

# Nano One's New Cathode Materials Aim to Make Batteries Safer and Longer Lasting



August 21, 2019 ([Source](#)) – Dr. Stephen Campbell, Chief Technology Officer at Nano One™ Materials Corp. (TSXV: NNO) (OTC Pink: NNOMF) (FSE: LBMB) is pleased to provide an update on Nano One's latest

lithium nickel manganese cobalt (NMC) innovations and how they are aimed at making high energy lithium ion batteries safer and more durable.

*Dr. Campbell explains, "Nano One's latest innovations provide added durability and safety to NMC cathodes by protecting them from the stresses of repeated charging and from undesirable side-reactions. We are able to form protective coatings on individual particles and this is clearly differentiated from others who are developing coatings on larger clusters of particles. The stresses of repeated charging cause large coated clusters to break apart, leaving individual particles on the inside exposed to side reactions. By protecting the individual particle, Nano One is engineering new materials for increased durability and safety. Our technology is particularly relevant to high energy nickel-rich NMC batteries because it provides added protection."*

The automotive battery industry is actively pursuing higher nickel content in lithium ion batteries, because it can boost energy density and thereby extend vehicle range while reducing the cobalt content and its inherent supply chain risk. However, this comes with increased risk to stability,

durability and safety. By protecting each nanoparticle rather than larger clusters, Nano One's technology is aimed at mitigating these risks.

Nano One's latest process innovations make NMC materials with a protective coating in fewer steps and form individual nanoparticles that are designed to resist cracking and withstand the rigors of repeated charging. Nano One is able to control the formation of its patented NMC materials using innovative manufacturing technologies, which are themselves protected by patents in the US, Canada, Taiwan, China, Japan and Korea.

These innovations and advantages are explained in a short animation posted on Nano One's website at <https://nanoone.ca/nanoonenmcanimationaug2019/>.

*Dr. Campbell said, "These are novel materials and coatings that have the potential to enable stable, low cost, fast charging and energy dense cathodes ideal for electric vehicles and other high energy density applications. These innovations differentiate Nano One and add considerable value to the development activities we now have underway with our automotive and battery materials partners."*

**Nano One Materials Corp.**

**Dan Blondal, CEO**

**About Nano One**

Nano One Materials Corp has developed patented technology for the low-cost production of high performance lithium ion battery cathode materials used in electric vehicles, energy storage and consumer electronics. The processing technology enables lower cost feedstocks, simplifies production and advances performance for a wide range of cathode materials. Nano One has built a demonstration pilot plant and is partnering with global leaders in the lithium ion battery

supply chain, including Pulead, Volkswagen and Saint-Gobain to advance its lithium iron phosphate battery (LFP), lithium nickel manganese cobalt (NMC) and lithium manganese nickel (LMN) cathode technologies for large growth opportunities in e-mobility and renewable energy storage applications.

Nano One's pilot and partnership activities are being funded with the assistance and support of the Government of Canada through Sustainable Development Technology Canada (SDTC) and the Automotive Supplier Innovation Program (ASIP) a program of Innovation, Science and Economic Development Canada (ISED). Nano One also receives financial support from the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP). Nano One's mission is to establish its patented technology as a leading platform for the global production of a new generation of battery materials. [www.nanoone.ca](http://www.nanoone.ca)

*Certain information contained herein may constitute "forward-looking information" under Canadian securities legislation. Forward-looking information includes, but is not limited to, the execution of the plans of Nano One Materials Corp ("the Company") which are contingent on the receipt of grant monies and the commercialization of the Company's technology and patents. Generally, forward-looking information can be identified by the use of forward-looking terminology such as 'believe', 'expect', 'anticipate', 'plan', 'intend', 'continue', 'estimate', 'may', 'will', 'should', 'ongoing', or variations of such words and phrases or statements that certain actions, events or results "will" occur. Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking statements or forward-looking information,*

*including: the ability of the Company to obtain additional financing; including the receipt of grant monies from SDTC, ASIP, NRC-IRAP and the receipt of all necessary regulatory approvals. Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements or forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements and forward-looking information. The Company does not undertake to update any forward-looking statements or forward-looking information that is incorporated by reference herein, except as required by applicable securities laws.*

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