NEO Battery Materials Provides Review and Highlights of 2021

written by Raj Shah | December 30, 2021

December 30, 2021 (Source) – NEO Battery Materials Ltd. (**TSXV: NBM**) (**OTCQB: NBMFF**) ("**NEO**" or the "**Company**") is pleased to share a review of 2021 related to the advancement of the Company's patented and proprietary silicon anode active materials for electric vehicle lithium-ion batteries.

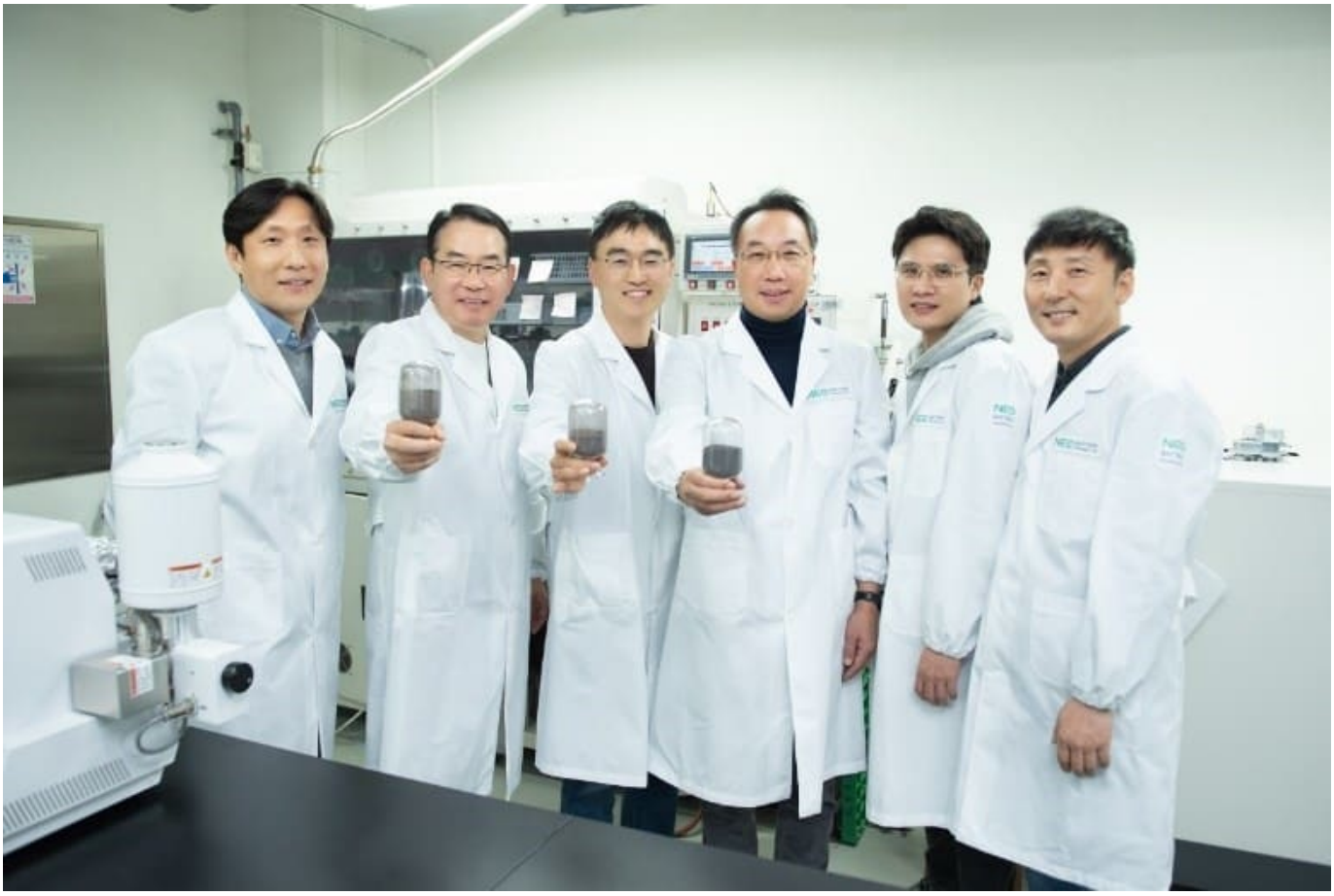
Overview of NEO Battery Materials Ltd.

