

# Danny Huh on Neo Battery Materials' Process Innovation, 9th Patent and Position in NBM Korea

written by InvestorNews | April 4, 2024

In a recent enlightening interview with Tracy Weslosky of InvestorNews, Danny Huh, the Senior Vice President of Strategy and Operations at NEO Battery Materials Ltd., (TSXV: NBM | OTCQB: NBMFF) detailed the company's strides in silicon anode technology for lithium-ion batteries, underlining their consistent progress over the past three years. Particularly notable was the discussion around the application for their 9th patent a month ago, marking a technological leap aimed at significantly enhancing their silicon anode materials' production capacity and efficiency.

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## Revolutionizing Energy Storage with NEO Battery Materials' Strategic Advances in Silicon Anode Technology

written by InvestorNews | April 4, 2024

[NEO Battery Materials Ltd.](#) (TSXV: NBM | OTCQB: NBMFF), a leader in the development of low-cost silicon anode materials, is at

the forefront of a technological revolution that promises to redefine the lithium-ion battery landscape. As the demand for electric vehicles (EVs) and renewable energy storage solutions grows, the quest for more efficient and cost-effective batteries has become more critical than ever. NEO's strategic initiatives and recent achievements reflect its commitment to driving innovation in this space, amidst a broader industry shift towards silicon anodes over traditional graphite.

Since the commercial debut of lithium-ion batteries three decades ago, the technology has seen vast advancements, including a significant drop in price and improvements mostly on the cathode side. However, the graphite anodes used in these batteries have seen little innovation, until now. Silicon, capable of holding up to 10 times as many lithium ions by weight as graphite, has emerged as a promising alternative, despite its initial challenges, including volume expansion and material fracture.

NEO's recent strategic moves, including [increasing its ownership](#) in its South Korean subsidiary, NBM Korea, and filing its [9th patent](#) for a major silicon anode manufacturing innovation, underscore its role in this evolving market. The company's efforts to overcome silicon's historical challenges signify a major leap towards the commercialization of silicon anodes, which are essential for the next generation of lithium-ion batteries. These batteries promise longer ranges, faster charging times, and reduced costs for EVs, positioning silicon as a critical material in the global push towards electrification.

The significance of NEO's advancements cannot be overstated in the context of the broader industry's pivot towards silicon anodes. Companies like General Motors are already integrating silicon anodes into their products, signaling a market ready for

change. Furthermore, the recent influx of nearly half a billion dollars in investments towards commercializing silicon anode materials, including significant contributions from the U.S. Department of Energy, highlights the strategic importance of this technology.

Silicon anodes not only offer the potential for longer-range and faster-charging EVs but also promise to alleviate supply chain constraints associated with graphite anodes, nearly all of which are processed in China. By reducing reliance on overseas graphite and leveraging silicon, the most abundant metal in Earth's crust, companies like NEO are paving the way for a more sustainable and efficient future for batteries.

In its comprehensive strategy for 2024, NEO Battery Materials outlines a multi-faceted approach to commercialization, emphasizing operational execution, capital efficiency, and risk mitigation. The company's vision extends beyond mere technological innovation; it aims to optimize the electrochemical performance and cost competitiveness of its silicon anode material, NBMSiDE®, to establish advanced commercial agreements and expand its global supply chain network.

As NEO and other industry players continue to advance silicon anode technology, the promise of more affordable, efficient, and sustainable lithium-ion batteries becomes increasingly tangible. This shift not only supports the growing demand for EVs but also contributes to the global effort to transition to renewable energy sources, marking a significant milestone in the quest for greener and more sustainable energy solutions.

The [NEO Battery Materials Ltd.](#) (TSXV: NBM | OTCQB: NBMFF) market cap for Thursday, February 22, 2024 is CAD\$28.70M.

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# Critical Minerals Export Ban is China Tit-for-Tat with the United States

written by Jack Lifton | April 4, 2024

**“The issue here is one of understanding.** The Chinese didn’t stop exporting the materials. What the Chinese said, and what they are going to do is to restrict the exports, not prohibit them. This means that they have adopted a policy of tit-for-tat with the United States. We recently have restricted the export to China of very high-tech machinery to make the latest and greatest chips. Simultaneously, we have prohibited our own companies from buying Chinese-manufactured chips for use in their products without permission from our State or Commerce Department in the form of a ruling that such importation and/or use does not impact “national security.”

