

# PALOS

## CONTENTS

## Weekly Commentary

Issue No. 24 | JUNE 13, 2022

Nano One Materials Corp.	1
Palos Funds vs. Benchmarks (Total Returns)	3
Disclaimer & Contacts	4

*By Charles Marleau CIM<sup>®</sup> and William Mitchell CIM<sup>®</sup>*

## Nano One Materials Corp.

**Nano One Materials Corp.** (NANO: TSX) is a Canadian clean technology company with patented processes for producing **cathode active materials** (CAM) which are essential to produce Lithium-ion (Li-ion) batteries. These batteries are used in electric vehicles (EV), power storage systems and consumer electronics. CAMs are an important ingredient in the manufacturing of Li-ion batteries. Depending on the requirements and intended application for a battery, CAM chemistries can be comprised of a combination of metals including lithium, cobalt, nickel, manganese and iron.

Nano One's proprietary technologies include over twenty patents and thirty-five patents pending. At the forefront is the company's **One-Pot Process** which is a revolutionary manufacturing process for producing CAMs for use in nickel-manganese-cobalt oxide (NMC), lithium-iron-phosphate (LFP), and lithium-nickel-manganese (LNMO) batteries. The One-Pot Process allows CAMs to be manufactured in a single step and without the use of sulphates. The advantages include lower costs (fewer steps), reduced complexity and a lowered environmental impact.

For the batteries themselves, each technology has its advantages. Generally, NMC batteries perform better in colder temperatures and have higher density than LFP while LFP offers greater longevity, less toxicity, improved safety and lower cost given that iron is much more abundant than cobalt. LMNO technology uses manganese, which is also abundant and stable, but these batteries have a reduced cycle. Both LFP and LMNO don't require cobalt which is more costly and can be harder to secure a reliable source.

On May 25, NANO announced the acquisition of Johnson Matthey Battery Materials Canada, a subsidiary of Johnson Matthey PLC (JMAT: London) for CAD\$ 10.25 million. The deal includes an operational LFP facility located in Candiac, QC that currently produces over 2,400 tonnes per annum (tpa). NANO has confirmed that all Johnson Matthey employees will be retained thus enhancing NANO's research and development, production expertise and in-house knowledge related to LFP CAMs.

Shortly after the Johnson Matthey acquisition, global chemical giant **BASF (BASF: Germany)** and NANO announced a joint development agreement where the companies will co-develop "next generation" CAM technology. The expectation is that BASF' slate of CAM products will benefit from NANO's expertise and

*By Charles Marleau CIM<sup>®</sup> and William Mitchell CIM<sup>®</sup>*

innovation. BASF had previously announced (March 4) that the company had secured a parcel of land for construction of a CAM battery metals and recycling plant in Bécancour, QC. The Bécancour location, which is situated on the St. Lawrence River, is ideally situated for a localizing the supply chain and relatively close to cheap sources of renewable electricity. The Bécancour project further entrenches BASF's supply chain and manufacturing potential in North America.

Last Thursday, NANO disclosed an injection of capital from global mega-miner **Rio Tinto PLC (RIO: London)**. According to terms of the agreement, RIO will make a USD\$10 million strategic equity investment in NANO whereupon RIO will hold approximately 5% of NANO shares outstanding. The collaboration includes partnering with NANO in the commercialization of NANO's metals-to-CAM (M2CAM<sup>®</sup>) technology, the advancement of proprietary technology and joint business initiatives, as well as the supplying of iron phosphate feedstock from RIO's Sorel-Tracy, QC facility. RIO will hold participation rights in any future equity financings.

In our opinion, significant steps are being made in scaling up battery manufacturing capability in Canada. As we already know, the federal government's "mines-to-mobility" initiative, as well as provincial governments, are highly supportive of nurturing a domestic battery industry. This will include financial incentives. Fortunately, our country excels in what is needed: a highly educated population, technological expertise, access/proximity to the U.S. market, and finally, all the materials that are required to produce the final products at scale. New investment opportunities are sure to follow.

Follow us on LinkedIn:



Chart 1: Palos Domestic Funds versus Benchmarks (Total Returns) <sup>1</sup>	FundServ	NAVPS	YTD Returns
Palos Income Fund L.P.	PAL100	\$9.11	-5.52%
Palos Equity Income Fund - RRSP	PAL101	\$6.80	-5.74%
Palos Merchant Fund L.P. (Dec 31, 2021) <sup>2</sup>	PAL500	\$1.16	24.67%
Palos WP Growth Fund - RRSP	PAL213	\$15.46	-18.31%
Palos-Mitchell Alpha Fund <sup>3</sup>	PAL300	\$10.01	-2.62%
S&P TSX Composite (Total Return with dividends reinvested)			-3.34%
S&P 500 (Total Return with dividends reinvested)			-17.60%
S&P TSX Venture (Total Return with dividends reinvested)			-24.95%
Chart 2: Market Data <sup>1</sup>			Value
US Government 10-Year			3.16%
Canadian Government 10-Year			3.35%
Crude Oil Spot			US \$120.67
Gold Spot			US \$1,848.80
US Gov't10-Year/Moody BAA Corp. Spread			207 bps
USD/CAD Exchange Rate Spot			US \$0.7822

<sup>1</sup> Period ending June 10th, 2022. Data extracted from Bloomberg

<sup>2</sup> Fund is priced annually

<sup>3</sup> Fund is priced weekly on Tuesdays



# Weekly Commentary

Issue No. 24 | JUNE 13, 2022

## Disclaimer:

This publication is proprietary to Palos Management Inc. (along with its affiliate Palos Wealth Management Inc., "Palos"). This publication may be copied, downloaded, stored in a retrieval system, further transmitted, reproduced, disseminated, and/or transferred, in any form or by any means, but only as long as it is unaltered and attributed to Palos. This publication and its contents may not be sold or licensed without Palos' written permission. The information and opinions contained herein have been compiled or arrived at from sources believed reliable but no representation or warranty, express or implied, is made or implied regarding accuracy or completeness. The information provided does not constitute investment advice and it should not be relied upon on as such. If you have received this communication in error, please notify us immediately by electronic mail or telephone. This document may contain certain forward-looking statements that are not guarantees of future performance and future results could be materially different. Past performance is not a guarantee of future performance. "S&P" is a registered trademark of Standard and Poor's Financial Services LLC. "TSX" is a registered trademark of TSX Inc. The Bloomberg USD High Yield Corporate Bond Index is a rules-based, market value weighted index engineered to measure publicly issued noninvestment grade USD fixed rate, taxable, corporate bonds. To be included in the index a security must have a minimum par amount of 250MM.

# PALOS

1 Place Ville Marie, Suite 1670  
Montreal (QC) H3B 2B6, Canada

T. +1 (514) 397-0188

F. +1 (514) 397-0199

1 St. Clair Avenue East Suite 504  
Toronto, Ontario M4T 2V7

T. +1 (647) 276-0110

F. +1 (647) 343-7772

[www.palos.ca](http://www.palos.ca)