- NEO Battery Materials Ltd. is a company that focuses on the anode material of the 4 core battery materials: 1) Anode, 2) Cathode, 3) Separator, and 4) Electrolyte. The Company is advancing a proprietary nanotechnology to produce **Silicon Anode Materials** through a low-cost, single-step manufacturing process.
- With accelerating efforts to replace parts of graphite with silicon in the anode material, the silicon anode active materials market faces a significant growth potential of 70-80% compound annual growth rate (CAGR) over the next five years, reaching a market size of approximately $5B CAD.
- NEO Battery Materials offers a cost-competitive silicon anode material technology that 1) increases the battery run-time through improving the energy density with silicon, 2) ultra-flexibility characteristics that enable structural durability and robustness, and 3) ultra-fast charging capability through enhancing the wettability of silicon particles with its nanocoating layers.
- NEO has secured a strong management team and lithium-ion

battery experts from former LG Chemical, the second-largest battery manufacturer in the world through LG Energy Solutions, and Samsung SDI, the fifth-largest battery manufacturer in the world, enabling the fast-tracked advancement of NEO's silicon anode materials in South Korea

Product & IP (Intellectual Property) Developments

- Established a **2–Track** Silicon (Si) Anode Material Development Process: 1) **Silicon Microparticles** and 2) **Silicon Nanoparticles**
  - Selected to innovate with silicon microparticles due to the significant cost savings for raw material input cost compared to silicon nanoparticles, which microparticles are on average 8 to 10 times cost-effective than nanoparticles
- Successfully launched **3 Silicon Microparticle Anode Material Products** named **NBMSiDE** with the trademark pending approval through the Korean Intellectual Property Office
  - Each NBMSiDE product retains unique nanocoating materials and characteristics that enable the silicon microparticles to perform as an anode material



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- Expanded NEO's patent portfolio from **3** issued or pending in February 2021 to **5** issued or pending patents at the end of December 2021

Semi-Commercial Plant Developments

- Upscaled pilot plant facility design with a capacity to produce 10 tons per annum by a **12-fold** to a semi-commercial plant facility capable of producing **120** tons of NBMSiDE per annum
    - The capacity expansion was enabled through the optimization of NEO's low-cost, single-step manufacturing process that precludes the need for

expensive engineering environments

- Located in **South Korea**, the 2nd largest battery manufacturing country in the world, the conceptual design of NEO's semi-commercial plant was completed, progressing to the review stage for the **Engineering, Procurement, and Construction (EPC) Contract**
- The **site approval process** is underway by the local provincial government in which the semi-commercial plant will be situated

Business Developments

- Increased the non-disclosure agreement ("NDA") count from **2** in March 2021 to approximately **20** NDAs which include globally established industry players in the battery cell manufacturing, materials manufacturing, and automotive industries
- Completed the establishment of the wholly-owned South Korean subsidiary, **NEO Battery Materials Korea Co., Ltd.**, for flexibility of operations in South Korea and creating relationships with battery manufacturers and government entities
- Signed a Letter of Intent with the **University of Toronto** and an **Undisclosed Global OEM** for a research consortium on the R&D and scale-up of electric vehicle (EV) battery material technologies
- Formed a licensing agreement and collaborative development agreement with the **Yonsei University** of South Korea for the development and advancement of NBMSiDE manufacturing and nanocoating material technologies for high-performance EV lithium-ion batteries

- Secured talented Scientific Advisors and In-House Researchers excelling in the field of rechargeable lithium-ion batteries for application in electric vehicles: **Addition of 7 Scientific Advisors, 2 Senior Research Engineers, and 2 Semi-Commercial Plant Project Managers**

Mr. Spencer Huh, President and CEO of NEO, expressed, “2021 was a highly special and historical year to NEO. We hold great confidence and belief that we will be among the advanced and crucial components of the supply chain for the promising lithium-ion battery industry in the coming years. We expect that 2022 will be another decisive year to achieve important and noticeable milestones related to the commercialization and performance improvement of NBMSiDE. On behalf of management and the board of directors, we would like to thank all our team and our valued shareholders for a great 2021. We will move forward at full capacity to maximize our shareholders’ value in 2022, and we wish you the best happy new year.”

About NEO Battery Materials Ltd.

NEO Battery Materials Ltd. is a Vancouver-based company focused on battery metals and materials. NEO has a focus on producing silicon anodes 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. 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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