

News Release - Volt Carbon Releases Battery Test Results

FOR IMMEDIATE RELEASE

## Volt Carbon Technologies Releases Test Results for its Lithium-Metal Battery Technology

January 17, 2023, Calgary, Alberta, Canada – Volt Carbon Technologies Inc. (“Volt Carbon” or the “Company”) (TSX-V: VCT) (OTCQB: TORVF) is pleased to announce the release of test results on the performance of its solid-state lithium-metal batteries. The batteries were fabricated at Volt Carbon’s subsidiary Solid Ultrabattery in Guelph, Ontario. These results reflect the accomplishments of Solid Ultrabattery’s new facility during its first full year of operation in 2022.

### Highlights

The battery cells were fabricated using the company’s proprietary technology which include; 1) a metal organic framework (MOF) membrane which utilizes nanotechnology to achieve high ionic conductivity. 2) composite electrolytes that improve cycle life and battery stability. The Company’s own electrolytes and membranes were assembled with the high energy cathode NMC811 and lithium metal to make the battery cells.

In 2022, the Company successfully developed, tested and implemented a proprietary non-flammable composite electrolyte intended to improve fire safety of lithium metal batteries. The test data presented in this press release include the newly developed non-flammable electrolyte which was used in the battery batch builds. The new non-flammable composite electrolyte is expected to positively impact the safety of the Company’s lithium metal battery by reducing probability of thermal runaway and battery fires.

In summary; Lithium metal coin cell batteries have achieved 400 cycles at 81.6% capacity (see Figure 1). The lithium metal pouch cell batteries have achieved 265 cycles at 81.8% (see Figure 2).