The Chinese are saying, OK, so if those are the rules of the game then, now, we’re playing also by those rules. We’re going to start playing by picking two materials that you don’t have available domestically in end-user form, the metalloid germanium, and the metal gallium. These two materials, are in fact, critical to the manufacturing of the chips, access to which you wish to prohibit China from getting.

Now the interesting thing is here the journalists have got this all wrong – they all call these metals, “rare earths”, and they couldn’t be more wrong, It’s frightening to think that they don’t understand what rare earths are, considering how important rare earths are to us in a different industrial context of use.

Germanium is a member of the silicon family. Gallium is chemically related to aluminum. Neither one of these are rare earths, and if I were teaching a course in general chemistry, I would fail anyone who said something like that. Alright, here's the point. The United States Department of Defense actually has stockpiled germanium. That should tell you something. It's really critical. It's what I call a critical-critical mineral. OK, but not, for some reason that I don't understand, gallium. Both of those, as I recall from my misspent youth, were produced in the United States and we were self-sufficient.

We have domestic American sources of both of these materials that come actually as byproducts of more common materials. Germanium is a byproduct of zinc and silver mining, and can also be obtained from coal. Gallium is a byproduct of aluminum production. Both of those were once produced and in abundance in the United States. I've talked about germanium and gallium, because we used to produce so much of the metals of which they're a byproduct, that we supplied our gallium needs and our germanium needs out of processing those materials. America stopped producing end-user forms of both germanium and gallium, because the Chinese got into the processing of these materials in a big way and pretty soon it became obvious that it was much cheaper to buy them from China.

Now keep in mind that when the Chinese were setting up to produce both of these metals, they actually had little or no use for them. They were strictly a service operation 25 years ago. I doubt that the Chinese had ever produced a computer chip 25 years ago. There is one other use they might have had back then for gallium. It, gallium, is used in making atomic bombs, so perhaps they were doing it for that, but we simply stopped producing fine gallium chemical forms here, because, we didn't have to. You could get cheaper from China.

Now, "all of a sudden," The Chinese, who are very aware of critical materials and have been organizing themselves to be self-sufficient and secure in their supplies of all of these materials that underlie our modern technological society, are supposed to be "weaponizing" them for use against us. This is saying that we're so stupid and lazy that we didn't notice the dependence of our technological society on certain critical materials and take action to secure sufficient supplies of them for our domestic industries. Of course, this is exactly what happened.

I'm sure, once we started with the arguments about computer chips, that the Chinese could be using them to spy on us, and when we started saying this publicly and embarrassing the Chinese and insulting them, they decided that they had no recourse but to take aggressive action in the marketplace. They may, in fact, be doing these things. I'm not saying that they're innocent. I'm just saying that somehow or other. Our government doesn't seem to understand that cultures outside of the American ethos may be different from those on the American ethos. For example, you keep telling the second largest economy in the world and, perhaps, the proudest people in the world of their multi 1000 year old heritage of "civilization" that you're liars and you're cheats. You're trying to screw us, blah blah, blah. Pretty soon they get annoyed.

Fast forward to today. The U.S. Secretary of the Treasury, Mrs. Yellen, is in Beijing today. OK. And all the reporters, the same ones who think germanium and gallium are rare earths, they're saying, well, she's going to straighten things out with the Chinese. Do you know what I think? I'll bet that when she landed and went to see the first Chinese officials, they started telling her, Hey, what the hell does your country think they're doing now? You want to discuss economics with us while you're insulting us. You call us pariahs, you call our great leader a

dictator.

OK. This problem with germanium and gallium is not going to go away anytime soon until American diplomats get diplomatic and so-called American experts in Washington figure out that we should have never gotten out of the germanium and gallium “processing” business in the United States. We can go back to secure self-sufficiency.

