

NEO Battery Materials Files 5th Silicon Anode Nanocoating Process Patent

written by Raj Shah | August 12, 2021

August 12, 2021 ([Source](#)) – NEO Battery Materials Ltd. (**TSXV: NBM**) (**OTC: NBMFF**) (“**NEO**” or the “**Company**”) is pleased to announce that a new patent has been filed regarding NEO’s proprietary process of manufacturing silicon (Si) anode active materials. As of today, the Company retains five patents that have been issued and applied.

This patent will extend the protection related to the Si nanocoating process by the single-step, one-pot solution process which was originally developed by NEO. This applied patent joins a family of related patents already issued and applied for the unique and cost-effective process by NEO’s patented one-pot process.

Spencer Huh, President and CEO of NEO, commented, “We are excited to announce this patent as this is the first patent that has been filed and originated under the name of NEO Battery Materials Ltd. As our Si anode material is gaining further traction and interest, we recognize expanding and strengthening the IP portfolio is imperative. This week, we have initiated another NDA with a multi-billion-dollar South Korean battery material manufacturer for a potential cooperative development, and we are currently on schedule to commercialize our silicon anode materials.”

Conventional approaches to mitigate volume expansion problems of Si anode material are not cost-effective and scalable due to the process complexity and high material input costs. For instance,

vacuum processes like chemical vapor deposition (CVD) need special precursor materials which result in low-production throughput. Diverse forms of nanostructured Si materials have been thoroughly developed, but their respective mass-production capability remains questionable due to cost.

Dr. J. H. Park, Director and Chief Scientific Advisor of NEO, added, "To meet the requirement for recent battery manufacturers, especially Si anode materials, low-cost, metallurgical grade silicon microparticles is an excellent candidate, but its pulverization problem is a substantial challenge. We have proved that NEO's one-pot nanocoating process is applicable to a wide range of Si materials including nano- and micron-sized particles. NEO's Si anode material forms a highly robust and stable solid-electrolyte interphase (SEI) layer within a few cycles in the Si anode and acts as a damper to reduce the stress from the Si anode."

The newly applied patent will provide coverage for a novel method for a more uniform formation of the SEI layer and stabilization of lithium-ion battery Si anodes. Si anode by this technology is under sample testing by EV/battery material manufacturers for confirming its applicability in typical electric vehicle batteries.

"At NEO, we are working to maximize our shareholders' value through continual technical developments with our proprietary Si anode materials, potential strategic partnerships and joint development agreements, and IP portfolio expansion. In a couple of weeks, we will provide updates on the commercial viability and scalability of our Si anode materials through the pilot plant construction and design study," added Mr. Spencer Huh.

About NEO Battery Materials Ltd.

NEO Battery Materials Ltd. is a Vancouver-based resource company

focused on battery metals and materials. The Company has staked new mining claims in Golden, BC, along a strike with a quartzite bed, targeting silica in the quartzites for a total of 467 hectares. NEO is also focusing on developing silicon anodes, which provide improvements in capacity and efficiency over lithium-ion batteries using graphite in their anode materials. The Company intends to become an integrated silicon producer and anode materials supplier to the electric vehicle industry. For more information, please visit the Company's website at: <https://www.neobatterymaterials.com/>.

On behalf of the Board of Directors

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