NEO Battery Materials and NanoRial Advance Product Collaboration with CNT-Based Silicon Anode

written by Raj Shah | August 21, 2023
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- Collaboration Advancement through Product Portfolio Expansion – Carbon Nanotube (CNT) Nanocoatings for NEO's Silicon Anode Materials
  - To Offer Diverse Performance & Cost Offering Alongside Polymer Nanocoatings to Downstream Manufacturers
  - Preliminary Evaluation of Mechanically Durable CNT Coating to Improve Silicon Battery Performance

- **Project 2N-CSi** – Partnership for Joint Development and Non-Dilutive Funding Application in Canada's EV Battery Supply Chain
- Dr. Chitral Angammana, CEO of NanoRial, Appointed to Scientific Advisory Board

NEO Battery Materials Ltd. ("**NEO**" or the "**Company**"), a low-cost silicon anode materials developer that enables longer-running, rapid-charging lithium-ion batteries, is pleased to announce the collaboration advancement with NanoRial Technologies Ltd. ("**NanoRial**") through expanding the silicon anode, NBMSiDE®, product portfolio using carbon nanotube ("**CNT**") nanocoatings. The formal partnership named **Project 2N-CSi** will be utilized to

jointly apply to non-dilutive financing and commercialization in Ontario, Canada.

Following the collaboration agreement in early 2023, NEO Battery Materials and NanoRial have been developing CNT-nanocoated silicon anodes for EV lithium-ion batteries. Using NEO's uniform nanocoating capability, preliminary evaluations of NanoRial's CNTs are underway to improve cycle life and energy capacity. To offer a diverse performance and cost offering to downstream manufacturers, NEO will commercialize NBMSiDE®-CNT in addition to the Company's polymer-nanocoated products.

Project 2N-CSi is the first EV battery materials collaborative product being developed by two Canadian and Ontario-based companies. NEO Battery and NanoRial will continue to further advance the product, in progressing towards engaging global battery manufacturers & EV automakers for commercial-level testing. Both parties are jointly securing non-dilutive financing through discussion with Canada's governmental authorities.

To develop the partnership, Dr. Chitral Angammana, CEO of NanoRial, has been appointed to NEO's Scientific Advisory Board. Co-founding NanoRial in 2019, Dr. Angammana has successfully led the company to scale up its CNT dispersion technology for energy storage, coatings, and additive applications. He has commercialized technologies through partnerships with large-scale corporations to startups. Receiving his Ph.D. in Electrical Engineering and Nanotechnology from the University of Waterloo, Dr. Angammana holds several patents approved and pending for the processing and fabrication of nanoparticles, nanotubes, nanofibers, and nanocomposite materials.

Dr. Chitral Angammana, CEO of NanoRial, commented, "I am excited to be aboard for NEO Battery's silicon anode commercialization.

NanoRial is currently evaluating our CNTs with global-tier automotive and chemical manufacturers, and the collaboration with NEO will create value and synergies for the global EV battery supply chain. As we are in the process of constructing a 15 tons per year facility with expansion for a multi-thousand tons production capacity, we anticipate complementing NEO's production on a long-term basis."

Dr. Dongmok Whang, Lead Scientific Advisor of NEO, remarked, "Having researched CNTs for over 10 years, this is another critical nanomaterial that must be adopted by battery cell manufacturers. With properties of superior electrical conductivity, tensile strength, and elasticity, CNTs are being actively pursued as both a conductive additive and nanocoating material for electrodes. The CNT market is expected to grow from US$ 1.8 billion in 2025 to US$ 9.2 billion in 2030 with 120,000 tons and 600,000 tons produced, respectively."

About NanoRial Technologies Ltd.

NanoRial is an Ontario-based high-tech advanced materials company enabling next-generation products and materials from faster charging batteries to longer, lighter wind turbine blades through our patented nano-particle exfoliation technology and carbon nanotube (CNT) based additives. NanoRial intends to become a leading CNT-based materials supplier to the energy storage systems market. For more information, please visit NanoRial's website at: https://nanorial.com/.

About NEO Battery Materials Ltd.

NEO Battery Materials is a Canadian battery materials technology company focused on developing silicon anode materials for lithium-ion batteries in electric vehicles, electronics, and energy storage systems. With a patent-protected, low-cost manufacturing process, NEO Battery enables longer-running and ultra-fasting charging batteries compared to existing state-of-

the-art technologies. Building the first commercial plant in South Korea, the Company aims to be a globally-leading producer of silicon anode materials to the electric vehicle and energy storage industries. For more information, please visit the Company's website at: https://www.neobatterymaterials.com/.

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