I have been asked frequently in the last few days how long it would take for the USA to regain self-sufficiency in the production of ultra-high-purity end-user forms of germanium and gallium. Would it take decades, the youthful reporters ask breathlessly? I’ll make you a bet we could be back into producing gallium and germanium in the United States in a useful form for electronics in six months to a year. I mean, this is not, excuse the expression, rocket science. We developed these technologies. This is among the very first things I ever did in my working life, the ultra-purification of metals for electronics. I knew how to process gallium and germanium 60 years ago(!), and there’s been a lot of work to improve and commercialize processes since then. We have to stop saying “Oh my God. The sky is falling,” and just start doing what we should have been doing all this time. That is my commentary on this subject...” – *Excerpt from an interview with the Critical Minerals Institute’s Co-Chairman, Jack Lifton*

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## **Danny Huh of NEO Battery on EV**

# Industry Attention as it Revolutionizes Silicon Anode Technology

written by InvestorNews | April 4, 2024

In this InvestorIntel interview, Tracy Weslosky talks with [NEO Battery Materials Ltd.](#)'s (TSXV: NBM | OTCQB: NBMFF) Strategy and Operations Manager Danny Huh about achieving a significant [technology milestone](#) in the nanocoating manufacturing process of silicon anodes that can increase the driving range of electric vehicles and enable ultra-fast charging.

Speaking about the high performance and cost-reduction capabilities of their uniform nanocoating technology, Danny discusses how there is an increased interest from ten companies, including global battery and electronic manufacturers and EV automakers, to use NEO Battery Materials' silicon anodes in their lithium-ion batteries.

Providing an update on its South Korean Commercial Plant construction that has completed the Request for Quote ("RFQ") process, Danny also discusses filing NEO's [6th patent](#) to Korean Intellectual Property Office for one-step nanocoating technology for silicon anodes.

Danny also talks about the recent [appointment](#) of Dr. S. G. Kim, a silicon/polymer material and chemical technology development expert, as NEO's Chief Technology Officer. Dr. Kim is the former Executive Vice President and Head of R&D of Hanwha Solutions Corporation (KSE: 009830), a multi-billion South Korean chemical manufacturing conglomerate.

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



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## About NEO Battery Materials Ltd.

NEO Battery Materials Ltd. is a Vancouver-based company focused on electric vehicle lithium-ion battery materials. NEO has a focus on producing silicon anode materials through its proprietary single-step nanocoating process, which provides improvements in capacity and efficiency over lithium-ion batteries using graphite in their anode materials. The Company intends to become a silicon anode active materials supplier to the electric vehicle industry.

To learn more about NEO Battery Materials Ltd., [click here](#)

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If you have any questions surrounding the content of this interview, please contact us at +1 416 792 8228 and/or email us direct at [info@investorintel.com](mailto:info@investorintel.com).

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## **NEO Battery Materials fast tracks their silicon anode EV battery material plant in Korea**

written by InvestorNews | April 4, 2024

[NEO Battery Materials Ltd.](#) (TSXV: NBM | OTCQB: NBMFF) ("NEO") is advancing at full speed with their recent [announcement](#) that they have "completed a contract for the Commercial Plant's construction, design, and permits with an architectural firm". The plant will be located in Gyeonggi Province's Oseong

International Investment Zone in South Korea, near major battery manufacturers LG Energy Solution and Samsung SDI.

As a brief reminder for new investors, NEO has developed high-performance silicon anode materials to replace parts of the graphite used by anode and battery manufacturers in their battery anodes. Their leading product is NBMSiDE™, a silicon anode material for EV lithium-ion batteries. NBMSiDE™ is manufactured through the Company's proprietary nanocoating technology, achieving a high specific capacity of >2,500 mAh/g. This essentially means the NEO silicon anode material helps improve the all-important battery energy holding capacity and ultimately the charging speed of the EV.

As NEO [states](#): "Through a mix of treatments and nanocoating materials, NEO utilizes pure metallurgical-grade silicon particles, which provide a 40-70% higher initial specific energy or capacity compared to current competitors that employ SiO<sub>x</sub>, SiC, or other composite silicon materials."

