapid expansion, onboarding new acquisitions, and developing financial and operational processes. She is a CPA & a CA.



### Dr. Joseph Guy, Director

Dr. Guy has served as a Director at Nano One since 2015. He previously worked at E.I. duPont de Nemours & Co. conducting research in medical imaging technologies. Dr. Guy has been a Patent Agent since 1992 with expertise in patents from prosecuting over 1000 U.S. and foreign patent applications with over 300 issued U.S. patents. He was awarded a Ph.D. in Chemistry from the University of Wisconsin-Milwaukee in physical inorganic chemistry with a focus on organometallic complexes.

#### Lisa Skakun, Director

Ms. Skakun is a lawyer and executive with **over 20-years of experience** in a variety of private and public industries. She is currently the Chief Legal, Regulatory and Corporate Affairs Office of **Coast Capital Savings Federal Credit Union**. She received her LLB from the University of British Columbia, holds a Masters of Laws degree from Osgoode Hall Law School at York University, and

the ICD.D designation from the Institute of Corporate Directors. Lisa is the recipient of the Lexpert Zenith Award: Celebrating Women in Law, the Association of Women in Finance's PEAK award for Rising Star, and the National Post Award for Tomorrow's Leader at the Western Canada General Counsel Awards and has been named to Canada's Diversity 50 list by the Canadian Board Diversity Council. Previously, she was the Board Chair of Kwantlen Polytechnic University, a past board member of the Cause We Care Foundation, a previous Chair of the BC Business Law Section of the Canadian Bar Association, and was also a member of the Securities Law Advisory Committee for the British Columbia Securities Commission.

# Final Thoughts from The Venture Letter™

Nano One Materials Corp. (TSX: NANO / OTC: NNO / FSE: LBMB) stands as a leading innovator in the rapidly growing lithium-ion battery market. Their distinctive technology, strategic partnerships, and strong financial position set the company up them for continued success and growth. With a clear vision for the future and a commitment to sustainability, Nano One is an appealing investment opportunity for investors seeking exposure to the dynamic energy storage industry. As seen on the Nano One website, many professional investment analysts are **supporters** of the company and its pursuits:



#### **TD Securities**







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Nano One Materials' innovative One-Pot process positions the company to become a leading provider of high-performance cathode materials for the lithium-ion battery industry. The company's established partnerships with industry leaders and increasing revenue show great promise for future growth prospects. As the demand for lithium-ion batteries continues to rise, Nano One is well-positioned to take advantage of the market opportunity with its innovative technology.

As well, the company has already commenced its 2024/25 market awareness campaign to introduce interested, new retail and institutional investors to its stock. With a soon fast-growing investor audience in North America and Europe anticipated, Nano One Materials Corp. should soon realise maximised shareholder value along with even greater liquidity.

The Venture Letter™ will be providing follow-up reports on Nano One in the weeks ahead as further news and updates are released from the company. We are excited to watch this game changing, clean technology company as it advances in its business efforts. For more



information on **Nano One Materials Corp.**, we encourage you to visit the company's corporate website at <a href="www.nanoone.ca">www.nanoone.ca</a>. Contact the company via phone at +1 (604) 420-2041, or email at <a href="mailto:info@nanoone.ca">info@nanoone.ca</a> with any questions.

Good luck and good hunting.



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Director, Capital Markets of Nano One Materials Corp., Mr. Paul Guedes has reviewed and approved the information contained in this report.