

Nano One Enters into a Co-Development Agreement with Niobium Producer CBMM

written by Raj Shah | May 6, 2021

May 6, 2021 ([Source](#)) – **Nano One® Materials Corp. (TSXV: NN0)**
(OTC Pink: NNOMF) (FSE: LBMB)

- Nano One to co-develop niobium coated battery cathode materials with CBMM.
- CBMM is the global leader in the production and commercialization of niobium products and technologies.
- The project will build on CBMM's niobium products and technologies, and on Nano One's successful demonstration and patenting of niobium coated cathode materials.
- Niobium coatings protect the cathode from dissolution or undesired interfacial reactions with liquid or solid electrolytes, enhancing long-term cycling stability.
- Nano One's One-Pot process eliminates extra steps and costs, by forming the niobium coating simultaneously with the underlying cathode material.

Nano One® Materials Corp. ("[Nano One](#)") is a clean technology company with a patented low carbon intensity process for the production of low cost, high-performance cathode materials used in lithium-ion batteries. Nano One announced today that it has entered into an advanced lithium-ion battery cathode materials coating development agreement with CBMM, the global leader in the production and commercialization of niobium products and technologies. The objective of the agreement is to optimize Nano One's patented One-Pot process for nickel rich cathode materials using niobium from CBMM as a coating. Project details and financial contributions are confidential.

“Nano One has successfully demonstrated the use of niobium as a coating for various cathode materials and has several related patents now granted and pending,” said Nano One CTO Dr. Stephen Campbell. “Our One-Pot process enables us to form coatings simultaneously with the underlying cathode material. This avoids extra steps and costs while enabling individual nanocrystals, also known as single crystals, to be coated for increased durability. With the support and partnership of CBMM, we will build on these successes and optimize our One-Pot process for the production of niobium coated nickel rich cathode materials for demanding applications such as electric vehicles.”

Niobium is a key element in the advancement of lithium-ion battery cathode materials as it can be made to form a coating on the outer surface of each grain of a cathode powder. As a coating, niobium protects the highly reactive cathode from deleterious side reactions that can cause rapid degradation in high performance batteries while preventing the growth of interfacial resistance during battery cycling. Nano One’s lithium niobate coating is a form of non-flammable ceramic solid state electrolyte that allows lithium ions to pass through it and into the cathode material during discharge whilst protecting the cathode from side reactions.

Nano One’s coated nanocrystals have been proven to significantly increase the durability of cathode active materials in lithium-ion batteries, as most recently announced on January 16 and June 24 2020. The ability to coat without additional steps keeps costs down and is unique to the patented Nano One process.

Nano One CEO Mr. Dan Blondal said, *“CBMM has an impressive track record in niobium technology and business development, and we believe that upstream collaborations, such as this, add to our differentiation and offer strategic value to downstream partners as we progress towards the adoption and commercial application*

of our technologies.”

CBMM’s Executive Manager for Battery Products Rogério Ribas says that, *“CBMM is encouraged by Nano One’s ground-breaking innovations and capabilities, and we look forward to demonstrating the stability that niobium brings to high-energy lithium-ion batteries and fostering a lasting and collaborative working relationship with Nano One.”*

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About Nano One:

Nano One Materials Corp (“Nano One”) is a clean technology company with a patented, scalable and low carbon intensity industrial process for the low-cost production of high-performance lithium-ion battery cathode materials used in electric vehicles, energy storage, consumer electronics and next generation batteries in the global push for a zero-emission future. Nano One’s One-Pot process and its Metal to Cathode Active Material (M2CAM) technologies address fundamental supply chain constraints while reducing costs and carbon footprint. Nano One has received funding from various government programs and the current “Scaling of Advanced Battery Materials Project” is supported by Sustainable Development Technology Canada (SDTC) and the Innovative Clean Energy (ICE) Fund of the Province of British Columbia. For more information, please visit www.nanoone.ca

About CBMM

World leader in the production and commercialization of Niobium products, CBMM has customers in over 40 countries. With headquarters in Brazil and offices and subsidiaries in China, Netherlands, Singapore, Switzerland and the United States, the company supplies products and technology to the infrastructure,

mobility, aerospace and energy sectors. CBMM was founded in 1955 in Araxá, Minas Gerais, and relies on a strong technology program to increase Niobium applications, growing and diversifying this market.

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