### **South Korea anode plant design progressing with an increased production target**

Regarding the new anode materials plant, [the final site approval has now been granted](#). Due to the land site being in a Foreign Investment Zone, NEO will receive a range of benefits including a [99% reduced lease rate](#) and tax incentives. NEO may also access Provincial financial support for equipment purchases, employment subsidies, and education/training subsidies.

Additionally, NEO recently [stated](#) that the "Company will now advance to the detailed process design for the production lines and will proceed with early orders of components that have long lead times for the commercial plant. Through a structured execution plan of performing procurement and construction processes one after another, NEO expects to achieve the initial

commission of the Commercial Plant by the first half of next year... We are currently working on pursuing strategic investments and communicating with the respective companies and investors to finance the construction of the commercial plant.”

In another very interesting development from NEO, the Company [has increased their anode material production targets again](#). The original pilot plant capacity was 10 tons, which last year was increased 12 fold to a commercial scale of 120 tons pa. This was recently increased to 240 tons pa. Even more impressive is the longer term target of the full facility capacity after installing the maximum number of mass-production lines through expansion, of 2,000 tons of NBMSiDE™ anode material pa.

NEO has also been [busy sending NBMSiDE™ product samples](#) to several potential off-take companies for testing. If this stage goes well then usually off-take agreements follow, which then typically helps the project financing process.

“The first refined sample of NBMSiDE™ has been provided to a Europe-based battery materials company,” NEO recently [stated,](#) “and a second delivery is planned in April. NEO is additionally conducting sample tests with several Asia-based and European battery manufacturers.”

NEO has also recently internally developed [NBMSiDE™ pouch-type full cells](#) which have been manufactured to evaluate product performance, viability, and durability in genuine battery charging conditions.

In an [April 5, 2022 news release](#) NEO stated that: “NEO Battery Materials will commence construction in June 2022 and will follow stringent timelines and protocols to aim completion in June 2023.” I would assume this is subject to project financing.

**Closing remarks**

NEO is making great progress with their silicon-anode material commercialization plans, with the excellent advantage of locating their manufacturing facility in the Oseong International Investment Zone in South Korea.

Investors should understand that the next stages of product evaluation and testing, off-take deals, financing, and project construction all carry risks and the possibility of delay. Nonetheless, NEO is certainly making all the right moves and looks to be very well connected to the major Korean battery manufacturers.

NEO Battery Materials trades on a market cap of [C\\$52 million](#).

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# Targeting next generation silicon anode materials NEO Battery Materials up 387.5% in 2021

written by InvestorNews | April 4, 2024

2021 will be remembered as the year that the western world woke up to the electric vehicle (EV) boom, especially boosted by the fact that global electric car sales look set to finish up [about 100% YoY](#). So what will 2022 bring? I previously wrote [here](#) my top 3 stock picks for 2022 and [here](#) are my top 5 graphite miners to watch in 2022; but today's company looks set to benefit from a little-known trend in the EV world.

That trend is the increasing use of silicon in battery anodes to

boost battery performance, especially charging speed and energy density (range). This is because when a battery charges the rate of charge depends on how quickly the 'anode' can absorb or fill up with electrons. By adding silicon into the graphite anode it is better able to absorb more electrons and therefore the battery has better capacity. Companies continue to work on some of the challenges of silicon in anodes which include swelling, cracking and lower cycle life.

Today we look at [NEO Battery Materials Ltd.](#) (TSXV: NBM | OTCQB: NBMFF) ("NEO") whose stock price rose [387.5%](#) on the TSXV in 2021. NEO is a Canadian battery materials company with a current focus on developing silicon anode materials through an ion-and electron-conductive polymer nanocoating technology.

Looking back on 2021, NEO had a strong year ([company highlights here](#)) especially in building up both their technology and their team. You can read some more on that in my last article: [Making lithium-ion battery components more durable and efficient to improve battery capacity](#). In that article, I discussed how NEO's 'pure' silicon anode materials were already achieving much higher cycle-life than competitors (NEO is achieving 1,000 cycles) with the main benefit of silicon material in anodes being greater energy density and charging speeds. Conventional lithium-ion batteries with graphite anodes have a cycle life of between 2,000 and 5,000+ cycles.

