MGX Minerals-UBC Partnership Receives Funding from Mitacs Accelerate Program for Continuous Development of High-Performance and Low-Cost Silicon Anode for Next-Generation Lithium Ion Batteries

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VANCOUVER, December 24, 2019 - MGX Minerals Inc. ("MGX" or the "Company") (CSE:XMG)(FKT:1MG)(OTC PINK:MGXMF) is pleased to report that its collaborative research partnership with the University of British Columbia ("UBC") has been approved for $120,000 grant from Mitacs Accelerate Program to continue the development of high-performance and low-cost silicon anode materials for next-generation batteries. Following successful optimization of etching process for metallurgical silicon and the demonstration of the produced nanostructured silicon in half-cells in 2019, this grant will allow the team to further develop nanostructured Si/carbon composite anode and validate this high-capacity anode in full-cell conditions in 2020. The team is also reaching out to potential battery materials suppliers and manufactures for third-party materials evaluation and joint venture.

The MGX/UBC partnership is targeting to develop highly efficient, long-lasting silicon anode that will aide in the development of next generation lithium-ion batteries capable of quadrupling energy density from the current standard of ~ 200 Wh/kg up to 400 Wh/kg for use in long-range electric vehicles and grid-scale energy storage. The project utilizes low-cost MGX metallurgical-grade silicon as a feedstock to fabricate nanostructured silicon.

About the Research Initiative

The overall objective of the two-year research program is to develop a low-cost and scalable method that will fabricate a silicon-based anode to improve the energy density of Li-ion batteries. Dr. Jian Liu, Assistant Professor in the School of Engineering at UBC Okanagan, is leading a research group focused on advanced materials for energy storage. Dr. Liu was previously the technical lead for development of surface coating materials by atomic and molecular layer deposition, and their applications in surface and interface engineering on the anode and cathode of Li-ion batteries and beyond, at Western University and Pacific Northwest National Laboratory.

Figure 1. Fabrication and evaluation of Si-based anode for Li-ion batteries

MGX Silicon Projects

MGX operates three silicon projects in southeastern British Columbia- Koot, Wonah and Gibraltar. A one-ton sample of quartzite from the Company's Gibraltar project was previously shipped to the independent lab Dorfner Anzaplan ("Dorfner") in Germany for mineralogical analyses. Dorfner conducted X-ray diffraction analysis, chemical analyses through X-ray fluorescence spectroscopy, grain size distribution, mineral processing analysis, automated optical sorting and thermal stability testing. Results indicated that the material, after comminution and classification fraction, is of high initial purity (99.5 wt.-%), making the fraction chemically suitable as medium quality feedstock material for metallurgical-grade silicon production.

About MGX Minerals Inc.

MGX Minerals is a diversified Canadian resource and technology company with interests in global advanced material, energy and water assets.

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