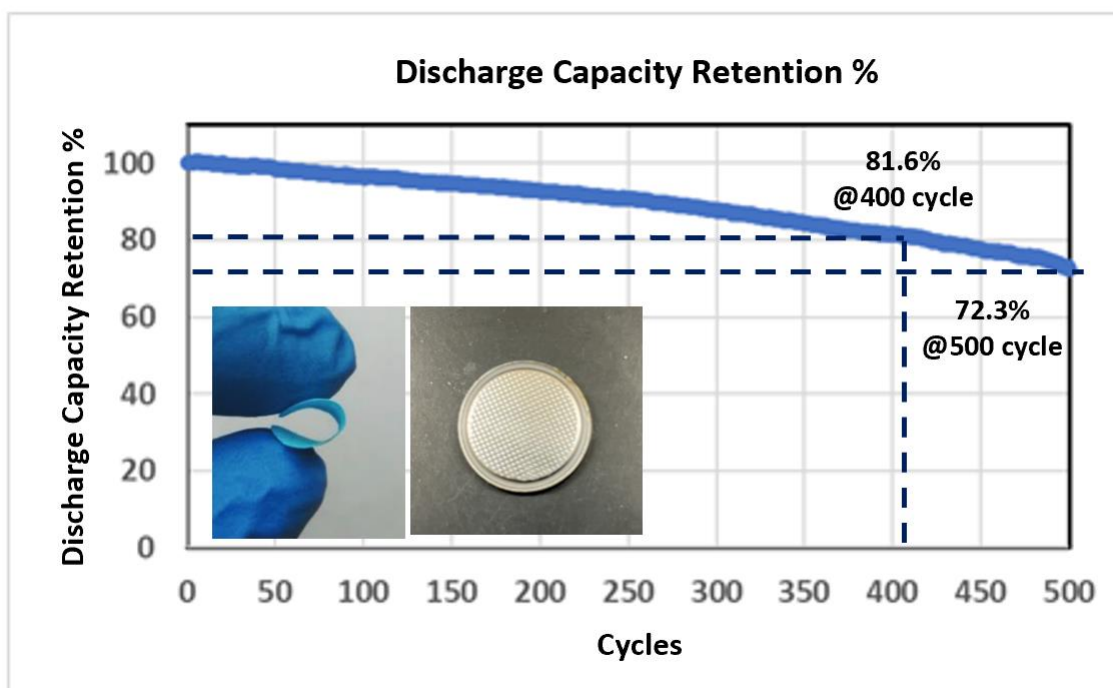


Fig. 1: NMC811 Lithium Metal Coin Cell, Charge/Discharge data, C/3, 25 °C

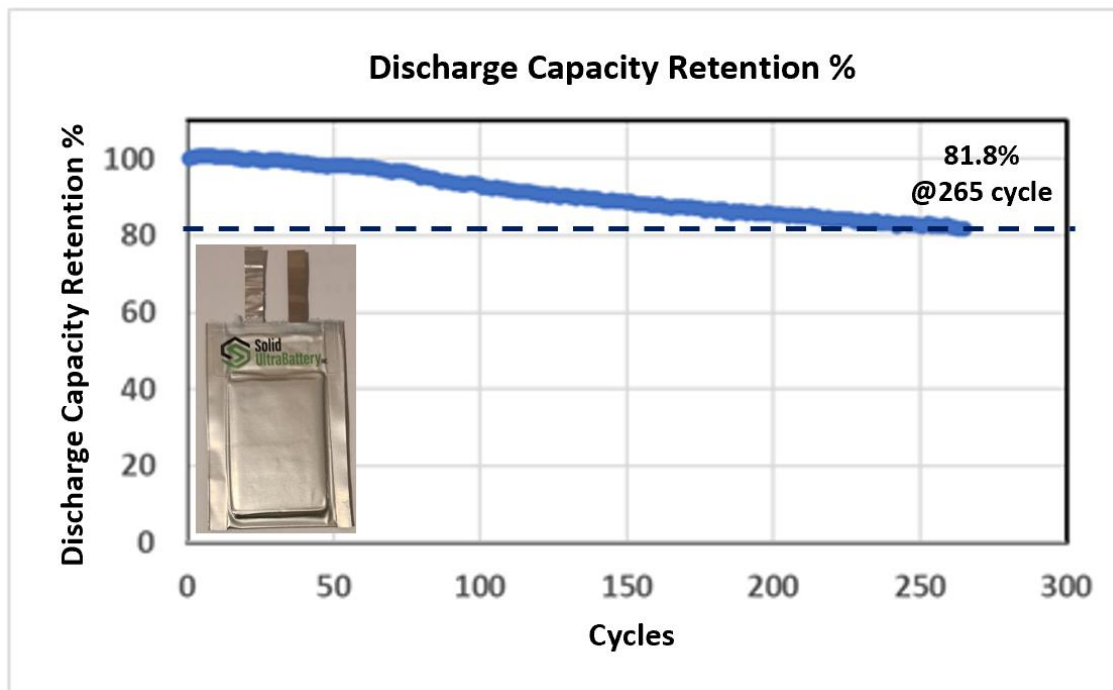


Fig. 2: NMC811 Lithium Metal Pouch Cell, Charge/Discharge data, C/3, 25 °C

### Next Steps

The Company's goal is to exceed 800 cycles and 80% capacity with its safe lithium metal battery technology. The initiatives in progress to reach this goal include:

- 1) Further development and testing of proprietary MOF nanotechnology;
- 2) Development and testing of new proprietary composite electrolyte that promote cycle stability; and
- 3) State of the art upgrades to the battery fabrication equipment at the Guelph facility.

In addition to the battery cells fabricated with the high energy NMC811 cathode, the Company successfully fabricated battery cells using the lower energy lithium iron phosphate ("LFP") cathode. LFP is generally considered safer with higher cycle life but with lower energy density compared to NMC811. The LFP cells are currently in cycle testing and those results will be reported after a substantial number of cycles are completed. The Company will continue to develop both LFP and NMC811 product lines which are interchangeable with its proprietary membrane separator and composite electrolytes.

Dr Zhongwei Chen, University of Waterloo Research Chair, Professor, and Director of Volt Carbon Quotes "I am pleased to see that after only one year of operation, the Solid Ultrabattery team in Guelph is building lithium metal batteries that are starting to demonstrate good cycle stability. We will now set our sights to exceed 800 cycles and 80% capacity which is a performance target required for potential use in Electric Vehicles."

## About Volt Carbon Technologies

Volt Carbon is a publicly traded carbon science company, with specific interests in energy storage and green energy creation, with holdings in mining claims in the provinces of Ontario, Quebec and British Columbia in Canada. For the latest information on Volt Carbon's properties and news please refer to the website [www.voltcarbontech.com](http://www.voltcarbontech.com).

On behalf of the Board of Directors,

### **Volt Carbon Technologies Inc.**

V-Bond Lee, P. Eng.

CEO, President, Chairman of the Board and Director

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*These forward-looking statements are based on current expectations, and are naturally subject to uncertainty and changes in circumstances that may cause actual results to differ materially. Although Volt believes that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that these expectations will prove to be correct. Such statements include statements with respect to: (i) the Company's expectation that the new non-flammable composite electrolyte will positively impact the safety of the Company's lithium metal battery by reducing probability of thermal runaway and battery fires; (ii) the Company's goal to exceed 800 cycles and 80% capacity with its safe lithium metal battery technology; (iii) the Company's intentions to: (A) further develop and test its proprietary MOF nanotechnology; (B) develop and test its new proprietary composite electrolyte; and (C) upgrade the battery fabrication equipment at the Guelph facility; (iv) the Company's intention to develop both LFP and NMC811 product lines which are interchangeable with its proprietary membrane separator and composite electrolytes; and (v) the Company's goal to exceed the 800 cycle and 80% performance target required for potential use of its batteries in Electric Vehicles. Forward-looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors, including those discussed above, could cause actual results to differ materially from the results discussed in the forward-looking statements. Any such forward-looking statements are expressly qualified in their entirety by this cautionary statement.*

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