It should be noted that there is today a growing market for silicon anode materials to be used as an additional material combined with a conventional graphite anode to boost performance. Tesla is one of many that use silicon-graphite anodes.

In recent months NEO has made further progress as shown by three recent significant announcements:

- Dec. 6, 2021 – [NEO Battery Materials announces the launch of 3 silicon anode material products “NBMSiDE” for high performance lithium-ion batteries](#)
- Dec. 24, 2021 – [Korean Intellectual Property Office issues core patent for NEO Battery Materials’ silicon anodes for high performance lithium-ion batteries](#)
- Jan. 6, 2022 – [NEO Battery Materials Builds NBM Korea R&D Scale-Up Centre in South Korea’s Yonsei University](#)

Within the three announcements above the key progress for NEO is the launch of 3 types of silicon (“Si”) anode active materials (NBMSiDE-P100, NBMSiDE-P200, and NBMSiDE-C100), and the fact that NEO is on schedule for semi-commercial scale production of these materials by the end of 2022. Regarding the 3 silicon anode materials NEO [stated](#):

“The three types of products are manufactured through NEO’s proprietary nanocoating technology and are based on metallurgical-grade silicon with purities of at least 99.95%....**NEO’s technology significantly improves the life span and cycling stability compared to conventional metallurgical silicon-based particles.**”

NEO President and CEO, Spencer Huh, [stated](#): “We are very glad to bring the 3 types of silicon anode active prototypes to the market as a result of valuable research and development for the past 7 years. All our business developments are aligned with our plans and strategy, and we have complete confidence in pushing towards the semi-commercial plant facility in South Korea. **NEO is positioning itself as a low-cost, robust Si anode materials supplier for electric vehicle lithium-ion batteries, and we are set to provide long-term value for all stakeholders.**”

*Note: Bold emphasis by the author.*

The Company also [stated](#): “NEO is expediting the process of developing its 100% pure silicon anode based on CNT (carbon nanotube) conductive additives and new robust binder technologies, and is currently conducting research and progressing commercialization projects regarding the graphite/silicon composite anode through active collaboration with companies that have signed NDAs.....Our process that effectively reduces the cost of Si anode production will act as a stark point of differentiation compared to existing and potential competitors.”

Also of significance is that [NEO has established and built its R&D Scale-Up Centre](#) at the Yonsei University of South Korea through NEO Battery Materials Korea Co., Ltd., a wholly-owned subsidiary of the Company. NEO believes that this R&D center “could speed up further development of additional NBMSiDE pipelines of silicon anode active materials.”

### **Closing remarks**

NEO is at the leading edge in developing lower cost silicon anode active materials and recently launched 3 new silicon anode materials products with [another 2](#) to follow soon. Usually, once product samples are released it often leads to off-take agreements. Planned semi-commercial scale production of these materials by the end of 2022 offers a strong potential catalyst for investors.

NEO Battery Materials trades on market cap of [C\\$34 million](#) and is definitely a stock to watch closely in 2022.

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# Making lithium ion battery components more durable and efficient to improve battery capacity

written by InvestorNews | April 4, 2024

## NEO Battery Materials' Progressing on the Development and Commercialization of Longer Lasting Higher Energy Density Lithium Ion Battery Components

Investors looking for a cutting edge technology company in the electric vehicle (EV) battery components sector need look no further than [NEO Battery Materials Ltd.](#) (TSXV: NBM | OTCQB: NBMFF). NEO is a North American battery materials company with a current focus on developing silicon anode (the negative electrode in a battery) materials through its “ion-and electronic-conductive polymer nanocoating technology.” Or, in simpler language, a ‘silicon material’ for batteries, used to make the anode last longer in service (make it capable of being charged and recharged more times without losing integrity or efficiency) and be capable of holding more energy, thus making the battery more durable and efficient

NEO [states](#): “NEO has a focus on producing silicon anode materials through its proprietary single-step nanocoating process, which provides improvements in capacity and efficiency over that of lithium-ion batteries using graphite in their anode materials.”

