



## MGX Minerals Announces Partnership with University of British Columbia to Develop Metallurgical Silicon Based Anode for High-Energy Lithium-Ion Batteries

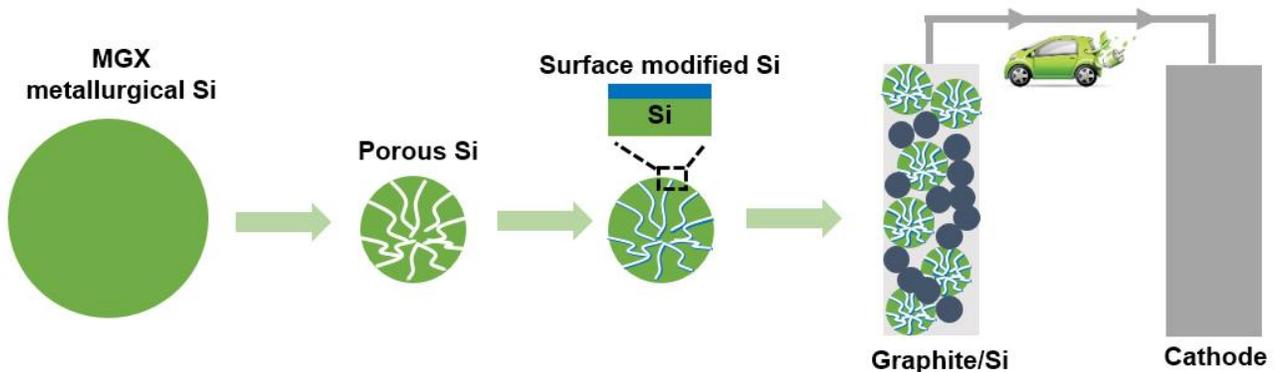
**VANCOUVER, BRITISH COLUMBIA** / December 20, 2018 / **MGX Minerals Inc.** ("MGX" or the "Company") ([CSE: XMG](#) / [FKT: 1MG](#) / [OTCQB: MGXMF](#)) is pleased to report it is funding a research consortium with the University of British Columbia ("UBC") to develop a low-cost and scalable method for fabricating Silicon based anode to improve the energy density of Li-ion batteries. The two-year research program will focus on 1) fabricating nanostructured silicon using low-cost metallurgical silicon as a feedstock and 2) compositing nanostructured silicon with commercial graphite to develop a high-performance silicon anode. The purpose of the research is to replace the graphite anode with silicon and complete a hybrid in the short-term which will not require retooling. The ultimate goal is to enable next-generation Li-ion batteries capable of quadrupling energy density from current 100 Wh/kg up to 400 Wh/kg for use in long-range electric vehicles and grid storage.

Leading research and development will be Dr. Jian Liu, Assistant Professor in the School of Engineering at UBC Okanagan. Dr. Liu is leading a research group focused on advanced materials for energy storage. Dr. Liu was previously the technical lead on the 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.

*Table 1. Schedule of program milestones*

Milestone	Timeline for collaborative work							
	Year 1				Year 2			
1. Development of porous Si from metallurgical Si								
2. Development of surface coating materials for porous Si								
3. Electrochemical testing of porous Si in half cells								
4. Evaluate optimized porous Si in full cells								

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 recent 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 indicate 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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### Forward-Looking Statements

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*"anticipate", "intend", "estimate", "potentially" and similar expressions, or are those, which, by their nature, refer to future events. The Company cautions investors that any forward-looking information provided by the Company is not a guarantee of future results or performance, and that actual results may differ materially from those in forward-looking information as a result of various factors. The reader is referred to the Company's public filings for a more complete discussion of such risk factors and their potential effects which may be accessed through the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).*