

Dan Blondal on Nano One's collaboration agreement with Pulead Technology

Recently during PDAC 2019, Dan Blondal, CEO, Director and Founder of Nano One Materials Corp. (TSXV: NNO), shared updates on Nano One's collaboration agreement with Pulead Technology with InvestorIntel's Tracy Weslosky.

Dan Said: "We put a joint development agreement with Pulead in mid-January. They are a very prominent cathode producer in China supplying the lithium iron phosphate market and supplying the lithium cobalt oxide market as well. That's the materials that go into your iPhones. Very exciting company to be working with. Pulead is the world's largest producer of lithium iron phosphate. That's the material that goes into electric buses, lower range electric vehicles..."

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 addresses fundamental supply chain constraints by enabling wider raw materials specifications for use in lithium ion batteries. The process can be configured for the full range of cathode materials and has the flexibility to shift with emerging and future battery market trends.

Nano One has built a pilot plant to demonstrate high volume production and to optimize its technology across a range of materials. The pilot plant is 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).

To access the complete interview, [click here](#)

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Analyst is in agreement with bullish outlook on copper market

Copper has exhibited some rather strange behaviour of late; the value of the ubiquitous metal remained relatively stable since the fall of last year as weakened demand delayed the expected supply shortfall. More recently, prices have been climbing to the extent that we are now looking at a two-year-high of almost \$3/lb, and continued erosion of inventories worldwide, combined with related regulatory pressures are likely to maintain this trend for the medium to long term. This is yet further evidence that we are entering into the next bull-phase of the economic cycle, as similar growth patterns can be observed in commodity markets around the globe.

The current international market for copper totals around 24 million tonnes annually and is heavily influenced by construction and telecommunications since the material is crucial to almost all wiring systems, as well as motors, pipes and printed circuit boards. This is because copper conducts both heat and electricity extremely well and is fairly abundant in the Earth's crust, comprising roughly 60 ppm. Around a third of the world's copper reserves are to be found in Chile, and about half of that amount is located in the United States, giving someone other than China the lead for

once!

The fact that copper is easy to recycle means that producing mines are not necessarily required to meet demand; however, China has recently suggested that it will ban the import of low-grade scrap metal by the end of 2018 as part of the country's plan to reduce the impact of polluting industries. This pressure to conserve resources is taking effect all over the planet and resulting in steadily dwindling stockpiles at the same time as new technologies that require considerably more copper than their predecessors are achieving prominence.

The expected explosion in the demand for electric vehicles should come of no surprise, but many are unaware of the stress it will place on copper supply. Traditional internal combustion driven cars require up to 23 kg of copper each, whereas a hybrid electric vehicle demands almost double that amount at 40 kg of copper, and a plug-in hybrid electric vehicle uses 60 kg. Furthermore, a single car can feature up to 6km of copper wiring, and depending on the size of battery, an electric bus can use between 224 kg and 369 kg of copper. The seemingly inevitable changes to our transportation systems are clearly going to bring about massive shifts in how we use metallic resources, and copper is no exception.

The thing about renewable energy sources is that they almost all require a generator of some description, of which a requisite feature is a thick copper coil whose length is proportional to its power rating; the greater the output needed, the greater the size of the coil. Even solar panels, which do not require a copper winding, are far more efficient when crafted from copper diselenide as opposed to silicon. In fact, copper-based solar cells are currently the most efficient available.

As reserves continue to shrink and requirements grow, we should expect the price of copper to climb, and after all, this is all that's necessary to inspire confidence in the

bulls that are still sitting on the side and waiting for certainty. Traders are already increasing long positions on copper futures, and since the use of the metal is entirely congruent with the energy efficient and environmentally friendly direction in which we are heading, I am in total agreement with the bullish outlook that is taking hold.