NEO's stock price has been on a tear in 2021; however, the recent pullback potentially gives a better entry point for investors.

## NEO Battery Materials (TSXV: NBM) 1 year stock price chart



Source: [Yahoo Finance](#)

Another thing that investors love is active management that can rapidly progress a company and produce lots of good news. We'll take a look at the news flow summary below, just for November 2021.

- [Nov. 23, 2021](#) – NEO Battery Materials appoints lithium-ion battery electrode binder and polymer technology expert, Dr. Byeong-Su Kim, to Scientific Advisory Board. The news [states](#): “Utilizing robust binder technologies with characteristics such as a high elastic modulus can **help contain and control the volume expansion of silicon**, resulting in lower probabilities of particle pulverization and a cracking anode.”
- [Nov. 18, 2021](#) – NEO Battery Materials receives approval for a core patent from the Korean Intellectual Property Office.
- [Nov. 16, 2021](#) – NEO Battery Materials announces research consortium LOI with both the University of Toronto **and with an undisclosed global OEM for R&D and scale-up of EV Battery Materials**. The preliminary project will involve the full electrode fabrication of silicon-carbon composite anodes through NEO's silicon particle nanocoating process....With the active material (silicon and/or graphite), binders and conductive additives as core components....
- [Nov. 10, 2021](#) – NEO Battery Materials appoints Dr. Dongmok

Whang, expert in low-dimensional nanomaterials and graphene, to Scientific Advisory Board. His research expertise lies in the field of fabrication and manufacturing of low-dimensional nanomaterials, especially **graphene, semiconductor nanowires, and porous nanostructures** for applications in electric vehicle lithium-ion batteries, fuel cells, and various energy storage solutions.

- [Nov. 4, 2021](#) – NEO Battery Materials accomplishes **anode production capacity upscaling Project** over the past three months. The news [states](#): “From the initial production rate of several grams per hour for manufacturing silicon anode materials at the lab-scale, **NEO’s engineering team has accomplished to expand the rate to a level of several kilograms per hour.** This is a result of improving productivity by more than 1,000-fold, and the success of the Project at this level has given stronger validation for **the 120-ton semi-commercial plant that is scheduled to be commissioned by the end of next year.**” President & CEO Spencer Huh, added: “As NEO understands the need to fast-track into mass production, we are pleased to announce the accomplishment of the Upscaling Project. The Company is at the forefront of developing unique Si anode lines through the low-cost manufacturing process, and we are customizing solutions for various downstream users to optimize the products for high-power electric vehicle lithium-ion battery applications.”

The above 5 news items, when added together’ show the rapid pace and progress NEO is achieving. Looking back on the previous two months there were even more great achievements by NEO. The standout news came on October 26 when NEO [announced](#): “**Completion of semi-commercial plant conceptual design** and initiates engineering EPC stage for construction.” The facility will be in South Korea. President & CEO, Spencer Huh, [stated](#): “NEO is now

another step towards commercializing our silicon anode materials for EV lithium-ion batteries and is actively expediting our timelines and milestones.”

As shown below the problem with silicon in anodes can be that as the silicon absorbs the electrons it expands then cracks the anode, leading to a low cycle life (low longevity). NEO has managed to improve this by using its cost-effective and efficient one-pot, single-step, nanocoating process.

**NEO Battery Materials state that their silicon anode materials are already achieving much higher cycles than competitors**



Source: [NEO Battery Materials company website](#)

### **Closing remarks**

A lot of the details surrounding NEO Battery Materials' achievements are not very well understood by investors. This is only natural as most investors are not battery material scientists.

The key to understanding NEO's work is that its silicon anodes or composite silicon graphite anodes can significantly improve battery capacity, which relates to greater energy density, and hence longer range for the same size battery. What EV manufacturers and customers all want is better performing batteries that result in longer driving range for a given size battery. Silicon anodes today present many challenges, especially cracking leading to poor cycle life. NEO is making great strides in solving this problem by producing silicon anode materials with a much longer cycle life.

If NEO can succeed in meeting commercial standards it will have Tesla and other EV and battery/anode OEMs knocking on its door.

For now it appears there is plenty of promise, especially given the longer cycling results (1,000 cycles) and recent production scaling progress, as well as the interest from an OEM in joining NEO's research consortium.

NEO Battery Materials trades on a market cap of [C\\$39 million](#). It's one to watch.

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# Recharging a battery in 5 minutes is the starting block for NEO Battery Materials interest

written by InvestorNews | April 4, 2024

It seems like it was only last week that I was writing about nanomaterials and how they were going to save the world by making everything better. Oh wait, it was just [last week](#). I guess the difference here is that this company has an actual resource (targeting silica in quartzites) that would supply their proprietary nanocoating technology. Nope, that's almost the same as well. So to quote baseball's philosopher, Yogi Berra, it's déjà vu all over again. Today is another story about nanomaterials that look like they have the potential to improve the technology required to lower our carbon footprint and make the air we breathe a little cleaner.

The company being discussed this time around is [NEO Battery Materials Ltd.](#) (TSXV: NBM | OTC: NBMFF). A six-month chart of

this stock will tell you that there is plenty of buzz around what is happening, given it has traded in a range of \$0.14/share to as high as \$1.31, closing yesterday at \$0.89. Most of this activity is being driven by the steady stream of exciting news that comes out on an almost weekly basis. Two of the biggest surges in the stock price came first in early June when the Company made the remarkable announcement that its [nanocoated silicon anode](#) allows for a safe full charge on small battery cells within 5 minutes leading to a two-day rally of 62%. Then this past Friday NEO reported the [first prototype of silicon anode](#) active materials has been successfully produced, and samples have been sent to partners for full cell evaluation and electrochemical characterization. The latest news causing the stock to surge 30% on the day with further follow through on Monday adding another 14% to the share price.

These are some pretty stunning moves so let's look a little closer at what this all means in the grand scheme of things and why the stock may be responding like it is to this news. The first news seems pretty obvious to me, recharging a battery in 5 minutes is impressive no matter how you look at it. If we could all recharge our smartphone, wearable device, tablet, laptop, cordless yard equipment, etc. in 5 minutes, life would be a whole lot more convenient. But convenience isn't going to save the earth. Where this becomes a game changer is if they can evolve this technology for use in the Li-Ion batteries used in EVs. Imagine the change in adoption of EVs over internal combustion engines if you can recharge your battery in almost the same amount of time it takes to fill a vehicle with gas. It almost wouldn't matter what the range of the battery is as long as there was adequate charging capability. Going to Starbucks for a coffee? Plugged in the car before I went in and it was charged when I came out. Stopping by the grocery store on the way home from work to pick up something for dinner? No problem,

also charged the car while I was in the store.

Perhaps I'm getting a little bit utopian but it's hard to argue that an EV that could charge in 5 minutes wouldn't be revolutionary. This leads us to the latest news from the Company, the first working set of NEO's proprietary silicon anode materials has been manufactured through their unique process. This prototype will be utilized by NEO's third-party partners for evaluating the performance and efficacy of NEO's silicon anodes in each respective party's cell system and environment. The Company expects this development to act as a catalyst to accelerate the commercialization of its silicon anode active materials. Another critical piece of information in the [latest press release](#) was the signing of two new Non-Disclosure Agreements (NDAs) with global top-tier battery material producers in China and South Korea for NEO's innovations with silicon. They are getting the word out and in front of the right people to make something happen.

The Company [raised \\$2 million in early May](#) and had a cash balance of \$872,171 as of their May 31<sup>st</sup> financials. NEO has likely raised another \$1.4 million from the exercise of in-the-money (\$0.30 strike) warrants that were set to expire on August 21<sup>st</sup>. There are still 17 million warrants outstanding but with an expiry date of May 2024, who knows if/when those might get exercised. In the meantime, there should be enough cash to continue operations for a couple of more months at which point in time we will see what's next for NEO Battery Materials. They may have to go back to the market to raise some capital, or perhaps a JV with one of their NDA partners will provide some financial support. Regardless, there are some exciting things happening that will keep investors on the edge of their seats for the foreseeable future.